

**An Examination of Executive Directors' Remuneration  
in FTSE 350 Companies**

Submitted by

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as a thesis for the degree of

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# Declaration

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# DEDICATION

To My Mother And Father

To My Brothers And Sisters

To My Wife (*Rasha*), My Son (*Louai*) And My Daughter (*Leen*)

Thank you for your Love, Sacrifice, and Support - Your belief in my abilities kept me going forward, when I really did not think that I could get to where I am Today.

# ACKNOWLEDGEMENTS

## *In the Name of Allah, the Most Merciful and the Most Magnificent*

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# ABSTRACT

Issues as to the suitability of executive compensation packages have obtained an ever increasing profile in recent years. Whilst there has been quite extensive empirical investigation of pay-performance sensitivity, the framework of performance-pay has received less attention in the literature and examination to date. Besides this - whilst there has been a quantum of investigation of relationships between compensation and performance, there has been less focus on case study based analysis.

In this context, the current study makes a twofold contribution to the examination of executive directors' remuneration in FTSE 350 companies. First, this research aims to empirically investigate linkages between the nature and amount of compensation packages and company performance with a particular focus on examining the extent of interrelationships between pay and performance over a ten year period from 1999 to 2008. Within the scope of a variety of theoretical perspectives, this deductive study puts a focus on addressing the question of whether managerial compensation is the greater influence on firm performance or whether it is the latter which has the greater influence on the former. Second, this study seeks to qualitatively add to the relevant literature by means of a longitudinal case study of remuneration at UK based major multi-national company, BP, over a ten year period from 2001 till 2010. Within the context of a variety of theoretical and institutional perspectives, this inductive study explores, by means of investigation of BP's Directors Remuneration Reports, the role of the BP remuneration committee in setting the mechanisms and structures which determine the nature and extent of executive remuneration packages at BP and considers the wider generalisability of the findings therefrom. Overall the current study utilises a mixed methods approach via a combination both quantitative and qualitative modes of analysis – an approach which is relatively rare in the discipline of research into corporate governance and related issues.

The outcomes from the empirical work show evidence of the presence of dual positive associations between executive compensation and company performance. However, the results do indicate that executive compensation is more influential in its effect on firm performance than the framework of performance-related pay. This finding is interpreted as lending support to the stewardship and/or tournament theories as to underlying drivers of

executive remuneration in comparison with agency theory, represented by agent-principal or managerial hegemony perspectives, as an explanatory of the construction of executive remuneration and the link with firm performance. Similar to prior literature, the empirical findings indicate that equity-based compensation is more robust in the linkage with firm performance than cash pay dominated packages. However, the results showed that the existence of remuneration committees in general reveals insignificant and negatively related to total CEO/executive remuneration. This finding highlights therefore the need to put a focus on the actual role of compensation committee in setting the type and extent of executive pay packages in a large UK company.

The outcomes from the archival case study also suggest that it is difficult to find significant support for a pure agency theory approach whereby shareholders seek to align their interests directly with those of their managers as a driver of executive compensation packages. There is more evidence suggestive of a managerial power/hegemony perspective which is heavily mediated by the presence of powerful non-executive directors and the institutional presence of the remuneration committee. Perhaps the most significant aspects to emerge from the case study are the importance of personal relationships and power at boardroom level. Beyond this the inferences of the supplementary content analysis conducted specifically on the Directors Remuneration Reports are suggestive of a focus on overall BP performance rather than on the specific activities and achievements of individual executive directors.

In conclusion, the findings of the present study provide a wealth of detail both quantitative and qualitative as to the manner in which executive remuneration has been set in the UK in recent years and as to linkages both with corporate performance and underlying theories of the determinants of executive remuneration. As such it sheds light on an area of importance and one of continued private and public concern and may be of interest to those responsible for governance within firms and to wider public and regulatory interest as well as future researchers in the field.

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# Chapter 1

**STUDY INTRODUCTION**

# Chapter One

## Study Introduction

### 1.1 Background and Overview

In recent years issues as to board room compensation have been extensively aired in the popular media, the academic literature and periodically in the regulatory arena.<sup>1</sup> In the UK the media has tended to focus on single high profile cases, for example in the 1990s the ‘fat cat’ controversy surrounding Cedric Brown’s remuneration at British Gas,<sup>2</sup> the 2003 shareholder revolt at GlaxoSmithKline directed at Jean-Pierre Garnier’s compensation package,<sup>3</sup> in 2008 the outcry associated with the revelation that Sir Fred Goodwin chief executive of the failed Royal Bank of Scotland (RBS) would walk away at the age of 50 with a pension entitlement valued at anything up to £30m,<sup>4</sup> in 2012 the media and political furore surrounding the award of a bonus of just under a million pounds (subsequently declined) to the chief executive of the reconstituted RBS and the possible bonus packages for directors and senior executives of the publicly funded Network Rail (also subsequently declined).

Apart from these specific cause celebres there has been increasing concern as to the overall level of senior executive remuneration and the widening gap between remuneration at the top of both private and public sector organizations and that of the average worker in those organizations – concerns expressed for example in recent reports of the High Pay Commission (2011a, 2011b). This has led to questioning as to whether the structure in place within organizations which acts to determine senior executive pay is appropriate and, related to this, whether clear linkages can be established between the composition and amount of executive compensation packages and organisational performance.

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<sup>1</sup> See for instance, the recent report of the ‘High Pay Commission’ available at:

<http://highpaycommission.co.uk/wp-content/uploads/2011/09/HPC-DPperformance.pdf>

Another example, The economist report under the title of ‘Executive Pay: Money for nothing’ available at:

<http://www.economist.com/node/21542802?fsrc=scn%2Ftw%2Fte%2Far%2Fmoneyfornothing%0A%0A%0AThank>

<sup>2</sup> See, the Independent report:

<http://www.independent.co.uk/life-style/cedric-brown-fat-cat-in-the-dog-house-1611078.html>

<sup>3</sup> See, the New York Times report:

<http://query.nytimes.com/gst/fullpage.html?res=9804EFD9133EF933A15756C0A9659C8B63>

<sup>4</sup> See, the Telegraph report: <http://www.telegraph.co.uk/finance/personalfinance/pensions/4861923/Sir-Fred-Goodwin-True-cost-of-pension-is-30m.html>. In January 2012, Fred Goodwin was stripped of his knighthood.

Parallel to this institutional performance itself has attracted ever increasing attention especially in the light of the financial crisis of 2007-2009 reverberations from which are still being felt today. This crisis had a number of underlying causes including mismatches of financing positions and poor lending decisions accompanied by excessive management optimism and the issuance of misleading information (Polo, 2007; Turner, 2009; Walker, 2009). The associated wave of collapses in the financial sector further heightened concerns of both institutional shareholders and regulators alike as to both the quality of managerial decision making and the linkages between that decision making and the composition and nature of executive remuneration packages. This itself was encompassed within enhanced focus on the role of corporate governance more widely in ensuring both effectiveness in the manner in which companies were run for the benefit of their shareholders and other stakeholders and also associated transparency thereof (Solomon 2007).

In this respect, the manner in which interrelationships between managerial compensation and company performance can be established within an appropriate structure of corporate governance has been extensively considered in previous literature (such as Conyon and Leech, 1994; Kang and Shivdasani, 1995; Core et al., 1999; Lee et al., 2008 etc.). Clearly senior level pay and its determination are only one aspect of a wider governance framework and in the examination of pay-performance and performance-pay frameworks and related linkages it is important to control the effect of different corporate governance mechanisms in explaining the variability in such frameworks and practices and the overall effect on institutional performance.

This introductory chapter commences with an overview of the arguments and issues surrounding executive compensation which themselves provide motivation for this study. The second section covers the research objectives and identifies the research questions adopted in the current study. The motivations underlying both the selection of research questions and the methodology to be utilised in the study are discussed in more detail in the third section. The fourth section highlights the manner in which it is intended that the study should make an incremental contribution to existing knowledge. The fifth section develops this further by means of a review and summary of the key findings consequent to carrying to the research and relates these to the actual contribution to knowledge and understanding.



The final section of the chapter sets out the structure and organisation of the thesis as it develops in future chapters.

## **1.2 Research Objectives and Questions**

For many years received wisdom in respect to the appropriate setting of compensation packages for senior executives has been that the package, comprising both options and incentives, should be relevant and sufficient in terms of acting as an effective motivation mechanism for aligning the professional managers' rewards with the institutional shareholders' returns in an attempt to enhance corporate performance. As such they would normally comprise both options and specifically targeted incentives as appropriate to the circumstances of the individual company (Kim and Nofsinger, 2007). Within this wider compass the need for address and explore further the interrelationships between managerial compensation and company performance has been an important motivating factor underpinning this current study.

Two main frameworks have been advanced in terms of explaining the relationship between executive pay and firm performance. These are both contrasting and to an extent interlinked. The first structure is the pay-performance framework. Here the main focus of the literature, extending back more than eighty years, has been perspectives derived from pure agency (Berle and Means, 1932), which envisages a positive relationship between an agency based contract and firm performance, and from managerial hegemony (Bebchuk et al., 2002), which suggests the possibility of a negative relationship in circumstances when executive directors have significant influence over the setting of their contracts.

Implications of agency based contracts are that executive directors will only obtain high rewards when certain targets relating to company performance are reached, whereas managerial hegemony suggests that high rewards may be obtained largely irrespective of company performance.

The second structure - the performance-pay framework - has shifted the emphasis away from incentivisation per se toward a more direct link between company performance and executive director remuneration, a link which might not be related to managerial performance in itself but instead to a whole range of environmental and institutional factors which impact company performance. Here the interactions may be complex and with

exceptions (such as Conyon and Sadler, 2001; Devers et al., 2007; Falato et al., 2011) there has been more limited research work done as compared with that investigating other paradigms. Notions of performance-pay link more to the underlying perspectives offered by stewardship theory (Muth and Donaldson, 1998) and in particular, in recent years, tournament theory (Lazear, 1998). Here the emphasis has been on the manner by which board room executives are attracted and motivated by a sufficient set of incentives regarding their managerial talents and experience and also by the ambition of lower-level executives to advance their careers for the purpose of achieving the rewards obtainable at higher points in the corporate ladder.

Although the nature of the performance-pay framework has received less attention in the literature compared with pay-performance framework, the emphasis shifts toward the future in the light of the interaction between the mechanism and structure of executive pay and company performance, and the manner in which firm performance as a whole will be enhanced through providing prospect reward schemes for their board members. In this respect, one key research question which is addressed in the empirical part of the current study is: whether managerial compensation is the greater influence on firm performance or whether it is the latter which has the greater influence on the former?

Exploration of the manner by which decisions as to remuneration packages are set has led to more detailed probing of relationships within corporate entities. In particular the role and composition of remuneration committees within those entities has been explored from an empirical perspective (Main and Johnston, 1993; Narasimhan and Jaiswall, 2007 etc.). This literature has drawn attention to questions relating to the size and composition of remuneration committees and their perceived increased power and influence within the boardroom. However there is still scope for further investigation of the actuality of practice and the interactions in terms of relationships with executive directors, institutional shareholders etc. With relatively few exceptions (Bender, 2003, 2007), case study analysis of how remuneration committees operate has been sparse in prior research and their role in both defining and mediating the relationship between managerial compensation and firm performance has received relatively little attention from a qualitative perspective. In this regard, the second key research question asked is: do behavioural and institutional factors,

in particular those relating to the remuneration committee, play an important role in determining the composition and size of executive compensation?

Accordingly, the current study has two key research objectives. First, an empirical examination is conducted to extend the existing experiential investigations beyond the focus on the typical one-way impact of institutional performance on the amount and structure of executive compensation or vice versa. This research objective is established by examining the interrelationships between executive directors' remuneration and corporate performance in FTSE 350 companies over a ten year period, while controlling for a variety of corporate governance mechanisms and institutional characteristics. Second, an institutional archive-base case study is employed to enable a greater depth of understanding of the mechanisms and structures which have determined executive director pay in one large UK company. The case study is in turn based upon information contained in the Directors Remuneration Reports (DRRs) of that company over a ten year period supplemented by both wider information sources and more specifically by content analysis of the remuneration reports.

### **1.3 Research Motivations, Methodology and Methods**

Whilst the majority of prior literature puts more focus on the pay-performance structure, little research has been conducted that directly investigates the impact of executive compensation on corporate performance, and very few studies have addressed such separate associations in the UK context. Besides this the empirical investigation of the interrelationships between managerial compensation and company performance has not been addressed within the UK context. Furthermore - while there has been quite extensive quantitative examination of such associations between executive compensation and business performance, there has been less focus on case study analysis of the actual role of the remuneration committee to set the mechanisms and structures that determine boardroom compensation packages at singular companies.

In this respect, this present study has two separate but interrelated research motivations. The first is to investigate the extent of linkages between the nature and amount of compensation packages and company performance to address the question of whether managerial compensation is the greater influence on firm performance or whether it is the

latter which has the greater influence on the former. The second is a desire to understand in greater depth the mechanisms and structures which determine senior executive pay in a large UK multinational organisation and the manner in which these mechanisms and structures have changed in recent years through providing an overall review on what it is possible to learn from the information contained in the directors' remuneration reports.

In terms of its underlying methodological foundations the study may be seen as adopting a positivist approach linked in to notions of ontological realism (further discussion of these fundamental assumptions is set out in Chapter 4). This translates into research which seeks to objectively describe, examine and explore the perceived reality of executive compensation and corporate performance. To fulfil these research objectives and motivations, the current study adopts both the deductive and inductive approaches. This ambition calls for a mixed methods (i.e. abductive) approach, which is used extensively in pragmatically oriented fields of social science research (Johnson and Onwuegbuzie, 2004; Johnson et al., 2007; and Creswell and Clark, 2011) but to date has been more restricted in its application to corporate governance research.

Regarding the research techniques, the present study comprises a number of different, but complementary, research analyses which are identified based on the extant phenomenon being analysed for achieving the study objectives. The quantitative study is undertaken to examine the extent of the interrelationships between managerial compensation and institutional performance for FTSE 350 companies from 1999 to 2008 by employing two modelling plans by which the research findings are discussed in terms of the adopted theoretical perspectives. First a fixed-effect analysis framework is adopted through utilising two separate multiple regression equations incorporating by a set of appropriate categories of control variables relevant to executive pay and firm performance - such as internal corporate governance monitoring mechanisms, nature and composition of firm ownership, leverage ratios as proxies for company risk-taking behaviour, as well as a variety of corporate characteristics and expertise indicators. Second a set of simultaneous or structural equations modelling is developed in attempt to examine jointly the influence of executive pay or company performance on a number of corporate governance mechanisms, by which the twofold relationships between pay and performance are combined.

The qualitative study is undertaken to investigate the actual role of remuneration committee in setting the mechanisms and structures which determine executive director pay in BP (a FTSE 350 company) from 2001 to 2010 by adopting two different research methods. First the archival-base case study is conducted to review the nature of remuneration practice at BP with a particular focus on changes in the amount and nature of remuneration packages over the years under examination, and explore the role of the remuneration committee in effectively determining the type and extent of those packages. Second the archival case study is supplemented by a practical content analysis which provides a more specific empirical analysis of the directors' remuneration reports.

#### **1.4 Research Contribution to Knowledge**

This thesis contributes to the knowledge regarding the topic of executive directors' remuneration through two different, but complementary, modes of examination. The first part of the research provides updated documentary and empirical evidence on the linkages between the amount and composition of managerial compensation and the accounting-based indicators of company performance in FTSE 350 companies, while controlling for corporate governance mechanisms, boardroom members' features and corporate characteristics. The second research reviews the nature of remuneration practice at BP for the purpose of highlighting the changes in the amount and nature of remuneration packages over the years under examination and exploration of the role of the remuneration committee in setting out the mechanisms and structures which determine the type and extent of those packages.

Within the scope of the first mode of examination the study contributes to knowledge in a number of ways. To the author's knowledge no other published study combines empirical investigation of the frameworks of pay-performance and performance-pay and seeks to measure the separate extent of associations between executive compensation and corporate performance in a single piece of research. The endogenous estimations through using Two-Stage Least Square (2SLS), in addition to sub-period and sub-sector analyses are also provided in the present research. This is not in itself novel but the analysis builds on and develops previous research in this area. Beyond this, the study develops a system of six simultaneous equations in order to examine the interrelationships between managerial remuneration and company performance via employing data available on four control

variables through using Three-Stage Least Square (3SLS) estimation technique. Again to the author's knowledge this study is the only study to date which has adopted this technique using UK data. Underlying this empirical analysis the study provides a quite detailed analysis and investigation of the institutional and regulatory background relating to executive compensation and the associated literature. This is informed by consideration of a number of the diverse, but interrelated, theoretical perspectives that have been developed which have sought either to normatively establish appropriate mechanisms and procedures for setting senior executive remuneration or to act as explicators for the type of structures that exist and the manner in which they have developed and changed.

The second mode of examination, the archival case study, adds to the quite limited array of previous case study/qualitative research in the governance arena in the UK. It does this by means of investigation with the ambition to understand in greater depth the mechanisms and structures which determine executive pay in one large UK based multinational company, BP. Although pay structures at BP have attracted comment and discussion in recent years they have not been subjected to more rigorous analysis based primarily on the contents of the BP Directors Remuneration Reports. The findings of this analysis are considered and interpreted within the context of the theoretical perspectives underlying questions as to how boardroom and senior executive remuneration are or perhaps 'should be' set. Emphasis is also given to the wide ranging, and sometimes competing, institutional influences and processes which impact upon remuneration at a major multinational company – and which on occasion lead to conflict as for example reflected in the 38% of the voting BP shareholder body which did not support the Directors Remuneration Report tabled at the company's Annual General Meeting held in April 2010?

To recap the key contributions of the present study in terms of its research approach are its novelty in terms both of the combination of both quantitative and qualitative research methods and also of originality both in the mode of empirical analysis and the use of a qualitative case study. Mixed methods research, which attempts to maintain generalisation while capturing the specificity of the context (Johnson et al., 2007), is not that common in the field of corporate governance research and it is suggested that is an avenue or approach to research which might be more widely employed by future researchers.

As compared with previous empirical UK studies (such as Conyon et al., 1995; Main et al., 1996; Cosh and Hughes, 1997; Conyon and Murphy, 2000 etc.) this study benefits from an enhanced data set with more than 2,700 observations in consequence both of using the FTSE 350 as the base sample and a greater longitudinal series of observations, ten years, than previous studies which were limited by a greater need to collect data manually. Moreover the supplementary content analysis, using NVivo as an available data analysis program which is contained within the archival-based case study, is relatively novel in that the author is not aware of previous studies which have employed this technique formally in the context of directors' remuneration reports.

Overall the current research has the potential of attracting the attention of those concerned about the level and structure of executive directors' remuneration packages and how far the linkages and the direction are or were between the executive pay packages and corporate performance, as well as the role of the remuneration committee in setting the mechanisms and structures which determine the types of boardroom compensation packages.

### **1.5 Summary of Main Findings**

The findings of the empirical study show evidence of the presence of dual positive associations between executive compensation and company performance. The findings imply also that, perhaps not surprisingly, the remuneration committees of FTSE 350 companies put more focus on the link between the non-cash compensation of boardroom members to company performance rather than the direct cash remuneration package. There is also evidence that the CEO remuneration package is more sensitive to firm performance than that of executive board directors, a result which is consistent with that of (Sapp, 2008).

The results of the fixed-effect equation modelling suggest that the pay-performance framework supports the influence of agent-principal relationships rather than those indicative of managerial hegemony. In this narrative CEOs and boardroom executives are compensated for their apparent intention to act in the best interests of the owners based on the prior levels of corporate performance. However the findings in respect to the performance-pay framework lean toward support for a tournament and/or stewardship theoretical underpinning to remuneration whereby corporate performance is enhanced when executive remuneration is relatively higher in previous years. The mechanisms whereby

achieve this are less clear but may be linked into prospects (Lazear, 1998) or actual managerial talents (Hendry and Kiel, 2004).

The results of simultaneous equation modelling are again in line with scenarios which fit better into an underlying framework associated with either tournament or stewardship theory, i.e. there is a better fit with a performance –pay framework than with a pay-performance framework although in both instances there were statistically significant positive associations. One slightly surprising finding was that the existence or otherwise of a remuneration committee was not significantly related to executive compensation. If anything there was a negative association albeit not statistically significant – although as by the end of the period under examination almost all the sample companies had remuneration committees this result, though of interest, may be of limited relevance.

The outcomes of the case study yet again suggest that it is difficult to find significant support for a pure agency theory approach whereby shareholders seek to align their interests with those of their managers as a driver of executive compensation packages. There is more evidence supportive of a managerial hegemony perspective, albeit one which in BP was heavily mediated by the presence of powerful non-executive directors and the institutional presence of the remuneration committee. There was also little evidence that the pay packages were dictated by mobility within the international labour market, although very significant one-off ‘retention payments’ were made to two directors in one year the circumstances were suggestive that the motivation for these payments was inextricably connected to wider issues relating to boardroom compensation in that particular year.

Perhaps the most significant findings to emerge from the case study are the importance of personal relationships and power at boardroom level and the evident malleability of remuneration structures – in particular the willingness to ‘shift the goal-posts’ subsequent to events usually to the benefit of the executive directors. The formal content analysis provided additional insights – one being a documented focus by the remuneration committee on overall BP performance rather than on the specific activities and achievements of individual directors. The case study also reflects on the role of the remuneration committee and its nature as an institutional construct, and considers whether it constrains, obscures, or adds pseudo legitimacy to boardroom compensation. Overall the case study adds richness to the empirical work by means of the ability to identify a wider



range of factors and circumstances, some of them one-off, some which persisted for a number of years which influenced executive director compensation at the company under examination and suggests that both similar patterns and individual reasons for variance apply across the wide range of companies.

## **1.6 Structure of the Thesis**

This section depicts the structure of the current study by providing an overview of its contents. The study is organised in seven chapters. Chapter one is an introductory chapter that presents the background of the study along with the research objectives and questions. It outlines the motivations underlying the research undertaking, identifying and discussing the methodological assumptions and the research methods. It highlights the contribution to existing knowledge and concludes with a brief summary of the key findings of the research.

Chapter two provides a preparatory review of the literature to date which focuses on the institutional and regulatory background of boardroom executive compensation. It commences with an overview of UK corporate governance in general and executive compensation in particular. The structure and role of compensation committees in determining executive compensation in the UK are explored along with reviewing the composition and significance of executive compensation packages. This chapter also highlights issues and developments relating to executive pay disclosure in the UK.

Chapter three provides a review of the pertinent literature on the linkages between executive compensation and company performance, and concludes with a discussion highlighting possible research gaps in existing academic literature. This chapter then identifies a variety of institutional and theoretical frameworks which have been utilised either normatively or explicitly in the context of boardroom level remuneration, and highlights the implications of these theoretical perspectives on pay-performance and performance-pay frameworks.

Chapter four explains the research methodology employed by the current research to seek to fulfil the underlying the research purpose and objectives, as well as the research philosophy and how it justifies the chosen approaches used in carrying out the study. The research process of the empirical study is developed with reference to identification of

topic, highlighting research gaps, selection of variables, sample selection and data collection and preparation.

Chapter five provides the main analysis and discussion of the results obtained from the empirical investigation. It reports the findings of the deductive study based on a variety of statistical tests and analyses, including descriptive statistics, correlation analyses and two different sets of regression modelling analysis. First, the fixed-effect equation modelling is undertaken to test the developed hypotheses separately for investigating the relationships between executive compensation and company performance. Second, the simultaneous equation modelling is adopted to examine further the interrelations between pay and performance and in particular to establish whether executive remuneration has the greater influence on firm performance, or does firm performance has the greater effect. The empirical study's findings are reported and also interpreted in the context of the underlying theoretical perspectives and conclusions are drawn therefrom depending on the statistical results.

Chapter six constitutes the case study adopted in the present thesis. This chapter commences with introducing the strategy of this indicative study, including the research objective, hypothesis, and examination plan. It highlights also a number of related theoretical perspectives underlying the question of how boardroom and senior executive remuneration are, or perhaps 'should be', set. The chapter then reports the explanations of the outcomes based on two research techniques. First, the archival-base case study is adopted to review the nature of remuneration practice at BP with a particular focus on the years 2001-2010, and to detail changes in the amount and nature of remuneration packages and explore the role of the remuneration committee in effectively determining the type and extent of those packages. Second, content analysis is undertaken to shed some light on why 38 per cent of the BP shareholder body failed to support the compensation committee's report presented to the Annual General Meeting in April 2010.

Chapter seven summarises the research project regarding both the quantitative and qualitative studies. The work in the context of prior literatures is also placed with an attempt to explain its contribution to knowledge and highlight the research findings. Finally, this chapter describes the work limitations, offers some recommendations for forthcoming research, and discusses the implications of this work for practitioners.

# Chapter 2

## **INSTITUTIONAL AND REGULATORY BACKGROUND**

## **Chapter Two**

### **Institutional and Regulatory Background**

#### **2.1 Introduction**

The past 20 years have witnessed an increasing focus on the requirements of a good corporate governance framework in order to maintain or even restore confidence in corporate management (Hossain et al., 1994; Krambia-Kapardis and Psaros, 2006), re-balance the corporate financial and administrative structures (Berger et al., 2005; Krambia-Kapardis and Psaros, 2006; Solomon, 2007), and broaden the phenomenon of a wide reaching investment culture (Fraser and Henry, 2003; Khurshed et al., 2011) within a knowledge economy (Gugler, 2001; Krambia-Kapardis and Psaros, 2006; Abdullah and Page, 2009). One area of significant interest both in the public and academic arenas has been the manner whereby executive compensation is set and linkages between the nature and composition of executive compensation and corporate performance. This has led to a substantial extent of research in this field going back to the 1980s at least. This prior literature has focused on examination of the relationship with company performance (Conyon, 1997; Cosh and Hughes, 1997; McKnight and Tomkins, 1999), the mechanisms of corporate governance (Agrawal and Knoeber, 1996; Core et al., 1999; Berry et al., 2006; Lee et al., 2008), as well as the personnel- and/or firm-dependent effects (Smith and Watts, 1992; Adams and Ferreira, 2004; McKnight and Tomkins, 2004; Devers et al., 2007 ) on the amount and composition of boardroom members' pay packages.

However, as discussed above, the framework of performance-pay has received relatively less attention in the literature to date as compared with studies that focus more directly on agency theory relationships between the nature of compensation packages and corporate performance. Furthermore there has been less emphasis on rigorous case study analysis of actual executive compensation within specific companies, analysis designed both to shed light on how relationships between executive directors' remuneration and firm performance are shaped and formed and also to consider the actual role of the remuneration committee in terms of setting the policy for, and nature of, remuneration practice at individual companies.

This chapter aims to provide, primarily by means of a literature review, an introduction to the institutional and regulatory background relating to boardroom executive compensation. The chapter is organised as follows. After this short introduction the second section provides a review of the development of UK corporate governance in general and executive compensation in particular, in which the institutional and regulatory aspects in terms of approval, disclosure and governance requirements are outlined. The third section provides a review of UK remuneration code. The fourth section explores the structure and role of compensation committees in determining executive compensation in the UK. The fifth section reviews the composition of the typical executive compensation package in a large UK company. The sixth section sets out the current requirements for the disclosure of executive pay in the UK. The final concluding section provides an overall review and discussion of the institutional and regulatory framework underpinning on executive directors' remuneration in the UK.

## **2.2 UK Corporate Governance and Remuneration History**

In the UK, historically, executive pay was seen as a matter very largely internal to the individual company, its board of directors and ultimately the shareholders. Until the 1980s the institutional framework surrounding executive remuneration in the UK was all but vestigial (Fraser and Henry, 2003). Other than a long running Companies Act requirement, for the amount paid to the chairman and to the highest paid director (if not the chairman) to be disclosed together with disclosure of the number of employees in income bands above a certain level, there were no disclosure requirements nor was there any requirement for disclosure of options or other similar contingent remuneration. Over time the Stock Exchange began to require more disclosure in respect to directors' remuneration in quoted companies. However, as noted in the introduction, from the 1990s onwards issues of corporate pay began to attract wider stakeholder attention which in turn led to more regulation - in particular in respect to disclosure requirements - but also as to internal governance structures for the determination of executive remuneration and the manner in which these should be referred to and approved by the shareholders.

The Cadbury Report issued in 1992 provided the framework for governance which, subject to subsequent development and revision, underlies the present Governance Code (FRC,

2012)<sup>5</sup>. The report, which was commissioned in the wake of a number a high profile corporate collapses associated with the economic downturn of the early 1990's, provided a series of recommendations seen as representing good corporate governance practice (Tricker, 1994; Gugler, 2001; Dedman, 2002; and Kim and Nofsinger, 2007). However it contained little specific guidance as to compensation, although the report did recommend that companies which did not already have a remuneration committee consisting wholly or mainly of non-executive directors should establish one (Cadbury, 1992)<sup>6</sup> – the first quasi-mandatory call for such a committee.

However the Greenbury committee - whose report was issued in 1995 - focused specifically on public and shareholder concerns regarding executives' pay. It endorsed the role of a remuneration committee comprising only of non-executive directors in setting, via recommendations to the whole board, a pay agenda for executive directors. Within this agenda pay packages should be constructed sufficient to attract, retain and motivate directors of the quality required, and based particularly on the performance-related pay components - whether by annual bonuses, share option schemes, or long-term incentive plans - which should be designed to align the interests of directors and shareholders according to the corporate compensation policy (Greenbury, 1995)<sup>7</sup>. As Solomon (2007, p.97) claimed, “... *one important aim of the Committee (and of the earlier Cadbury Code of best practice) was to create remuneration committees that would determine pay packages needed to attract, retain and motivate directors of the quality required but should avoid paying more than is necessary for this purpose*”. Greenbury emphasised the need for contracts to incorporate aspects and measures relating to long term performance. It also recommended that contracts for executive directors should not exceed twelve months in duration. These recommendations were carried forward into the Combined Code issued in June 1998<sup>8</sup> and have been reiterated in subsequent revisions of the Code and, in relation to

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<sup>5</sup> The UK Corporate Governance Code link: <http://www.frc.org.uk/Our-Work/Publications/Corporate-Governance/UK-Corporate-Governance-Code-September-2012.aspx>

<sup>6</sup> The Cadbury Report link: <http://www.ecgi.org/codes/documents/cadbury.pdf>

<sup>7</sup> The Greenbury Report link: <http://www.ecgi.org/codes/documents/greenbury.pdf>

<sup>8</sup> The 1998 Combined Code link: [http://www.ecgi.org/codes/documents/combined\\_code.pdf](http://www.ecgi.org/codes/documents/combined_code.pdf)

financial sector firms, most recently in a separate remuneration code (FSA, 2010)<sup>9</sup> discussed further below.

The recommendations of a separate committee, the Hampel Committee, also fed through into the revised Combined Code published in 1998. Hampel set forward recommendations related to disclosure issues, in particular on the need for companies to adopt a strategy of full transparency in which institutional shareholders have access to all the information required to enable them evaluate the corporate compensation policy. Inter alia this would entail disclosure of the full actual pay packages of boardroom members, details of remuneration committee membership and where necessary clarification of compliance by means of a clear statement identifying any areas of non-compliance (Hampel, 1998)<sup>10</sup>.

For listed companies the requirements of the Combined Code, although not strictly speaking mandatory, were enforced initially by the London Stock Exchange/Financial Services Authority (FSA) and then in statute by the 2002 UK Directors' Remuneration Report Regulations (FRC, 2002)<sup>11</sup> and now carried forward into the 2006 Companies Act<sup>12</sup>. The 2002 Act additionally introduced a requirement for the directors' remuneration report to be put before the shareholders at the annual general meeting and for the shareholders to vote their approval or otherwise thereon - although the vote is advisory only and is not binding on the company (Deloitte, 2004). In relation to this Franks et al. (2001) argued that UK board members perform an advisory role rather than a monitoring function and this has an influence on the manner in which they review and control executive remuneration. Further governance recommendations were contained in the Higgs Report 2003<sup>13</sup> and these were incorporated into subsequent revisions of the Combined Code. Beyond this other stakeholders including the Association of British Insurers (ABI) and the National Association of Pension Funds (NAPF) published guidance in 2009 and 2011 respectively as

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<sup>9</sup> The Remuneration Code (Policy Statement) link: [http://www.fsa.gov.uk/pubs/policy/ps10\\_20.pdf](http://www.fsa.gov.uk/pubs/policy/ps10_20.pdf). This code in its final form contains thirteenth principles and aims mainly to ensure that firms have to establish, implement and maintain remuneration policies, procedures and practices that are consistent with and promote effective risk management.

<sup>10</sup> The Hampel Report link: [http://www.ecgi.org/codes/documents/hampel\\_index.htm](http://www.ecgi.org/codes/documents/hampel_index.htm)

<sup>11</sup> The UK DRRR Bulletin 2002/2 link: <http://www.frc.org.uk/getattachment/57bb2af7-addd-43f6-8dcd-d85e36857f94/Bulletin-2002-2-The-United-Kingdom-Directors-Remun.aspx>

<sup>12</sup> The 2006 UK Companies Act link: <http://www.legislation.gov.uk/ukpga/2006/46/contents>

<sup>13</sup> The Higgs Report link: <http://www.berr.gov.uk/files/file23012.pdf>

to how shareholders should evaluate the quality of the remuneration report for the purpose of deciding on voting behaviour.<sup>14</sup>

### 2.3 Banking Remuneration Code

As noted above, there has been a particular regulatory interest in executive compensation in the financial sector consequent to the series of banking failures which commenced in 2007 and also the disclosure of high levels of corporate remuneration and executive bonuses in the financial institutions. This led to the publication of a separate remuneration code by the FSA in 2010 for the financial sector itself underpinned by the recommendations of the Walker Report (Walker, 2009) and supported to an extent by those of the Turner Report (Turner, 2009)<sup>15</sup>. Following a consultation paper ‘*Revising the Remuneration Code*’ issued in July 2010<sup>16</sup>, the final draft of the Code was published in December of that year<sup>17</sup> and came into force in January 2011. Although still not statutory in terms of limiting executive levels of pay, it is quasi-mandatory and the FSA made clear that if any financial institution fails to follow the new remuneration code, it will be strictly prohibited from participating in the Government’s Asset Protection Scheme. In line with the Walker Report, the Code does not impose any absolute limit on executive remuneration, but focuses on the recommendations emanating from the Walker Report as to: the remuneration structure, aligning remuneration paid with performance, deferred pay packages, and further disclosure requirements (FSA, 2010).

The key recommendation of the Walker Report in terms of the remuneration composition was that the remuneration committee should not only be entitled to set the policy for, and nature of, remuneration practice, but also be engaged in determining the compensation strategy of the whole workforce in the company within an overall effective and efficient risk framework. However the linkage between executive directors and workforce members in terms of the nature of compensation has not been discussed in the FSA’s Remuneration Code. Besides this the remuneration committee should carefully examine the compensation

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<sup>14</sup>In particular, those of the Association of British Insurers (ABI) “Executive Remuneration - ABI Guidelines on Policies and Practices” - 2009, and the National Association of Pension Funds (NAPF) “Corporate Governance Policy and Voting Guidelines” - 2011.

<sup>15</sup>The Walker Report link: <http://group30.org/images/PDF/WalkerReview%20July%202009.pdf>, and the Turner Report link: [www.fsa.gov.uk/pubs/other/turner\\_review.pdf](http://www.fsa.gov.uk/pubs/other/turner_review.pdf)

<sup>16</sup>The Remuneration Code (Consultation Paper) link: [http://www.fsa.gov.uk/pubs/cp/cp10\\_19.pdf](http://www.fsa.gov.uk/pubs/cp/cp10_19.pdf)

<sup>17</sup>The Remuneration Code (Policy Statement) link: [http://www.fsa.gov.uk/pubs/policy/ps10\\_20.pdf](http://www.fsa.gov.uk/pubs/policy/ps10_20.pdf)



packages and policy of those executive directors whose total compensation is greatly above the median remuneration provided to other executive directors - those executives who are known as “high end” members due to their significant execution and impact on the risk profile of the company. The disclosure requirements of the “*high end*” pay packages require the remuneration committee to establish and confirm the performance of such high profile executives after a careful scrutiny via linking the achieved levels of performance to the related pay packages. The Walker Report suggested also that all executives should be awarded at least half of the expected value of variable pay in the form of LTIP subjected to some pre-awarding performance requirements, however these requirements would be challenging on eligibility - as 50 per cent of the awarded shares should not be available until at least 3 years and the remainder after a period of 5 years, in addition to the review did not propose any performance level or mechanism that has to be achieved by the board room executives. However the Code clarifies that the remuneration structure based on the deferment policy should not award a pay unless at least 40 per cent of it is deferred over a period not less than three to five years, while at least 60 percent of the amount should be deferred in the case of variable compensation component.

As the same as no absolute limit on executive remuneration has been imposed, the Code does not propose a targeted level of performance that has to be achieved by the board room members to award variable remuneration package. Besides that the Code requires that 50 per cent of any variable remuneration should be paid in shares, whilst the Walker Report recommended that the shares awarded as bonuses for the executive performance during the current year should be phased for a period of 3 years and the maximum amount should not exceed one-third of the total shares awarded in the first year. Furthermore the Code’s pension policy states that when a board executive member - who will leave the entity before the contract expiry - discretionary pension benefits are held by the firm in the form of instruments for a period of five years, while the Walker Report noted that any executive leaves the entity before retirement should not be entitled for a full pension whatever the pension size. The Walker Report recommended - based on the binding vote of firm shareholders - that the chair of the remuneration committee would need to stand for re-election at the following Annual General Meeting, if less than 75 percent of shareholders did not approve the Directors Remuneration Report.

As noted above for all UK quoted companies, whether the financial or non-financial, statutory requirement for disclosure and related issues in respect to directors' remuneration disclosure requirements in respect to directors' remuneration are governed by the Companies Act 2006 which has incorporated the requirements of the 2002 UK Directors' Remuneration Report Regulations. Beyond this additional non-statutory but quasi-mandatory requirements are contained within the Financial Service Authority's listing rules – in particular in respect to the approval of share plans by shareholders, the UK Governance Code – in particular in respect to the role of the remuneration committee and the design of performance related remuneration – the specific financial sector remuneration code, as discussed above, and more indirectly by the guidelines of UK institutional investor bodies.

Beyond this a likely future statutory development is that the shareholders vote on the Directors Remuneration Report will become binding. Recently the UK Prime Minister: David Cameron committed himself to this development<sup>18</sup> – although as yet relevant legislation has not been enacted.

#### **2.4 The Structure and Role of Remuneration Committees in the UK**

Remuneration (compensation (US)) committees with a formalised structure and role were largely a child of developments in corporate governance in the US in the 1970s. UK companies followed the US model relatively quickly, influenced by globalisation and the development of uniform approaches to governance, and perhaps led by those with multinational operations and/or dual-listing in the UK and the USA (Main and Johnston, 1993; Tricker, 1994; and Morck and Steier, 2005). As noted above, formal recommendations for companies and other similar entities to set up both audit and remuneration committees, if they did not already exist, were contained in the Cadbury Report together with guidance as to the structure and role of these committees. These recommendations have been carried forward with some revision in the various iterations of the Code through to the UK Governance Code of 2010. In that this study covers a number of years in which various Codes running through from 1999 to 2010 were operational, the

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<sup>18</sup>See, the BBC interview on 8 January 2012: <http://www.bbc.co.uk/news/uk-16458570>

description of the role and structure of the remuneration committee below is based on the 2008 Code<sup>19</sup> although differences in the various iterations are small.

According to the UK Combined Code on corporate governance (FRC, 2008), the remuneration committee is a sub-committee of the main board consisting only of non-executive directors as members. The number of members should be at least three (two for small companies) and not more than six. The committee should have a chairman from within its membership chosen by the board. The 2008 Combined Code does not specify the age of board room directors, but the Companies Act 2006 noted that board officers should not be less than 16 years old. Each remuneration committee should determine its meetings' rules and procedures, the suitable time and place for such meetings in frequent format, and committee attendance must cover the majority of its members in all meetings so as to direct their responsibilities effectively. Members who wish to leave the remuneration committee should do so in a timely manner notifying their resignation in writing. The appointment of new members is by the consent of the board. All expenses related to the members' attendance to compensation committee meetings would normally be paid, in addition to the fixed amounts in the light of the board policy regarding membership, accommodation, travel etc. As non-executive directors members of the remuneration committee will normally receive a fee but it is not unusual for a, normally relatively small, proportion of the fee to be dependent upon attendance at remuneration committee meetings.

As set out in the Code, the remuneration committee should inter alia monitor, set and approve the remuneration plans for the executive directors, evaluate on a continual basis the suitability of these packages, assess where appropriate the performance of executive directors monitored against these plans and other relevant information, ensure that minutes and reports emanating from the meetings of the remuneration committee are available to all board members, prepare and adopt the remuneration committee report which will be presented to the shareholders having been approved by the whole board.

As Reports and Codes from Cadbury and Greenbury onwards have stated the primary role of the remuneration committee is then to ensure that pay packages should be constructed sufficient to attract, retain and motivate directors of the quality required. They also

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<sup>19</sup>The 2008 Combined Code link: <http://frc.org.uk/Our-Work/Publications/Corporate-Governance/The-Combined-Code-on-Corporate-Governance.aspx>

emphasise the need to focus on the performance-related pay components of such packages which should be designed essentially to align the interests of directors and shareholders.

As such remuneration committees are now firmly embedded in the UK corporate culture, and indeed far beyond extending as they do to a whole range of commercial and public sector entities. How successful they have been in their ascribed role has been questioned periodically with concerns expressed both at the macro level – Has the performance of corporate UK improved in the last twenty years? Have they contributed to the widening of the gap between the pay of senior executives and average corporate remuneration over this period? – to more micro level and operational concerns. These more specific concerns include definitions of what constitutes a non-executive director (Main and Johnston, 1993)? An issue brought into greater focus by the Walker Report recommendation that the chairman of a large financial institution should spend at least 50% of his or her time working on behalf of the company. There are also issues as to whether executive directors should be allowed to participate in remuneration committee meetings albeit in a non-voting capacity (Braiotta and Sommer, 1987; FRC, 2008), questions as to the role and motivations of compensation consultants within the pay agenda and beyond this the wider questions posed in Gwilliam and Marnet (2009) as to the viability and suitability of a whole governance paradigm so heavily dependent upon the role and activities of non-executive directors. A number of these questions are addressed and discussed in more detail later in this study.

The establishment of a compensation policy to guide in the process of setting executive pay is an important part of the remuneration committee's role. Based on the 1998 Combined Code, Bender and Porter (2003) noted that this policy should frequently be reviewed to confirm that remuneration programmes are in accordance with business strategy and assure balance in the requirements of their shareholders, regulators and executives. Such a policy should be in accordance with the general precepts underlying the setting of executive directors' remuneration - essentially to preserve and attract those who will contribute successfully to better corporate progress (Hengartner, 2006). Beyond this overarching responsibility, the remuneration committee has the task of making recommendations to the board as to the implementation of the compensation policy in relation with setting the pay packages of individual directors. In this context the remuneration committee puts a focus on

addressing the composition of the reward package, i.e. the proportions of basic salary and performance-related payments, the components of performance-related payment, the amount of compensation paid to executives for expected performance, how should performance be measured, and how should performance targets be determined (Main and Johnston, 1993; Bender, 2004; FRC, 2008; Main et al., 2008; FSA, 2010 etc.).

The remuneration committee also has responsibility, via the board, for appropriate disclosure of remuneration policy and specific packages in the directors' remuneration report which is presented to the shareholders at the Annual General Meeting. At a minimum the disclosures must comply with the statutory requirements but there is no prohibition on further disclosure if the remuneration committee/directors consider that this is in the interests of the shareholders and/or wider stakeholders.

## **2.5 The Composition of Executive Directors' Remuneration Package**

In the UK executive directors' remuneration package typically consist of a number of separate compensation components. Typically these will include a basic salary and a number of performance related benefits – benefits which may be in the form of cash and/or shares. These benefits are normally related to measures of corporate performance both short and long term. There may also be pure stock options although these are not as common in the UK as they are in the US. Besides these key remuneration components, senior officers might be additionally awarded by a supplement package of reimbursements – for instance pension contributions, monetary pay allowances for housing etc., performance shares, stock appreciation rights, as well as one-off payments such as retention plans, or camouflage payments.

There is evidence that structures of executive directors' remuneration are semi-convergent on a global basis – but there are still significant differences both in the relative importance of the various component parts and also the absolute levels of remuneration. Over time in the UK the proportion of remuneration represented by base salary appears to have fallen somewhat as compared with specific performance related measures. In 1997, the average UK CEO compensation package in the largest UK publicly traded companies consisted of 53% base salary, 18% annual bonus, and 29% for non-cash items: including share options, LTIPs and other components; compared with 44%, 22% and 34% respectively in 2003. There was a similar trend in the US – although annual salary constitutes a small percentage

of the total than in the UK. The components of the average US CEO pay package from the S&P 500 firms contained 34% salary, 20% bonus, and the remainder for equity-based components in 1997; for 2003 the corresponding figures were 31%, 20% and 49% (Conyon et al., 2005). In fact Conyon et al's data indicates that equity based remuneration in the US is approximately five times higher on average than that in the UK. Not dissimilar results were obtained by Fernandes et al. (2010) who using 2006 data for CEO compensation found that US CEOs receive a lower proportion of their remuneration in basic salary than their counterparts in 14 other countries. The US CEOs compensation packages on average comprised 28% salary, 27% bonus, 39% in the form of stock options and restricted shares, and 6% for other pay components; whereas the average UK CEO package consisted of 42% salary, 19% bonus, 30% options and restricted shares, and 9% other payments and allowances. This study suggests that by 2008 the proportion of total compensation of CEOs and executive directors (including CEOs) in UK FTSE 350 companies attributable to base salary were only 23% and 26% respectively (see Figure 8).

In terms of overall remuneration there is evidence that US executive director remuneration is higher than in the UK. Conyon et al (2005) suggest that on average it was 1.6 times higher in the US than in the UK in 2003. Here however comparisons are complicated by factors relating to size and also to differences in structure and composition between UK and US boardrooms (historically US boards have had a lower proportion of executive directors as compared to non-executive directors as compared with the UK).

Within these broad categories there is a wealth of diversity in the manner in which packages are constructed to fit the circumstances of particular firms and individuals and this section seeks to consider further the nature of the separate components and to discuss their purpose and importance under the following headings: base salary; annual bonus; option grants; long-term incentive plans; retirement plans; benefit-in-kinds allowances; and camouflage payments.

### **2.5.1 Base Salary**

Prior literature (Murphy, 1999; Paddock, 2003; Mallin, 2007; Solomon, 2007 etc.) regards salary as the fundamental cash amount that should be paid for attracting suitably talented board members. This amount is determined both by market forces and by the experience

and background of the individual. It is normally set for a period of time, typically one year, and reviewed at the end of this period. Once agreed the sum is not normally open to adjustment in the relative period. Over time the basic pattern is that the base salary either holds steady or rises – it is unusual for base salary to be reviewed downward. Kim and Nofsinger (2007) noted that executive directors who are risk averse would prefer regular increases in basic salary rather than the raises in other pay components which are more variable and contingent in terms of outcome. Base salary is important not only in itself but because it is frequently benchmark for other bonuses, in particular the annual bonus which may well be a proportion or even a multiple of base salary (Murphy, 1999). As noted above, in recent years base pay has formed a smaller proportion of the overall remuneration package for executive directors – a shift which is normally attributed to a desire to align the remuneration of executive directors more closely with the interests of the shareholders.

There is an extensive literature (Fabozzi and Peterson, 2003; Rogers, 2004; Banks, 2004; Mallin, 2007; Kim and Nofsinger, 2007 etc.) that has investigated the determinants of base pay. These studies suggest that salaries are dependent not only on the executive characteristics (e.g. age, experience, historical performance etc.), but also on a number of business features (such as corporate size, capital structure, profitability etc.). Murphy (1999) and Kim and Nofsinger (2007) emphasise further the role of comparison and benchmarking, usually with industry or sector competitors in the setting of base salaries – a trend which may be seen as underpinned by the increasing role and importance of remuneration consultants.

### **2.5.2 Annual Bonus**

Reaching the appropriate, positive levels of company performance is clearly a major target of boardroom executives who are entitled to receive compensation in the form of bonus payments (Paddock, 2003). In the UK, bonuses normally comprise either an annual payment in cash (cash bonus) or a reward based on the issue of fully paid shares (performance bonus) or both – the amount being determined by corporate and individual performance during the financial period. As such bonuses may be considered to be rewards for prior-achieved performance, while salaries might be seen as a payment contingent upon future, as yet unachieved, performance (Kim and Nofsinger, 2007). Therefore the higher

levels of corporate performance in the near-past periods will lead to the higher amounts of annual bonuses for executives in the near-future intervals.

Fabozzi and Peterson (2003) suggest that ideally the assessment of executive bonuses should be based on current financial-performing measures as this will link in most directly with enhancement of the shareholders' interests. However this is difficult to implement in practice and the majority of the literature (such as Conyon, 1997; Cosh and Hughes, 1997; McKnight and Tomkins, 1999; Conyon and Sadler, 2001; Mallin, 2007; Ozkan, 2007; Sapp, 2008 etc.) identifies the link between annual bonuses and immediate past metrics (such as earnings per share (EPS), earnings before interest and taxes (EBIT), economic value added (EVA), return on assets (ROA), return on equity (ROE), market share price etc.). The majority of these relate to accounting number metrics – although they may be at an immediate remove from financial numbers (as is the case with metrics involving market prices) or linked to non-financial metrics, for example environmental or safety data. In this context Murphy (1999) raised questions as to the reliability and value of executive bonus plans entirely reliant upon financial metrics as the accounting numbers are, to an extent, under the control of executive directors who may be tempted to misuse them in their own personal interests. Nevertheless a wealth of prior studies including those of Donaldson and Davis, 1991; Bhagat and Black, 1999; Core and Larcker, 2002; Dalton et al., 2003; Adams and Mehran, 2005; Belkhir, 2009; Sigler, 2011; Coles et al., 2012 have highlighted the use of accounting-based performance indicators – and noted on occasion the role of governance structures including audit in controlling and mediating the manner in which the accounting numbers are produced.

### **2.5.3 Option Grants**

Stock options (i.e. contracts that allow executives to buy and sell shares at a specified price) are a dominant equity-pay component in the US but, although certainly not unknown, the use of pure options has been much less common in the UK as compared with the issue of fully paid shares under a long term incentive plans (discussed further below). The reasons for this are not entirely clear but may be embedded in differences in corporate culture between the countries. Until now, the recent Code and prior versions did not address in detail how share options are determined? - but they highlighted that executive share options should not be offered at a discount save as permitted by the relevant listing rules'



provisions, should be weighed against other kinds of long-term incentive scheme, and should not be exercisable, in less than three years. Further explanations are provided in Chapter 4 re the share options' calculation according to the guidance of IFRS 2 (Christian and Ludenbach, 2013).

Pure option contracts arguably are the most efficient means of directly aligning the interests of the managers with those of the shareholders but a number of factors have acted to limit their use within remuneration contracts. Risk averse managers may not wish to offer their services if options form a major or dominant part of their remuneration. Corporate outcomes are contingent upon a whole range of factors and managerial effort and ability does not in itself guarantee successful results. Option based remuneration might also have an impact on managerial choice of policy and strategy in that it might encourage managers to take more risky decisions than those desired by the shareholders and thereby increasing the firm's risk exposure (Cohen et al., 2000). Conversely Rogers (2005) and Wilkinson (2005) argue that managerial stock holding is likely to make managers more risk averse. There is also the possibility of manipulation and impropriety. Udemgba and Igwebuike (2009) document the scandals surrounding the backdating of options for the benefit of the option holders which came to light in the US in 2005.<sup>20</sup>

#### **2.5.4 Long-Term Incentive Plans**

Long-Term Incentive Plans (LTIPs) are compensation schemes available to board members designed to provide motivation for achieving longer term corporate goals and objectives (Paddock, 2003; Kim and Nofsinger, 2007; Mallin, 2007 etc.). They are more prevalent in the UK than in the US and the majority of large UK companies will have executive director remuneration schemes which contain LTIP aspects and features. The linking of executive rewards to longer term achievement has been encouraged in governance reports and codes from Greenbury onwards. Typically LTIPs are constructed so as to link the award of fully paid shares with the achievement of longer term targets, frequently updated on a rolling basis. These shares will not vest – i.e. be transferred to the executives – until a period of time, normally three or five years or a combination thereof, after their award. There may

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<sup>20</sup>As Udemgba and Igwebuike (2009) noted that Options' backdating is regarded as an illegal practice in which the institutional shareholders are misled as a result of changing the share contracts due for gaining additional funds through issuing these contracts on a later date than which the options have listed, or the technique by which the company accounts for the options coincide with low underlying stock prices.

well be provisions for the cancellation of all or part of the award if performance outcomes turn down during this vesting period – although in practice it is very rare for this to happen.

As Kim and Nofsinger (2007, p.15) stated, “*restricted stock is common stock of the company that includes a limitation that requires a certain length of time to pass or a certain goal to be achieved before the stock can be sold*”. Share restriction therefore is regarded as an essential compensation component for encouraging boardroom executives to run and act in the favour of company long-run interests (Murphy, 1999; Tyson and Bournois, 2005; Thomas et al., 2006; Kay and Van Putten, 2007 etc.). An extreme example was posited by Bhagat and Romano (2009) who suggested that managerial incentive schemes should comprise only of the potential award of restricted shares and options which cannot be sold or exercised until at least two to four years after the executive resignation or the last working day in the manner to assure the best efforts of board room members. Conventionally designed LTIPs are also seen as removing some of the contingent nature of compensation in that there will still be benefits from fully paid shares even if they fall in value whereas in the same situation options would be worthless (Tyson and Bournois, 2005; and Thomas et al., 2006).

### **2.5.5 Retirement Plans**

Retirement plans (pensions) for executive directors have received considerable publicity in recent years – most notably in relation to the generous pension entitlements available to departed executives of failed UK companies – for example RBS and HBOS. In previous years disclosures as to pension entitlements and the cost to the company of those entitlements were less than fully transparent and the cost of the schemes and this lack of transparency has given rise to a degree of conflict between boardrooms and institutional investors in some companies (GAO, 2004; and Global Investor, 2010). The great majority of schemes at boardroom level (non-executive directors do not normally have a pension entitlement) are defined benefit in nature and therefore give rise to a liability which is now brought onto the company balance sheet under IAS 19. In recent years these liabilities (and the associated charge to the income statement) have grown markedly as a consequence of increasing executive compensation, greater longevity and a sharp fall in the rate used to discount the liability forward.

## **2.5.6 Benefits-in-kind Allowances**

Benefits-in-kind (such as accommodation benefit, company car allowance, relocation expenses, private medical insurance etc.) are generally regarded as indirect benefits whereby executive directors receive goods or services free or at greatly reduced cost (Murphy, 1999; Paddock, 2003; Kim and Nofsinger, 2007; Mallin, 2007 etc.). Such benefits are substantial in nature as they may also incorporate tax advantages either for the recipient or for the company (Alcouffe and Alcouffe, 2000). The level of such benefits, although not insignificant, is usually a relatively small proportion of overall compensation and only occasionally do they attract specific concern and publicity (Murphy, 1999). As the 1998 Combined Code mentioned that levels of benefits-in-kind and related allowances are normally determined by the remuneration committee in accordance with the particular circumstances of the company and of individual employees. They are also influenced by the nature of the packages offered by industry or sector competitors or by other companies of a similar size.

## **2.5.7 Camouflage Payments**

The term ‘Camouflage payments’ covers a range of payments and pay related agreements which do not appear directly within the basic remuneration package – and as the name suggests may be less transparent to shareholders and other stakeholders (Bebchuk and Fried, 2004b). Amongst the range and variety of such payments are included: golden hellos; goodbye payments; and executive loans.

A “golden hello” is, as the name suggests, an incentive offered to attract talented executives to join the corporate board room. As such they are relatively transparent in that they would normally entail an upfront cash payment or the immediate grant of shares or options (Murphy, 1999). To take a US example James McNerney Jr received two separate golden hellos from his new employer General Electric as well as compensation for the loss of bonuses, options, stocks and options from his previous employer (Creswell, 2006)<sup>21</sup>. In the UK, for instance, AstraZeneca provided a special bonus as “golden hello” worth £4 million

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<sup>21</sup> See, the New York Times report:  
<http://www.nytimes.com/2006/12/29/business/29whole.html?adxnnl=1&pagewanted=all&adxnnlx=1382443264-JmpoTxitT4wMteu+tg9tBQ>

for its new CEO, Pascal Soriot, as a compensation for his bonuses' sacrifice when he left Roche.<sup>22</sup>

Conversely “golden goodbye” or “parachute” payments refer to rewards received on the departure, voluntary or otherwise, of senior executives. In a number of instances these have attracted significant adverse publicity being seen as rewards for underachievement or poor performance. In the past transparency relating to these payments has been limited particularly in relation to whether these payments related to contractual arrangements previously entered into or were genuinely ex gratia in nature (Bebchuk and Fried, 2003). In France, for example, Philippe Jaffre, the former PDG (i.e. Président-directeur général<sup>23</sup>) of Elf Aquitaine Oil Company, received FF 40 million as parachute payment (Alcouffe and Alcouffe, 2000).

Executive loans, frequently granted at preferential rates, have been quite widely used as a form of executive compensation in the US in the 1990s and early 2000s but they were banned in 2002 – normally for the nominal purpose of assisting senior executives to purchase shares or bonds in the company (Kahle and Shastri, 2004). As Bebchuk and Fried (2004a) discussed that the companies granting executive loans either at no interest or at below the market rate, and in either cases the loans might often be forgiven. WorldCom is the most notable case of granting loans to executives which loaned millions of dollars, worth approximately 20% of the cash on the firm's balance sheet, to its CEO, Bernard Ebbers. Their use in the UK has been much more limited especially in relation to directors because of the long standing company law prohibition on companies lending money to officers of the company (now contained in CA2006 s197-214). However loans are in fact possible subject to agreement by a resolution of the members of the company (CA2006, section 197) - but this is rare, if not unheard of, for quoted companies.

Beyond this a range of implicit or explicit remuneration might be available, for example making up tax clawbacks on pension arrangements, future consultancy work or work as a director of an associate or related pension company etc. Again although the numbers are not normally very large proportionate to the main remuneration package they do again raise

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<sup>22</sup> See, the FiercePharma report:

<http://www.fiercepharma.com/story/uk-funds-lambaste-astrazeneca-ceos-4m-golden-hello/2013-04-16>

<sup>23</sup> This title is a French business title and office equivalent to both the chairman of a board of directors and a chief executive officer.

issues of approval, disclosure and transparency. Here one particular example is the common practice of executive directors being allowed, and on occasion encouraged, to take up non-executive director positions with other companies.

To conclude – the nature of the executive remuneration package is typically twofold. The first part – which might be characterised as the stable element is that constituted by base executive compensation (for example salaries, pensions and allowances) which are to an extent independent of the level of company performance. The second part, which is likely to exhibit much greater variability (for example bonuses, options, LTIPs and other equity incentives) which have a more direct relationship with corporate progress and success (Greenbury, 1995). As such performance-related compensation is seen as more efficient in aligning the interests of executives and shareholders as compared with the more fixed elements of remuneration. As Spong and Sullivan (2007, p.4) stated, *“Owner managers will not only benefit financially from their salaries in running a bank, but, as stockholders, they will also be rewarded for good performance through their claim to bank earnings and capital appreciation. Hired managers with little or no stockholdings, on the other hand, will have their principal compensation coming through their salary”*. Therefore, the ownership package of executive directors is regarded as an important instrument of corporate governance in mitigating the agency problem between the agents and the principals.

## **2.6 The Transparency of Executive Directors’ Remuneration in the UK**

Do corporate stakeholders, and in particular the shareholder body, actually receive sufficient information about executive directors’ remuneration in a comprehensible and understandable form? In the US, Kim and Nofsinger (2007) called for further disclosures to institutional shareholders as to the amounts and composition of the remuneration obtained by corporate CEOs and other boardroom executives – suggesting that disclosures were less detailed when company performance was at a low ebb. Others too have noted a contrast between the trend toward increased CEO remuneration and relatively flat overall economic performance. For example, Hall and Liebman (1998) reported that the CEOs’ direct remuneration (including salary, bonus, and option grants) increased by 136% at the median and 209% at the mean in a sample of the largest US companies from 1980 to 1994, while the overall firm profitability was decreasing. Another example, Fabozzi and Peterson

(2003) noted that the CEO of AT&T Company received salary and bonus of \$5.2 million and options valued at \$11 million in 1995 – but the shareholder body were unhappy as the average annual return on AT&T shares from 1996 till 2001 was negative by 23.19%.

In the UK Greenbury (1995) highlighted disclosure and transparency as a fundamental principle underlying the governance aspects of board room compensation. As noted above, historically the statutory requirements were very limited and disclosure beyond these requirements was largely voluntary albeit more recently strongly encouraged by Greenbury and the Combined Code. For quoted companies the level of statutory disclosure was greatly enhanced by the requirements of the Directors' Remuneration Report Regulations (2002). This required a special report to be laid before the shareholders at an annual general meeting which should, inter alia, contain disclosure of individual amounts paid to each director differentiated between fixed, variable and share-based compensations. These requirements are now contained in the Companies Act 2006.

According to the Section 420(1) of the UK Companies Act (2006), UK quoted companies have to prepare Directors Remuneration Reports (DRRs) for each accounting period. Details as to the disclosure requirements are contained in Schedule 8 of the Act. A checklist of these requirements for quoted companies under the Companies Act (2006) is to be found in Deloitte (2008)<sup>24</sup>. Following a developed proposal for the reform of the disclosure and corporate governance framework for executive directors' remuneration of quoted companies was issued by the Department for Business Innovation and Skills (BIS) in June 2012<sup>25</sup>, a second version of the draft was published on 12 March 2013<sup>26</sup> and is coming into force on 1st October 2013. This amended draft proposed that the directors' remuneration report will be categorised in two key parts. First part contains a prospect policy of remuneration which should be approved by the shareholders at least every three years,

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<sup>24</sup>Deloitte (2008, April), Directors' Remuneration Disclosure Checklist for Quoted Companies: <http://www.deloitte.com/assets/Dcom-UnitedKingdom/Local%20Assets/Documents/Services/Audit/Corporate%20Governance/Checklists/uk-audit-cg-directors-remuneration-checklist-nov11.pdf>

<sup>25</sup>Directors' Pay – Consultation on Revised Remuneration Reporting Regulations: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/31358/12-888-directors-pay-consultation-remuneration-reporting.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/31358/12-888-directors-pay-consultation-remuneration-reporting.pdf)

<sup>26</sup>The Large and Medium-sized Companies and Groups (Accounts and Reports) (Amendment) Regulations 2013: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/138335/bis-13-717-draft-large-and-medium-sized-companies-and-groups-accounts-and-reports-amendment-regulations-2013.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/138335/bis-13-717-draft-large-and-medium-sized-companies-and-groups-accounts-and-reports-amendment-regulations-2013.pdf)

under the proposed new Section 439A of the Act. Second part comprises of an implementation report of remuneration which will be required per annum and will be subject to an advisory vote in accordance with Section 439 of the Act.

Responsibility for the preparation of the DRR lies immediately with the company registrar (Section 441(1) CA 2006). The DRR should be presented to all interested parties - such as institutional shareholders, debenture holders, and other members - at the Annual General Meetings (Section 423(1) - Companies Act, 2006). Section 439(4) of the Companies Act 2006 requires that the shareholders should vote to approve or otherwise the DRR presented to them. Although this vote is advisory only nevertheless any significant opposition to a DRR is taken as a signal of shareholder dissatisfaction and may well influence company behaviour in respect to actual or future remuneration packages. Recent examples of shareholder dissatisfaction include votes at Aviva, Centrica and Barclays<sup>27</sup> and, as documented in Chapter 6 of this thesis, at BP case study analysis.

According to Schedule 7A of the Companies Act 1985 which sets out the content of Directors' Remuneration Report and by which the 2002 UK Directors' Remuneration Report Regulations (FRC, 2002)<sup>28</sup> contained further guidance, certain parts of the DRR are required to be audited by the company's statutory auditor. Information that has to be audited includes the numerical amounts relating to emoluments and compensations, stock options, LTIPs, pensions and retirement benefits, and external directorship fees. Aspects which are not subject to audit include matters relating to directors' remuneration, the remuneration policy statement, the performance review and details of service contracts which cover the associated factors for the pay framework. Section 497 of the Companies Act (2006) sets merely out those parts of the DRR which are subject to audit. This auditable part is further identified under Section 421 of the Act (2006) which highlights that the

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<sup>27</sup>See, the Guardian report:

<http://www.guardian.co.uk/business/2012/may/03/aviva-shareholder-rebellion-executive-pay>

See, the Telegraph report: <http://www.telegraph.co.uk/finance/newsbysector/energy/9261237/Centrica-shareholders-revolt-against-executive-pay.html>

See, the Telegraph report:

<http://www.telegraph.co.uk/finance/newsbysector/banksandfinance/9229527/Third-of-Barclays-shareholders-set-to-vote-against-chief-Bob-Diamonds-remuneration-package.html>

See, the Huffington Post report:

[http://www.huffingtonpost.co.uk/2012/05/25/hsbc-10-of-shareholders-v\\_n\\_1545586.html](http://www.huffingtonpost.co.uk/2012/05/25/hsbc-10-of-shareholders-v_n_1545586.html)

<sup>28</sup>The UK DRRR 2002 – Statutory Instruments link:

[http://www.legislation.gov.uk/ukxi/2002/1986/pdfs/ukxi\\_20021986\\_en.pdf](http://www.legislation.gov.uk/ukxi/2002/1986/pdfs/ukxi_20021986_en.pdf)

possibility of Secretary of State to make provision by regulations as to what is to be the auditable part of the DRR. Further insights has been included in the 2013 proposed draft of the disclosure of executive directors' remuneration reports regarding the auditable aspects of the DRR, including total amounts of remuneration for each director and their related definitions, additional disclosure of the payment amounts, pension entitlements, variable pay awarded in relation the achievement of performance conditions in the future, statement of performance targets, and loss of office payments – but still certain aspects are not subject to audit, such as statement of directors' shareholding and share interests, the performance review, percentage increase in remuneration of CEO, matters relating to directors' remuneration, and statement of shareholder voting.

## **2.7 Conclusion**

This chapter provides an introductory overview of the institutional and regulatory background of boardroom executive compensation. It sketches out the relevant history as it has developed from a situation where directors' remuneration was very much a matter internal to the company, its board and the shareholders to the present day situation where there are wider influences from both guidance and statute. Guidance has come with the recommendations of various reporting bodies, most notably the Greenbury Committee (Greenbury, 1995), carried forward in various iterations of the Combined Code and now incorporated into the UK Governance Code (FRC, 2012). It is also contained in statute, most notably in the Directors' Remuneration Report Regulation (FRC, 2002) now carried forward into the 2006 Companies Act. Particular provisions relating to the banking sector building on the work of the Walker Report are also considered.

Further to this the focus turns to remuneration committees, their composition and structure, and their role in setting a framework for executive director compensation. Beyond this the remuneration committee has the task of sustaining the alignment of executive directors' pay to company performance. This association opens the arguments on the performance role of remuneration committees not only in designing and policing the executive pay contracts (Main and Johnston, 1993), but also in choosing and arranging a compensation package in a manner that ensure the effectiveness of boardroom members in taking efficient decisions in the best favour of the corporate performance (Main et al., 2008). This in turn leads on to consideration of components of the typical remuneration package either linked or not to



performance with reference to: base salary, annual bonus, share options, long term incentive plans, retirement benefits, benefits in kind and finally a general category loosely termed camouflage payments.

The final section of the chapter focuses on requirements for disclosure and wider aspects of transparency as contained within the Directors Remuneration Report. The importance of this Report as a means of communication between the company and its wider stakeholders, in particular the shareholders, was highlighted. There was also reference to the increasing willingness of shareholders to register dissatisfaction with all or part of the remuneration policy and structure of the company by voting against the Directors Remuneration Report at a company general meeting. In this context the proposals to make the relevant shareholder vote binding not advisory were noted.

Going forward the next chapter provides a more detailed review of literature covering linkages between managerial compensation and company performance identifying a number of gaps in the extant literature. Literature relating to underlying conceptual issues and theoretical perspectives is reviewed so as to ground the present study within a wider framework from which relevant hypotheses can be developed and tested. In this respect chapter three explores prior literature on executive compensation and firm performance associations, identifies any gaps in the existing literature, outlines the theoretical framework adopted by the current study, and provides the implications of the underlying conceptual structure on pay-performance and performance-pay frameworks.

# Chapter 3

## **LITERATURE REVIEW AND THEORETICAL FRAMEWORKS ON EXECUTIVE COMPENSATION AND COMPANY PERFORMANCE**

## **Chapter Three**

### **Literature Review and Theoretical Framework on Executive Compensation and Company Performance**

#### **3.1 Introduction**

This chapter builds on the introduction and background contained in Chapters One and Two in two ways. First, it identifies prior literature which has examined the relationships between executive pay and firm performance, noting areas which to date have been relatively under-researched. Second, it provides a review of underlying theoretical perspectives which are employed by prior literature as a means either to establish the appropriate procedures for setting executive compensation or to act as explicators for the type of structures of these pay packages. Such theoretical framework provides support in depicting the conceptual structure for the study's objectives and the required guidance in explaining such linkage between managerial compensation and company performance.

This chapter therefore is organised as follows. After this brief introduction the second section provides a review of the implications of relevant prior literature on the linkages between executive compensation and company performance. The third section highlights the gaps in existing academic literature, and explores possible reasons for the failure of prior studies to establish consistent results. The fourth section covers a number of diverse, but interrelated, theoretical perspectives which support either the examination of the interrelationships between executive pay and firm performance (that would conform with the purpose of the empirical study) or the assessment of the appropriate mechanisms and procedures for setting executive remuneration (that would fit with the nature and scope of the case study). The fifth section emphasises the implications of these theoretical perspectives on pay-performance and performance-pay frameworks. The final section provides an overall conclusion regarding the literature review and theoretical framework.

### **3.2 Literature Review– Discussion of Prior Research on Executive Compensation and Company Performance Relationships**

Associations between boardroom compensation and institutional performance have frequently been a key axis of debates within the overall corporate governance framework and the last two decades have witnessed a widening and intensification of academic study and investigation of the relevant phenomena. Accordingly this review of the prior literature highlights recent empirical research on the linkage between pay and performance (in the UK and elsewhere), with a particular focus on the contribution of academic literature in examining the two-way relationships between the level and structure of executive pay and corporate performance within a set of corporate governance mechanisms.

The primary focus of prior studies has been on the pay-performance link which highlights the effect of firm performance levels on the type and amount of executive directors' remuneration based on the theoretical perspectives of pure agency and managerial hegemony, thereby largely abstracting from the potential endogenous associations between performance and compensation packages. Across the spectrum of empirical studies the results have overall been mixed with a dichotomy between those studies which report a direct association between executive compensation and firm performance and those which find at best a weak relationship or indeed none at all when other interconnected indicators (such as corporate size, mechanisms of governance and ownership etc.) are taken into account.

Perhaps the majority of early UK empirical studies on executive pay and company performance fall into the latter category. These include those of Gregg et al., 1993, 2011; Conyon et al., 1995; Conyon, 1997; Cosh and Hughes, 1997; Conyon and Peck, 1998; Conyon and Sadler, 2001. Whilst finding some direct linkage between pay and performance the relationship tended to be a weak one and many other factors were also identified as intervening in or influencing the relationship as direct, but heavily linked by weak sensitivity. For example, Gregg et al. (1993) reported a weak sensitivity in pay-for-performance association for 288 firms over the years 1983-1991. Gregg et al. (2011) found that the cash-plus-bonus pay-performance sensitivity of financial companies (comprising banks, insurance companies, and real estate and speciality finance firms) is not significantly higher than non-financial firms for 415 UK companies, included 59 financial institutions,

over the period 1994 to 2006. Conyon et al. (1995) also reported that the pay-for-performance link was neither strong nor consistent by providing an example of one UK Company (i.e. Arjo Wiggins Appleton PLC, as ranked 71 in the Times Top 1000) in 1995 because it did provide good information on executive compensation at that year. Conyon (1997) looked only at cash pay for a sample of 213 large UK companies between 1988 and 1993, and again found only a weak relationship between directors' remuneration and current and pre-dated shareholder returns highlighting in this instance the importance of remuneration committees in influencing remuneration. Cosh and Hughes (1997) concluded that executive compensation positively related to both shareholder profitability and share returns and to size but that the latter was the most significant influence for 64 UK electrical engineering companies over the years 1989-1994. Conyon and Peck (1998) found the alignment between top management pay and firm performance is weak in companies without outsiders-dominated boards and remuneration committees for a sample of 94 FTSE 100 companies over the period 1991-1994. Conyon and Sadler (2001) found the link between managerial pay and performance was small and weak for 532 executive within 100 large UK stock market companies in 1997. Beyond this they also considered a preliminary framework for study of the alternative performance-pay association reviewing the theoretical evidence on the tournament models and their role in incentivising lower level executives by means of generous remuneration packages for higher level executives.

A number of studies have gone beyond immediate cash compensation to include equity based compensation and other benefits. In the UK Main et al. (1996) was among the first academic studies that utilised the value of option grants as an indicator of equity-based compensation besides the cash pay components to yield a comprehensive total remuneration figure for the highest paid director for a sample of 60 companies for the period 1983–1989. They found limited sensitivity of total compensation including share options to share performance. In contrast McKnight and Tomkins (1999) demonstrated a strong pay-performance link between executive director remuneration and accounting profits and total shareholder return across a sample of 109 companies from 1991-1995. They were the first academic study for the UK context to split total remuneration into salary, annual bonus and share options to verify how each component is related to performance. They also found significant results when they broke down the compensation packages into their separate components, in particular noting that base salary was largely

influenced by company size and that although the linkage between base salary and firm performance was positive it was weak in nature and significance.

Although the results of UK focused research have been mixed and inconclusive, research in the US has suggested a clearer link between senior level compensation and firm performance. These studies include those of Jensen and Murphy, 1990; Hall and Liebman, 1998; Aggarwal and Samwick, 1999; Attaway, 2000; Rupp and Smith, 2002; Bebchuk and Fried, 2003, 2004b; Conyon et al., 2005 etc. Jensen and Murphy (1990) reported no correlation between pay and performance for a sample of 2,213 US CEOs from 1,400 companies over the period between 1974 and 1986 – as chief executive officers' wealth rises by only \$3.25 for every \$1,000 increase in shareholder wealth. In this line, Attaway (2000) found again a weak association between compensation (salary plus bonus) and firm performance, measured by ROE, for a relatively small sample of 215 US CEOs from 42 firms in the computer and electronics industry over the years 1992-1996. In the contrast, Hall and Liebman (1998) found a strong significant link between compensation, measured by changes in the value of CEO holdings of stock and options, and performance for 15-year panel data set (1980-1994) of CEOs in 478 large US companies. They reported an increase of the remuneration of the median CEO by more than 50% for a moderate change in company performance, which represents an increase in CEO wealth of \$1.8 million. Aggarwal and Samwick (1999) found also positive link between total compensation for the top five executives (ranked annually by salary and bonus) and performance at 1500 of the largest US publicly traded corporations over the period between 1993 and 1996. Bebchuk and Fried (2003) reported that weak corporate governance structure leads to an inefficient design of compensation contracts due to the influence of managerial power. For instance, compensation for CEOs and top executive members will be higher in firms where they have more power, or the board is relatively weak. In 2004 they analysed theoretically stealth compensation, known as camouflage payments, in terms of retirement benefits provided to directors of public companies in the US context, and suggested several changes in disclosure requirements aimed at putting retirement payments on shareholders' radar screens. They reported also that high compensation may reflect the power of managers in designing their pay packages and indeed indicates weak governance of the company. As discussed earlier in Chapter Two, Conyon et al. (2005) provided an empirical comparative study between US and UK CEO compensation - comprising the total of cash pay, stock and

option grants, and other pay - in cross section and in time for two separate years 1997 and 2003, based on 1,663 US and 235 UK CEOs in 1997 and 1,495 US and 240 UK CEOs in 2003. They examined whether the US CEO pay appears unusually high by utilising the UK CEO compensation as a benchmark, and reported that US CEOs have higher compensation and much higher incentives than UK CEOs.

Executive compensation studies have been carried out against a background of changes in the overall governance paradigm, as described in Chapters One and Two. A number of studies have sought to examine the effect of corporate governance mechanisms over time on the level and structure of executive compensation (Ozkan, 2007; Sapp, 2008 etc.), or the indicators of firm performance (Agrawal and Knoeber, 1996; Berger et al., 2005; Abdullah and Page, 2009; Brown and Caylor, 2009 etc.), or the relationship between pay and performance (Canyon, 1997; Lee et al., 2008 etc.). Regarding the pay-governance link, Ozkan (2007) investigated the influence of corporate governance mechanisms on the level of CEO compensation for a sample of 414 large UK companies for the fiscal year 2003/4. Ozkan (2007) found that firms with larger board size and higher proportion of non-executive directors pay their CEOs higher compensation, while there is a significant negative relationship between institutional ownership and block-holder ownership and CEO compensation. Sapp (2008) examined the relationship between the compensation of the top five executives at a set of 416 publicly listed Canadian firms and various internal and external corporate governance-related factors over the period from 2000 to 2005. Sapp (2008) concluded that variances in the characteristics of the CEO, compensation committee, and board of directors as internal measures of corporate governance do influence both the amount and structure of executive compensation; whilst different types of shareholders and competitive environments as external indicators of governance do affect executive compensation.

According to performance-governance relationship, Agrawal and Knoeber (1996) used seven factors of corporate governance and suggested that these factors are interdependent and that no one governance structure suits all firms. They found significant linkages between firm performance, measured by Tobin's Q, and four of the governance mechanisms for a sample of 383 large US companies in 1987. Abdullah and Page (2009) found variability in the association between governance mechanisms (i.e. board

independence and size, and block and directors' holdings) and performance indicators (e.g. Tobin's Q, ROA, and ratio of sales to total assets) in FTSE 350 companies over two three-year sub-periods 1999-2001 and 2002-2004. They also found little evidence that independence or board size is related to either Q or ROA, whereas they both have a strong negative association with Sales Asset Turnover during both sub-periods. Brown and Caylor (2009) utilised 51 individual governance factors provided by Institutional Shareholder Services (ISS) and related them to operating performance measures (i.e. ROA and ROE) for 2363 US firms in 2003. They found six corporate governance provisions that are significantly and positively associated with ROA, ROE or both.

Regarding the link of governance mechanisms on the linkage between compensation and performance, Conyon (1997) concluded that large UK companies that adopted remuneration committees are seen generally to have lower growth rates in top managerial compensation, whilst the separation of CEO and chairman roles appeared to play no part in shaping directors' remuneration. Lee et al. (2008) looked only at a compensation element (i.e. dispersion of compensation across managers) and its impact on firm performance, measured by Tobin's Q or stock performance, for the listed US firms over the years 1992–2003. They found company performance is positively linked to the dispersion of managerial compensation, and good structure of corporate governance in terms of board independence strengthens the positive relationship between firm performance and pay dispersion.

Academic literature using data from countries other than the UK and US (Kaplan, 1994a, 1998; Kato, 1997 in Japan; Kaplan, 1994b, 1998 in Germany; Zhou, 2000; Sapp, 2008 in Canada; Matolcsy, 2000 in Australia) have again suggested mixed relationship between boardroom remuneration package and company performance although significance levels have not always been that high. The findings of these studies also indicate that trend of pay-performance sensitivity may not only be company specific, but are also likely to be influenced by country-level institutional and cultural features. For example, Kaplan (1994a) found a negative linkage between managerial pay and firm efficiency for 119 large Japanese companies over the period 1982-1984, while in 1997 Kato found positive relationship between CEO compensation of 154 large Japanese firms and company performance, measured by ROA, during the 1985 year. Also Zhou (2000) reported positive



and robust association between executive compensation (measured by salary and bonus, and total cash pay including long-term incentives) and corporate performance for a sample of 775 Canadian companies over the period 1991-1995. Sapp (2008) demonstrated similar direct links between higher executives' pay and firm performance for 416 Canadian companies over the years 2000-2005. In Germany Kaplan (1994b) reached similar findings to the results of his research in Japan context. Matolcsy in 2000 reported that executive directors' bonuses are the largest component of compensation in major Australian companies and are based mainly on the accounting performance measures rather than the market indicators. It also highlighted the influence of the status of the economy on the setting of target annual performance. In terms of a link between pay and performance, no significant association between cash compensation and corporate performance were found during periods of economic downturn but positive associations did exist during the periods of economic growth for a random selected sample of 100 Australian companies, in which the finance sector (including banking, investment, and insurance firms) is represented by 15 companies, over the period between 1987 and 1995.

In recent years a growing number of researchers have investigated the influence of executive directors' remuneration on firm performance via conceptualising remuneration as a promotion tool (Devers et al., 2007) - in which compensation package can be adopted as a predictor rather than a predicted variable. Consequently the theoretical perspectives of stewardship and/or tournament might perhaps be introduced as alternative approaches to the linkage between executive directors' remuneration and firm performance through adopting attractive and/or sufficient incentive plan for enhancing prospect company performance. The majority of academic studies which adopted the impact of executive directors' remuneration on company performance are largely witnessed in the US. For example, Falato et al. (2011) examine empirically the linkage between CEO productive abilities and their compensation, and conclude that total compensation of CEOs is positively associated with their talents for a sample of 2,195 US CEO succession events from 20,904 firm-year observations over the period 1993-2005, which is consistent with the argument that talented CEOs have superior ability to make value-added decisions for shareholders. An earlier study Leonard (1990) examined the effects of executive compensation policy on the corporate performance, and reported a strong significant link between long-term incentives of executive directors and ROE for a sample of 439 large US

companies over the period between 1981 and 1985. Mehran (1995) examined the executive directors' remuneration structure of 153 US manufacturing companies over a two-year period (1979-1980), and found that the percentage of equity, shares and options held by executive members was directly related to firm value proxies (Tobin's Q and ROA). Smith (2008) focuses on the compensation packages of a large sample, 15,611, of CEOs of US firms over the period 1993 till 2002 to determine whether equity "flow" incentives improve company performance. The study found CEOs' stock options and bonuses were positively related to both market valuation measures (Tobin's Q) and operating performance measures (ROA). As noted above, Lee et al. (2008) investigated the performance-pay framework for the listed US firms over the years 1992–2003, and reported a positive and robust association between corporate performance and the dispersion of managerial compensation.

To date there have been few, if any, UK empirical studies which have investigated this phenomenon although as noted above Conyon and Sadler (2001) did extend their pay-performance approach toward a performance-pay basic framework by reviewing the evidence on tournament theory, but did not carry out a consistent empirical investigation in relation to the latter. They established a relationship between company performance and managerial incentives controlled only by volatility and market value, and reported a positive and robust association between ROA and total board pay-performance sensitivity for 100 large UK companies in the fiscal year 1997/8. After showing findings, they stated on page 164 that *"However, we are keen to emphasize the exploratory nature of our results and our desire to stimulate further research in this area. The effect of incentives on firm performance is perhaps the acid test of whether the corporate governance system is working well or not."*

To date the performance-pay association has received less attention in prior literature, although the focus of modern management strategies has shifted toward an emphasis on the manner in which the overall company performance will be enhanced through providing an attractive and/or sufficient reward scheme for their board room members (Falato et al., 2011; and Lazear, 1998), consistent with stewardship and/or tournament perspectives.

### **3.3 Literature Gap in Executive Compensation and Company Performance Relationships**

Relationships between managerial compensation and corporate performance have been widely aired, considered and investigated in academic literature since the 1970s. The research has focused on normative (i.e. explicative) studies of how executive compensation packages should be, or are actually, set, based on a number of theoretical perspectives including agency, managerial hegemony, tournament, legitimacy, institutional, social networks, stewardship, etc. The majority of empirical studies have tried to relate the amount and type of executive pay packages to certain company related variables (such as shareholders' ownership, boardroom size, duality role, etc.), or to establish relationships between the nature of executive remuneration and firm performance. These studies have yielded conflicting results and are beset by issues of causality, timing, data availability and structure, etc.

This literature utilised executive pay as either a predictor, or a predicted variable within the framework of the relationship between managerial compensation and company performance; and also the manner in which this relationship is influenced by a variety of other variables (including corporate governance mechanisms and ownership structure, boardroom structure and composition, and a variety of firm related characteristics – size, growth, leverage, sector etc.). However in these studies the direction and size of the relationship between executive pay and firm performance has been considered largely from the perspective of a pay-performance framework, with less focus in the literature on theoretical or empirical examination within a performance-pay framework. Therefore, the current research seeks first to extend the existing empirical investigation beyond the focus on a single impact between pay and performance by conducting a detailed comparative study using a large sample of more recent UK data subsequent to a series of UK reports being issued to strengthen the internal corporate governance (including the 1992 Cadbury report, the 1995 Greenbury report, the 1998 Hampel report, the 2002 UK Directors' Remuneration Report Regulations, the 2003 Higgs report, the 2006 Companies Act, and the 2008 Combined Code).

As noted above, with relatively few exceptions, there has been little empirical or qualitative based work focused within a performance-pay framework. In the UK a single quantitative

empirical study has been identified (Conyon and Sadler, 2001), while the academic literature contains little in the way of qualitative type archival work which seeks to obtain a greater understanding of the reality of the manner in which executive compensation is set. Bender (2003, 2007) and Main et al. (2008) are seen as intended to approach such issues from either a theoretical or qualitative perspective through utilising the interview-based approach in the UK context. Bender (2003) addressed the question 'how is the directors' remuneration determined?' by conducting 11 interviews with executives, non-executive directors and their consultants involved in the remuneration-setting process to determine the processes undertaken and the factors affecting their decisions at two UK utility companies. Bender (2003) analysed the results through two theoretical lenses (institutional and legitimacy theories), and found that the amount and composition of compensation were generally influenced by the market, however two separate market-based indicators were used - salaries were determined based on the market comprising companies in the same sector, or in the same FTSE grouping; whilst a different market is utilised to determine company performance when evaluating LTIPs. Bender (2007) examined a number of the underlying reasons for the continued increase in executive compensation by reporting the findings of 40 interviews with the key people involved in the remuneration debate at twelve UK listed companies. Based on agency and expectancy theories, Bender (2007) reported that remuneration policies have become more performance-related, and showed that changes in schemes are made to motivate the board executives for obtaining rewards when they can meet the required targets. Main et al. (2008) explored the adequacy of the agency approach in representing how remuneration committees design executive compensation contracts by interviewing 22 members of various UK remuneration committees in 2006. They suggested that remuneration committees seek legitimacy for their decisions by recourse to norms and rules for the purpose of isomorphism in process and practice.

This study then seeks to address this perceived gap in the existing literature in the UK by providing initial results of a large scale quantitative study which encompasses aspects of both the pay-performance and performance-pay frameworks with the ambition to determine whether managerial compensation is the greater influence on firm performance or whether it is the latter which has the greater influence on the former? It also seeks to extend existing qualitative research by means of case study work using a major UK based multi-national as the research site – again approaching the relevant issues within a wider theoretical field

than that utilised by the majority of previous studies. Therefore, the second ambition of the current research is to conduct an archive-based case research with the aim to investigate, if any, the behavioural and institutional factors, in particular those relating to the remuneration committee, which play a significant role in determining the composition and size of executive compensation by reviewing what is possible to learn from the information contained in the Directors Remuneration Reports. These issues have not specifically been addressed by previous studies.

Overall, the major contribution or originality of the extant study is to empirically examine the interrelationships between managerial compensation and company performance in FTSE 350 companies, and to qualitatively investigate and understand the mechanisms and structures which determine executive compensation packages in the particular multinational company in question. Therefore, a collaborative study is needed to quantitatively and qualitatively examine the associations between executive directors' remuneration and company performance.

### **3.4 Underlying Theoretical Frameworks - Executive Compensation and Company Performance**

Over the years a number of diverse, but interrelated, theoretical structures that have been developed which have sought either to normatively establish appropriate mechanisms and procedures for setting senior executive remuneration or to act as explicators for the type of structures that exist and the manner in which they have developed and changed. These theoretical approaches are themselves rich and varied but here it is sought to categorise them in terms of their general approach and tenor under the following headings: agency; managerial hegemony; stewardship; tournament; and institutional.

#### **3.4.1 Agency Theory**

Agency theory - widely defined - has had a very significant influence in the economics and finance literature extending back for many decades (Muth and Donaldson, 1998). Its specific application to the theory of the firm and managerial compensation in particular emphasises, in its most simplistic form, the contradictory motivations of professional managers of firms (the agents) who are hypothesised to be seeking to obtain high rewards

whilst minimising their effort and the owners of firms (the principals) whose ambition is to maximise their returns from ownership within appropriate risk categories. In their classic book Berle and Means (1932) drew to the wider public attention the increasing separation between the class of professional managers and a diverse collection of owners, individuals, institutional shareholders etc and provided an initial discussion of the problems arising therefrom. From the 1970s onwards the application of agency theory notions to the theory of the firm and issues of compensation became increasingly more sophisticated with a particular focus on the information asymmetry between agents and principals. Jensen and Meckling (1976) provided a more formalised analysis of the incentives of the various parties and how they might be resolved by the writing of appropriate contracts incorporating both incentive based pay and monitoring. They also highlighted the incentives for managers operating in a rational expectations type world to voluntarily engage in signalling or monitoring activities to demonstrate their intention to act in the best interests of the principals. As relating to management compensation per se and the endeavour to align the interests of principals and agents, the agency theory literature has developed two separate strands. One focuses on behaviour-based contracts where compensation is related to organisational hierarchies, the other on outcome-related contracts whereby rewards are more closely related to actual or perceived performance. The former type of contract is primarily fixed in its structure and amount whereas the latter contains far more variation in structure and amount (Eisenhardt, 1989). However, for both types of contract the underlying issue is how to design an agreement which will be optimal in seeking to align the interests of the agents and principals and to mitigate agency costs associated with the fundamentally different desires and utility functions of managers and principals within a world of asymmetric information (Jensen and Murphy, 1990; Kang and Shivdasani, 1995; Subramaniam, 2006 etc.).

### **3.4.2 Managerial Hegemony Theory**

In recent years perspectives as to the power and influence exerted directly and indirectly by executive management, perspectives which may be loosely classified as managerial hegemony theory, have become more prominent in the literature relating to executive compensation and the theory of the firm more widely (Gomez-Mejia and Wiseman, 1997; Bebchuck et al., 2002; Hendry and Kiel, 2004; Sapp, 2008). Drawing on insights from

sociology and political science this literature, as it relates to executive compensation, emphasises both the behavioural nature of the process whereby executive compensation is determined and the manner in which executives at, or close to, board level are enabled to exercise influence over the nature of their contracts and obligations and directly or indirectly over their level of remuneration. Put simply executives' power is seen as playing a significant role in designing the level and structure of their pay packages (Bebchuk et al., 2002). As Bebchuk and Fried (2004b, p.80) noted, "... *the managerial power approach predicts that compensation packages will be more favorable to managers in firms in which managers have relatively more power*". This power can take a number of forms, for example in terms of influence over the nomination of non-executive directors, the identification of the nature of remuneration contracts, and provision of information to board members and other parties - information which is likely to impact directly upon perceptions of activities and outcomes and feed through into decisions as to executive compensation.

Within this general framework, Bebchuk et al. (2002) introduce and analyse specifically three relevant aspects which they term: rent extraction, outrage cost, and camouflage. 'Rent extraction' by senior executives is defined by Bebchuk et al. (2002; p.783) as, "... *value in excess of that which they would receive under optimal contracting ...*" - and is directly related to the more power senior executives have. 'Outrage cost' is seen as having a moderating influence on rent extraction - as Bebchuk et al. (2002; p.783) clarified: "... *Rent extraction might give rise to outrage on the part of observers about whose views directors and managers care. This outrage can in turn impose costs on directors and managers, thereby discouraging the adoption of some arrangements favorable to managers.*" Outrage costs - which may include costs associated with a concern to protect reputation and social position within and without the company - therefore act as a constraint on senior executives' pay packages and in particular that of a CEO who is likely to be the highest profile senior executive. 'Camouflage' is a strategy whereby senior executives dress up and package their remuneration contracts so as to prevent or reduce outrage cost - as Bebchuk et al. (2002; p.783) stated: "... *managers' attempts to hide, obscure, and justify various aspects of their compensation in order to reduce outrage.*" Camouflage may take the form of introducing sufficient complexity into the contractual arrangements so as to make it difficult to establish either the total amount of remuneration or the basis on which it is determined. It may also take the form of representing the nature of the remuneration

contract as one which is in accordance with the principles of optimal contracting in terms of aligning the interests of shareholders and other parties - representation which may itself entail suggestion of a need for complexity so as to best achieve this alignment.

### **3.4.3 Stewardship Theory**

Whilst stewardship theory may be considered to lie within an agency framework, very widely defined, it derives and imports many of its insights from the disciplines of sociology and psychology (Donaldson and Davis, 1991; Muth and Donaldson, 1998) and offers perspectives on issues of managerial compensation which can be quite different from those drawn from more conventional agency theory analysis. In particular it welcomes the reallocation of company control from principals to agents in order to help in enhancing the advancement and performance of complex organizations for the benefit of shareholders and wider stakeholders (Donaldson, 1985; Donaldson and Davis, 1991; Donaldson, 1995; Davis et al, 1997; Alam, 2006). Whereas under conventional agency theory senior managers are characterised as individualistic and self-serving, stewardship theory perceives them to act collectively and to be trustworthy in the sense that they will not allow personal motivations to override their role as managing the assets of the entity for the benefit of owners and other stakeholders. In turn this greatly reduces the emphasis to be placed on the need to seek to robustly align their pay packages with company performance.

Whilst both conventional agency theory and stewardship theory highlight the benefits that can be obtained from professional management in terms of knowledge, expertise, day to day operational control and the advantages that might be obtained therefrom (Barney, 1991; Castanias and Helfat, 1991), stewardship theory plays down the need for remuneration contracts to seek to mitigate the potentially dysfunctional aspects of the relationship between managers and owners and instead emphasises the need to consider human capital aspects in terms of knowledge and skills, qualifications and experience etc. In that senior management are anticipated to derive satisfaction/enhance their utility from the appropriate performance of a challenging and demanding role and the respect and appreciation of their peer group of competitors and other managers (Hendry and Kiel, 2004) then the focus should be toward the appointment and retention of the most suitable management team and less on the specification of contracts designed to direct their behaviour along paths that it would take anyway.



### 3.4.4 Tournament Theory

In recent years tournament theory (Lazear and Rosen, 1981) has become more prominent in the economic literature. As applied to senior executive remuneration the basic insight is that remuneration is a reward for advancement within the entity rather than necessarily directly related to either individual or entity performance. Although this might seem counter-intuitive, the argument is that it is the knowledge that advancement will lead to superior rewards which will inspire and motivate more junior employees. In consequence they will work harder and be more focused to achieve entity goals and objectives – and in this, indirect, way compensation will be aligned with entity performance. As Lazear (1998; p.249) stated, “*A firm’s compensation system should be viewed as an entire structure. An individual compensation not only affects his or her own behavior, but more important, the behavior of those below who aspire to be promoted into the job*”. Tournament theory embraces a number of behavioural and institutional nuances – for example if remuneration for senior executives is at a level higher than their performance might deserve – because of the need to create motivational effects for more junior employees - what incentives are there for senior executives to leave? In that, the model is based upon the aspirations of lower level employees then unless they perceive a realistic chance of replacing more senior executives within a reasonable time frame then they may adjust their behaviour accordingly (Rosen, 1986). Here there is a role for institutional mechanisms which ensure review of senior management performance both in terms of the actuality of their performance and also the need to ensure suitable turnover of senior management whether age or otherwise related.

Although tournament theory has appealing characteristics as an explicator of senior management compensation, there has been to date relatively little empirical work which has sought to rigorously examine and test related hypotheses – although some related work, for example Smith (2008) has highlighted the association between CEO incentives, risk taking behaviour and incentivisation of operating performance. Also the findings of Main et al. (1993) and Conyon et al. (2001) suggest that there is a positive relationship between the number of contestants in the ‘tournament’ and remuneration. In some areas of commercial activity, for example large accounting firms which traditionally have employed a pyramid approach to personnel structure whereby staff who are not advancing through the hierarchy

leave on a voluntary or involuntary basis, insights from tournament theory are likely to be highly relevant, the extent to which compensation in mainstream industrial and commercial organisations is determined on this basis is a matter which is open to further investigation and research.

### **3.4.5 Institutional Theory**

In one form or another ‘institutional theory’, with its focus on sociological and behavioural attributes of, and within, organisations, has been an underpinning of research into, and explication of, organisational behaviour for very many years. As such it emphasised the sociological factors which provided a broad explanation of why a myriad of corporations, end up with adapting similar organizational structures and practices (so called: isomorphism). More recently it has been formalised in what might be termed the ‘new institutionalism’ which itself has various strands and directions (DiMaggio and Powell, 1983, 1991; Moll et al., 2006). More specifically, ‘old institutional economics/theory’ focuses on a uniform paradigm in why and how particular behaviours or structures - including rules, habits, routines etc - emerge, influence, shape and re-shape through time; while ‘new institutional economics/theory’ may comprise a network of different perspectives and sub-perspectives without a specific uniform paradigm but within an overall framework of seeking out explanations for the reasons behind the existence and disappearance of institutions which are assumed to be seeking to maximise corporate profits on the basis of rational optimizing behaviour. Beyond this ‘new institutional sociology/theory’ defines institutions in terms of external pressures through reference to outside rules, procedures, models, pressures etc rather than in terms of the cost-minimising objectives designed to enhance the level of internal efficiency.

DiMaggio and Powell’s seminal 1983 paper – which has spawned a major body of literature in this field - introduced three distinct types of isomorphism which they termed: coercive, mimetic and normative. Coercive isomorphism - in which homogeneity results from political influences - stems from pressures by other institutions, cultural expectation, government mandates, and reporting requirements. Mimetic isomorphism - wherein homogeneity results from similar responses to uncertainty - associates with corporations not knowing what to do in an ambiguous environment - for example when a new technology introduced - in which circumstances copying what other companies are

perceived to be doing seems to be an easy way out of this complexity. Normative isomorphism - in which homogeneity relates to professionalism as a third form of legitimization to control corporate professional practices - stems from hiring personnel from similar background even from other companies in the same industry and increasing competition between corporate staff members so as to make themselves look more prestigious.

Clearly institutional theory in its various forms and guises has the possibility of explaining a number of aspects of senior management compensation - whether in terms of levels of compensation packages or their construction and form - and of similarities, and perhaps differences, between organisations in the manner in which they approach compensation issues (Finkelstein and Hambrick, 1996) and these issues will be developed further in the thesis.

### **3.5 Implications of Theoretical Perspectives on Pay-Performance and Performance-Pay Frameworks**

The theoretical perspectives discussed above are diverse and interrelated and their implications as they relate to executive compensation and the linkages between pay and performance are not clear cut. Agency theory perhaps suggests the most direct relationship between pay and performance - which is not surprising in that its outcomes are predicated upon relating incentive based contracts and performance. This is supported by theoretical studies - for example Jensen and Meckling (1976), Hossain, et al. (1994, 1995), Muth and Donaldson (1998), Solomon (2007) - and some empirical studies - for example Jensen and Murphy (1990), Murphy (1991, 1999), Kay and Van Putten (2007) - but other studies - for example, Bebchuk and Fried (2004a) - throw doubt upon the relationship between pay and performance.

The managerial hegemony perspective suggests linkages between managerial power and compensation structures. This is supported theoretically by Bebchuk et al. (2002) who posit executive directors utilise their power in influencing their own remuneration packages and rent extraction - but not necessarily in a manner which has positive connotations in respect to this association. As Gomez-Mejia and Wiseman (1997) note, "... *the power of CEOs to*

*influence boards provides a better explanation for the lack of pay-performance sensitivity than alternative explanations*”<sup>29</sup> – a perspective endorsed by Sapp (2008).

Stewardship theory offers a very different perspective emphasising as it does innate human qualities - a desire for one’s own self esteem, a desire for peer group esteem and perhaps a wish to work and contribute toward the wider goal of benefit for society and the organisations which constitute that society (Donaldson, 1985 and 1995; Muth and Donaldson, 1998; Alam, 2006). Whilst not ignoring the normal human aspirations for command over resources and the ability to follow a particular lifestyle, it is at a remove from the idea that direct financial incentives will necessarily result in improved performance - or indeed that enhanced rewards for ‘high’ performance are anything other than a congratulatory exercise which in itself may not be more than an expression of thanks rather than an incentive to better future performance.

Tournament theory does not necessarily identify a specific relationship between compensation and performance - other than within a general framework whereby the payment of high rewards to those at the top of the ladder is seen as encouraging performance at all levels within the firm (Lazear and Rosen, 1981; Rosen, 1986; Conyon and Sadler, 2001). Lazear (1998) note “*A firm’s compensation system should be viewed as an entire structure. An individual compensation not only affects his or her own behavior, but more important, the behavior of those below who aspire to be promoted into the job*”.<sup>30</sup>

Institutional theory again offers a variety of perspectives on the linkages between pay and performance, and performance and pay - but none of these are necessarily definitive nor even complementary. It emphasises the range of intervening factors in terms of social interaction and networks which might come between such an association/relationship (Powell and DiMaggio, 1991; Finkelstein and Hambrick, 1996; Moll et al., 2006; Mulligan, 2012) - but also the likelihood that firms will have similar remuneration structures whether or not these are necessarily the most appropriate in terms of either incentivisation or rewarding exceptional managerial performance. At a distance from agency theory with its clear identification of connection between performance and economic reward, institutional theory may be seen as highlighting the range of issues and factors which interpose

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<sup>29</sup> p.320

<sup>30</sup> p.249

themselves between such an association - thereby perhaps suggesting alternative lines of explication and research enquiry.

To conclude - agency theory may be seen as supporting a pay-performance framework, while the managerial hegemony perspective interposes significant intervening factors consistent with executive authority and control. In contrast tournament and stewardship perspectives are perhaps directly related to the notion of performance-pay. Although the incentives regarding the tournament theory are primarily for those lower in the executive hierarchy to aspire to the rewards achieved by those at the very highest level, stewardship perspective highlights the human capital aspects in terms of personnel knowledge and skills, qualifications and experience for boardroom members. Institutional theory offers overarching perspectives in terms of the relevance of regulatory oversight, organisational structures, social interaction and networks, etc - but again these are likely to mediate and perhaps mitigate direct pay-performance or performance-pay relationships.

### **3.6 Conclusion**

This chapter provides a review of literature as to the frameworks of pay-performance and performance-pay and highlights the literature gap as it relates to prior studies which seek to provide recent empirical evidence on the relationships between executive compensation and firm performance. The chapter also reviews a range of theoretical perspectives as to executive compensation developed in prior literature and considers their implications for the analysis and investigation of senior level remuneration packages.

The considerable body of prior literature concluded that executive pay could be adopted either a predictor, or a predicted variable through examining the relationships between managerial compensation and company performance. However, no comparative study using UK data has been conducted so far to investigate directly the frameworks of pay-performance and performance-pay to address the question of whether managerial compensation is the greater influence on firm performance or whether it is the latter which has the greater influence on the former, while at the same time controlling for a variety of explanatory factors (such as corporate governance mechanisms and ownership, board room members' features, and company characteristics) following a series of corporate governance contributions in the UK. In addition – although a number of academic

literatures based on interview-based approach conducted in the way of qualitative research as to the manner in which executive compensation is set, no archive-based case study analysis has been conducted so far to review what it is possible to learn from the information contained in the Directors Remuneration Reports (DRRs).

Therefore, the key purpose of the first trend of the extant research is to empirically examine the interrelationships between executive compensation and company performance in FTSE350 companies, whilst the main objective of the second trend of the current research is to qualitatively investigate the role of remuneration committees in setting the executive pay in an attempt to understand the mechanisms and structures that determine managerial compensation at one large UK company.

Based on the review of prior literature, a wide range of theoretical backgrounds have been adopted to explain such relationships between executive pay and firm performance. According to pure agency theory, firm performance plays a key role in mitigating the conflicts of interest between the agents and the principals through sound corporate governance mechanisms, whilst managerial power perspective provides a contradictory view in which executives' authority is seen as playing a significant role in designing the level and the structure of their pay packages without taking into consideration the performing levels of the company. Alternatively executive remuneration may be regarded as an instrument for achieving the wider goal of benefit for the company in terms of rewarding the level of knowledge and skills that the boardroom members have (stewardship theory), or encouraging the board members to win a prospect title in the nearest future (tournament theory). Furthermore, institutional theory here offers overarching perspectives in terms of the relevance of regulatory oversight, organisational structures, and social interaction and networks which might perhaps mediate the interrelationships between executive pay and corporate performance.

The next chapter presents the research methodology which utilises mixed methods (abductive) approach, identifies the development of the empirical research hypotheses and variables based on the theoretical framework and prior literature, and covers the modelling plan and data employed to investigate quantitatively the mutual relationships between executive pay and company performance.

# Chapter 4

**RELATIONSHIPS BETWEEN EXECUTIVE  
COMPENSATION AND  
COMPANY PERFORMANCE –  
METHODOLOGY, MODELLING AND DATA**

## **Chapter Four**

### **Relationships between Executive Compensation and Company Performance – Methodology, Modelling and Data**

#### **4.1 Introduction**

After highlighting the institutional and regulatory background, reviewing the relevant prior literature, and outlining the underlying theoretical perspectives, the necessary methodological choices can be identified and the appropriate research design constructed. As discussed before this research study has two separate but interrelated motivations. The first is to investigate the linkages between the nature and amount of executive compensation packages and company performance, with a particular focus on examining the two-way relationships between pay and performance. The second is a desire to understand in greater depth the mechanisms and structures which determine senior executive pay in large UK private sector organizations and the manner in which these mechanisms and structures have changed in recent years. Therefore, the mixed methods (abductive) approach is followed as the first primary question is addressed by means of a more conventional positivist study, whilst the second primary question is addressed by means of a combination of institutional and archival work together with a specific longitudinal case study of remuneration at a major UK company. This methodology also shows the linkage between the empirical research and the case study in an attempt to combine both approaches in the current research to examine executive directors' remuneration in FTSE 350 companies.

In this chapter - due to the increasing significance of the degree and route of linkages between boardroom executive compensation and company performance, based mainly on the theoretical views under agency and tournament - the empirical part of the study aims to address the first key research question via examining the interrelationships between the two, in order to identify: whether managerial compensation is the greater influence on firm performance or whether it is the latter which has the greater influence on the former? This empirical research contributes to the current debate on the examination of executive compensation in FTSE 350 corporate performance by investigating the interrelationship between executive remuneration and company performance. This can be achieved by



addressing a number of distinctive compensation components and measures from one side and a variety of accounting-based indicators of performance from the other for the UK FTSE 350 companies over a period 1999-2008 (after the reform of the combined code).

This preparatory chapter of the empirical study is organised as follows. After this short introduction the second section explains the research methodology employed by the present study, as well as the research philosophy and how it verifies the approaches chosen to carry out the study, including the deductive and indicative approaches. The third section covers the research examination process of the empirical study in detail in an attempt to explain the nature of the research, and how it will be conducted. The empirical research design comprises three stages: the first stage presents the research strategy (including the research question, the development of research hypotheses as well as the variables utilised, and the research modelling plan), the research data collection and preparation is covered in second stage, and finally the research data analyses (including the research findings and discussion) are found in chapter 5. The final section provides an overall conclusion regarding the research methodology and the empirical examination process.

## **4.2 Research Methodology**

Bogdan and Taylor (1975, p.1) defined the term ‘methodology’ as, “*the process, principles, and procedures by which we approach problems and seek answers*”. Therefore, in order to conduct a valid study, a number of crucial steps and procedures should be highlighted and ordered rationally and accurately, as each procedure provides different sets of options and the choice of each option needs to be justified in terms of the objectives and nature of the research. In this section, the research methodology is discussed in detail and categorised in three sub-sections (research purpose, research philosophy, and research approach).

### **4.2.1 Research Purpose**

The purpose of this study is to investigate the remuneration of executive directors in FTSE 350 companies by adopting two interconnected studies (i.e. *Empirical* and *Exploratory* studies) in order to guide the research philosophy and approach thereafter (Ryan et al., 2002; Collis and Hussey, 2003; Saunders et al., 2007, etc.).

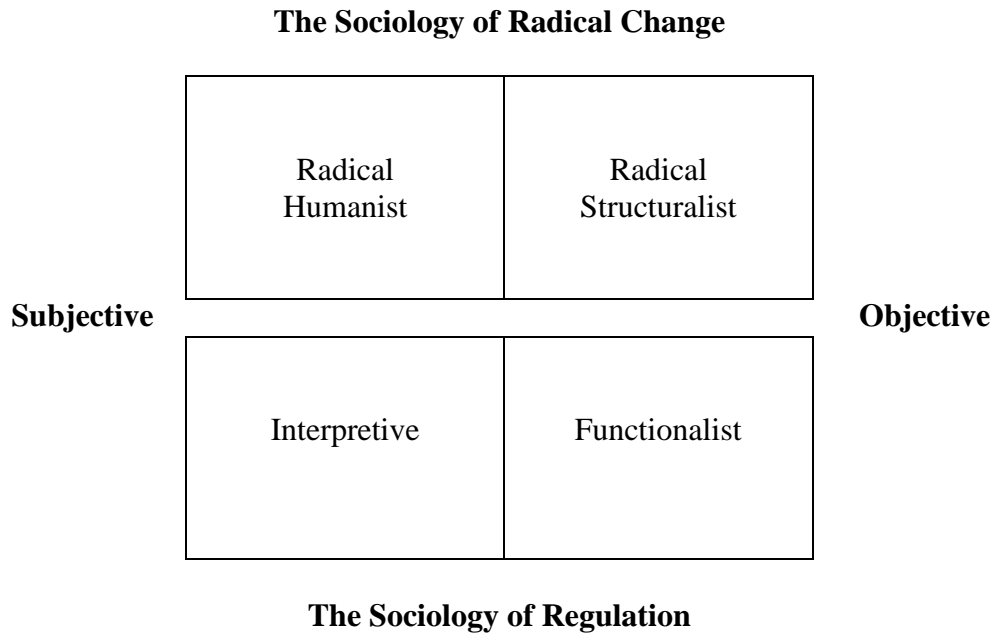
The first research objective is to measure cause and effect (i.e. *first primary research*) in order to explain: how the interrelationships and influences underlying the setting strategy of executive compensation packages are shaped and how they work in practice. In this empirical study, the researcher aims to understand the nature of remuneration packages in enhancing firm performance by utilising a set of variables to test the hypothesised relationships between executive pay and firm performance in FTSE 350 companies in an attempt to answer a specific question: whether managerial compensation is the greater influence on firm performance or whether it is the latter which has the greater influence on the former?

The second research objective is to shed the light on the mechanisms and structures that determine executive compensation packages and explore the role of remuneration committees in setting the type of these pay packages in a singular case, which is BP, as a complement study (i.e. *second primary research*) to the first empirical study. In this exploratory study, the researcher aims to depict a specific observable case, seek new insights, and present an accurate profile of how boardroom and senior executive remuneration are or, perhaps, 'should be' set, based on a number of underlying theoretical perspectives: What is the nature of remuneration practice which predicates the changes in the amount and nature of pay packages?, and What can be learnt from the information contained in the case remuneration reports and the potential explanations for the outcomes uncovered, in order to identify the institutional and regulatory factors which might influence the determination of executive pay?

#### **4.2.2 Research Philosophy**

As Saunders et al. (2007) noted, the development and understanding in greater depth of a specific knowledge is referred to as research philosophy, in which the methodological choices of any study are mainly determined by the assumptions of ontology (*realism* or *nominalism*) and epistemology (*positivism* or *anti-positivism*) based on the two key dimensions of methodological choices regarding the nature of social science: *objectivism* or *subjectivism*, consistent with Burrell and Morgan's (1979) framework. The research paradigms are shown in Figure 1.

**Figure 1: Four Paradigms for the Analysis of Social Science**



Source: Adapted from Burrell and Morgan (1979, p.22)

Burrell and Morgan (1979) were among the first to highlight that the identification of the nature of the research’s social, political, and economical reality assists in setting the research’s ontological position (which is either *realism* or *nominalism*), in which the former, realism, regards the social world as a compound of real and tangible constructions, while the latter, nominalism, considers it as comprising names and terms that provide a construction for reality. By comparison the epistemological position (which is either *positivism* or *anti-positivism*) explains what constitutes the awareness level of acceptable knowledge (or how to gain knowledge), in which positivism<sup>31</sup> aims to predict what happens in the social world by examining the relationships between its constituents, whilst anti-positivism calls for an understanding of the differences between humans as social actors (Burrell and Morgan, 1979).

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<sup>31</sup>Positivism is a social science philosophy of innovation in which positivist individuals propose the verification of meaningful statements via the *observation* pattern (Ryan et al., 2002).

Moreover, Saunders et al. (2007) indicate that the research paradigm is regarded as the direction for examining a social phenomenon from which explanations can be obtained, and is based on the ontological and epistemological status adopted which a study can adopt to distinguish between different forms of research. Accordingly, Burrell and Morgan's framework classifies the research paradigms for the analysis of social theory into four categories: radical humanist, radical structuralist, interpretivist, or functionalist<sup>32</sup>, whilst the research philosophical dimensions can be categorised as subjectivist, objectivist, the sociology of radical change, or the sociology of regulation.

In the empirical study, the phenomenon of examining the two-way relationships between executive pay and firm performance is understood, and the quantitative technique is adopted by forming and testing the study hypotheses derived from the ontological belief that social institutions exist independently in the same way as natural organisations by which the theoretical perspectives can be investigated and the model can be structured in order to observe reality and ultimately generate new insights. Therefore, the term 'functionalism' here combines both the objective perspective of the environment and the extent and nature of regulation exercised (Ryan et al., 2002). Accordingly, based on Burrell and Morgan's 1979 framework, the empirical study adopts the realist ontological perspective and the positivist epistemological status under the dimension of objectivism. Consequently, the source of the researcher's belief is based on the testimony of variables (i.e. *deductive belief*), in which the process of inferring general truths relies on *introspective* (the process of introspection) and/or *rational* (the process of reason) belief.

On the other hand, the exploratory study is the most appropriate structure for the second motivation, in which the researcher is seeking to employ an archive-based case study<sup>33</sup> analysis which is supplemented by an exploratory and/or explanatory content analysis adopting the qualitative method in order to understand the nature of remuneration practice

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<sup>32</sup>On the other hand, Ryan et al. (2002) reported that *mainstream* (i.e. *functionalism*), *interpretive*, and *critical* studies are the three key categories (i.e. paradigms) of accounting research which provide the platforms for studying accounting phenomena.

<sup>33</sup>Case studies in general are a means of collecting evidence relating to behaviours, institutional, and regulatory aspects which require a comprehensive conceptual framework so as to capture the interaction among a number of related activities and variables - such as strategy, culture, structure, systems, indoor-outdoor environments, interdisciplinary relationships etc. It is imperative to define the starting point of the case study in order to help not only in shaping the research design and informing research inquiries, but also in supporting the evaluation of evidence collected so that the readers will understand the research pathway and outcomes (Collis and Hussey, 2003).

at one global UK company and explore the role of the remuneration committees in determining the type of these packages. The researcher holds the positivist epistemological belief to be aligned with its mainstream counterparts, in which the observed cases (i.e. phenomena) are explored and explained in a scientific manner by introducing first a number of positive theoretical perspectives (Saunders et al., 2007) and then exploring the archival case analysis based on this set of theoretical views, as the researcher is concerned mainly with providing an explanation (what does actually happen?). Accordingly, the researcher's belief is based on the positivism induction approach (i.e. *inductive belief*) through which the inductive approach is adopted for the case study analysis with the ambition to provide explanations in terms of the realist ontological perspective of the reality and the positivist epistemological status of the knowledge under the objectivist dimension. This is consistent with the perspective of Scapens (1990, p.5): "*Positive researchers cannot assist in the choice of a decision model, but they can help the decision maker to understand how the relevant variables interact, i.e. how the world works.*"

In short, although research philosophy comprises a variety of organisational research categories, this research structure in general adopts the assumptions of realist ontology and positivist epistemology - as the empirical study focuses on the quantitative structure, aspiring to examine the two-way associations between executive directors' remuneration and corporate performance (Chapters 4 and 5); while the archive-based case study covers the qualitative structure, aiming mainly to explore insights into the factors involved in setting the remuneration practice by examining directors' remuneration reports (Chapter 6). Accordingly this research adopts the functionalist position through both the empirical and exploratory studies, by which the positivists examine objectively the observable social reality, in which the logical understanding and explanations lead to find logical solutions to social problems.

### **4.2.3 Research Approach**

Knowledge can normally be gained by adopting various sources. Here the research approaches related to knowledge can generally be either *deductive* or *inductive* (Ryan et al., 2002; Collis and Hussey, 2003; Saunders et al., 2007). Whilst deductive studies are associated with testing hypothesised relationships according to an existing theory or a set of theories by collecting and analysing data in order to reach a reasoned conclusion based on a

known fact; inductive studies are conducted by observing and examining an existing phenomenon in order to reach subsequently to conclusions based on the development of the suggested theoretical perspective(s), consistent with Saunders et al. (2007).

As the deductive approach is frequently related to a quantitative framework and is linked more to positivist epistemological philosophy, the current empirical study is therefore based on the deductive frame in which the conceptual structure of the existing theory is studied, testable hypotheses are developed, and the empirical observations are discussed.

Scientifically, this approach is also used to move from the general to the particular in an attempt to explain or investigate reality. Accordingly, the researcher aims to explore the prior literature and theoretical background on executive directors' remuneration and corporate performance in order to test the developed research hypotheses on the two-way relationships between executive pay and firm performance in FTSE 350 companies.

On the other side the appropriate approach to study, explain, and explore reality is more likely to be inductive rather than deductive, especially when the theory is not well developed, very hesitant, or outdated. Inductive studies normally start with data collection, move on to the analysis, and end with the results which could lead to the development of the existing theory or the formation of a new theory underpinning the phenomena being examined, therefore the data would be followed after investigating the theory (Saunders et al., 2007). Based on the inductive framework, the researcher seeks to utilise the qualitative examination of relationships and factors underlying the question of how executive compensation packages are, or perhaps 'should be', set in order to investigate the directors' remuneration reports at one major multinational UK company registered in the FTSE 350 index.

Accordingly, by adopting both deductive and inductive approaches, the research methodology calls for a mixed method (abductive) approach, in which the existing study moves constantly from empirical to theoretical dimensions of analysis, and contributes by combining both quantitative and qualitative studies, which is rare in the discipline of corporate governance. As Johnson et al. (2007, p.120) stated, "*Mixed methods research is the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study or set of related studies.*" Mixed methods research is currently regarded as the third

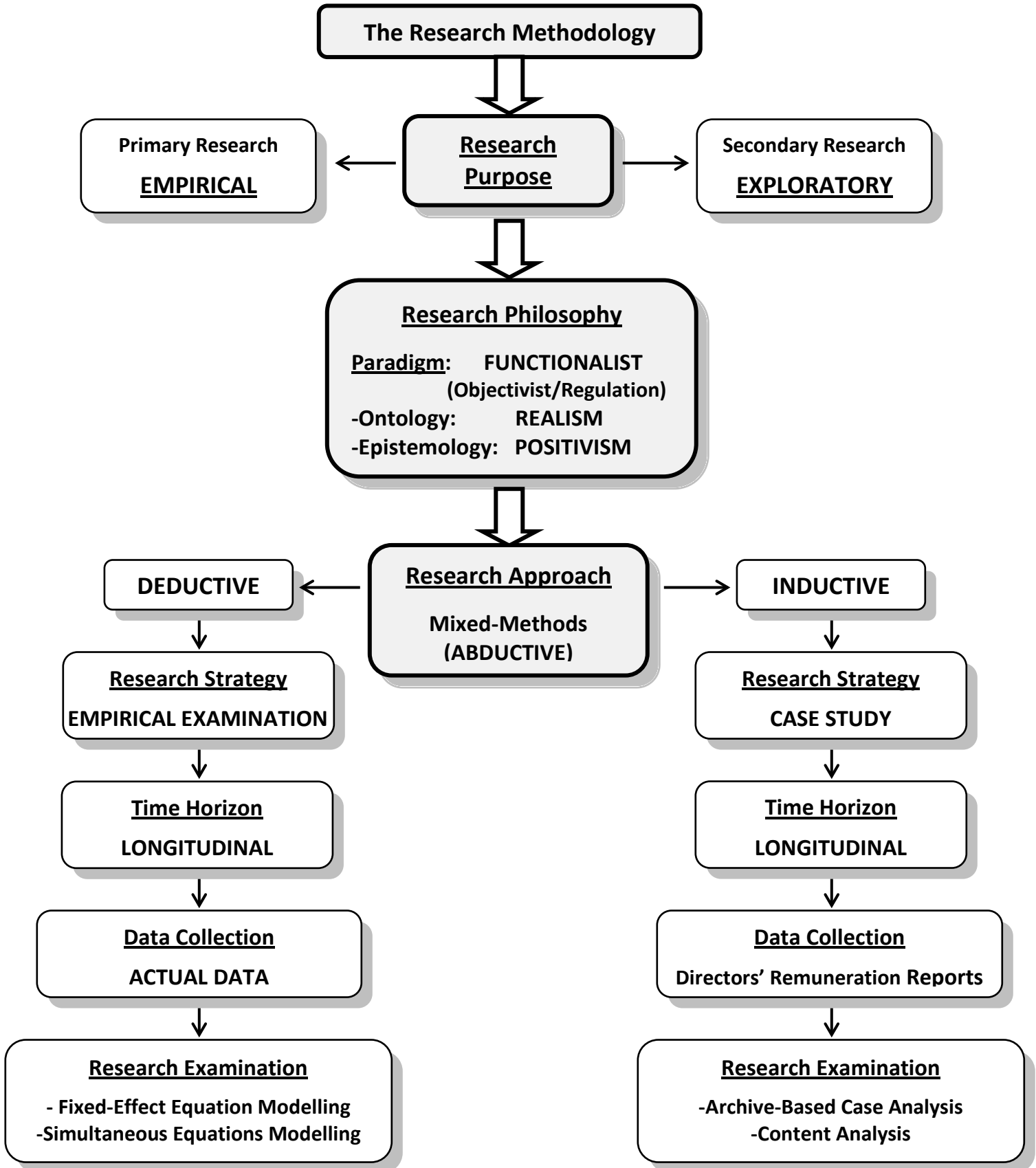
approach to social research and is utilised extensively in pragmatically oriented fields based on the purposes of complementarity (in which the results of one method is used to illustrate and enhance the results of other methods) and expansion (in which the breadth and range of inquiry are expanded by using different methods for different inquiry components), consistent with Johnson and Onwuegbuzie (2004). The current research therefore seeks to collect multiple data by utilising different strategies and methods in an attempt to result in complementary strengths and non-overlapping weaknesses. The overall research methodology is illustrated in Figure 2.

### **4.3 Research Examination Process**

The central examination framework of the research process inspired by Collis and Hussey (2003) can be presented through three stages, stages followed directly or indirectly, by the majority of scientific papers and studies, whether deductive or inductive. Based on this examination structure, the researcher aims to discuss first the deductive study (chapters 4 and 5) and second the inductive study (chapter 6), in which each stage will lead coherently and plausibly to the next stage. Failure at one stage will therefore require that earlier stages be revisited before commencing the investigation.

The research examination process adopted here starts by outlining the research strategy of the empirical study (stage 1), which comprises three sections: the research question, the research hypotheses and variables, and the research modelling plan. Afterwards, the research data sample is collected and prepared (stage 2), before the study is completed with the data analysis and discussion of the results for both deductive and inductive studies in the final stage (stage 3). The research examination process overall is outlined in Figure 3.

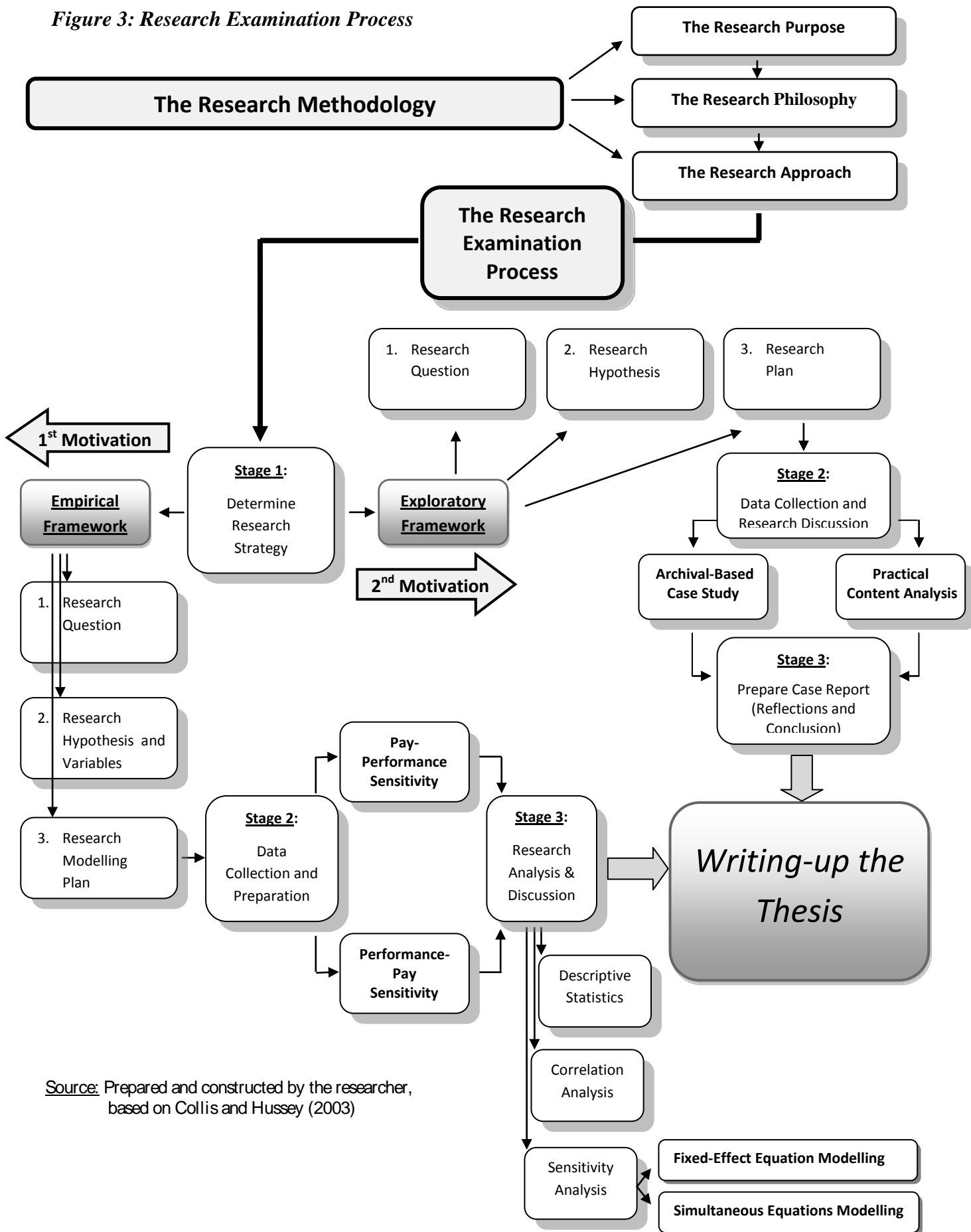
Figure 2: Research Methodology



Source: The Researcher prepared and constructed this diagrammatic explanation of the underlying research methodology consistent with Ryan et al. (2002) and Saunders et al. (2007)



Figure 3: Research Examination Process



Source: Prepared and constructed by the researcher, based on Collis and Hussey (2003)

### **4.3.1 Research Strategy<sup>34</sup> - Empirical Structure**

In adopting the deductive approach, the empirical structure is followed in the planning phase for the first motivation of examining the interrelationships between executive compensation and firm performance, in which the research question is highlighted, the research hypotheses are developed and formulated, and the examination modelling is structured. These three main sections of the empirical strategy plan represent the guidelines as to how this research will be conducted with respect to the quantitative element.

#### **4.3.1.1 Research Question**

The first step of the empirical strategy plan aims to identify the research question. Based on the research gap in the academic literature regarding the relationships between the nature of executive remuneration and firm performance (as discussed before in Chapter 3), the current study seeks here to add to the literature with evidence regarding whether managerial compensation is the greater influence on firm performance or whether it is the latter which has the greater influence on the former?

This research question is tested empirically by examining the two-way associations between both pay and performance in FTSE 350 companies during a time period 1999-2008, which covers different phases of the UK stock market. In addition, this study investigates the role of corporate governance mechanisms and the features of company variables and those relating to boardroom structure and membership in controlling the interrelationships between compensation and performance.

#### **4.3.1.2 Research Hypotheses and Variables**

The second step of the empirical strategy plan seeks to specify the research hypotheses that will be tested and the research variables that will be utilised. This section is divided into two key sub-sections. The first shows the development of the empirical research hypotheses, while the second discusses in detail the adopted research variables.

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<sup>34</sup>The research strategy refers to the plan that would be followed so as to answer the research questions. Each research strategy can be established according to the research purpose - such as exploratory, descriptive, and explanatory - and the research approach which might be deductive or inductive. In general the research strategy consists of a volume of accepted research methods - such as Experiment, Survey, Case Study, etc (Ryan et al., 2002; Collis and Hussey, 2003; and Saunders et al., 2007).

#### 4.3.1.2.1 Research Hypotheses

Regarding the interrelationships between CEO/board executive compensation and company performance, a set of hypotheses are developed based on different theoretical perspectives. According to the hypothesis regarding pure agency theory, the agent-principal perspective highlights the increasing conflict of interests between professional managers, who are hypothesised to be seeking to obtain high rewards, and the owners, whose ambition is to maximise their returns from ownership (Berle and Means, 1932). As Jensen and Meckling (1976) noted, these contradictory motivations emerged due to the information asymmetry between managers and owners, which can be resolved by monitoring and providing appropriate incentive based pay contracts based on firm performance (Jensen and Murphy, 1990). Therefore, the focus should be on the action of agents in the best interests of the principals in order to obtain high incentives within a good structure of corporate governance.

*(H1a): A higher level of company performance is positively related to future CEO/board executive pay<sup>35</sup>.*

Consistent with the managerial hegemony hypothesis, CEO/executives at or close to board level might exercise more authority and control over the nature of their compensation contracts (Bebchuk et al., 2002; Bebchuk and Fried, 2003/4b), even when the levels of company performance is below the business targets, and especially when the corporate governance is weak. As Bebchuk et al. (2002) and Bebchuk and Fried (2003) noted, executives' power is seen as playing a significant role in designing the level and the structure of their pay packages regardless of the firm's achievement. Accordingly, the lower levels of corporate performance within a weak corporate governance structure might perhaps lead to higher CEO/executive pay, according to the managerial hegemony perspective.

*(H1b): A lower level of company performance is negatively related to future CEO/board executive pay.*

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<sup>35</sup>CEO/board executives' pay in year  $t+1$  on company performance in year  $t$  are regressed in the empirical examination analysis.

Conversely, the stewardship hypothesis indicates that higher CEO/board executive pay based on the innate qualities (Barney, 1991; Castanias and Helfat, 1991) of the boardroom members may ultimately contribute to the wider goal of benefiting the company. As Hendry and Kiel (2004) highlight, the need to consider human capital aspects in terms of knowledge and skills, qualifications, and experience, is significant in enhancing the levels of company performance. As a result, the focus should be on the appointment and retention of the most suitable management team to maximise owners' wealth and make a difference in decision making process that directly affects the future prospects of the firm. Furthermore, the hypothesis regarding tournament theory calls for encouraging lower-level members at boardroom level to work harder to win the CEO title including the related compensation package as a reward (Lazear and Rosen, 1981; Rosen, 1986; Lazear, 1998). As a result, the payment of high rewards to those at the top of the ladder is seen as encouraging performance at all levels within the firm, consistent with the findings of prior literature (such as Main et al., 1993; and Conyon et al., 2001), which report a direct relationship between pay inequality in the top management layer and corporate performance.

*(H2): A higher level of CEO/board executive pay is positively related to future company performance<sup>36</sup>.*

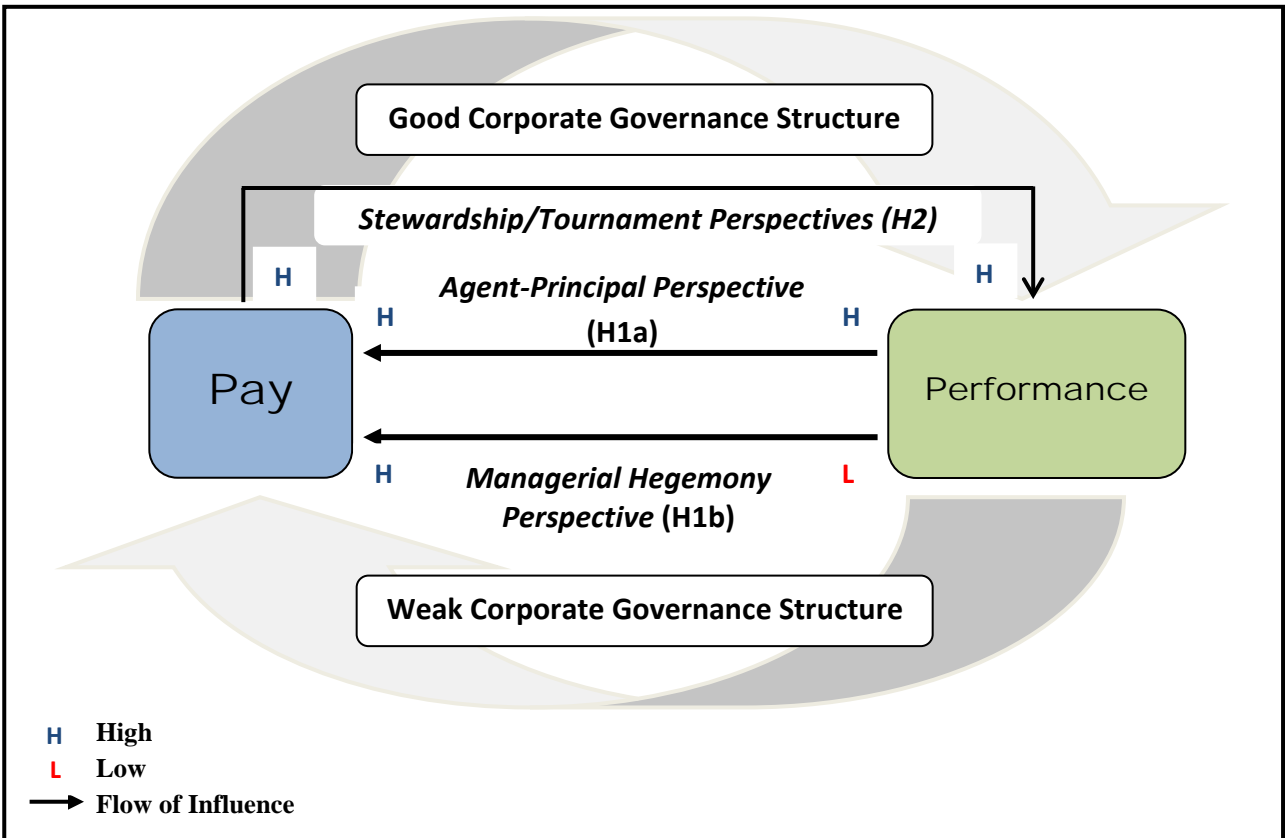
In general, the two-way relationships between CEO/executive pay and firm performance are basically derived here from a number of contradictory but interrelated theoretical perspectives: agent-principal, managerial hegemony, stewardship, and tournament. Figure 4 demonstrates the empirical study's development of the hypotheses, and shows the possibility of CEO/executive pay affecting the corporate performance more. Accordingly, the suggested hypothesis of the key research question can be structured based on hypotheses (1) and (2) as follows:

*(H3): The amounts of CEO/board executive pay have relatively greater influence on the levels of company performance.*

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<sup>36</sup>Company performance in year  $t+1$  on CEO/board executive pay in year  $t$  is regressed in the empirical examination analysis.

*Figure 4: Hypotheses Development Structure*



Source: Prepared and constructed by the researcher.

#### 4.3.1.2.2 Research Variables

In this section, the researcher discusses the key research variables under examination (i.e. remuneration package and company performance), as well as the set of control variables (i.e. corporate governance mechanisms and characteristics of company and boardroom members). Table 1 summarises the names, codes, and definitions of all variables utilised in the current empirical study.

**Table 1: List of Indicators, Variables, Codes and Definitions**

Indicators	Variables	Codes	Definitions
CEOs and Board Executive Directors' Remuneration Package	<b>Cash Compensation Variables</b>		
	Salary	SLRLOG	Natural log of minimum fixed amounts received by both corporate CEO and executive directors, including fees paid for membership of corporate board committees, in UK£,000 (BoardEx: Salary).
	Bonus	BNSLOG	Natural log of annual reward received by both corporate CEO and executive directors, depending on prior performance, in UK£,000 (BoardEx: Bonus).
	Pension	PNSLOG	Natural log of pensions (retirement) schemes provided to both corporate CEO and executive directors when they are no longer earning a regular income from being in service, in UK£,000 (BoardEx: DC Pensions).
	Other	OTHRLOG	Natural log of other benefits and allowances received by both corporate CEO and executive directors, such as private medical insurance benefits, car allowance, as well as benefits-in-kind, in UK£,000 (BoardEx: Other).
	<b>Total Cash Compensation</b>	TCCLOG	Natural log of total cash value of first four pay components (Salary, Bonus, Pension, and Other), based on the pay of both CEO and executive directors scaled by the total number of board executives, in UK£,000.
	<b>Equity-based (Non-Cash) Compensation Variables</b>		
	Equity Awarded	EQAWLOG	Natural log of the value of awarded performance shares provided to both corporate CEO and executive directors, in UK£,000 (BoardEx: Value of Equity Awarded).
	LTIP Awarded	LTIPAWLOG	Natural log of the value of restricted share grants awarded, according to board directors' prolonged performance achievement provided to both corporate CEO and all executives, in UK£,000 (BoardEx: Value of LTIP Awarded).
	Intrinsic Options Awarded	IOPAWLOG	Natural log of options' value awarded by both corporate CEO and executive directors at the value of the positive difference between the market price (i.e. fair value) of the share and the grant (strike) option exercise price, in UK£,000 (BoardEx: Intrinsic Value of Options Awarded).
Estimated Options Awarded	EOPAWLOG	Natural log of contracts awarded to both corporate CEO and executive directors at an estimated exercise price, in UK£,000 (BoardEx: Estimated Value of Options Awarded).	
	<b>Total Equity-based Compensation</b>	TECLOG	Natural log of total non-cash value of second of the four main pay components (Equity Awarded, LTIP Awarded, Intrinsic and Estimated Options Awarded), based on the pay of both CEO and executive directors scaled by the total number of board executives, in UK£,000.
	<b>Total Remuneration during the Period (Cash + Non-Cash)</b>	TREMLOG	Natural log of total cash and non-cash amounts of compensation for board directors during the accounting period, based on the pay of both CEO and executive directors scaled by the total number of board executives, in UK£,000.
Firm Performance Indicators	Tobin's Q	TQWINZ	Ratio of corporate total market value on the stock market to its total book value assets after the winsorization process (Manually measured on the basis of T1B and DataStream data).
	Earnings Per Share	EPSWINZ	Corporate earnings for the 12 months ending in the fiscal year after the winsorization process (T1B and DataStream: EPS).
	Return on Equity	ROEWINZ	Ratio of operating income to common equity after the winsorization process (T1B and DataStream: ROE).
	Return on Assets	ROAWINZ	Ratio of operating income to total assets after the winsorization process (T1B and DataStream: ROA).

	Total Assets Turnover	TASSTWINZ	Ratio of managing corporate total assets to its revenue generated after the winsorization process (T1B and DataStream: Assets Turnover).
Corporate Governance Mechanisms (Controls)	Duality Role	DR	Role of CEO and Chairman held simultaneously, (1 refers to a duality role, i.e. the CEO and Chairman roles are held by the same person; whereas 0 refers to the absence of a duality role, i.e. the two posts held by two different persons) (BoardEx: Duality).
	Board Size	BS	Total number of members on the board (BoardEx: Board_No).
	Non-executive Directors	NXD	Number of non-executive directors within the overall corporate boardroom (BoardEx: No. NONEXE_Board).
	Independent Directors	ID	Number of independent directors among the corporate board members (BoardEx: No. Independent_Board).
	The Existence of Board Committees	AC, RC and NC	Existence of Audit, Remuneration and Nomination committees separately (1 indicates the committee exists; whereas 0 means the committee does not exist), BoardEx provides the committee size.
Ownership Package (Controls)	Wealth Share Plans	WSP	Accumulated Wealth Share Plan LTIPS Volume (Size). These ordinary Outstanding Shares (Stocks) represent the total number of shares which the member will own in the same year + those which the member was promised to hold in the following years, provided by BoardEx.
	Wealth Options (Exercised)	EWO	Volume (Size) of Options exercised in the current year which the member already held in previous years, provided by BoardEx.
	Wealth Options (Un-exercised)	UWO	Volume (Size) of Un-Exercised Options which the member owns currently and will in the following years, provided by BoardEx.
	Wealth Equity (Exercised)	EWE	Volume (Size) of Exercised Equity which the member already had in previous years, provided by BoardEx.
	Wealth Equity (Un-exercised)	UWE	Volume (Size) of Un-Exercised Equity which the member owns currently and will in the following years, provided by BoardEx.
Board Member Features (Controls)	Age	AGE	Age of boardroom CEO and executive directors. The researcher measures the average age for board executives (BoardEx: Age).
	Tenure	TIR	Time period for CEO and other boardroom members holding their current boardroom role. The researcher measures the average TIR for board executives (BoardEx: Time in Role).
	Gender	GNDR	Distinguishes between male and female of CEO member; male=0 and female=1 (BoardEx: Gender).
Firm Characteristics (Controls)	Corporate Size	TASSLOG	Natural log of corporate total assets (T1B: Total Value of Assets).
	Corporate Growth	CTASSLOG	Natural log of corporate change in total assets (T1B: Total Value of Assets).
	Total Debt to Common Equity	DE	Proportion of funds provided by corporate creditors (T1B: Debt to Equity).
	Total Debt to Total Assets	DA	Percentage of assets financed by debt (T1B: Debt to Asset).
Dummy Variables (Controls)	Regulation Dummy	D <sub>reg</sub>	Dummy construction for the two sections of the FTSE 350 industries representing the sectors “Financials and Utilities” by zero and the non-financial sectors by one.
	Time Dummy	D <sub>t1-9</sub>	Dummy construction for the 10-year time period by removing one time period dummy.

#### 4.3.1.2.2.1 Executive Directors' Remuneration Package

The current study employs a package of compensation variables chosen on the basis of the study theoretical perspectives and incorporating insights from prior literature. In practice, previous studies (such as Jensen and Murphy, 1990; Lee et al., 2008, etc.) point out that total executive compensation is broadly comprised of two sums. First, the total cash remuneration (comprising the base salary ( $SLR_{i,t}$ ), annual bonus ( $BNS_{i,t}$ ), pension contribution ( $PNS_{i,t}$ ), and other monetary pay, such as benefits-in-kind, car and accommodation allowances, other perks etc. ( $OTHR_{i,t}$ )). Second, the total non-cash or equity-based remuneration (including value of granted equity ( $EQAW_{i,t}$ ), value of awarded long-term incentive plans ( $LTIPAW_{i,t}$ ), and options awarded either as intrinsic ( $IOPAW_{i,t}$ ) or estimated ( $EOPAW_{i,t}$ )). A detailed discussion of these components has been outlined in Chapter 2. In this study remuneration components are captured directly from the directors' remuneration reports and therefore were computed on a before-tax basis. Inevitably this means that the tests largely abstract from the effect of taxation and tax clientele effects as they impact CEO and boardroom executive pay structure (Murphy, 1985).

According to Fernandes et al. (2013), two aspects of compensation measurement via BoardEx database deserve special mention. First, BoardEx computes the value of options granted using the closing stock price on the last trading day of the fiscal year rather than the stock price on the grant date. Second, the calculation of the value of performance share plans (i.e. LTIPs) through BoardEx is based on the maximum (rather than the target or minimum) shares that can be awarded under the plan, multiplied by the end-of-fiscal-year closing stock price. Further to this, IFRS 2 relating to the share-based payments specifies two values of a share option, which are intrinsic value and time value (Christian and Ludenbach, 2013). The intrinsic option value is calculated by the positive difference between the share fair value and the price that has to be paid to acquire this share under the option, whilst time option is measured by the option fair value and its intrinsic value. The latter reflects probably that the intrinsic option value will increase or that that option will become profitable to exercise before it expires. This therefore might explain the definition of "Estimated Options Awarded" provided by BoardEx at an estimated exercise price.

The current examination puts more focus on the three key components of executive directors' remuneration (i.e. salary, bonus, and LTIPs) because of their dominant



significance in value composition for both CEOs and other boardroom executive members in the UK. Within this composition three distinct measures of CEO and boardroom executive pay are investigated, comprising the total cash compensation ( $TCC_{i,t}$ ) measure, the total equity-based compensation ( $TEC_{i,t}$ ) measure, and the total remuneration ( $TREM_{i,t}$ ) measure, which incorporates both the cash and non-cash compensation measures, i.e. the sum of all pay components.

#### **4.3.1.2.2 Corporate Performance Indicators**

Murphy (1985) suggests that adopting firm performance measures based on relevant accounting and finance indicators is more appropriate than the absolute market-base measures. Shareholder returns are volatile and significant elements might be related to elements largely outside management control, for example the state of the economy overall, interest rates, commodity prices etc. These financial indicators have also to be associated with the overall market performance as aspects of market portfolio can overwhelm individual corporate aspects; in addition, companies with large risk categories are generally expected to realise high returns. Profitability, growth, and efficiency are separate, if interrelated, performance measures, but the latter category, efficiency, is perhaps of greater significance focusing as it does on what created has corporate success and what is likely to do so in the future thereby creating the conditions for profitability and growth (Bull, 2008). Clearly here comparison with past achievement and with other companies in similar sectors and markets is also important in evaluating the success or otherwise of management.

Lagged accounting-based measures of company performance have been widely utilised in the prior literature for two key reasons. Firstly, it is very likely that boardroom executive compensation in any one year will be directly influenced by the achievement of good performance during the previous year (Perry and Zenner, 2001). Secondly, lagged performance indicators assist in avoiding the problem of reverse causality between company performance and executive compensation, which in turn assist in managing endogeneity problems of pay-performance and performance-pay frameworks (Hermalin and Wallace, 2001).

In this vein the study focuses primarily on two key performance measures (Tobin's Q and ROA) supplemented by a number of other accounting-based performance indicators (such

as EPS, ROE, and Total Assets Turnover). While Tobin's Q incorporates a market value element in the ratio numerator other accounting-based measures are more directly based on accounting numbers and ratios together with more direct operating data. The reason behind utilising a package of performance indicators is to gain more certainty as to the sensitivity of the findings as compared with the use of just one single performance indicator. It also seeks to alleviate to an extent issues associated with the heterogeneity of executive directors and their different motivations – which can only be controlled for in a simplistic fashion via the introduction of variables relating to age, gender, experience etc.

Tobin's Q<sup>37</sup> is a commonly utilised metric in empirical accounting and finance contexts, which has been used very frequently in prior studies, such as Agrawal and Knoeber (1996), Himmelberg et al. (1999), Adams and Mehran (2005), Habib and Ljungqvist (2005), Belkhir (2009), Ozkan (2007, 2011), by which the market value of a company is compared with the book value of its total assets (Fabozzi and Peterson, 2003). It has been interpreted, perhaps rather simplistically, that a high level of corporate Q ratio encourages institutional shareholders to invest more as the company resources are worth more than the price paid for the underlying assets (Fabozzi and Peterson, 2003; Bull, 2008).

ROA<sup>38</sup> essentially spans both the management of the company's assets and the delivery of added value to its clients. It is also significantly influenced by the manner in which corporate assets are financed (Fabozzi and Peterson, 2003). Again ROA is very widely utilised in academic literature. Studies such as those by Bhagat and Black (1999), Core and Larcker (2002), Dalton et al. (2003), Adams and Mehran (2005), Belkhir (2009), Gregg et al. (2011), Coles et al. (2012), show its significance as an accounting-based indicator of financial performance relevant to topics relating to, inter alia, corporate governance mechanisms, managerial ownership, and executive compensation. Essentially ROA is regarded as well proven metric for capturing aspects of the efficiency and profitability of company performance (Bull, 2008).

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<sup>37</sup>Tobin's Q (Q ratio) is measured as the total market value of a company on the stock market divided by the replacement value of the firm's assets, according to James Tobin's formula.

<sup>38</sup>ROA has been calculated as (Net income before preferred dividends + ((interest expense on debt-interest capitalized) × (1-tax rate))) / (last year's total assets) × 100 (Thomson-One-Banker database).

EPS<sup>39</sup> measures are normally calculated for companies with publicly traded shares (Bull, 2008), as it refers to the amount of firm earnings allocated to each outstanding market share. EPS only measures one specific, albeit very important, aspect of performance but previous studies have indicated positive associations with the composition of equity-holdings (Dalton et al., 2003) and with the total compensation of executive directors (Gregg et al., 2011). Overall, EPS is regarded as an acceptable indicator of corporate profitability, consistent with Fabozzi and Peterson (2003).

Closely linked to EPS as a performance measure is return on equity (ROE)<sup>40</sup> – they are similar in terms of the measurement of income as both focusing on operating income which may be seen relevant in terms of efficiency and sustainability, however there are differences in the manner of reflecting the firm value. EPS's dominator represents just the number of company shares, whilst the dominator of ROE stands for the corporate market valuation by measuring the value of these shares based on the last-year price. Therefore, it clearly reflects the impact of the means of company financing on the returns available to shareholders (Donaldson and Davis, 1991; Dalton et al., 2003; Berger et al., 2005; Sigler, 2011 etc.). Shareholders, and institutional shareholders in particular, are interested in a combination of both risk and return as they manage either individual, or more normally portfolio, shareholdings (Palepu et al., 2004).

Another not infrequently used measure of corporate efficiency is total assets turnover (TASST)<sup>41</sup>, in which all corporate asset accounts are considered, consistent with Brigham (1991). The relationship between TASST and wider notions of profitability and indeed efficiency is likely to be dependent upon asset composition, industry sector etc but there is a general perception that, *ceteris paribus*, higher asset turnover is linked both to greater managerial efficiency and value added within a framework of a higher profitability (Bull, 2008). Although of undoubted importance in terms of the management of corporate operations TASST as a variable has yielded relatively few significant relationships with other variables of interest - however Bhagat and Black (1999) did identify asset turnover as

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<sup>39</sup>EPS has been calculated as (Net income – Dividends on preferred stock) / Average outstanding shares × 100 (Thomson-One-Banker database).

<sup>40</sup>The percentage of ROE in all industries is equal to: (Net income before preferred dividends - preferred dividend requirement) / last year's common equity × 100 (Thomson-One-Banker database).

<sup>41</sup>The percentage of TASST in all industries is equal to: Net Sales / Corporate Total Assets × 100 (Thomson-One-Banker database).

the only positive significant measure among a number of performance/profitability variables in their association with board independence.

#### **4.3.1.2.2.3 Underlying Control Variables**

Within the overall aim of the empirical exploration of whether executive pay has the greater influence on corporate performance or vice versa, it is crucial that an appropriate set of variables proxying for other influences on the level and structure of executive compensation and company performance are included for control purposes. A number of previous UK and US studies have been limited in their generality and means of interpretation because of their use of a relatively small set of such control variables (such as Mehran, 1995; Kubo, 2000; Abdullah and Page, 2009; etc.). Particular omissions have included those with internal and external governance mechanisms that can potentially affect the relationships between executive compensation and firm performance.

This section discusses the nature of the control variables to be incorporated in this study. Although primarily utilised for control purposes the researcher is interested in investigating the effects of these variables on both remuneration and performance modelling equations, as well as the manner in which they mitigate the impact of omitted variables in explaining the dependent variables.

A review of prior literature on executive compensation and company performance suggests a range of suitable control variables. These are grouped into the following categories: corporate governance and ownership mechanisms, board member features and firm characteristics. The majority of these variables are continuous in form but for ease of exposition (as in a number of previous studies: Conyon and Murphy, 2000; Adams and Mehran, 2005; Smith, 2008; etc.) related dummy variables within these categories and others are considered separately. For each variable the justification for inclusion and the expected nature of the relationship between the variable and measures of executive pay and corporate performance are discussed individually below.

##### **4.3.1.2.2.3.1 Governance and Ownership**

A growing stream of literature, from a wide spectrum of theoretical backgrounds, have considered that mechanisms of corporate governance are the cornerstone which both

supports and dictates the interrelationships between executive compensation and company performance (for example Conyon and Leech, 1994; Kang and Shivdasani, 1995; Core et al., 1999; Lee et al., 2008 etc.). These mechanisms themselves have become more complex and sophisticated for a number of reasons – including the wider nature and role of major corporations in business society, an increased emphasis on sustainability and environmental matters related to these corporations, in addition to issues raised by both greater diversity and globalization, - issues that include those relating to transparency and disclosure (Solomon, 2007). This reinforces the need to seek to understand how corporate governance mechanisms are associated with the amount and composition of boardroom compensation - a need to which attention has been drawn by many commentators.<sup>42</sup>

Arguments have been advanced as to the need to commit to and practice a set of unified requirements for the structure and mechanisms of corporate governance in order to: restore confidence in corporate management (Hossain et al., 1994; Krambia-Kapardis and Psaros, 2006), rebalance the corporate financial and administrative structures (Berger et al., 2005; Krambia-Kapardis and Psaros, 2006; Solomon, 2007), broaden the phenomenon of investment culture (Fraser and Henry, 2003; Khurshed et al., 2011) and knowledge economy (Gugler, 2001; Krambia-Kapardis and Psaros, 2006; Abdullah and Page, 2009).

More specifically consideration has been given to the manner in which corporate governance, for example in relation to the size and composition of the firm boardroom, the existence of board committees, non-executives and independent directors, definition of role and the prohibition of role duality, impact on both executive directors' remuneration and company performance for enhancing the internal control and monitoring role that prevents or limits opportunistic managerial behaviour (Donaldson and Davis, 1991; Khatri et al., 2002; Doucouliagos et al., 2007; Lee et al., 2008; etc.). Other factors that have been considered include the relevance of equity ownership by board members (including the value of stock, equity, and options owned by the corporate board of directors) both from an agency theory perspective and that of managerial power (Mehran, 1995; Loderer and Martin, 1997; Thomsen and Pedersen, 2000; Berger et al., 2005; etc.).

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<sup>42</sup>See, the Independent report: <http://www.independent.co.uk/news/world/europe/pressure-grows-on-europe-to-do-more-to-help-euro-2354582.html?origin=internalSearch>

See, the Economist report: <http://www.economist.com/blogs/buttonwood/2012/02/fiscal-crisis>

Thus the first set of control variables utilised and discussed separately below are the mechanisms of corporate governance which have been extensively referenced in the prior literature (such as Agrawal and Knoeber, 1996; Conyon, 1997; Core et al., 1999; Berry et al., 2006; Lee et al., 2008) as proxies for both pay-performance and performance-pay frameworks. The researcher aims to explore the types of association between the mechanisms of corporate governance on one hand, and executive compensation and company performance on the other, by categorising the former variables in terms of their significance under the headings: duality role; board size; non-executive directors; independent directors; board committees' existence regarding the presence of audit, remuneration, and nomination committees; and boardroom ownership packages.

#### **4.3.1.2.2.3.1.1 Duality Role ( $DR_{i,t}$ )**

Historically it was common both in the UK and in the US for the duality roles of chairman and chief executive to be performed by the same person. The present guidance as to governance in the UK calls for separation of these duties so as to prevent any one individual having dominant or even unfettered power in the boardroom (FRC, 2008). Where separation is not in place it might be predicted, from a managerial power perspective, that CEO-chairman duality increases the degree of executive control over the determination of the level and structure of managerial compensation (Core et al., 1999). In the UK Conyon (1997) concluded that there was no association between UK executive pay and the duality role although an earlier study (Main and Johnston, 1993) suggested that CEOs who are also chairmen received larger total compensation in the UK. Also, using UK data, Conyon and Peck (1998) reported that CEO duality as a measure of board monitoring had a limited effect on the amount of top management compensation. However Lee et al. (2008) find, on the basis of their empirical findings, that CEO-Chairman duality is negatively related with no significant effect to the enhancement of business performance, measured by Tobin's Q, in the US context.

Enhanced executive remuneration is just one avenue for opportunistic managerial behaviour (Donaldson and Davis, 1991; Gubitta and Gianecchini, 2002). For example, Forker (1992) highlights the increased opportunity for control over information and even the possibility of withholding information when CEO-Chairman duality exists. Similarly Blackburn (1994) notes the possibility of control of board meetings, the ability to select the

agenda items, and the nomination of directors, both executive and non-executive, to the board.

Essentially duality creates the opportunity for actions inimical to the interests of the shareholders which are likely to affect performance via inappropriate decision making (Messier, 2003). It may also allow for exaggerated compensation packages for executive directors including the CEO as managerial power is extended. Consistent with the findings of Lee et al (2008), the expectation is that duality of role is likely to be associated with an adverse influence on firm performance.

#### **4.3.1.2.2.3.1.2 Board Size ( $BS_{i,t}$ )**

The recommendations of Cadbury Report (1992) are likely to have led to an increase in the average overall board size via its emphasis on the role of non-executive directors evidence as to the relationship between the size and composition of the board and company performance is mixed as it is in respect to the link with senior executive remuneration. For example using UK data Ozkan's study (2007) found no clear evidence of any relationship between the size of the board of directors and corporate performance – however the study did find a positive relationship between the number of directors and CEO remuneration. Abdullah and Page (2009) reported some evidence that companies with bigger boards had higher values of Tobin's Q for the period 1999-2001, but a weaker relationship, if anything negative, in the later period; whilst they found a negative relationship between board size and ROA.

Similarly mixed results were found in prior studies in the US and elsewhere. These studies include those of Muth and Donaldson, 1998; Bhagat and Black, 1999; Lawrence and Stapledon, 1999; Adams and Mehran, 2005; Raheja, 2005; Belkhir, 2009. This perhaps reflects the variety in the attempts to theorise the expected nature of the relevant associations and relationships. At one level increasing board size may lead to inefficiency and a lesser inclination to take a personal interest in monitoring the activities of other board members. For example Jensen (1993) and Yermack (1996) discuss the decreasing proficiency of board members in examining administrative roles as they grow in size and their control becomes inefficient. Pound (1995) considered the smaller the corporate board of directors, the more likely it is to be reliable in monitoring business operations whereas

the larger the board, the slower it is to react to decisions that require a direct and quick action. A review study by Hermalin and Weisbach (2000) concluded that previous empirical studies on board size have produced a number of consistent findings. For instance, board composition, as measured by the insider-outsider ratio, has no correlation with corporate performance, and board size is negatively related to a firm's financial performance. Raheja (2005) too found that board size is negatively related to the proxies of monitoring the costs of insiders.

In terms of expectations contained within this study the basic perspective along with that of Jensen (1993), Bhaghat and Black (1999) (for Bhaghat and Black the optimal board composition is approximately three and five executive members in a total board size of eleven) and many others is that above a certain size boards may become unwieldy and factional or even generate their own internal agency costs leading to less efficient and appropriate decision making. When other factors are controlled for the perspective adopted in this study is that enhanced board size is likely to be associated with lower rather than higher managerial and corporate performance. Whether on balance larger boards are likely to be less rigorous in their monitoring of executive remuneration packages or whether smaller boards are likely to be less independent and more under the control of executive directors in terms of the determination of executive compensation is left open to question at this stage.

#### **4.3.1.2.2.3.1.3 Non-Executive Directors ( $NXD_{i,t}$ )**

Non-executive (outside) directors are members of the corporate boardroom who do not play a direct part in the day to day running of a company as part of the executive managerial team but who play a significant role in monitoring the performance of executive (inside) directors. They are seen by both regulators and the majority of commentators as an integral part of the structure of internal governance which ensures both propriety and efficiency in the manner in which companies operate and in which they fulfil their obligations to their shareholders and wider stakeholders – see for example Gugler, 2001; Fraser and Henry, 2003; Kim and Nofsinger, 2007; Mallin, 2007. The Higgs' report (2003) states that non-executive directors have corporate policy responsibilities to contribute constructively to the improvement of company strategy and firm performance by scrutinising the managerial team's efficiency in achieving the enumerated objectives.



Specific theorising as to how non-executive directors contribute to improved corporate performance has perhaps been more limited than one might expect given the widespread acceptance of their role within a paradigm of good or ‘better’ governance – albeit an acceptance with some dissenting voices for example Franks et al (2001), Spira (2003), Spira and Bender (2004), Gwilliam and Marnet (2009). Benefits are normally seen in acting to moderate and improve decision making at board room level, in part because of the experience and knowledge which non-executives can bring to boardroom discussion, in part because of their ability to stand at a remove as compared with executive directors in terms of risk taking and personal involvement in the outcome of decision making. They are also seen as an important part of the wider monitoring mechanisms via their involvement in audit, nomination and remuneration committees. As such they act to enhance controls within the company and also to bring wider transparency and communication with shareholders and other stakeholders.

Consequently, non-executive directors are regarded as an agent for monitoring and controlling executive action and limiting their ability to indulge in opportunistic behaviour (Jensen and Meckling, 1976; Fama and Jensen, 1983; Rosenstein and Wyatt, 1990; Pettigrew and McNulty, 1995). Mehran (1995) and Leung and Horwitz (2004) emphasise that one aspect of controlling opportunistic behaviour at the expense of the shareholders is ensuring that excessive remuneration packages are not awarded to corporate executives. However, others have argued, for example Fama and Jensen (1983), that non-executives should be mindful of the need to ensure that there are sufficient incentives for executive directors to maximise their efforts to ensure the effective and profitable running of the firm on behalf of the shareholders – and this is likely to result in higher remuneration packages if they are successful in this endeavour. Evidence from prior studies for example Ozkan (2007) using UK data report that companies with more non-executive directors in relative terms (as a percentage of board size) paid their CEOs more than the companies with a lower number of non-executive directors.

Although noting that the role of non-executive directors within the corporate governance paradigm is not itself without its critics in this study the majority view is followed – i.e. the expectation is that the absolute number and relative proportion of non-executive directors on the board is likely to be positively related to measures of corporate performance in line

with, inter alia, Fama and Jensen, 1983; Haniffa and Cooke, 2002; Mura, 2007 etc. Again expectations as to any association with the level of executive compensation are not clear cut. At one level non-executive directors may act to prevent self seeking management enriching themselves inappropriately, at another implementation of appropriate incentive packages is likely to lead to better performance and associated higher payments to executive directors. At this stage the study takes this latter perspective which is in line with the theorising of Fama and Jensen (1983) and the empirical findings of Ozkan (2007).

#### **4.3.1.2.2.3.1.4 Independent Directors ( $ID_{i,t}$ )**

In both the UK and the US non-executive directors can be categorised into those which are independent and those which are not. It is the former who are considered by many commentators as those who can effectively exercise their best opinions and decisions for the benefit of the company and are therefore an essential building block of and for good governance.<sup>43</sup> In the UK directors are deemed to be independent if they satisfy the guidelines set out in the Higgs Report (2003) as to the absence of material pecuniary and other relationships with the company together with any additional requirements determined by the company itself. The overlap between the notion of a non-executive director and an independent director has been something of a grey area in terms of perceptions (Gubitta and Gianecchini, 2002) but it is the independent directors who might reasonably be expected to be situated to use their best judgment for the company's interests, consistent with the guidelines of the Combined Code of Corporate Governance (2008)<sup>44</sup>.

Although a priori theorising supports the notion of non-executive directors being independent, evidence from previous empirical studies is again somewhat mixed – both in

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<sup>43</sup>See the LexVidhi article 'Independent directors and corporate governance':

<http://www.lexvidhi.com/article-details/independent-directors-and-corporate-governance-312.html>

See also the Synopses report:

<http://www.synopsys.com/COMPANY/ABOUTSYNOPSIS/CORPORATEGOVERNANCE/Pages/GovGuidelines.aspx>

<sup>44</sup>According to the Code (2008; A.3.1), a director is considered not to be independent if he/she:

- has been an employee of the company or group within the last five years;
- has, or has had within the last three years, a material business relationship with the company;
- has received or receives additional remuneration from the company apart from a director's fee;
- has close family ties with any of the company's directors;
- holds cross-directorships;
- represents a significant shareholder; or
- has served on the board for more than nine years from the date of their first election.

terms of the relationship with performance and with executive compensation. For example, in the US, Core et al. (1999) document a positive association between the percentage of independent directors and firm performance, measured by Tobin's Q, and also report that the higher the proportion of independent directors on the board, the more the CEO is paid. In the UK Conyon and Peck (1998) reported no correlation between CEO compensation and board composition, whilst Abdullah and Page (2009) found that board independence is positively related to Tobin's Q – but it is negatively associated with ROA. In line with this negative relationship Bhagat and Black (1999) provide evidence of how companies with a high proportion of independent directors on their boards are less profitable than other firms for a sample of 928 large US companies over various sub-periods during 1985-1995 and in a later study (Bhagat and Black, 2002) reported that whilst poorly performing entities were more likely to enhance their board's independence level there was no clear evidence that this resulted in an improvement in firm performance for the same sample utilised before (i.e. 928 large US companies) over two sub-periods 1988-1990 and 1991-1993. Using Australian data Lawrence and Stapledon (1999) found a positive relationship between the proportion of independent directors and corporate performance – but they counselled that this relationship might itself be an artefact based on the relative better performance of larger firms whose boards comprised a higher proportion of independent directors.

The Combined Code in 1998 stated that the board should comprise no less than one-third independent members, whilst the 2003 Combined Code Guidelines suggest that at least 50 percent of the board should be independent members. This latter requirement was implemented after 30<sup>th</sup> June 2004. This study therefore aims here to explore the volume effect of independent directors on both pay-performance and performance-pay frameworks within a context in which the proportion of independent directors is likely to have been increasing over time. In terms of expectations the study, in line with the majority of theoretical insights/intuition and regulatory commitment, anticipates that an increased proportion of independent non-executive directors might act to improve corporate performance (consistent with Core et al., 1999; Lawrence and Stapledon, 1999; and Abdullah and Page, 2009) and to moderate executive compensation packages - but is aware that the limited extent of prior empirical evidence does not support such a relationship.

#### **4.3.1.2.2.3.1.5 Board Committees' Existence ( $AC_{i,t}$ , $RC_{i,t}$ and $NC_{i,t}$ )**

Audit, remuneration, and nomination committees are considered by both commentators and regulators to be an integral part of what constitutes 'good' or 'better' corporate governance (Gwilliam and Marnet, 2009). The beneficial attributes of these committees, comprised wholly or largely of non-executive directors fit within a variety of theoretical perspectives both as to their effect on corporate performance and executive compensation packages. For example Hossain et al. (1994) discuss the manner in which an audit committee can support the principals (i.e. the shareholders) as they seek to monitor the activities of their agents (i.e. the managers) and endeavour to align the interests of both parties appropriately. Equally from a managerial power perspective these committees will act as a check on managerial opportunism (McDaniel et al., 2002). The specific role of a remuneration committee is considered earlier in Chapter Two - but there is an extensive range of prior literature including that of Braiotta and Sommer, 1987; Main and Johnston, 1993; Conyon and Peck, 1998; Narasimhan and Jaiswall, 2007; Main et al., 2008; Brown and Caylor, 2009 which indicate the importance of the existence of remuneration committees. These committees provide assistance in the determination of executive pay packages in a fair and appropriate manner and again act to enhance the mechanisms of corporate governance and also, perhaps more tenuously, the level of firm performance, consistent with the principle of aligning the interests of agents and principals according to the agency theory (Jensen and Meckling, 1976). In the UK Main and Johnston (1993) reported that the proportion of the presence of remuneration committees is represented by 30% for a sample of 220 large publicly held British companies for the fiscal year 1989/90. This might explain the finding of Conyon and Peck (1998) as to board monitoring, measured by the presence of remuneration committees, had a limited effect on the level of top executive compensation in the UK context. However, the significance of the presence of remuneration committees has been highlighted in later periods, for example Brown and Caylor (2009) found the representation of remuneration committees for 2363 US firms in 2003 is 66 per cent. Nomination committees are set up for the purpose of ensuring that board appointments are made in an open and transparent manner and lead to the appointment of appropriately qualified and talented people to the board. This too is consistent with both an agency theory perspective and one which places greater emphasis on managerial power (Braiotta and Sommer, 1987).

In this light the expectations are that, consistent with the majority of previous theorising, albeit supported by limited empirical evidence, that the existence of such committees is likely to be linked, via improved monitoring and control, to enhanced corporate performance. As with other variables hypothesised, associations with executive compensation are difficult to formulate as there will be situations in which the appropriate compensation committees to aid enhanced performance leads to increased remuneration whereas in other circumstances these committees will act as a check on managerial profligacy and self serving activities.

#### **4.3.1.2.2.3.1.6 Boardroom Ownership Packages ( $WSP_{i,t}$ , $E/UWO_{i,t}$ and $E/UWE_{i,t}$ )**

The principal-agent problem between directors and owners arises when the former hold a small-part of corporate equity and have incentives to act in behaviour which is sub-optimal from the perspective of the owners (Jensen and Meckling, 1976; Leftwich et al., 1981). The lower the levels of executive ownership, the likelihood is that agency issues will be more pressing and significant. Conversely a higher level of executive ownership will mitigate conflicts of interest and result in more suitable and appropriate corporate policies more in line with the expectations of the wider shareholder body (Watts, 1977; Craswell and Taylor, 1992; Ang et al., 2000; Leung and Horwitz, 2004), and thereby to enhance their company performance (Mehran, 1995; Agrawal and Knoeber, 1996; Loderer and Martin, 1997; Thomsen and Pedersen, 2000). Although the link with corporate performance is reasonably straightforward from a theoretical perspective again that with compensation is more mixed – but, as Ozkan (2007) noted, it is very likely that remuneration committees will incorporate perspectives as to the volume of shares, owned outright or with future option rights, held by boardroom executives, especially CEOs, in designing their incentive packages. Prior studies (e.g. Murphy, 1999; Conyon and Murphy, 2000) distinguish between compensation per annum (including current value of LTIPs and options) and wealth effects which refer to the change in value of these incentive plans and options. The current study adopts therefore a package of managerial ownership derived from the *BoardEx* database; namely, Wealth Share Plans ( $WSP_{i,t}$ ), Wealth Options as Exercised ( $EWO_{i,t}$ ) and Un-exercised ( $UWO_{i,t}$ ), Wealth Equity as Exercised ( $EWE_{i,t}$ ), and Un-exercised ( $UWE_{i,t}$ ).

Here again there is consistency with perspectives deriving from managerial hegemony theory (Tosi and Gomez-Mejia, 1989). Using UK data Conyon and Sadler (2001) reported that corporate performance is positively associated with the change in firm-specific wealth owned by CEOs and other corporate executives. In the US Core and Larcker (2002) report also that the adoption of share incentive plans, which represent the managerial equity ownership, for top executives is significantly correlated directly with corporate performance for a sample of 195 US firms in fiscal year 1995. There are mixed results in terms of executive compensation from the US empirical studies. Whilst Allen (1981) indicate a negative association between the level of CEO compensation and the CEO stock ownership for a sample of 218 large US industrial corporations during 1975 and 1976, Holderness and Sheehan (1988) found that officers with greater stockholdings in publicly traded companies received higher salaries for a sample of 114 US firms for at least two consecutive years between 1979 and 1984 – a finding which Ozkan (2007) interpreted to mean that executive directors with high equity holdings may have the authority and power to benefit themselves from the usage of company resources.

Again in accordance with the majority of prior theory and commentary, albeit again noting the limited and mixed empirical evidence, the expectation is that a higher level of actual or potential share ownership by executive directors will be associated with enhanced corporate performance (consistent with Conyon and Sadler, 2001; and Core and Larcker, 2002). In respect to compensation packages, the theorising diverges in that one strand would suggest a positive relationship between insider ownership and remuneration whether driven by improved performance or managerial power, whereas another would suggest that higher share ownership would reduce the reliance of executive directors on fixed components of remuneration to achieve their rewards.

#### **4.3.1.2.2.3.2 Board Member Features**

The second set of control variables are a number of straightforward personnel/executive-dependent effects which are regarded as the influences of the expertise and genus of top managerial members (such as age, tenure, and gender), which in turn might have synergetic effects, especially on the pay-performance framework.

The age of boardroom CEOs and other executives is regarded as an important explanatory factor influencing the amount and structure of their remuneration package. Why this should be is less clear, but previous literature (e.g. Hogan and McPheters, 1980; Devers et al., 2007) suggests that age, perhaps proxying as an experience factor, has a significant and direct influence on managerial compensation. While Hogan and McPheters (1980) utilised a vector of personal and human capital characteristics, including CEO age, within the pay-performance framework for a relatively a small sample of 45 US highest paid executives; Devers et al. (2007) highlights the importance to consider the importance of existence the time-dependent effects (i.e. CEO age, tenure, temporal incentives) on the pay for performance models. However the evidence again is mixed. For example, Deckop (1988) concluded that CEO age has no effect on and is negatively associated with compensation for a sample of 120 US large firms over the period 1977-1981.

The tenure of corporate board CEOs and executives refers to the number of years that they have held their positions – the time-in-role (*TIR*) variable in the current study. The longer top-ranking officers have held their positions, the more efficient their track records, the more developed their contact lists and their key inside and outside personnel skills; in addition, longer tenure adds to their wealth accumulation in the form of stocks and options, consistent with McKnight and Tomkins (2004). As Hill and Phan (1991) argued, CEOs' longer tenure of a role in the company may lead them to exercise more control over the remuneration setting process in harmony with their preferences. Consequently, 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.

Again in line with a priori theorising and the majority of the empirical evidence in this study the expectation is that both age and tenure are positively related to both corporate performance and executive compensation.

The fact that women are paid less in amount and composition than men in similar jobs has been consistently recognised around the world (Blau and Kahn, 2000). In relation to the theorising of gender pay gap, Rubery (1995) suggests that individualising compensation is likely to increase fragmentation and diminution of women's interests beyond that which would be obtained from the application of uniform pay scales to particular job categories. More specifically Adams and Ferreira (2004) document several significant correlations

between the variability of stock returns, the structure of director compensation, and the gender diversity of corporate boards for a sample of boards of directors of 1024 US publicly traded companies in fiscal year 1998. They deconstruct the findings of gender based studies into three categories: first, a greater variability of stock returns when fewer women are on the board; second, more diverse boards lead to more pay-performance incentives; and finally, more diverse boards are associated with a greater frequency of more board meetings.

Without purporting to delve into the vast range of literature relating to gender and inequality the expectations of this study in accordance with the main thrust of this literature is that there will be a direct association between gender and CEOs' compensation as the majority of boardroom seats in FTSE 350 companies are occupied by males. Whether there will be an association in terms of corporate performance is an open question – and one which might be mediated by the claimed greater risk aversion of women.

#### **4.3.1.2.2.3.3 Firm Characteristics**

Apart from personnel-dependent variables a number of common firm-dependent effects as represented by the influences of corporate size, growth, and leverage are likely to be influential in respect to both corporate performance and executive compensation. Consequently a number of such variables, derived from and consistent with previous literature, are utilised which might have relevance to the two aspects of the research approach, i.e. that of pay-performance and performance-pay.

##### **4.3.1.2.2.3.3.1 Corporate Size ( $TASS_{i,t}$ )**

Understandably firm size is a variable that has received considerable attention in the literature of executive pay and company performance. As Conyon (1997) noted, firm size is significant in determining the level and structure of executive directors' remuneration. He attributed this in part to a competitive labour market for professional managers which will attract more talented officers to higher positions in the corporate hierarchy. This in turn suggests that larger companies will be able to bid more highly for talent and expertise – and also that talented individuals will bid up their remuneration expectations and that these are more likely to be satisfied by larger companies.



There is support for this perspective in the empirical literature which shows a clear relationship between company size and remuneration and in some instances links this in to the market for executive talent (Core et al., 1999; Zhou, 2000). The relationship is necessarily complicated by the body of literature which also relates size to performance, although here the evidence is mixed. Conyon and Murphy (2000) and Zhou (2000) report a positive link between CEO pay and corporate size which they attribute in part to the better performance of larger firms. Punnoose (2008) observes a direct relationship between size and performance. However, other studies, for example, Agrawal and Knoeber (1996) find an inverse and significant relationship, between company size and profitability. Also Loderer and Martin (1997) report a negative association between firm size and both acquisition performance and Tobin's Q.

Various reasons have been suggested for the perceived better performance of larger companies some of which are linked to corporate governance, i.e. the likelihood that larger firms will have more clearly structured board and management networks and employ more suitable and talented personnel. Jensen and Murphy (1990) link this in to an agency framework whereby firms choose the governance structure most suitable to minimise agency costs and align CEO and executive directors' compensation packages accordingly. Therefore the expectation is that larger-sized companies will be associated negatively with corporate performance (consistent with Agrawal and Knoeber (1996) and Loderer and Martin (1997)) and positively with executive remuneration (Conyon and Murphy, 2000; and Zhou, 2000).

#### **4.3.1.2.2.3.3.2 Corporate Growth ( $CTASS_{i,t}$ )**

The majority of the literature supports the contention that companies with upward growth opportunities seek more highly qualified executives who in turn expect higher amounts of compensation (Rosen, 1982). One strand of this literature focuses on agency perspectives. It suggests that corporations with sustainable growth and opportunities to prosper are more likely to have a high level of information asymmetry between board room directors and institutional shareholders, as the top managerial executives have sensitive information about prospective profitable projects, while corporate investors are more concerned with monitoring their efforts in enhancing business operations and processes (Rosen, 1982; Smith and Watts, 1992). Consequently, company growth might reflect increase potential for

managerial opportunism and possibly higher agency expenditure to counteract this. Smith and Watts (1992) show that firms with upward growth pay higher compensation levels to their boardroom members compared with those with downward growth, perhaps not surprisingly, but also suggest that managers in faster growing firms may adopt excessive risk-taking strategies as they seek to enhance their market shares, sales volume, and levels of profitability. It is possible that in order to seek to restrict the potential for managerial opportunism that there might be greater similarity in the nature of the composition packages offered to executives in firms with greater growth opportunities as compared to those in firms operating in a more steady state environment. Therefore, the research expectation is that there are positive associations between company growth, performance, and executive compensation.

#### **4.3.1.2.2.3.3.3 Corporate Leverage ( $DA_{i,t}$ <sup>45</sup> and $DE_{i,t}$ <sup>46</sup>)**

A number of writers have highlighted the relevance of corporate leverage to issues of executive compensation both in terms of risk averse managers preferring cash-based compensation rather than equity-based packages (Harris and Raviv, 1979) and also shareholders seeking to align the likely levels of corporate risk taking with their looked for risk return pay-off via the setting of appropriate compensation packages and firm performance. Here again aspects of both managerial power as managers seek to set packages, and also debt strategies, to suit their own aspirations and agency theory as shareholders and other stakeholders seek to control the managers come into play.

A variety of corporate leverage indicators are utilised as control variables in the prior literature. In this study the basic leverage control variables used are debt leverage indicators. They are significant in both operating and financing processes as they provide a good indication of the long-term solvency of the firm (Fabozzi and Peterson, 2003) – in which the debt operating<sup>47</sup> indicates the use of debt to acquire additional assets, whilst the

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<sup>45</sup>The DA percentage equal to: (Long term debt + short term debt + current portion of long term debt) / total assets × 100 (Source: Thomson-One-Banker database).

<sup>46</sup>The percentage of DE commonly equal to: (Long term debt + short term debt + current portion of long term debt) / Common equity × 100 (Source: Thomson-One-Banker database).

<sup>47</sup>Debt-to-asset ratio is the proportion of assets financed with debts, by which the percentage of funds provided by creditors within the overall assets is examined. In general, company creditors wish debt ratios to be low as the lower the ratio, the lower the chance of sustaining losses in the case of liquidation. Institutional investors, however, may prefer more leverage levels as this may increase the amount of expected earnings (Brigham, 1991).

debt financing<sup>48</sup> has the advantage of debt over equity in the capital structure for assessing how much business risk has been taken on (Brigham, 1991). Jensen (1986) reported that the usage of more debts might perhaps affect the company's capability to perform well. Bebchuk and Spamann (2009) also noted that the issuance of these debts to maximise corporate funds is regarded as an important sign of the excessive risk-taking behaviour of corporate executives, as a result of which the company performance is influenced. Therefore the expectation is that debt leverage is negatively related to company performance, consistent with (Jensen, 1986; and Bebchuk and Spamann, 2009).

#### **4.3.1.2.2.3.4 Dummy Variables**

As Wooldridge (2005) notes, one of the best ways to avoid the potential for threat of perfect multi-collinearity is to include one or more dummy (i.e. binary) indicators – which can be treated as numerical variables to represent subgroups of the sample – in an attempt to permit the slope differences across different sectors. In general, dummies are utilised as qualitative factors besides the quantitative factors to indicate the absence or presence of certain categorical effects that may be expected to shift the outcome, in addition to distinguishing different treatment groups.

The current study employs two types of dummy. First,  $D_{reg}$  implies the dummy construction for the two sections of the FTSE 350 industries by representing the sectors “Financial and Utilities” by zero and the non-financial sectors by one, consistent with Koh and Liu (2012). Second,  $D_{t1-9}$  refers to the dummy construction for the 10-year time period.

#### **4.3.1.3 Research Modelling Plan**

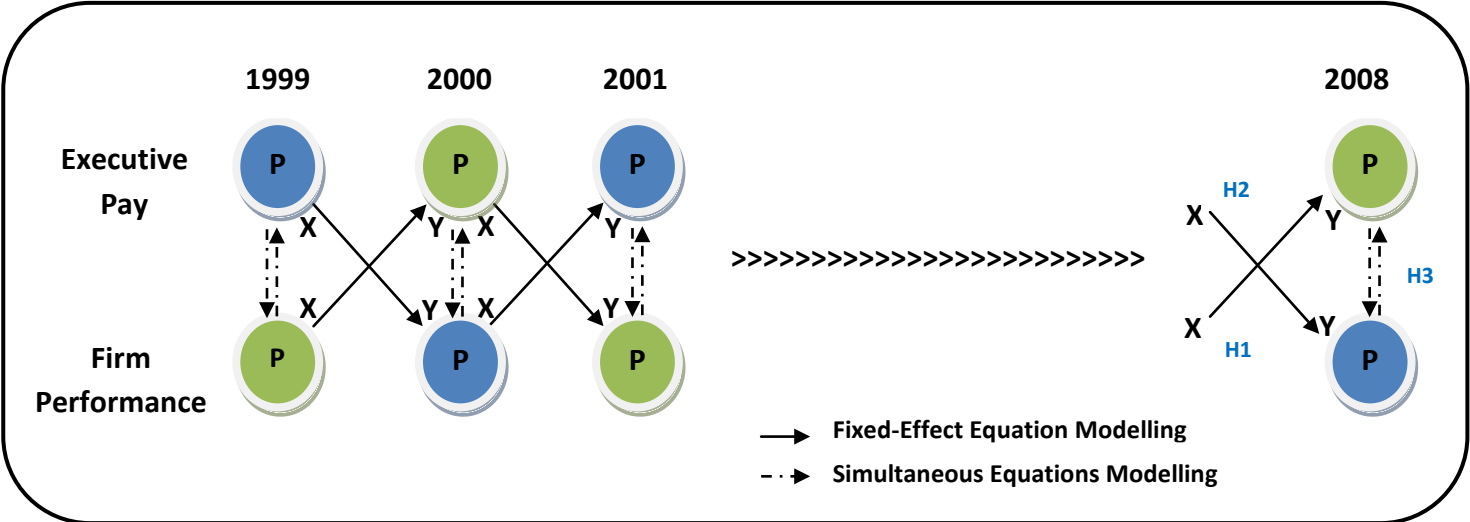
As previously noted and discussed in chapters Two and Three, there are a number of theoretical perspectives related to managerial pay packages and each are themselves based on diverse assumptions regarding the states of nature, the capital markets, managerial characteristics, etc. It is therefore not surprising that competing models should offer different sets of theoretical and empirical implications.

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<sup>48</sup>Debt-to-equity is the ratio which investigates the proportion of funds (i.e. total liabilities, including both short- and long-term debts) provided by creditors within their overall investments (Brigham, 1991). Consequently, the indicator of debt-to-equity shows the financial risk in terms of the use of debt relative to the use of equity, as well as indicating how many pounds of debt are used in financing the firm for each pound invested by its shareholders (Palepu et al., 2004).

The third and final stage of the empirical research strategy focuses on the design of the examination modelling the interrelationships between executive compensation and firm performance. The modelling frameworks of the relationships between executive compensation and company performance are set out in the two main models, as outlined in Figure 5. The first model is that of fixed-effect equations, in which boardroom pay can be influenced by the company’s previous year performance (which structure hypothesis (1)) and has an effect on the forward year performance, whilst the levels of company achievement can be influenced by the prior year executive pay (which construct hypothesis (2)) and has an effect on the next year executive remuneration. A panel of fixed-effect regression techniques has been implemented to capture the unobservable officer and firm-level differences (such as executive talent, corporate complexity, etc.), consistent with Main et al. (1996) and John et al. (2010), following earlier studies (for example, Benito and Conyon, 1999; and Sapp, 2008) in estimating the corporate fixed-effects model. The second model is a simultaneous equation framework, in which a set of corporate governance mechanisms is utilised in order to contribute explicitly to identifying the possible endogeneity issues, consistent with Agrawal and Knoeber (1996), that might arise from the potential simultaneous exercise of executive compensation and related corporate governance mechanisms (which outline hypothesis (3)) – as the former is one of the latter mechanisms, consistent with Mehran (1995), which companies utilise to mitigate or, at least, minimise agency conflicts.

**Figure 5: Framework of Relationships between Executive Pay and Firm Performance**



Source: Prepared and constructed by the researcher.

#### 4.3.1.3.1 Fixed-Effect Equations Model

The current study aims to examine the interrelationships between executive remuneration and company performance by showing the impact of each aspect on the other through a set of corporate governance mechanisms, boardroom ownership structure, as well as board member and corporate features, as follows:

$$\ln (Rem_{i,t}) = \beta_{10} + \sum_{j=1}^5 \beta_{11} \ln (Perform_{i,t-1}) + \sum_{j=1}^{18} \gamma_{12} Controls_{i,t-1} + u_i + v_{i,t} \quad (1)$$

in other words, 
$$\ln (Y_{i,t}) = \beta_{10} + \sum_{j=1}^5 \beta_{11} \ln (Y^*_{i,t-1}) + \sum_{j=1}^{18} \gamma_{12} X_{i,t-1} + u_i + v_{i,t}$$

$$\ln (Perform_{i,t+1}) = \beta_{20} + \sum_{j=1}^2 \beta_{21} \ln (Rem_{i,t}) + \sum_{j=1}^{17} \gamma_{22} Controls_{i,t} + u_i + v_{i,t} \quad (2)$$

in other words, 
$$\ln (Y_{i,t+1}) = \beta_{20} + \sum_{j=1}^2 \beta_{21} \ln (Y^*_{i,t}) + \sum_{j=1}^{17} \gamma_{22} X_{i,t} + u_i + v_{i,t}$$

where  $i$  denotes a company,  $t$  denotes a year, and  $u_i$  denotes a firm-specific effect.  $Y_{i,t}$  and  $Y^*_{i,t}$  refer to the same set of variables which represent the main components and measures of executive compensation in terms of their significance and size for the CEO and boardroom members at FTSE 350 companies ( $i$ ) in year ( $t$ ).  $Y^*_{i,t-1}$  and  $Y_{i,t+1}$  stand for the same group of variables which represent the accounting-based measures of corporate performance for FTSE 350 companies ( $i$ ) in years ( $t-1$ ) and ( $t+1$ ).  $X_{i,t}$  represents the set of control variables at FTSE 350 companies ( $i$ ) in year ( $t$ ).  $v_{i,t}$  is the disturbance (i.e. error) term, which is independent across the FTSE 350 companies ( $i$ ) in year ( $t$ ).

In respect to the slope coefficient  $\beta_{11}$  and  $\beta_{21}$  parameters measure the effect of performance of pay and the effect of pay on performance, respectively, during the year. In relation to the pay-performance association,  $\beta_{11}$  is the reaction coefficient of interest reflecting the sensitivity of executive directors' remuneration to firm performance with the ambition to explore how does company performance influence executive compensation. Academic literatures indicate that the estimates ( $\beta_{11}$ ) of pay-performance vary in sensitivity. For instance Jensen and Murphy (1990) found that CEO pay increased by \$3.25 for every \$1,000 increase in stockholders' wealth, while Hall and Leibman (1998) concluded that on average CEO pay sensitivity then was about \$25.11 for every \$1,000 increase in stockholders' wealth. In this study the coefficient degree of  $\beta_{11}$  will be interpreted by

referring to the optimal contracting view of agency theory, in which positive values of  $\beta_{11}$  suggest closer alignment between the interests of executive directors and shareholders (Conyon and Sadler, 2001) or a managerial hegemony perspective, in which negative values of  $\beta_{11}$  suggest the influence of boardroom members in constructing their pay contracts (Bebchuk and Fried, 2004b). In accordance with the performance-pay relationship,  $\beta_{21}$  is the reaction parameter of interest reflecting the sensitivity of company performance to variable executive directors' remuneration with the ambition to investigate how does executive pay influence company performance? Prior studies highlight that  $\beta_{21}$  coefficient can be interpreted by referring to tournament and/or stewardship perspectives, in which positive values of  $\beta_{21}$  suggest that enhanced prospects of promotion approach will inspire corporate executives to strive harder for recognition and reward and/or to highlight the human capital aspects relevant to advancement in terms of their knowledge and skills. Therefore, the framework of performance-pay leads principally to the notion of enhancement of overall firm performance, paralleled by a closer alignment between the interests of executive directors and shareholders.

Based on equations (1 and 2), a number of methodological thoughts and insights regarding the analysis of a package of panel data variables are highlighted below as they are considered essential analytical procedures before the data sample is analysed.

The first methodological/analytical concern is the residuals for each company, by which they show evidence of correlation across years and also may be associated across corporations within a single period. According to the methodology of Black et al. (2006), three approaches can generally be followed to overcome concerns re the residuals: (1) firm-clustering effects by using ID dummies consistent with Rogers's clustered standard errors (Rogers, 1993); (2) firm-random effects; and (3) firm-fixed effects. However, the model of firm-specific fixed effects is regarded as the most appropriate statistical estimation as it stands for the observed individual observations in terms of the explanatory variables, which are treated as if the individual observations were non-random. As Benito and Conyon (1999) reported, comparing the validity and interpretation of company random and fixed effects, the latter is statistically preferred when both random and fixed effects models are presented. This is because the former requires the corporate effects to be unconnected with the independent variables (i.e. regressors), and therefore suffers from inconsistency, as well

as inefficiency, as the estimated standard errors are not effective in taking account the dependence of the error term within individual observations over time. On the other hand, the firm-cluster effect permits observations of the same company to be correlated across the period under examination, and therefore might suffer from problems associated with multicollinearity. More importantly the technique of fixed effects estimation is probably best when there are omitted variables and these variables might perhaps be correlated with the variables in the model within the analysis of panel data (Hausman and Taylor, 1981; and Black et al., 2006) – this is discussed later in this chapter in the section relating to data collection and preparation. Accordingly the suggestion of Hausman and Taylor (1981) to adopt the fixed-effects framework is followed as it represents an unbiased method of controlling for omitted variables in a panel data set. In this case, fixed effects estimation provides a mean for controlling for omitted variable bias, consistent with prior literature - including Hausman and Taylor (1981), Gujarati (2004), Wooldridge (2005), and (Black et al., 2006).

The second methodological concern is the endogeneity of examining the relationships between executive directors' remuneration and corporate performance by which, once any regressor is correlated with the disturbance term, the problem of endogeneity arises, causing a biased coefficient. These types of relationship can occur due to either an omitted variables bias or reverse causation; however, both panel data structure and appropriate estimation techniques assist in overcoming the problems related to omitted variable bias, consistent with Black et al. (2006). For the fixed effects to be unbiased, the regressors in all periods are tested to be uncorrelated with the unobserved individual effects in all periods.

$$E(\mathcal{E}_{i,s} Y_{i,t}^*) = 0; \quad s = 1, \dots, T, \quad t = 1, \dots, T$$

On the other hand, reverse causality might arise in the interrelationships between pay and performance. For instance, Conyon and Sadler (2001) noted that directors' talent and/or background experience is thought to influence their pay package and corporate performance too. Palia (2001) also reported that CEO age and experience are superior instrumental indicators due to their relationship to CEO compensation. In addition, Yermack (2007) demonstrated that options might be endogenous because the corporate directors usually have better information than the market and they therefore may receive

options before the company performs well. However, the concern of reverse causality can be eliminated by avoiding running the regression model of relationships between pay and performance through the same time interval. Therefore, consistent with the theoretical perspectives noted and discussed, this study examines the pay-performance framework by estimating the current compensation package with the previous year levels of firm performance, whilst the framework of performance-pay stands for the current remuneration package with the forward year company performance.

In practice, the instrumental variable technique is frequently applied to determine the endogeneity links between the regressors from one side and the disturbance term from the other, as it requires specifying the appropriate instruments which are both correlated with the endogenous variables and unconnected with the disturbance term of the original regression. In general the single-equation methods are utilised often as they can estimate a single-equation in a multi-equation model without confusing other equations in the framework. Prior studies (such as Dougherty, 2002; Gujarati, 2004; Wooldridge, 2005, etc.) demonstrated that Two-Stage Least Squares (2SLS) is one of the single-equation methods which is acceptable as the obtained estimates are consistent (i.e. the estimators converge to their true population values no matter how large the sample size), and unbiased (i.e. the regressor is uncorrelated with the error term).

In this study, consistent with Agrawal and Knoeber (1996), Loderer and Martin (1997), Hermalin and Weisbach (2000), and Black et al. (2006), the estimation technique of two-stage least squares is adopted to report the potential endogeneity relationships between corporate performance and executive compensation. For the pay-performance framework, the econometric application of lagged performance (e.g.  $perf_{t-2, t-3}$ ) is applied to mitigate the extent of endogeneity links. This is consistent with prior econometric literature (such as Gujarati, 2004; Wooldridge, 2005, etc.), which recommend the lag approach when it might be difficult to identify the appropriate variables to serve as valid instruments. In accordance with the performance-pay framework, Smith (2008) used both age and tenure for CEOs and board executive members as endogeneity instruments; but both variables are utilised in the current study as control variables. Instead the lagged variable of compensation (e.g.  $comp_{t-2}$ ), in addition to the unexercised wealth equity and options as ownership components for CEOs and board executives are utilised as endogeneity



instruments. The latter selection is consistent generally with the principal-agent concern which is likely to be arisen when the directors hold a small part of corporate equity and options (Jensen and Meckling, 1976). As a result, according to the framework of performance-pay, the executive remuneration indicators are regressed on their instruments and other control variables in the first stage, while the corporate performance measures are regressed on executive pay package, control variables, and the residuals from the first stage regressions in the second stage. Any significant coefficient reported in the first stage residual will be considered as evidence of the presence of the endogeneity links.

The third methodological concern relates to testing the four principal assumptions (i.e. normality, linearity, homoscedasticity, and independence of error terms) before and within applying the parametric modelling, consistent with Gujarati (2004), in order to justify the use of linear regressions for prediction purposes and achieve more accurate estimates. Although the ordinary least square (OLS) estimators are suitable when the analyses contain both dummy and continuous variables, adopting the OLS mechanism is conditioned by these assumptions.

First, normality requires the data to be normally distributed. This study adopts two common tests to examine the variables' normality: skewness and kurtosis. Consistent with Haniffa and Hudaib (2006), data are statistically regarded to be normally distributed when the values of skewness and kurtosis are  $\pm 1.96$  and  $\pm 3$ , respectively; otherwise, the problem of non-normality will arise, which in turn requires the standard errors to be adjusted in all the regressions (White, 1980). This entails clustering the FTSE 350 companies to test the developed research hypotheses related to the entire data set - and this has been the approach adopted in this study. For example Belkhir (2009) adopted the same mechanism in all the regressions. Also Hoechle (2007) discussed that regression analyses with 'robust' standard errors are efficient when some of the assumptions of the underlying panel regression models, such as independence of distributed residuals and homoscedasticity, are not met, consistent with (Wooldridge, 2002 and 2005), whilst White (1980) indicated that adjusting the standard errors for heteroscedasticity will yield more robust estimates for the regression analyses. In addition, the procedure of data transformation using the natural logarithm will assist in avoiding not only the non-normality concern, but also the problems

of outliers, linearity, and heteroscedasticity, by synthetically creating a normal distribution structure (Wooldridge, 2002, 2005).

Second, linearity requires that the model has linear parameters in which the associations between the dependent and explanatory variables must be linear. Using multiple regression techniques, log transformations, as well as the multicollinearity test, will provide more assurance in avoiding the concern of nonlinearity, consistent with the econometric literature (such as Gujarati, 2004; Wooldridge, 2002, 2005, etc.). Third, homoscedasticity requires that the standard deviation or the variance of the dependent variable within the groups is equivalent or homogenous; otherwise the problem of heteroscedasticity will occur, which leads to biased standard errors. Fourth, the independence of error terms requires the error terms to be independent from each other, which means no serial correlation exists as the error terms are uncorrelated and so, therefore, are the variables; otherwise the problem of autocorrelation will arise. The possible presence of autocorrelation is detected based on a set of correlation analyses incorporating all underlying variables. As mentioned before, the current study adopts the regression analyses with an adjustment for standard errors to yield more robust estimates (White, 1980) and mitigate the issues related to homoscedasticity, consistent with (Wooldridge, 2002, 2005; Haniffa and Hudaib, 2006).

The concern of multicollinearity is a fourth analytical issue which arises when there are high linear relationships between two or more independent variables. This statistical phenomenon causes difficulty in picking out the true association between the dependent variable and the collection of X-variables as the coefficient estimates may change erratically in response to small changes in the model. As a result, a strong degree of multicollinearity might affect the analytical software's ability to estimate efficiently the regression coefficients, or it may render the results of matrix inversion inaccurate. The main consequence of higher multicollinearity is the increased standard error of estimates of the  $\beta$ s, which in turn will lead to a reduction in model reliability (Dougherty, 2002; Gujarati, 2004; Wooldridge, 2002, 2005, etc.). Therefore, the technique of removing the X-variable that is robustly correlated with one or more of other X-variables and less correlated with the dependent variable can provide more support in reaching a better estimation of the regression model. Besides this, the larger the sample size, the lower the standard errors, which reflects the fact that a large-size sample will provide more support in producing more

precise estimates of the regression coefficients. In addition, the present study adopts the Variance Inflation Factors (VIF) test to detect the problem of multicollinearity in the regression models, by which the tolerance factor and variance inflation factor of each variable used are measured. The presence of multicollinearity concerns will be detected if the tolerance factor is less than 0.10 and the value of the variance inflation factor is above 10 (Wooldridge, 2002, 2005; O'Brien, 2007).

Finally, survivorship bias is a methodological concern, and means that the study is abstracting from data relating to companies which have ceased to exist, or exist for just a very brief time during the period under examination. This is not an insignificant problem as there is considerable movement in the constituents of the FTSE 350 index over the relevant period as companies are demoted, taken over, or de-listed, and therefore the outcomes of examining them all might be misleading. The researcher therefore follows the suggestion of Abdullah and Page (2009) by reviewing the changes of the FTSE 350 composition through the published notes of the changes in "*The FTSE Actuaries Share Indices*"<sup>49</sup> throughout the time period under investigation in order to assure the integration of FTSE 350 companies; rather than Korczak and Liu's (2013) suggestion to remove the low frequency companies to put more focus on just the constituent companies for two main reasons. First, sample selection bias might be created even after removing the companies with low frequencies. Second, a large set of usable data might be underutilised in the current study.

According to the above discussion, the fixed-effect model has the advantage of being able to capture any unobserved effect of an estimated intercept ( $\alpha$ ) which is constant over time for each entity in order to allow comparison of results, consistent with Dougherty (2002), Gujarati (2004), and Wooldridge (2002, 2005). Therefore, it provides the support in controlling the correlation across companies, in addition to the time-invariant firm effect. Additionally, this technique has the benefit of not needing the corporate effect to be unrelated with other regressors, unlike the random effects technique, as well as providing help in removing all cross-sectional variations from the data sample. For these reasons, this study employs the construction of explicit comparisons between the amount and structure

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<sup>49</sup>See: [http://www.ftse.com/Research\\_and\\_Publications/Index\\_Notes/index.jsp](http://www.ftse.com/Research_and_Publications/Index_Notes/index.jsp).

of executives' pay packages among the levels of corporate performance measures by adopting the fixed-effect regression model with robust standard errors.

#### **4.3.1.3.2 Simultaneous Equations Model**

As mentioned above, the majority of recent empirical studies in the UK including: Main et al., 1996; Conyon, 1997; Benito and Conyon, 1999; Conyon and Sadler, 2001; Dong and Ozkan, 2008; Gregg et al., 2011; Ozkan, 2011 have controlled the examination between executive compensation and firm performance by a set of corporate governance mechanisms, but generally report weak sensitivity associations. The reason for these findings might be that they did not properly address the possibility of endogeneity issues, as using a number of alternative mechanisms of corporate governance to mitigate agency problems leads largely to the interconnection between the variables utilised– therefore the findings of single equation models might lead to unreliable outcomes, consistent with Agrawal and Knoeber (1996).

The second model has been developed to extend the examination of relationships between executive remuneration and company performance by developing a system of six simultaneous equations in order to allow for simultaneous interdependencies by employing data available on four control variables (comprising board size (*BS*), non-executive directors (*NXD*), leverage (*DA*), and boardroom ownership (*WSP*)), as well as accounting-based indicators of company performance (i.e. *Tobin's Q* and *ROA* separately) and total executive compensation (*TREM*) using the three-stage least square (*3SLS*) estimation technique, following Ntim et al. (2011). As Brooks (2008) suggests, 3SLS is utilised to estimate robust coefficients with a system of equations which are endogenous by controlling for cross-equation correlation among the error terms. Baltagi (2008) also noted that system estimations (by 3SLS) should be adopted rather than single-equation estimation (e.g. 2SLS) when the simultaneous equations modelling is utilised, which takes into account the zero restrictions in every equation, in addition to the variance-covariance matrix of the disturbances of the entire system. Table 2 contains a summary of variables employed by the simultaneous equations model.

**Table 2: Summary of Variables Employed by Simultaneous Equations Modelling**

<b>Executive Compensation and Corporate Performance within Corporate Governance (Endogenous) Variables</b>	
TREM	Natural log of total cash and non-cash amounts of compensation for CEO and boardroom executives scaled by the total number of board executives, in UK £,000.
TQ	Ratio of total corporate market value on the stock market to its total book value assets after the winsorisation process (Manually Measured).
ROA	Ratio of operating income to total assets after the winsorisation process (T1B and DataStream: ROA).
BS	Total number of members on the board (BoardEx: Board_No).
NXD	Number of non-executives within the overall corporate boardroom (BoardEx: No. NONEXE_Board).
WSP	Accumulated volume of Wealth Share Plan, provided by BoardEx.
DA	Percentage of assets financed with debts (T1B: Debt to Asset).
<b>Control (Exogenous) Variables</b>	
DR	Role of CEO and Chairman held simultaneously (BoardEx: Duality).
ID	Number of independent directors among the overall corporate board members (BoardEx: No. Independent_Board).
AC	Existence of Audit Committee, BoardEx provides the audit committee size.
RC	Existence of Remuneration Committee, BoardEx provides the remuneration committee size.
NC	Existence of Nomination Committee, BoardEx provides the nomination committee size.
TASS	Natural log of total corporate assets (T1B: Total Book Value of Assets).
CTASS	Natural log of corporate change in total assets (T1B: Total Book Value of Assets).
DE	Proportion of funds provided by corporate creditors with their overall investments (T1B: Debt to Equity).
D <sub>reg</sub>	Dummy construction for the two sections of the FTSE 350 industries representing the sectors “Financials and Utilities” by 0 and the non-financial sectors by 1.
D <sub>t1-9</sub>	Dummy construction for the 10-year time period by removing one time period dummy.

The underlying principle, therefore, is to explore how total CEO/executive pay influences corporate performance through a set of governance mechanisms in which *TREM* and performance indicators are endogenous, along with the governance mechanisms, by permitting each governance variable not only to influence *TREM*/performance, but also allowing *TREM*/performance to be influenced by each governance variable. The following six equations describe the development process of pay-performance simultaneous modelling.

First, total executive compensation (*TREM*) is utilised as a dependent variable in the first simultaneous equation by adding the same set of performance control variables in equation (1) to examine the relationships between executive remuneration and company performance within a package of corporate governance mechanisms, as follows:

$$\begin{aligned}
 TREM_{i,t} = & \beta_0 + \beta_1 BS_{i,t} + \beta_2 NXD_{i,t} + \beta_3 WSP_{i,t} + \beta_4 DA_{i,t} + \beta_5 TQ_{i,t} \\
 & + \sum_{j=1}^{10} \beta_j Controls_{i,t} + v_{i,t}
 \end{aligned} \tag{3}$$

Second, as mentioned above, boardrooms perform a significant role in sufficiently reimbursing professional managers to align their interests with those of institutional shareholders according to the perspective of agency. As noted above, the literature suggests that large-sized corporate boards compensate their CEOs more than small boards - consistent with Core et al. (1999) for US companies and Sapp (2008) for UK firms. Therefore, board size (*BS*) is utilised as a dependent variable in the second simultaneous equation.

The research expectations are that corporate size (*TASS*) is positively related to board size consistent with Abdullah and Page (2009). As Agrawal and Knoeber (1996) noted, larger-sized companies have lower growth opportunities. Here the research expectations predict that corporate change in total assets (*CTASS*) is negatively related to board size. Conyon (1997) reports that public scrutiny puts more pressure on large corporations and therefore the research investigates the likely positive link between board size, the number of independent directors (*ID*) and the existence of audit (*AC*), remuneration (*RC*), and nomination (*NC*) committees. However, board size is thought to be negatively associated to the duality role (*DR*). Finally, the research expectation is that board size will vary across

financial and non-financial companies ( $D_{reg}$ ), and years ( $D_t$ ). Reflecting this, the second simultaneous equation includes nine exogenous variables as follows:

$$BS_{i,t} = \beta_0 + \beta_1 TREM_{i,t} + \beta_2 NXD_{i,t} + \beta_3 WSP_{i,t} + \beta_4 DA_{i,t} + \beta_5 TQ_{i,t} + \sum_{j=1}^9 \beta_j Exogenous_{i,t} + v_{i,t} \quad (4)$$

Third, non-executive directors have a role in monitoring executives' actions so as to prevent opportunistic behaviour (Jensen and Meckling, 1976; Fama and Jensen, 1983; Rosenstein and Wyatt, 1990; Pettigrew and McNulty, 1995) and they also have a duty to protect the interests of institutional shareholders (Leung and Horwitz, 2004) by not awarding excessive remuneration package to corporate executives (Mehran, 1995). As large boards of corporate non-executive directors compensate their CEOs more than their smaller counterparts, consistent with Core et al. (1999) and Ozkan (2007), non-executive directors ( $NXD$ ) is utilised as a dependent variable in the third simultaneous equation.

The earlier discussion in this chapter suggests a positive link between the number of non-executive directors and corporate size ( $TASS$ ) and the mechanisms of corporate governance (such as the existence of audit ( $AC$ ), remuneration ( $RC$ ), and nomination ( $NC$ ) committees), consistent with Spira and Bender (2004) as they are a highly desirable inclusion on company boards; but conversely might be associated with duality ( $DR$ ), consistent with the perspective of Agrawal and Knoeber (1996), according to which large-sized companies have more credibility and visibility to attract potential high quality executives. However, in this research model a distinction has not been drawn between non-executive directors and independent directors ( $ID$ ) because of the difficulties over time in establishing a clear dichotomy between the two (Gubitta and Gianecchini, 2002) (although it is recognised that now companies have to specify which of the directors are independent). The model also incorporates a prediction that corporate change in total assets ( $CTASS$ ) is negatively related to the number of non-executive directors. Finally, the researcher hypothesises that the number of non-executive directors varies across financial and non-financial companies ( $D_{reg}$ ), and years ( $D_t$ ). In summary the third simultaneous equation includes eight exogenous variables as follows:

$$\begin{aligned}
NXD_{i,t} = & \beta_0 + \beta_1 TREM_{i,t} + \beta_2 BS_{i,t} + \beta_3 WSP_{i,t} + \beta_4 DA_{i,t} + \beta_5 Q/ROA_{i,t} \\
& + \sum_{j=1}^8 \beta_j Exogenous_{i,t} + v_{i,t}
\end{aligned} \tag{5}$$

The fourth simultaneous equation detailed below contains a number of different control variables. As previously mentioned, the principal-agent problem is likely to be more pressing when the directors hold a small part of corporate equity (Jensen and Meckling, 1976). Therefore, higher levels of executive ownership can be regarded as a sign of a governance mechanism which may operate to increase the pay package of executive directors. As a result, the designated component of executive ownership (wealth share plan: *WSP*) is utilised as a dependent variable in this equation.

Agrawal and Knoeber (1996) propose that companies with higher growth opportunities are more attractive to both executives and investors, likely to be more profitable and more likely to offer share based compensation packages. This leads to the research expectation that executive ownership is positively related to corporate change in total assets (*CTASS*). It has been suggested that when executives hold shares for long periods this might mitigate the conflicts of interest and result in more appropriate corporate policies in line with the expectations of the wider shareholder body, particularly in large-sized companies (Ang et al., 2000; Leung and Horwitz, 2004; etc.) and this leads to the tentative belief that executive ownership is positively associated with corporate size (*TASS*). Another point of interest is the possibility of a link between executive ownership and mechanisms of corporate governance. This study expects executive ownership to be positively related to the number of independent directors (*ID*) and the existence of audit (*AC*), remuneration (*RC*), and nomination (*NC*) committees, but to be negatively associated with the duality role (*DR*). Finally, there is an expectation that executive ownership holding proportions will vary across financial and non-financial companies (*D<sub>reg</sub>*), and years (*D<sub>t</sub>*). Consequently the fourth simultaneous equation includes nine exogenous variables and is specified as follows:

$$\begin{aligned}
WSP_{i,t} = & \beta_0 + \beta_1 TREM_{i,t} + \beta_2 BS_{i,t} + \beta_3 NXD_{i,t} + \beta_4 DA_{i,t} + \beta_5 TQ_{i,t} \\
& + \sum_{j=1}^9 \beta_j Exogenous_{i,t} + v_{i,t}
\end{aligned} \tag{6}$$



Fifth, the benefit of using greater debt in mitigating agency costs might mean that leverage is regarded as positively associated with corporate governance, consistent with Jensen (1986). According to prior literature (such as Harris and Raviv, 1979; Conyon et al., 2009, etc.), risk-averse executives might seek to trade off company risk for higher compensation packages. Therefore, the company debt-to-assets (*DA*) ratio is utilised as a dependent variable in the fifth simultaneous equation.

Previous research suggests that leverage is positively related to corporate size (*TASS*) as large-sized companies are more exposed to agency problems in terms of higher costs of managerial monitoring (Agrawal and Knoeber, 1996). However, Jensen (1986) notes that increasing corporate debt levels will in turn lead to outside constraints which will eventually limit the company's capacity to grow. The hypothesis then is that leverage is negatively associated with corporate change in total assets (*CTASS*). The literature identifies that debt leverage indicators are significant in both operating and financing processes in terms of their interaction with the long term solvency of the firm (Fabozzi and Peterson, 2003). The hypothesis then is that there are preferences as to the type of debt financing (*DE*) as the former perform as an alternative to the latter, but obviously associations between them and governance measures are not clear in the literature. The final hypothesis, again based on previous literature, is that leverage varies across financial and non-financial companies (*D<sub>reg</sub>*), and years (*D<sub>t</sub>*). This leads to specification of the fifth simultaneous equation which includes five exogenous variables as follows:

$$DA_{i,t} = \beta_0 + \beta_1 TREM_{i,t} + \beta_2 BS_{i,t} + \beta_3 NXD_{i,t} + \beta_4 WSP_{i,t} + \beta_5 TQ_{i,t} + \sum_{j=1}^5 \beta_j Exogenous_{i,t} + v_{i,t} \quad (7)$$

The final, and sixth, simultaneous equation brings into play Tobin's Q (*TQ*) and ROA separately as dependent variables but with the same set of control variables as in equation (2) to examine the relationships between executive compensation and firm performance within a package of corporate governance mechanisms. It is specified as follows:

$$TQ_{i,t} = \beta_0 + \beta_1 TREM_{i,t} + \beta_2 BS_{i,t} + \beta_3 NXD_{i,t} + \beta_4 WSP_{i,t} + \beta_5 DA_{i,t} + \sum_{j=1}^{10} \beta_j Controls_{i,t} + v_{i,t} \quad (8)$$

### 4.3.2 Research Data Collection and Preparation

In this section, the second stage of the research empirical examination process is discussed, and the sources and processes of collecting and preparing the data sample are highlighted.

The data sample is drawn from the constituent companies of the FTSE 350<sup>50</sup> index over the period 1999-2008. The preliminary sample of panel data<sup>51</sup> has the potential of comprising about 3,500 observations which are constituents of the companies of FTSE 350 index for ten years. However, the unavailability of a number of remuneration and/or governance variables for some companies restricts the sample to a panel of 2,726 firm-years over the period 1999-2008. In this case, the sample size is still considerably larger than those utilised in previous UK studies (such as Conyon et al., 1995; Main et al., 1996; Cosh and Hugh, 1997; Conyon and Murphy, 2000; etc) which reported the pay-performance results based typically on only few hundred companies or even less.

The FTSE 350 companies comprise those found in both financial and non-financial sectors in 10 different UK industries<sup>52</sup>. The industrial, customer services, and financial sectors represent the highest volume of companies in the index and in which the corporate observations in the sample number 633, 619, and 539, respectively, whilst the sectors of telecommunication and health care represent the lowest numbers, 69 and 87, respectively. In order to generalise the findings to all sectors and indices within the UK, all the FTSE 350 companies are included. In much of the prior literature (such as Khatri et al., 2002; Adams and Mehran, 2005; Spong and Sullivan, 2007) it is suggested that there are gains from excluding both the financial and utility sectors. However although the arguments for doing this were noted and considered, the decision was made to seek to add generality to the results by the inclusion of the relevant 643 observations in the index for the period under examination. It is also true that there is literature which argues for the inclusion of as wider sample as possible and seeking to discriminate if appropriate by means of the use of dummy or control variables (Koh and Liu, 2012) – and this has been the approach adopted

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<sup>50</sup>The largest institutions constitute the FTSE 100; the FTSE 250 comprises the largest companies from 101 to 350.

<sup>51</sup>The panel data are largely adopted in order to identify and measure effects that are not detectable with other data structures, such as pure cross-section or pure time-series data.

<sup>52</sup>UK industries are Oil and Gas, Basic Materials, Industrials, Consumer Goods, Health Care, Customer Services, Telecommunications, Utilities, Financials, and Technology. The sample represents the 10 industrial sectors based on the FTSE Global Industry Classification System.

in this study, although as documented below the research does also include separate industry sector analysis. Table 3 shows the sample size for each sector over the period under investigation.

The reason behind choosing the FTSE 350 index is that the registered companies in this represent the widely top-listed UK companies in the stock exchange based on their market capitalisation. As Polo (2007) reported, the major indexes of worldwide companies within diverse sectors are those which are among the most significant sources of organisational financing and external governance. The FTSE 350 index comprises a long history of these sectors in the provision of financial information, in addition to the data consistency in the manner of well-preparation and accounting systems.<sup>53</sup> The FTSE 350 is thus regarded as a significant super-sector index providing a comprehensive view of one of the global capital markets.

A significant reason underlying the choice of the 10-year period beginning in 1999 and ending in 2008 is that it enables an examination period of executive compensation after a period in which, as noted above, the UK corporate governance system was reformed through a series of mandatory and quasi-mandatory regulations which led to a much more uniform system of governance, and before the effect of the recent financial crisis was revealed. A separate period analysis is also included to capture the reflections of these series of regulations over the period 1999-2008. In particular in this period of time virtually all of the companies under examination had adopted the use of remuneration committees and very much enhanced disclosure as to compensation as compared with previous periods. It is contended that this does provide a good basis for a longitudinal study both in terms of the empirical results set out in the following chapter and also the single company case study which is explored in Chapter Six.

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<sup>53</sup>See: [http://www.ftse.com/Indices/UK\\_Indices/index.jsp](http://www.ftse.com/Indices/UK_Indices/index.jsp)

*Table 3: Summary of Sample Size for Each Sector by Year*

Sector Code	YEARS	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total	Financial and non-Financial Sectors	
	Initial Sample (FTSE 350)	350	350	350	350	350	350	350	350	350	350	3500		
	Missing Data on Remuneration, Corporate Governance, and/or Performance	151	111	79	70	61	56	50	54	67	75	774		
1	Oil and Gas	3	4	6	8	8	10	13	16	16	18	102	2083	
2	Basic Materials	8	8	10	11	12	11	13	10	12	15	110		
3	Industrials	50	53	65	68	68	64	65	67	68	65	633		
4	Consumer Goods	27	26	35	32	35	37	35	32	27	26	312		
5	Health Care	7	11	11	12	10	7	7	9	6	7	87		
6	Customer Services	47	53	63	65	69	71	63	66	62	60	619		
7	Telecommunications	3	9	6	8	8	8	9	7	6	5	69		
8	Utilities	7	9	8	10	11	12	14	13	11	9	104		643
9	Financials	31	39	50	54	55	62	66	65	63	54	539		
10	Technology	16	27	17	12	13	12	15	11	12	16	151		
<b>Total</b>		199	239	271	280	289	294	300	296	283	275	2726		
<b>Sub Periods</b>		989				883			854					

Because of the diversity of data employed (including executive directors' remuneration, corporate governance, company performance, and other related indicators), necessarily a variety of different sources need to be utilised to collect this data. Data for boardroom pay packages, corporate governance and ownership indicators, and board member characteristics have been taken from the *BoardEx* database.<sup>1</sup> Data relating to company performance and specific firm characteristics has been collected from the *DataStream* and *Thomson-One-Banker* databases.

Because of the range and variety of the data employed it has been necessary to take care with respect to a whole collection of data related aspects, for example missing values, value appearance and measurement, outliers, and lags - all of which have the capability to distort the results and the interpretation thereof. In this respect a number of points are noted.

First, the panel data utilised in the study contains a relatively low number of missing values, especially for executive directors' compensation and company performance. Where data was missing on the original trawl other sources, in particular directors' remuneration reports and annual reviews, were explored so as to fill gaps and provide the information necessary for the analytical program used (*Stata*<sup>2</sup>) to run appropriately.

Second, a logarithm function is utilised where the distribution of the underlying variables is such that it is likely to cause issues relating to the conventional regression assumptions. Consequently logarithmic transformations were used in respect to executive pay, company performance as measured by profitability, as well as corporate size and growth in terms of their magnitudes to more closely meet the necessary assumptions suitable for statistical inference.

However even after the employment of logarithmic transformation there is still the possibility of the results being affected or distorted by extreme observations and outliers. Here to avoid the possibility of high levels of residuals which might result in biased estimates of parameters,

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<sup>1</sup>The *BoardEx* database is a new business development tool and a source for academic research concerning on corporate governance and boardroom processes, containing a good package of information on company boards and individual directors.

<sup>2</sup>*Stata* is normally the core statistical software package used by academics and researchers to store, manage, manipulate, and analyse the numeric data, especially in the fields of sociology.

a 98%<sup>3</sup> winsorisation technique has been applied to the corporate performance and leverage data so as to exclude outliers which could disproportionately affect the statistical measurement and inference. The winsorisation technique is normally regarded as the most robust technique for transforming outliers (Gujarati, 2004; Wooldridge, 2005; Brown and Caylor, 2009; etc.).

Finally, the issues relating to lags have been carefully considered because of the importance to the research design of the need to consider the effect of data moving forward. To achieve the relevant research objective, this study aims to set the lags for the indicators of company performance to one year before and one year after. In the interests of efficiency and accuracy, company performance measures were collected directly from the databases rather than using an automatic machine generated process.

#### **4.1 Conclusion**

This chapter has presented the research methodology and outlined the first part of the examination process. The research methodology set out links underlying theory with the empirical analysis. As has been noted, the main research purpose of the current study is to examine the executive directors' remuneration in FTSE 350 companies by providing a quantitative investigation on the interrelationships between executive pay and company performance, and a qualitative case study on the mechanisms and structures that determine executive compensation. Again as has been noted before the study adopts a mixed methodology to conduct its research endeavour (i.e. the abductive approach) based on an objectivist methodological position of philosophical assumptions following the realist ontological and the positivist epistemological positions.

In line with the focus of the empirical research strategy a deductive approach has been considered the appropriate examination structure to adopt in this study in order to address the main research question: i.e. whether managerial compensation is the greater influence on firm performance or whether it is the latter which has the greater influence on the former? The detailed discussion set out above has considered the appropriate variables to utilise for this investigation, i.e. CEO/executive compensation, company performance, corporate governance

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<sup>3</sup>The set of firm performance indicators which are below 1% are set to the 1% level and those above 99% fit to the 99% level.

and ownership mechanisms, boardroom members' features, and firm characteristics. Drawing from this discussion a number of hypotheses have been developed which seek to investigate this question and its linked aspects. Using quantitative methods the research aims to gather and structure the underlying data based on a longitudinal time horizon by adopting two different, but complementary, quantitative empirical research analyses (i.e. fixed-effect and simultaneous equations). The fixed-effect regression modelling is used to examine separately the association between the key components and measures of CEO/executive compensation and company performance. The simultaneous regression modelling is utilised to investigate further and in more depth the interrelationships between CEO/executive pay and firm performance with a view to unpacking, if it is possible to do so, how those relationships work and are constructed.

The following chapter sets out more specifically the research methodology adopted and the sequential process by which the quantitative analysis has been conducted. It reports the empirics relating to the descriptive statistics and correlation analysis, and then proceeds to detail the results from the main empirical approach (i.e. fixed-effect and simultaneous equations modelling) conducted in order to examine the interrelationships between executive compensation and company performance.

# Chapter 5

**RELATIONSHIPS BETWEEN EXECUTIVE  
COMPENSATION AND  
COMPANY PERFORMANCE –  
ANALYSES, RESULTS, AND DISCUSSION**



## **Chapter Five**

### **Relationships between Executive Compensation and Company Performance – Analyses, Results, and Discussion**

#### **5.1 Introduction**

The previous chapter has outlined the research methodology, considered the relevant philosophical assumptions, and constructed an appropriate process for the purpose of the empirical examination discussed in this chapter. Accordingly this chapter proceeds to present both the empirical steps taken and the relevant analyses and findings. As discussed in Chapter Three the underlying theoretical approach has been linked into the pervasive but conflicting notions of pure agency, managerial hegemony, stewardship, and tournament play. This is the underpinning for the key research objective of the study which is to examine the interrelationships between executive directors' remuneration packages and corporate performance in FTSE 350 companies. Here the significant innovation of this study is the focus on the question as to whether managerial compensation is the greater influence on firm performance or whether it is the latter which has the greater influence on the former?

Previous literature has addressed the pay-performance framework in terms of the sensitivity of pay to performance and perhaps directed less attention to the performance-pay framework pertaining to the sensitivity of pay-related performance. To test the structure of the interrelationships between compensation and performance, the empirical section of this study employs two modelling plans to explore and reflect the research findings in alignment with the adopted theoretical perspectives. First, a fixed-effect analysis framework is utilised employing two separate multiple regression equations incorporating a set of appropriate categories of control variables relating to pay and performance. These include: corporate governance mechanisms designed to enhance internal monitoring, ownership determinants which are relevant to wider stakeholder issues, leverage ratios which may reflect companies' excessive risk-taking behaviour, as well as corporate characteristics and expertise indicators. Second, a set of simultaneous or structural equation modelling is developed for the purpose of

identifying insights into the question of the relative influence of executive pay or company performance and their linkages with aspects of corporate governance.

This chapter is then organised as follows. After this short introduction, the second section introduces the process of examination and analysis by reference to the descriptive statistics examining the nature of CEO/executive pay measures (i.e. cash, non-cash, and total remuneration), the trends of CEO/executive pay, and finally the wider consideration of the variables of interest throughout the period under examination (1999-2008). The third section looks at a number of different sets of correlation analyses in order to examine the value and direction of the relationships between the variables, detect any autocorrelations between the variables utilised, and confirm the validity of the framework for the analyses. By applying the two adopted regression frameworks, the fourth section details the discussions of the fixed-effect analyses to test the developed hypotheses separately to investigate the relationships between executive compensation and company performance throughout the three sub-sections (pay-performance analyses, performance-pay analyses, and reflections on pay-performance and performance-pay results). The fifth section highlights the discussion of the simultaneous modelling analysis to examine the interrelations between pay and performance. The final section provides an overall conclusion regarding the statistics and analyses.

## **5.2 Descriptive Statistics**

Gujarati (2004) and Wooldridge (2005) note that frequency distribution tests are the key initial step for indicating the number of values' occurrences within a particular group of variables or interval. These tests can be structured to assess differences and similarities between frequency distributions via demonstrating the measures of central tendency (such as the mean and median) and the measures of variability (e.g. the standard deviation). In this section, the descriptive statistics of the components and measures of CEO/executive directors' remuneration, as well as the features of company performance and the underlying control variables for the period of examination, are highlighted.

### 5.2.1 Measures of Executive Directors' Remuneration

The mean of CEOs and boardroom executive pay accounting for the difference between years (i.e. year-to-year descriptive statistics) is mainly utilised as a measure of central tendency to examine the evolution and direction of CEO/executive pay measures during the period under examination. It is usually used in conjunction with the median. In the statistics under examination in this study the values of means and medians in this study are relatively close to each other. Table 4 shows the fundamental explanatory statistics for the three measures of CEO and boardroom executive directors' remuneration (i.e. cash, non-cash, and total remuneration) for the FTSE 350 companies each year over the period 1999-2008. Panel A reports statistics relating to the total CEO pay, whilst Panel B presents similar figures for boardroom executive members.

The table demonstrates that cash pay for CEOs and board executives increased considerably over the first nine years but decreased in 2008 (a decrease likely to be attributable to the global financial and economic crises commencing at the end of 2007) reaching a peak of £1.29m and £3.18m for CEOs and executives, respectively, in 2007. There was more variability in the non-cash packages for both CEOs and boardroom executives varied during the period which although increasing substantially over the period – peaking at £1.59m and £3.53m respectively in 2007 did in fact decline three times in 2002, 2006 and 2008. Overall the findings show that the mean of CEOs' total reimbursement increased by about 89.5%, from £1.26m in 1999 to £2.38m in 2008, suggesting an approximate annual growth rate of 10.5%. This result supports the widely held perspective that the growth in CEO compensation has significantly outstripped average UK pay growth<sup>4</sup>.

Equity-based remuneration forms in general, the larger part of the CEO pay package compared with cash-based compensation, which supports the theoretical perspective of pure agency, by which the CEO interests are aligned with those of shareholders through providing a sufficient level and structure of managerial incentives.

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<sup>4</sup>The 10.5% growth rate is significantly higher than the increase in the average annual UK Consumer Price Index (CPI). To facilitate comparison, the annual CPI values published by the International Monetary Fund in their annual World Economic Outlook for the UK are 2.3%, 2.1%, 2.1%, 2.2%, 1.4%, 1.3%, 2.0%, 2.3%, 2.3%, and 3.6% for the ten consecutive years between 1999 and 2008, with a ten-year average of 2.16%.

**Table 4: Basic Descriptive Statistics of CEO and board executive pay measures in FTSE 350 companies, 1999-2008**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
<b>Panel A: Pay Indicators - CEO</b>											
<b>Total Cash Remuneration of CEOs (£000s)</b>											
Mean	560.407	634.6653	721.203	797.8179	838.5675	928.3878	978.83	1085.608	1292.576	1209.313	926.2112
Median	479	516	567	627	720	756	785.5	870	1011	931	889.75
S. D.	341.7622	443.4728	598.9345	540.6074	595.5877	635.1504	655.2923	739.0146	1050.503	957.5901	265.284
Min	40	38	15	135	30	12	38	0	187	0	464.7
Max	2060	2665	6100	3254	4239	4561	3856	6039	10177	7197	2801
Obs.	199	239	271	280	289	294	300	296	283	275	300
<b>Total Non-cash Remuneration of CEOs (£000s)</b>											
Mean	697.8894	704.0962	743.1513	727.5036	846.481	1072.969	1329.417	1154.99	1591.816	1175.233	1072.384
Median	116	209	252	256.5	349	450	519.5	622.5	742	483	816.2
S. D.	4045.196	1622.33	1933.128	1927.427	1779.918	2447.161	5297.416	1845.5	3327.361	2074.505	1059.992
Min	0	0	0	0	0	0	0	0	0	0	0
Max	55386	15504	20774	18622	16173	25153	87901	17962	42406	17967	9180.7
Obs.	199	239	271	280	289	294	300	296	283	275	300
<b>Total Remuneration of CEOs (£000s)</b>											
Mean	1258.296	1338.762	1464.354	1525.321	1685.048	2001.357	2308.247	2240.598	2884.392	2384.545	1998.596
Median	671	802	908	911	1099	1164.5	1350.5	1517	1760	1495	1739.6
S. D.	4167.222	1804.414	2350.225	2214.96	2144.535	2807.877	5526.934	2357.21	3742.413	2720.606	1198.316
Min	40	38	25	135	60	15	75	200	239	95	675
Max	57034	17046	24283	20688	18247	27893	90223	22056	43282	22718	10111.67
Obs.	199	239	271	280	289	294	300	296	283	275	300
<b>Panel B: Pay Indicators - Boardroom Executives</b>											
<b>Total Cash Remuneration of All Executives (£000s)</b>											
Mean	1948.472	2031.368	2241.089	2353.246	2413.394	2543.867	2638.59	2886.611	3184.516	2836.582	2525.347
Median	1450	1613	1662	1783	1866	2001	2071.5	2204	2372	2163	2415.23
S. D.	1727.388	1665.5	1837.757	1741.95	1814.795	1923.503	1965.916	2528.865	2896.976	2253.603	760.2351
Min	170	90	15	373	209	140	137	0	289	95	906.333
Max	15118	10292	13454	12639	11557	13288	12328	20948	23155	16446	5494.2
Obs.	199	239	271	280	289	294	300	296	283	275	300
<b>Total Non-cash Remuneration of All Executives (£000s)</b>											
Mean	1549.633	1992.169	1879.399	1774.169	1972.91	2323.19	2861.871	2524.424	3536.06	2299.588	2376.555
Median	376	509	704	683.5	946	1081	1040.5	1276.5	1503	983	1913.4
S. D.	5399.42	4161.319	3938.448	3717.19	3372.232	4188.338	10093.86	3709.802	10863.19	3877.785	2089.469
Min	0	0	0	0	0	0	0	0	0	0	269.25
Max	65387	32833	28400	34784	36545	39629	164814	21560	174176	38822	20112.5
Obs.	199	239	271	280	289	294	300	296	283	275	300
<b>Total Remuneration of All Executives (£000s)</b>											
Mean	3498.106	4023.538	4120.487	4127.416	4386.304	4867.058	5500.461	5411.036	6720.576	5136.169	4901.902
Median	1921	2317	2597	2454.5	2926	3191	3327.5	3496	4189	3300	4429.95
S. D.	6009.756	4903.879	5245.963	4913.848	4489.752	5409.37	10749.23	5532.172	11653.95	5450.657	2465.523
Min	170	117	200	377	209	140	211	303	298	95	1536
Max	68061	36487	41205	41722	41241	41136	170208	42465	177584	50989	23677.2
Obs.	199	239	271	280	289	294	300	296	283	275	300

*Notes:* The descriptive statistics for both cash and non-cash components of the total CEO and executive pay are based on the FTSE 350 registered corporations between 1999 and 2008 (British pounds), according to the availability of executive directors' remuneration packages for those corporations. All pay components are rounded to the nearest thousand. The average pay components are derived from the total cash and equity compensation packages, consistent with the factor of time. Total basic compensation consists of a base salary, a performance bonus, a pension contribution, and other elements. Total remuneration includes cash, as basic compensation, and non-cash/equity pay, which represents the value of granted shares, exercised options, and any other long-term incentive plans (LTIPs).

However, the differences are not that great with on average cash components during the period representing just over 46% and non-cash components just under 54% respectively of the average total CEO remuneration. For boardroom executives other than CEOs direct cash components have formed slightly more than half of total compensation during the whole period under examination – but as with CEOs this has masked some variability in particular the quite sharp decline in non- cash compensation in 2008. These trends are discussed further in the next section.

### **5.2.2 Trends of Executive Directors' Remuneration Packages**

Figures 6, 7, and 8 indicate the trends in CEO and board executive directors' remuneration in FTSE 350 companies throughout the period 1999-2008, demonstrating the average and median of CEO/executive remuneration indicators by time (Figure 6) and industry (Figure 7), as well as the average of CEO/executive pay components (Figure 8).

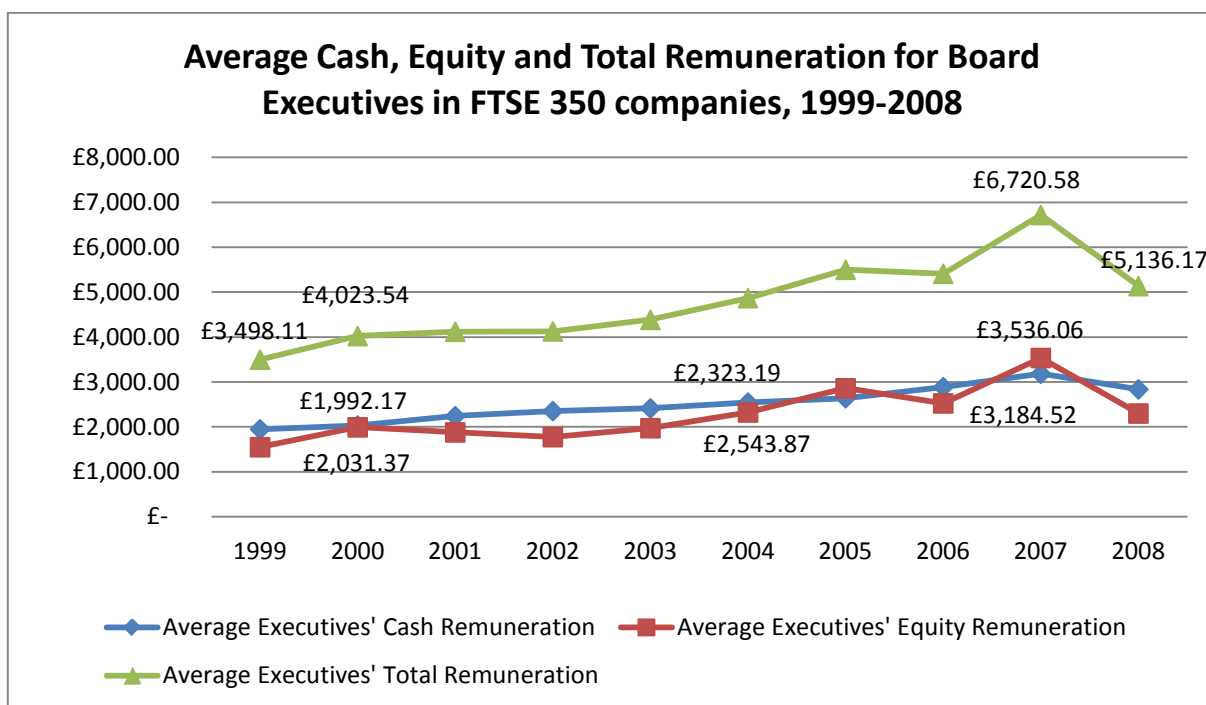
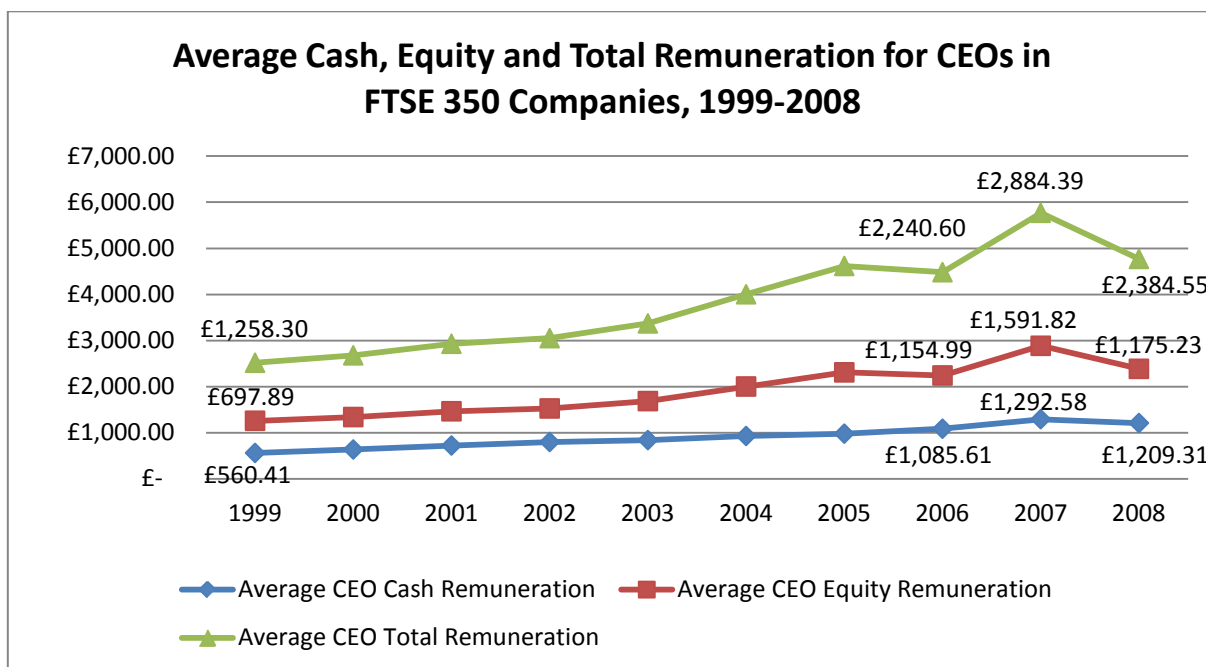
Figure 6 shows that the average of total CEO remuneration in FTSE 350 companies more than doubled, from about £1,258,300 in 1999 to £2,884,390 in 2007, before falling to £2,384,550 in 2008. As a result, the level of pay for CEOs in large-sized UK firms rose considerably over the past decade, driven by a significant growth in LTIPs. The average value of LTIPs rose from £0.67m in 1999 to over £1.54m in 2007 before falling to £1.16m in 2008. In contrast pure options and equities comprise a very small component of non-cash compensation.<sup>5</sup> Here there may be some questions as to how successfully the BoardEx data base captures the use extent and value of option and equity packages. The total remuneration of boardroom executives also increased, but it is not by the same proportion as that of CEOs (from £3.5m in 1999 to £6.72m in 2007, falling to £5.14m in 2008); although again the increase in LTIPs was a significant driver of this increase. There is, as would be expected, evidence of positive skewness with the means exceeding the medians for all the remuneration indicators for CEOs and board executives. There is also some evidence that this skewness has increased over the period under examination.<sup>6</sup>

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<sup>5</sup>The difference between the LTIPs' value in 2007 (i.e. £1.54m) and the £1.59m of equity-based compensation for the same year comprises awarded options and equities.

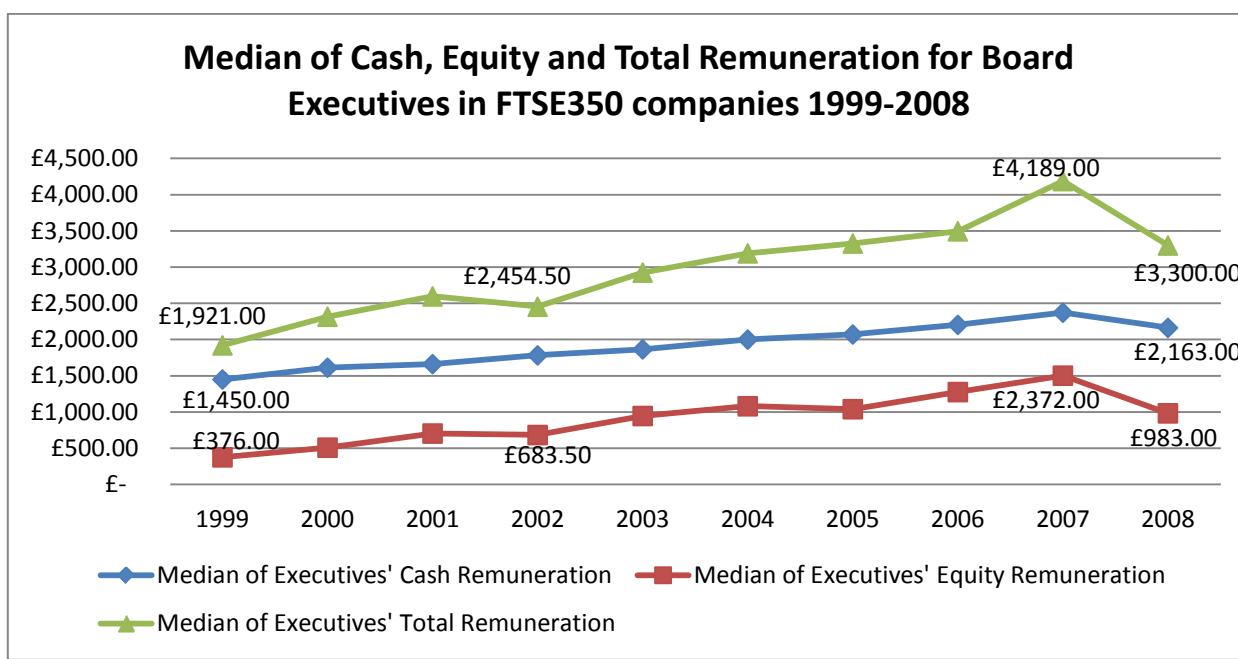
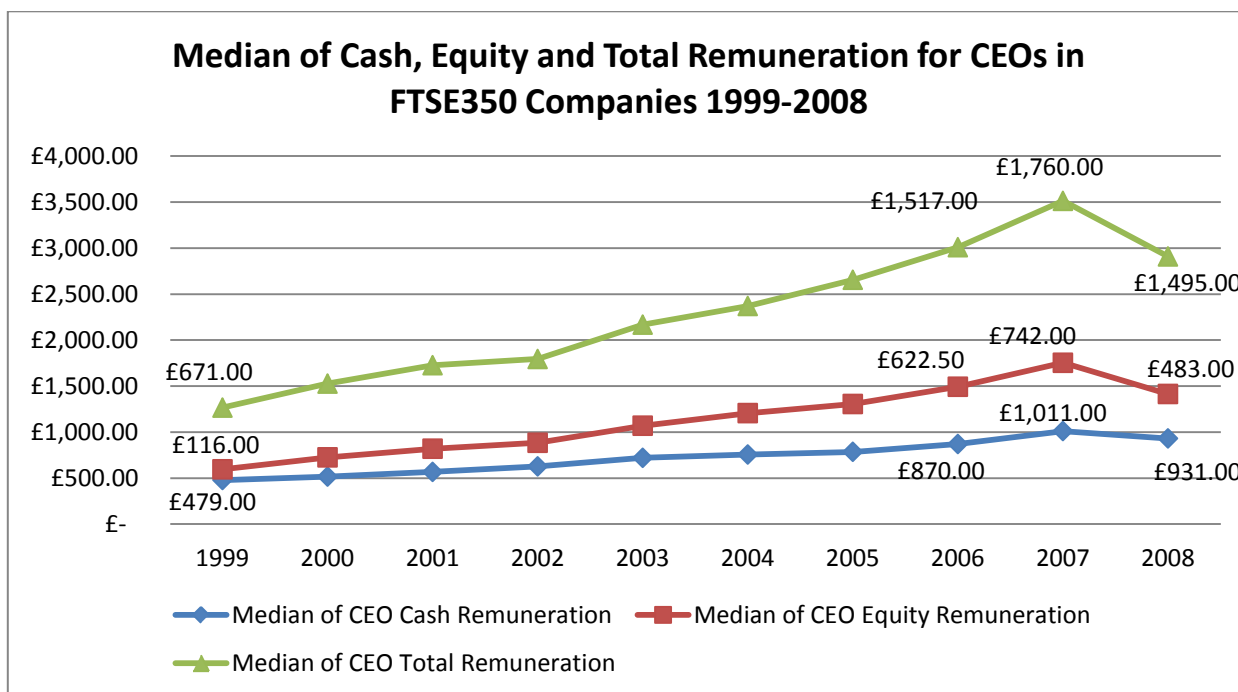
<sup>6</sup>The higher values lie to the right of the distribution by 2007 and 2008, while the left tail is longer with low values relating to 1999 and 2000.

**Figure 6: CEO and Board Executive Remuneration Packages in FTSE 350 Companies by Average of Pay Indicators, 1999-2008**



**Notes:** The sample is based on CEOs and board executives included in the FTSE 350 companies between 1999 and 2008, using the numeric data from BoardEx. The cash pay of CEOs and other corporate executives includes salary, bonus, pensions, and other elements, while their equity pay comprises value of equity awarded, value of LTIP awarded, intrinsic value of options awarded, and estimated value of options awarded. The total pay of CEOs and board executives represents both cash and non-cash remunerations.

**Figure 6: CEO and Board Executive Remuneration Packages in FTSE 350 Companies by Median of Pay Indicators, 1999-2008 (Cont.)**



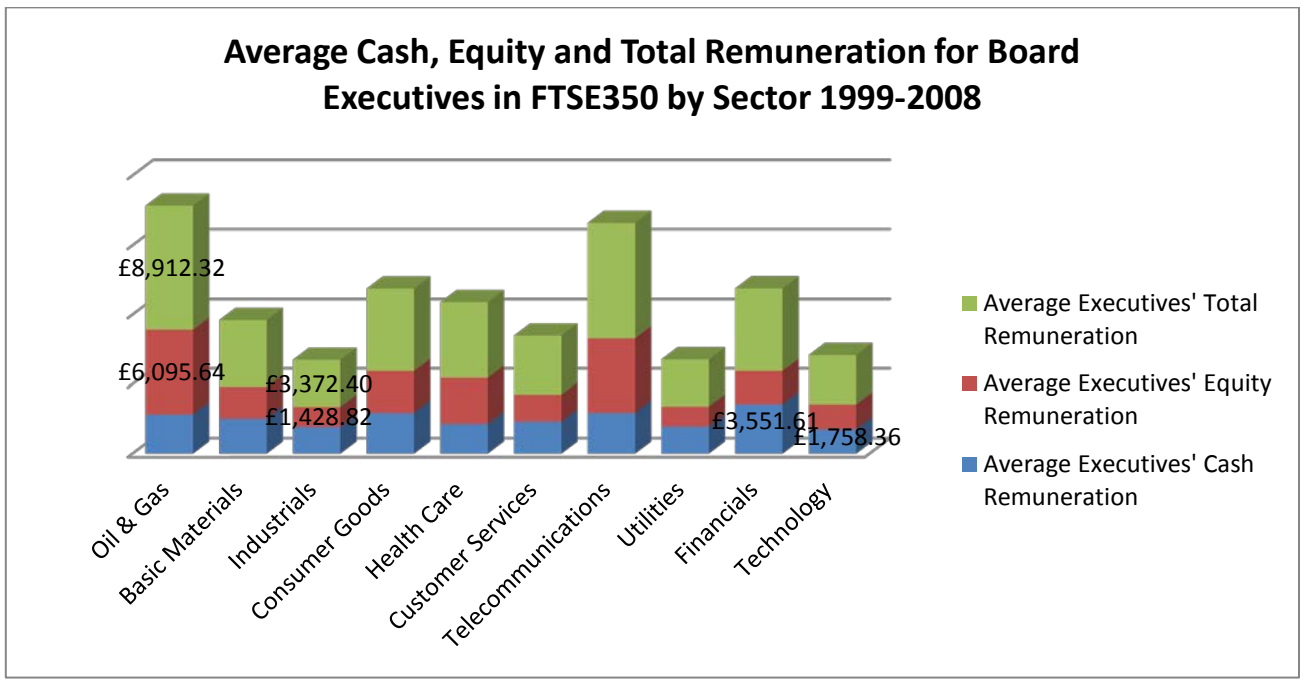
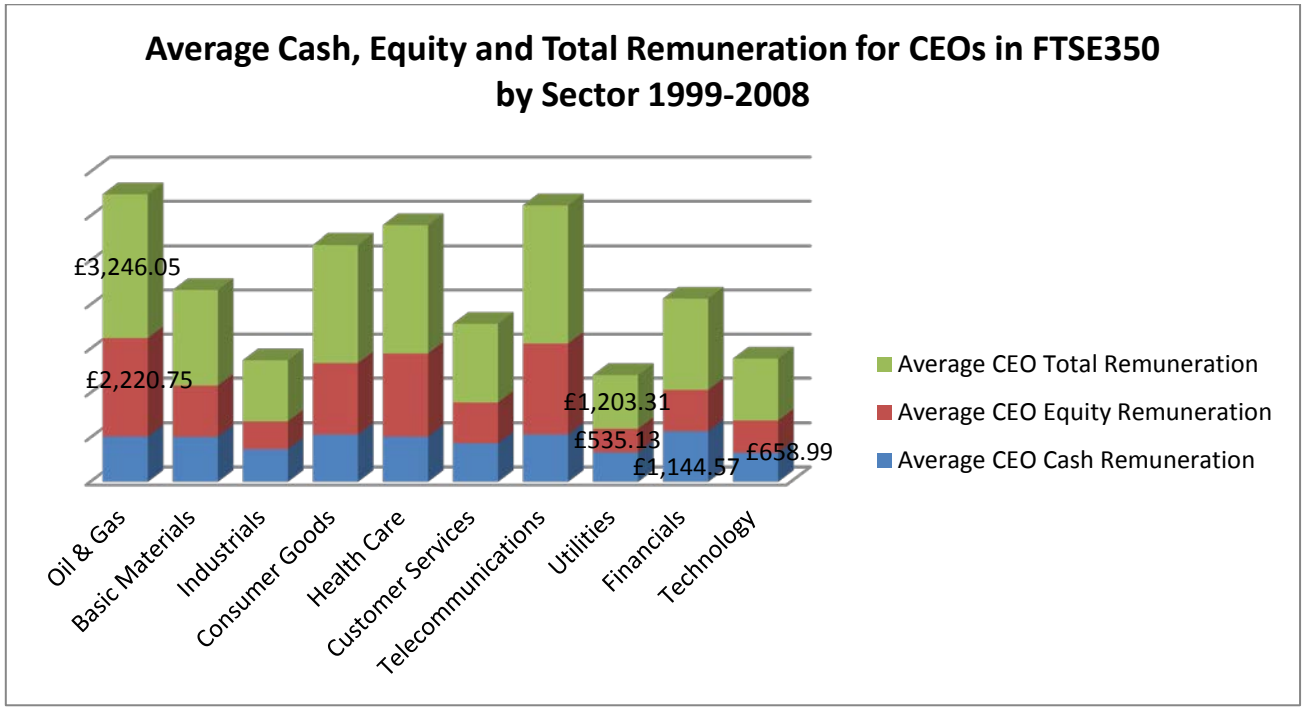
*Notes:* The sample is based on CEOs and board executives included in the FTSE 350 companies between 1999 and 2008, using the numeric data from BoardEx. The cash pay of CEOs and other corporate executives includes salary, bonus, pensions, and other elements, while their equity pay comprises value of equity awarded, value of LTIP awarded, intrinsic value of options awarded, and estimated value of options awarded. The total pay of CEOs and board executives represents both cash and non-cash remunerations.

Figure 7 shows both the average and median of remuneration indicators for both CEOs and board executive in various FTSE 350 industries during the same interval period (1999-2008). According to the average pay indicators of CEOs, the sector “*Financials*” has the highest average cash remuneration (£1.14m), whilst “*Oil and Gas*” offers the highest average equity-based and total remuneration, £2.22m and £3.25m, respectively. On the other hand, “*Technology*” has the lowest average cash remuneration for CEOs (£0.66m), while “*Utilities*” provides the lowest average equity-based and total remuneration, £0.54m and £1.2m, respectively. According to the average compensation measures for board executive, “*Financials*” still offers the highest average cash remuneration (£3.55m), whereas “*Oil and Gas*” also has the highest average equity-based (£6.1m) and total remuneration (£8.91m). By contrast, “*Technology*” provides executives the lowest average cash remuneration (£1.76m), and “*Industrials*” has the lowest average equity-based and total remuneration, £1.43m and £3.37m, respectively. The median values of pay measures for CEOs and board executives in FTSE 350 industries are again lower than their corresponding means, which outlines a position of resisting extreme values of executive remuneration via showing the middle values within each sector or industry.

Figure 8 shows the level and composition of the remuneration package of FTSE 350 CEOs and board executives from 1999 to 2008. In 1999 the base salaries of CEOs and board executive accounted, on average, for 28% and 34% of the total compensation, £0.35m and £1.18m, respectively, whilst LTIPs accounted for 53% and 41% for both CEOs and board executives, respectively. It is observable that the CEO/executive pay package increased each year from 1999 to 2005, fell slightly in 2006 before rising again to a high point in 2007 over time, at which the average base salary of CEOs and board executives accounted for only 18% and 20% of the total compensation (£2.9m and £6.7m, respectively), while the amount of LTIPs accounted for more than half of their overall pay package. In 2008 the average total remuneration for both CEOs and board executives fell, to £2.4m and £5.1m driven by a decrease in LTIPs which decreased to comprise nearly half of the CEO remuneration package and 43% of overall boardroom executive members’ packages. In consequence as a proportion of total remuneration base salary rose to 23% and 26% in that year.

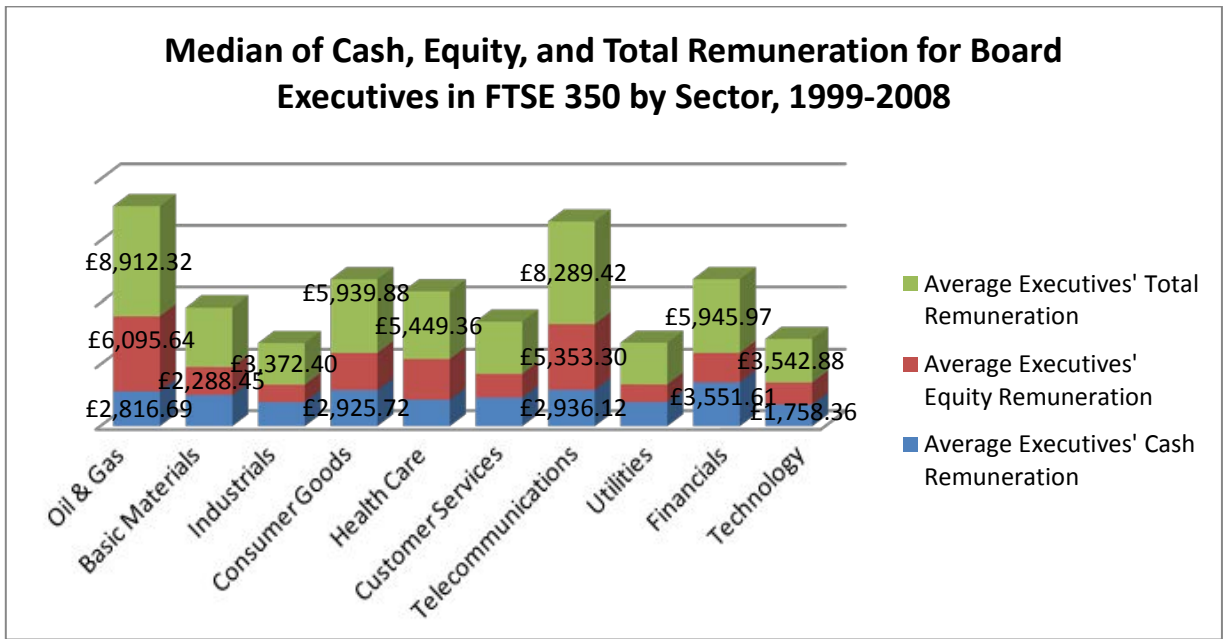
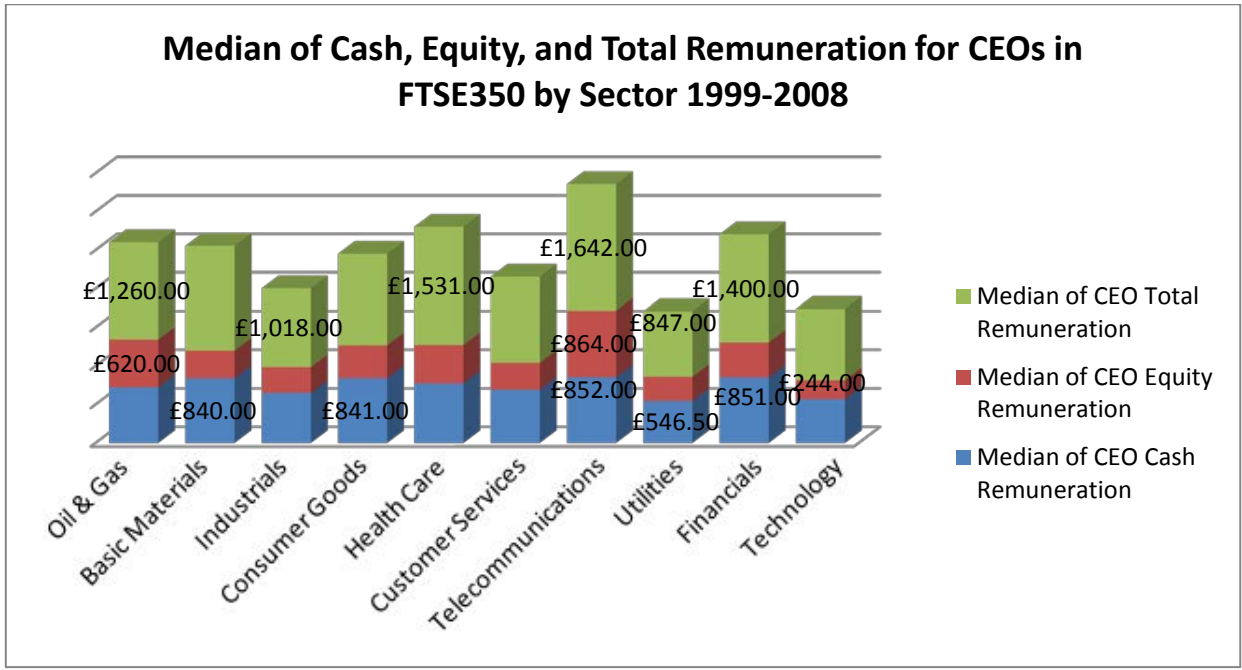


**Figure 7: Average of Cash, Non-cash, and Total Remuneration for CEOs and Board Executives in FTSE 350 Companies by Sector, 1999-2008**



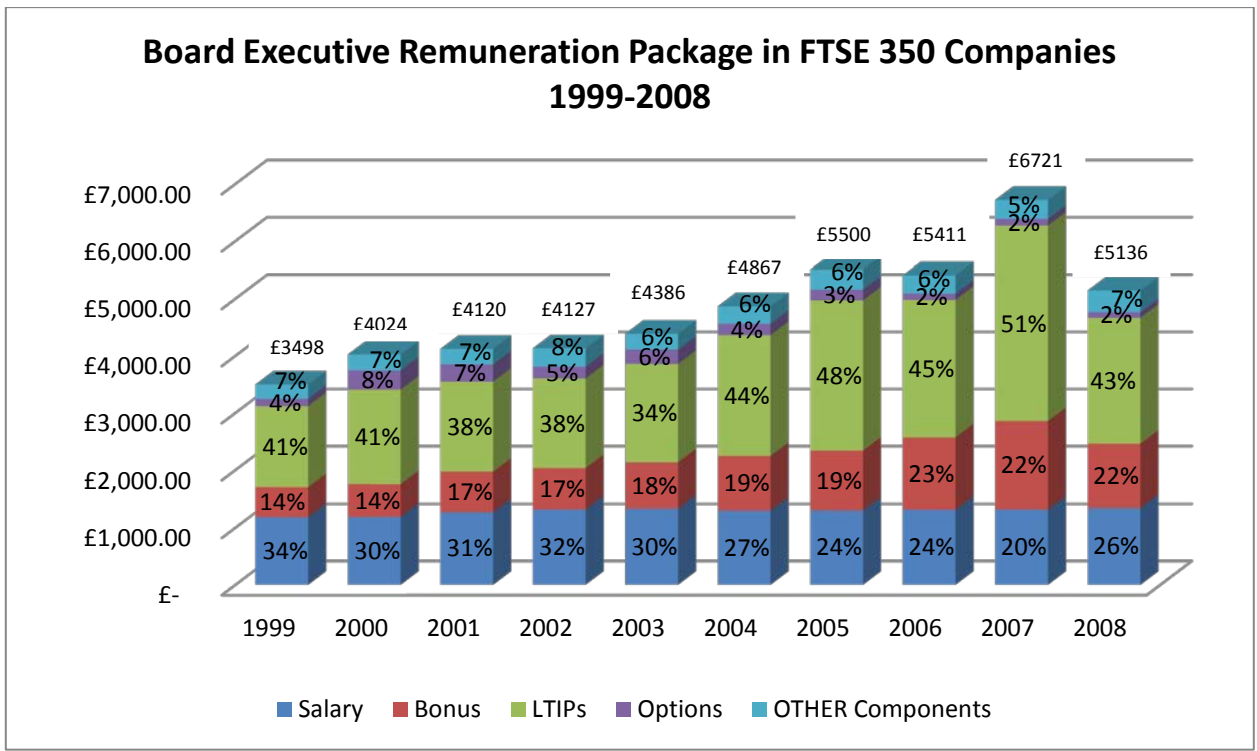
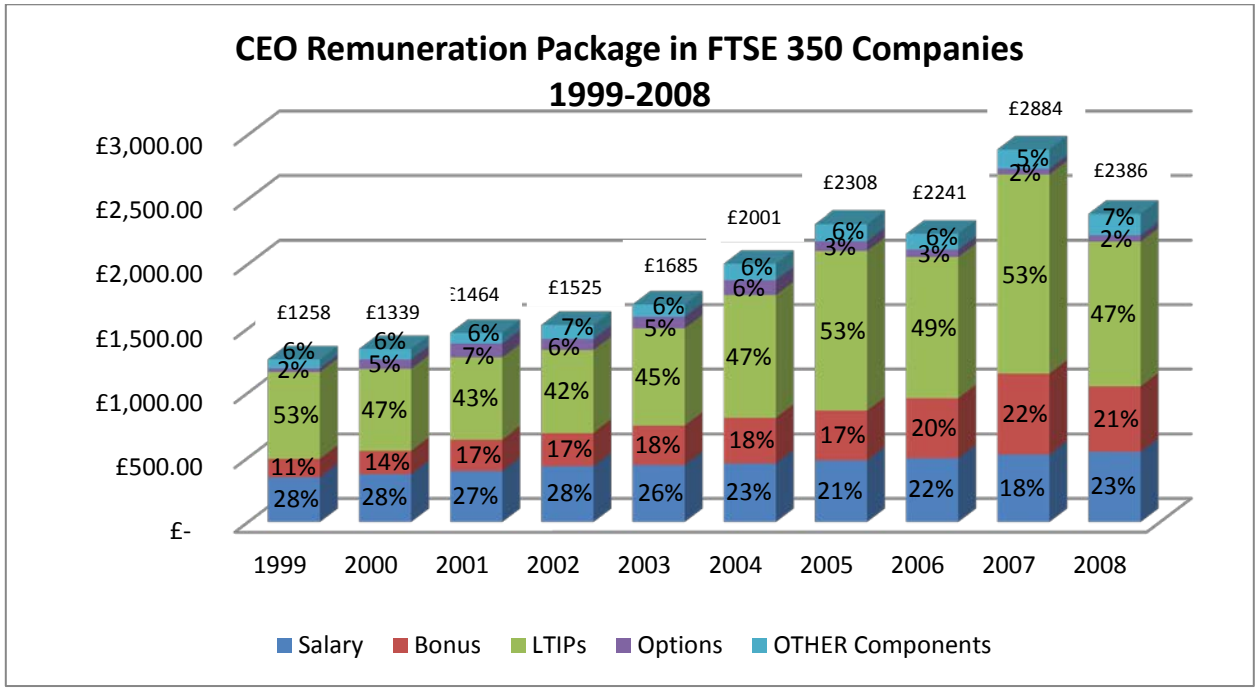
*Notes:* The sample is based on CEOs and board executives included in the FTSE 350 between 1999 and 2008, using the numeric data from BoardEx. The FTSE 350 index consists of 10 key sectors, which are oil and gas, basic materials, industrials, consumer goods, health care, customer services, telecommunications, utilities, financials, and technology.

**Figure 7: Median of Cash, Non-cash, and Total Remuneration for CEOs and Board Executives in FTSE 350 Companies by Sector, 1999-2008 (Cont.)**



**Notes:** The sample is based on CEOs and board executives included in the FTSE 350 between 1999 and 2008, using the numeric data from BoardEx. The FTSE 350 index consists of 10 key sectors, which are oil and gas, basic materials, industrials, consumer goods, health care, customer services, telecommunications, utilities, financials, and technology.

**Figure 8: CEO and Board Executive Remuneration Packages in FTSE 350 Companies by Average Pay Components, 1999-2008**



*Notes:* The sample is based on CEOs and board executives included in the FTSE 350 between 1999 and 2008, using the numeric data from BoardEx. The component “OTHER” comprises pensions, other monetary compensation, and value of equity awarded.

### 5.2.3 Descriptive Statistics for all the Variables Utilised

Table 5 summarises the overall descriptive statistics for all adopted variables.<sup>7</sup> CEOs and board executives members received the prime cash compensation component (i.e. base salary), which is, on average, £453,185 and £1,291,839, respectively, whilst the amount of LITPs (the key non-cash remuneration component) offered is £1,219,658 and £2,473,317, respectively. On the other hand, the value of pensions and the awarded equity with options are the lowest of the cash and non-cash pay components provided to both CEOs and board executives. Overall, the average CEO's total remuneration is £1,943,000 with a median of £1,160,500, whilst the average total compensation for board executives is £4,840,000 with a median of £3,012,000.

For the accounting-based indicators of company performance, Tobin's Q ratio at the current period ( $t$ ) has a mean of 1.49 with a median of 0.82, while ROA has a mean of 6.9 with a median of 6.6, implying that the mean and median values of ROA are closer to each other rather than to their Q ratio counterparts. It has been clearly seen that ROE has the maximum central location (18.47%, 18.1%, and 15.25%) for prior ( $t-1$ ), current ( $t$ ), and following ( $t+1$ ) periods, respectively. Also ROE data are spread out over a large range of values (58.8%, 55.4%, and 53.5%, respectively) which refers to the highest volatility in the whole time period compared with other indicators of performance, while EPS has the minimum average (0.26%, 0.25%, and 0.22%) and standard deviation (0.46%, 0.52%, and 0.62%) for the same time intervals (i.e. 1998-2007, 1999-2008, and 2000-2009, respectively), which shows that the EPS data tend to be very close to the mean.

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<sup>7</sup>Variables' names, codes, and definitions used in the empirical analyses are summarised in Table 1.

**Table 5: Summary of Basic Explanatory Statistics for Pooled Sample of FTSE 350 Companies within the 10-year Period**

		Variables	Mean (Median)	S.D.	Min. (Max.)	Skewness	Kurtosis	Obs.
<i>CEOs Remuneration Package (£000s)</i>	<i>Salary</i>	<b>CEOSLR</b>	453.1845 (405)	225.8776	0 (1842)	1.179328	5.410492	2726
	<i>Bonus</i>	<b>CEOBNS</b>	355.2903 (205)	554.6461	0 (10000)	5.730375	62.40436	2725
	<i>Pension</i>	<b>CEOPNS</b>	107.9598 (69)	120.2201	1 (1240)	3.010277	18.02046	1270
	<i>Other</i>	<b>CEOOTH</b>	64.33068 (24)	172.8305	0 (5040)	15.6086	378.4968	2643
	<i>Total Cash Compensation</i>	<b>CEOTCC</b>	921.0132 (726)	730.4951	0 (10177)	3.250275	23.78593	2726
	<i>Equity Awarded</i>	<b>CEOQAW</b>	223.6364 (8)	632.6823	0 (3391)	4.186556	20.65254	33
	<i>LTIP Awarded</i>	<b>CEOLTIPAW</b>	1219.658 (545.5)	3093.758	0 (87901)	15.40052	357.9143	2114
	<i>Intrinsic Options Awarded</i>	<b>CEOIOPAW</b>	126.6919 (4)	443.9063	0 (3686)	5.362479	35.64563	396
	<i>Estimated Options Aw.</i>	<b>CEOEOPAW</b>	281.3563 (6)	936.4889	0 (7771)	5.001303	30.74006	536
	<i>Total Equity Compensation</i>	<b>CEOTEC</b>	1022.273 (376.5)	2873.97	0 (87901)	15.36015	378.0501	2726
	<i>Total Remuneration</i>	<b>CEOTREM</b>	1943.286 (1160.5)	3213.549	15 (90223)	12.02023	259.888	2726
<i>Executives' Remuneration Package (£000s)</i>	<i>Salary</i>	<b>ALLSLR</b>	1291.839 (1093.5)	783.9226	0 (5937)	1.768509	7.465688	2726
	<i>Bonus</i>	<b>ALLBNS</b>	941.9567 (550)	1457.36	0 (21362)	5.428805	50.7622	2726
	<i>Pension</i>	<b>ALLPNS</b>	121.2422 (50)	209.155	0 (4338)	6.111394	84.69192	2713
	<i>Other</i>	<b>ALLOTHR</b>	181.2437 (83)	390.1589	0 (11170)	12.70653	278.874	2725
	<i>Total Cash Comp.</i>	<b>ALLTCC</b>	2535.637 (1949)	2115.275	0 (23155)	3.023221	18.09779	2726
	<i>Equity Awarded</i>	<b>ALLEQAW</b>	538.0222 (86)	1844.611	3 (12373)	6.06362	39.39389	45
	<i>LTIP Awarded</i>	<b>ALLLTIPAW</b>	2473.317 (1116)	6201.482	1 (174176)	18.10161	463.7954	2319
	<i>Intrinsic Options Aw.</i>	<b>ALLIOPAW</b>	182.9782 (5)	798.4492	0 (13155)	8.397355	105.1995	780
	<i>Estimated Options Aw.</i>	<b>ALLEOPAW</b>	376.7159 (8)	1634.636	1 (21354)	8.107727	84.21943	1009
	<i>Total Equity Comp.</i>	<b>ALLTEC</b>	2304.718 (927)	6030.734	0 (174176)	17.13332	444.3864	2726
	<i>Total Remuneration</i>	<b>ALLTREM</b>	4840.355	7000.651	95	11.88003	257.8444	2726

			(3012)		(177584)			
<i>Corporate Performance Indicators (year t / 1999-2008)</i>	<i>Tobin's Q</i>	<b>TQ</b>	1.495056 (.82296)	2.570347	0.04 (19.77)	2.94244	104.629	2726
	<i>Earnings Per Share</i>	<b>EPS</b>	0.254556 (.19)	0.521872	-2.18 (2.47)	-35.46855	1288.369	2726
	<i>Return on Equity</i>	<b>ROE</b>	18.10398 (15.54)	55.38736	-216.8 (369.77)	4.112887	360.8905	2726
	<i>Return on Assets</i>	<b>ROA</b>	6.891233 (6.595)	8.617823	-29.61 (35.53)	-2.405512	29.29984	2726
	<i>Total Assets Turnover</i>	<b>TASST</b>	0.860708 (.73)	0.699398	0.02 (3.23)	1.957937	12.80725	2726
<i>Corporate Performance Indicators (year t+1 / 2000-2009)</i>	<i>Tobin's Q</i>	<b>TQNY</b>	1.3505 (.79917)	2.175284	0.0333 (17.755)	4.32665	204.359	2726
	<i>Earnings Per Share</i>	<b>TQNY</b>	0.219134 (.18)	0.621436	-3.47 (2.33)	-50.05939	2562.118	2726
	<i>Return on Equity</i>	<b>ROENY</b>	15.25826 (14.43)	53.53992	-239.7 (315.21)	-7.276308	485.7623	2726
	<i>Return on Assets</i>	<b>ROANY</b>	6.053441 (6.09)	9.469233	-37.96 (36.57)	-3.256137	37.79661	2726
	<i>Total Assets Turnover</i>	<b>TASSTNY</b>	0.847018 (.71)	0.68852	0.02 (3.16)	0.3351991	31.77821	2726
<i>Corporate Performance Indicators (year t-1 / 1998-2007)</i>	<i>Tobin's Q</i>	<b>TQPY</b>	2.063538 (.902818)	4.895862	0.05 (40.53)	2.56877	72.6547	2726
	<i>Earnings Per Share</i>	<b>EPSPY</b>	0.256768 (.18)	0.457063	-1.44 (2.49)	-46.13098	2315.643	2726
	<i>Return on Equity</i>	<b>ROEPY</b>	18.47047 (15.835)	58.84553	-268.3 (371.05)	-16.82467	498.4936	2726
	<i>Return on Assets</i>	<b>ROAPY</b>	7.202927 (6.795)	8.389889	-27.64 (37.26)	-13.40965	421.1106	2726
	<i>Total Assets Turnover</i>	<b>TASSTPY</b>	0.878239 (.76)	0.707225	0.02 (3.25)	1.83122	11.7659	2726
<i>Corporate Governance Characteristics</i>	<i>Duality Role</i>	<b>DR</b>	0.070066 (0)	0.255305	0 (1)	3.368619	12.3476	2726
	<i>Board Size</i>	<b>BS</b>	9.761189 (9)	2.825931	2 (23)	0.999472	4.655388	2726
	<i>Non-executive Directors</i>	<b>NXD</b>	5.655906 (5)	2.165047	0 (17)	1.035916	4.879106	2726
	<i>Independent Directors</i>	<b>ID</b>	4.694424 (4)	1.910517	0 (14)	0.7806028	4.66628	2726
	<i>Audit Committee</i>	<b>AC</b>	0.997432 (1)	0.050618	0 (1)	-19.65785	387.4311	2726
	<i>Remuneration Committee</i>	<b>RC</b>	0.987528 (1)	0.111002	0 (1)	-8.785733	78.1891	2726
	<i>Nomination Committee</i>	<b>NC</b>	0.928834 (1)	0.25715	0 (1)	-3.335891	12.12817	2726
<i>CEOs Ownership Package</i>	<i>Wealth Share Plans</i>	<b>CEOWSP</b>	440.8319 (95.3295)	1175.607	0 (16200)	6.839663	64.92073	2726
	<i>Wealth Options (Ex.)</i>	<b>CEOEWO</b>	249.7959	843.6385	0	11.08642	188.127	2725

<i>Executives' Ownership Package</i>	<i>Wealth Options (Un-ex.)</i>	<b>CEOUWO</b>	(0) 428.7447 (38.82)	964.2135	(17000) 0 (20300)	6.349162	84.93934	2726
	<i>Wealth Equity (Ex.)</i>	<b>CEOEWE</b>	219.3799	1379.423	0 (35700)	16.9155	355.7279	2725
	<i>Wealth Equity (Un-ex.)</i>	<b>CEOUWE</b>	(0) 70.41367	750.8222	0 (26400)	26.67385	825.0201	2726
	<i>Wealth Share Plans</i>	<b>ALLWSP</b>	(0) 1133.890 (296.886)	2287.448	0 (22500)	4.959132	34.37278	2726
	<i>Wealth Options (Ex.)</i>	<b>ALLEWO</b>	621.7715 (54)	1485.751	0 (19300)	5.97223	55.08865	2724
	<i>Wealth Options (Un-ex.)</i>	<b>ALLUWO</b>	1114.758 (270)	2379.748	0 (30400)	5.062487	41.31047	2723
	<i>Wealth Equity (Ex.)</i>	<b>ALLEWE</b>	564.8072 (0)	3455.681	0 (91500)	17.37081	387.0734	2722
	<i>Wealth Equity (Un-ex.)</i>	<b>ALLUWE</b>	196.764 (5.668)	2071.887	0 (78700)	29.16084	978.1106	2724
	<i>Board member Features</i>	<i>CEOs Age</i>	<b>CEOAGE</b>	51.62326 (52)	6.599697	31 (82)	-0.159443	3.095337
<i>CEOs Tenure</i>		<b>CEOTIR</b>	5.010492 (3.4)	5.405783	0 (38.9)	2.35859	10.01314	2726
<i>CEOs Gender</i>		<b>CEOGNDR</b>	0.017975 (0)	0.132885	0 (1)	7.256098	53.65096	2726
<i>Executives' Age (Average)</i>		<b>AVAGE</b>	47.62326 (48)	6.599697	27 (78)	-0.159443	3.095337	2726
<i>Executives' Tenure (Average)</i>		<b>AVTIR</b>	7.010492 (5.4)	5.405783	2 (40.9)	2.35859	10.01314	2726
<i>Executives' Gender (Average)</i>		<b>AVGNDR</b>	0 (0)	0	0 (0)	.	.	2726
<i>Firm Characteristics</i>	<i>Corporate Size (£000s)</i>	<b>TASS</b>	19081.07 (1371.895)	107706	0.52 (2394570)	12.83816	214.9648	2726
	<i>Corporate Growth (£000s)</i>	<b>CTASS</b>	3047.712 (985.16)	33038.77	-60150.9 (1026299)	21.39149	552.2716	2637
	<i>Debt to Common Equity</i>	<b>DE</b>	77.07438 (57.59)	1598.328	-76200 (10080)	-39.95472	1907.8	2726
	<i>Debt to Total Assets</i>	<b>DA</b>	26.27821 (24.68)	21.08369	-42.1 (311.2)	2.750798	28.91868	2726
<i>Dummy Effects</i>	<i>Regulation Dummy</i>	<b>DREG</b>	0.765224 (1)	0.423937	0 (1)	-1.251472	2.566182	2726
	<i>Time Dummy</i>	<b>DT</b>	5.283199 (5)	2.766734	1 (10)	0.0749377	1.852473	2726

*Notes:* The descriptive statistics of all the diverse variables are based on the FTSE 350 registered companies between 1999 and 2008) according to the availability of executive directors' remuneration packages for those corporations. Table 1 fully defines all the variables used. Identical data sources have been used for all the FTSE 350 companies in the sample. Executives' pay and ownership packages are presented in £000s, while corporate size is presented in millions. A 98% winsorising technique has been applied to set all corporate performance and leverage outliers (i.e. extreme values) which can disproportionately affect the statistical distribution and measurement. The lags for company performance measures have also been manually collected and adopted for one-year before and one-year after, besides the current interval.

In terms of governance related variables, average the board size for FTSE 350 corporations has a mean of just under 10 members and a median of 9. This is lower than the corresponding number of 12 members noted by Yermack (1996) and the 13 reported by Core et al. (1999) for their samples of US corporations. A number of FTSE 350 companies, however, have more than 20 members in their boardrooms (as many as 23 members, as in the case of HSBC Holdings in 2001). The statistical results also show that the number of managerial members on the boardroom is ranging from 2 to 23, which is consistent with Ozkan (2007) who reported the range of 4 to 21 for UK firms' board size. The findings indicate that 5 to 6 members (median=5, and mean=5.66) are non-executive directors, and 4 to 5 (median=4, and mean=4.69) are independent directors in FTSE 350 companies. This illustrates a relatively high degree of compliance with the Higgs Report (2003) and the UK Combined Code's (2008) requirement that at least 50% of the board room members, excluding the chairman, should be non-executive directors who are determined by the board to be independent.

As would be expected following the requirements/expectations of the Combined Code the presence of audit committees (99.7%) and remuneration committees (98.8%) are all but universal and 92.9% of the sample have nomination committees. Not surprisingly the presence of remuneration committees is much higher than the figure of 30% reported by Main and Johnston (1993) for a sample of British companies, and perhaps more surprisingly than the 66% reported by Brown and Caylor (2009) for a sample of 2,363 US firms in 2003 derived from the Institutional Shareholder Services (ISS) database. However 7% of the sample did have a combined role of CEO and Chairman which was specifically discouraged in the Combined Code<sup>8</sup> (although this figure is lower than the 18% found by Conyon and Murphy (2000) for a sample of UK companies).

The ownership package variable shows on average relatively small proportions of boardroom share ownership. The ownership that is there is largely derived from share plans obtained as part of compensation packages, with an average £440,832 and £1,133,890 provided to CEOs and board executives, respectively; while little is derived from exercised options and unexercised equities.

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<sup>8</sup>This finding demonstrates a high level of compliance with the recommendations of governance reform (FRC, 2008), which emphasise the importance of two individuals occupying the positions of corporate Chairman and CEO to prevent any one individual having dominant or even unfettered power in the boardroom.



Characteristics of board members show a median age for CEOs of 52. There is however quite a wide range of age and experience the youngest CEOs in the sample being just 31<sup>9</sup> years old whereas the oldest is 82<sup>10</sup>. The median tenure of CEOs is just three and a half years.

Obviously many companies have fresh start CEOs but the longest in post in the sample had been CEO for 38.9 years. Again not unexpectedly CEOs are almost overwhelmingly male. In fact only 1.7% of FTSE 350 companies have a female CEO perhaps an even lower percentage than a priori expectations suggested. Similarly boardrooms were also male dominated – although not to quite such a striking extent as for CEOs.

Corporate characteristics were measured by a number of variables. Time spent in the FTSE 350 was measured by means of a dummy variable – the average length of time for a company to be in the index as a separate identity being between five and six years. The regulation dummy, as suggested by Koh and Liu (2012), acts to distinguish between financial and the non-financial companies and reflected the composition of the sample as containing 23% financial companies and 77% non-financial. According to the firm characteristics, corporate assets leverage (DA) ranges from -42.1 to 311.2, with an average of 26.3%, whilst the ratio of debt to equity (DE) ranges from -76,200 to 10,080, with an average of 77.1%. Here there are clearly a number of extreme outliers which would be removed by the winsorisation process. Over the period the average individual firm total asset is about £19.1 billion, whereas the overall growth of FTSE 350 corporations is approximately £3.05 billion on average.

Again as in line with expectations tests for skewness and kurtosis indicate that the majority of the variables utilised are positively or right skewed and therefore non-normally distributed, as the data does not fall within the ranges  $\pm 1.96$  and  $\pm 3$  for the standard skewness and kurtosis statistics, respectively (Haniffa and Hudaib, 2006). As a result, the estimated standard errors and the results of test statistics are more likely to be biased and inconsistent. According to Dinga (2011), the problem of non-normality can be solved or at least mitigated by using either data transformation or by means of running regression equations with robustness of standard errors (Wooldridge, 2002, 2005). The former option involves logarithmic transformations in order to artificially ensure that the data are normally distributed. This is consistent with much

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<sup>9</sup>Adam Kaye – the CEO of ASK CENTRAL PLC.

<sup>10</sup>Jacques Gaston Murray – the Chairman and CEO of London Security PLC.

prior literature in executive remuneration (for example Core et al., 1999; Sapp, 2008; Conyon et al., 2009). The latter option employs robust estimation analysis of standard errors within the multiple regression analyses, allowing the management of the variables' non-normality and the identification of the consistency of the findings. In the current study, these two alternative statistical approaches are adopted by means of using natural logarithmic transformations for all compensation components, corporate performance measures, corporate size, and growth opportunities, as well as utilising the multiple regression modelling incorporating robust standard errors.

### **5.3 Correlation Analyses**

This section discusses the correlation analysis results as they relate to significant interrelationships among the adopted variables in the categories of executive remuneration, firm performance, corporate governance, and other underlying control indicators in an attempt to confirm the construct validity of the analysis. In addition the variance inflation factors (VIF) test is utilised to check for multicollinearity issues and concerns.

Table 6 shows the degree of coefficient relationships between CEO/executive pay and corporate performance for two different time intervals ( $t+1$  and  $t-1$ ), whilst the structure of significance levels in the data set is shown in tables 7 and 8, consistent with Gujarati (2004) and Wooldridge (2002, 2005). In addition Table 9 shows the results of the relevant VIF test.

#### **5.3.1 Correlation Matrix - Pay and Performance**

Table 6 shows the degrees of association between the components and measures of pay for CEOs and boardroom executives and the accounting-based indicators of company performance by adopting two interval periods (one-year forward and one-year backward) in an attempt to identify the extent to which the underlying variables are interrelated within different time periods.

The findings indicate the existence of high levels of interrelation between and within the remuneration packages for CEOs and board executive directors and the indicators of corporate performance. The results show, perhaps surprisingly, that CEOs' salaries are negatively related to pensions and other monetary compensation, but, not surprisingly (because bonus

amounts are often directly linked as multiples of base salary), they are positively associated with bonuses and all non-cash components. CEOs' bonus, pension, and other pay components are negatively related with non-cash remuneration packages. Interestingly there are differences when one looks at correlations relating to executive directors compensation (including CEOs). The components of executive directors' remuneration are almost entirely positively correlated with each other with the exception of the relationships between awarded options and cash pay which are negatively correlated and the relationships between LTIPs and the components of bonus and pensions which are also negatively correlated.

It can be observed from the correlation analysis that the accounting-based measures of company performance at the remuneration at two interval periods are highly linked with the majority of CEO remuneration indicators – which is again what might be expected. They are however rather less closely associated with the indicators as they relate to board executive pay. It can also be seen that the compensation components of CEOs and board executives, especially the equity-based pay components, are strongly associated with both periods of firm performance measures, but the previous-year levels of performance are relatively more closely associated which might perhaps be more consistent with a pure agency perspective. There are some significant differences, for example, CEOs' LTIPs are associated with the following year's Tobin's Q at a level just above 68% - but the association with prior-year's Tobin's Q is actually over 98%. However rather surprisingly Tobin's Q, ROE, and ROA are in fact negatively correlated with the majority of cash compensation components for board executives (i.e. the whole set of board executives), whilst EPS and TASST have a positive link with the remuneration package of boardroom members.

**Table 6: Correlation Matrix - FTSE 350 CEOs' Compensation and Firm Performance at 2-interval Levels**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	
(1) Salary	1																					
(2) Bonus	0.1069	1																				
(3) Pensions	-0.9233	0.2831	1																			
(4) Other Pay	-0.941	0.2358	0.9988	1																		
(5) Total Cash	0.8072	0.6733	-0.5185	-0.5598	1																	
(6) Equity	0.4802	-0.8208	-0.7803	-0.7487	-0.1302	1																
(7) LTIPs	0.9353	-0.2519	-0.9995	-0.9999	0.546	0.7596	1															
(8) Options-1 <sup>1</sup>	0.9915	-0.023	-0.9653	-0.977	0.7237	0.59	0.9733	1														
(9) Options-2 <sup>2</sup>	0.9618	-0.1692	-0.9932	-0.9977	0.6148	0.7019	0.9964	0.9892	1													
(10) T. Non-Cash	0.9464	-0.22	-0.9979	-0.9999	0.5732	0.7378	0.9995	0.9803	0.9987	1												
(11) Total Pay	0.9888	-0.0429	-0.9704	-0.981	0.7098	0.606	0.9777	0.9998	0.9919	0.984	1											
(12) TQ - NY	0.3812	-0.8784	-0.7071	-0.6716	-0.238	0.994	0.6838	0.498	0.6197	0.6594	0.5152	1										
(13) EPS - NY	0.5685	0.8788	-0.2089	-0.2566	0.9445	-0.4486	0.2405	0.4569	0.3217	0.2723	0.4391	-0.5438	1									
(14) ROE - NY	0.9955	0.0123	-0.9555	-0.9688	0.7476	0.5612	0.9646	0.9994	0.9834	0.9727	0.9985	0.4671	0.488	1								
(15) ROA - NY	0.8994	-0.3386	-0.9983	-0.9942	0.4678	0.8154	0.9959	0.9485	0.9847	0.9924	0.9546	0.7471	0.1516	0.9367	1							
(16) TASST - NY	0.7263	-0.6057	-0.9346	-0.9161	0.1805	0.9517	0.9226	0.8094	0.8867	0.9094	0.8209	0.9123	-0.1525	0.7882	0.9538	1						
(17) TQ - PY	0.8631	-0.4098	-0.9909	-0.9831	0.3986	0.8574	0.986	0.9214	0.9684	0.98	0.9289	0.7959	0.0753	0.9071	0.997	0.974	1					
(18) EPS - PY	0.2656	0.987	0.125	0.0763	0.7835	-0.7181	-0.0928	0.1382	-0.0084	-0.0601	0.1185	-0.79	0.9441	0.1731	-0.1827	-0.4697	-0.2576	1				
(19) ROE - PY	0.2551	0.9887	0.1359	0.0872	0.7767	-0.7257	-0.1037	0.1274	-0.0193	-0.071	0.1076	-0.7967	0.9405	0.1623	-0.1934	-0.4794	-0.2681	0.9999	1			
(20) ROA - PY	0.985	-0.0663	-0.9757	-0.9853	0.6932	0.6244	0.9823	0.9991	0.9946	0.9879	0.9997	0.5351	0.418	0.9969	0.9613	0.8341	0.9373	0.0952	0.0844	1		
(21) TASST - PY	0.7541	-0.5724	-0.9485	-0.9318	0.2209	0.9382	0.9377	0.8329	0.905	0.9258	0.8438	0.8947	-0.1116	0.8129	0.9653	0.9991	0.9825	-0.4329	-0.4427	0.8561	1	

*Notes:* The correlation degrees of association for the variables of CEOs' pay and firm performance are based on the FTSE 350 registered corporations between 1999 and 2008. The table shows the correlation coefficients.

<sup>1</sup> CEO intrinsic options awarded.

<sup>2</sup> CEO estimated options awarded.

**Table 6: Correlation Matrix (Cont.) - FTSE 350 Board Executive Compensation and Firm Performance at 2-interval Levels**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
(1) Salary	1																				
(2) Bonus	0.8076	1																			
(3) Pensions	0.2531	0.6127	1																		
(4) Other Pay	0.9155	0.7894	0.1635	1																	
(5) Total Cash	0.9662	0.9294	0.4382	0.9108	1																
(6) Equity	0.2535	0.1404	-0.1315	0.2475	0.2338	1															
(7) LTIPs	0.2348	-0.0768	-0.0103	0.164	0.1264	0.2008	1														
(8) Options-1 <sup>3</sup>	-0.155	-0.5297	-0.2598	-0.4386	-0.328	-0.0089	0.2794	1													
(9) Options-2 <sup>4</sup>	-0.0998	-0.3994	-0.1159	-0.3341	-0.2298	0.0983	0.3151	0.915	1												
(10) T. Non-Cash	0.2061	-0.1416	-0.0093	0.0559	0.0828	0.3342	0.9531	0.4903	0.5281	1											
(11) Total Pay	0.8045	0.5463	0.3677	0.6118	0.7468	0.386	0.5841	0.2529	0.3679	0.6569	1										
(12) TQ - NY	-0.5091	-0.4807	0.0008	-0.6164	-0.5041	0.4126	0.2104	0.3722	0.4775	0.3741	-0.0519	1									
(13) EPS - NY	0.4418	0.3208	0.0063	0.3889	0.4064	0.2929	-0.2317	0.262	0.4321	-0.0924	0.4155	-0.2082	1								
(14) ROE - NY	-0.3219	-0.358	-0.0831	-0.4223	-0.3595	-0.1925	0.0513	0.6327	0.7749	0.1839	0.0208	0.2464	0.3998	1							
(15) ROA - NY	-0.2073	-0.2815	0.0385	-0.4155	-0.2457	0.2326	0.1933	0.6961	0.8841	0.4095	0.2647	0.6977	0.3702	0.7686	1						
(16) TASST - NY	0.6253	0.438	-0.0568	0.5484	0.5784	0.5703	0.3415	0.0348	0.2364	0.3978	0.66	0.1204	0.3755	0.0701	0.3506	1					
(17) TQ - PY	-0.502	-0.511	-0.1074	-0.7176	-0.5294	0.253	0.1717	0.5907	0.6067	0.3706	-0.0505	0.8633	-0.1688	0.4899	0.7801	0.1517	1				
(18) EPS - PY	0.7178	0.4257	-0.2448	0.6635	0.6221	0.5957	-0.0532	-0.029	-0.0583	0.0115	0.4698	-0.2509	0.5288	-0.418	-0.153	0.5481	-0.303	1			
(19) ROE - PY	0.0573	0.3065	-0.0843	0.0723	0.1371	0.1196	-0.2954	-0.1936	-0.0675	-0.2913	-0.1046	-0.1291	0.3495	0.3435	0.2015	0.36	0.116	0.0623	1		
(20) ROA - PY	-0.1006	0.019	-0.1434	-0.2655	-0.0777	0.2876	-0.1444	0.0898	0.1161	-0.0469	-0.0858	0.4699	-0.042	0.1033	0.4328	0.4345	0.6304	0.128	0.5984	1	
(21) TASST - PY	0.5919	0.4444	-0.1759	0.5291	0.5447	0.5837	0.3229	-0.0344	0.1085	0.3425	0.5437	0.0072	0.377	0.0176	0.2422	0.8983	0.0924	0.5904	0.5815	0.5387	1

*Notes:* The correlation degrees of association for the variables of board executive pay and firm performance are based on the FTSE 350 registered corporations between 1999 and 2008. The table shows the correlation coefficients.

<sup>3</sup> Boardroom executives' intrinsic options awarded.

<sup>4</sup> Boardroom executives' estimated options awarded.

To recap, the findings from this preliminary analysis of correlation are that there are high positive relationships between the measures of corporate performance and CEOs' salaries, LTIPs, and options. As discussed before, the underlying theoretical perspectives considered and reference to the relevant institutional and regulatory aspects suggest the likelihood of the possibility of such relationships between executive pay and company performance within the overall environment of corporate governance as operationalised under the Combined Code and related regulatory measures.

### **5.1.1 Pairwise Correlation Matrix - Pay, Performance, and Control Variables**

Tables (7 and 8) show the levels of significance between the pay components and indicators, as they relate to CEOs and board executives, and the measures of firm performance for two-interval periods (next-year and previous-year). They also show relationships between the underlying set of control variables focusing on aspects of corporate governance and ownership, and characteristics attributable to both companies and boardroom members. The correlation coefficients reported here are considered for the purpose of examining whether as significance levels increase then the potential collinearity introduces instability into the regression model. Wooldridge (2002) and Gujarati (2004) suggest that multicollinearity might threaten the coherence of the regression analyses if the degree of correlation exceeds 80%; therefore this proportion is adopted as a starting-point for further investigation and consideration.

The correlation analysis clearly shows that the cash pay components for CEOs and board executives are not only highly significantly related internally but also are strongly associated with the indicators of company performance, especially Tobin's Q and EPS. The analysis also shows that bonus payments have a more than modest degree of correlation with almost with all performance measures. However, the equity based compensation measures for both CEOs and board executives do vary both directionally and in terms of significance with the majority of corporate performance indicators.

**Table 7: Pairwise Correlation Matrix - FTSE 350 CEOs' Compensation and Firm Performance at 2-interval Levels**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	
(1) Salary	1																					
(2) Bonus	0.5167***	1																				
(3) Pensions	0.5523***	0.3041***	1																			
(4) Other Pay	0.3817***	0.241***	0.2385***	1																		
(5) Total Cash	0.7863***	0.876***	0.5561***	0.4328***	1																	
(6) Equity	0.5992***	0.5558***	0.3263	0.4346**	0.6394***	1																
(7) LTIPs	0.5006***	0.6018***	0.2688***	0.2607***	0.6044***	0.6377***	1															
(8) Options-1 <sup>1</sup>	0.0844	0.181***	-0.1235	0.0465	0.1607***	0.0806	0.2252***	1														
(9) Options-2 <sup>2</sup>	0.1103**	0.1567***	-0.0946	0.121***	0.145***	-0.0914	0.247***	0.9355***	1													
(10) T. Non-Cash	0.4589***	0.5525***	0.2247***	0.2393***	0.5516***	0.715***	0.9826***	0.4204***	0.399***	1												
(11) Total Pay	0.6814***	0.7496***	0.4403***	0.358***	0.8388***	0.8146***	0.8969***	0.4528***	0.4139***	0.8635***	1											
(12) TQ - NY	-0.2251***	-0.0846***	-0.2153**	-0.0901***	-0.1955***	-0.0475	-0.027	0.2777***	0.1922***	-0.0356*	-0.168***	1										
(13) EPS - NY	0.0987***	0.1371***	0.053*	0.0276	0.1271***	0.3673**	0.1186***	0.0317	-0.0033	0.1022***	0.126***	-0.0418**	1									
(14) ROE - NY	0.0171	0.1132***	0.0078	-0.009	0.0956***	-0.1597	0.0661***	-0.0009	-0.0591	0.0289	0.076***	0.0134	0.3373***	1								
(15) ROA - NY	0.0223	0.0739***	-0.0003	-0.0174	0.0779***	-0.2816	0.0347	0.0106	-0.0538	0.0125	0.053***	0.091***	0.5503***	0.5215***	1							
(16) TASST - NY	0.016	-0.0934***	-0.0565**	0.0131	-0.057***	-0.0133	-0.0833***	0.0379	0.0023	-0.0851**	-0.0649**	0.11***	0.0406**	0.1312***	0.242***	1						
(17) TQ - PY	-0.3145***	-0.152***	0.2711**	-0.1235***	-0.271***	0.002	-0.0358*	0.139***	0.1235***	-0.0638**	-0.2243**	0.697***	-0.096***	-0.0465**	-0.0507***	0.0225	1					
(18) EPS - PY	0.1607***	0.1424***	0.127***	0.0626***	0.1511***	0.2217	0.1013***	-0.0349	-0.028	0.0868***	0.129***	-0.121***	0.3033***	0.0529***	0.0826***	-0.0358*	-0.1188***	1				
(19) ROE - PY	0.0088	0.0734***	0.0138	-0.008	0.0725***	-0.1307	0.0137	-0.0654	-0.1037**	-0.0082	0.0477**	-0.0324*	0.097***	0.3517***	0.1452***	0.0564***	-0.032*	0.2139***	1			
(20) ROA - PY	-0.0056	0.0422**	-0.0242	-0.0604***	0.0269	-0.3178*	0.004	0.0428	-0.0049	0.0034	0.0153	0.073***	0.1593***	0.1597***	0.4279***	0.1927***	0.0497***	0.4192***	0.3962***	1		
(21) TASST - PY	-0.0008	-0.0907***	-0.0688**	0.0036	-0.0587***	0.0026	-0.0692***	0.0577	-0.001	-0.0681**	-0.0614**	0.108***	0.0558***	0.1505***	0.2681***	0.9131***	0.0988***	-0.0036	0.1055***	0.2751***	1	

*Notes:* The correlation levels of significance for the variables of CEOs' pay and firm performance are based on the FTSE 350 registered corporations between 1999 and 2008. The table shows the significant values. \*\*\*, \*\*, and \* denote significance at 1%, 5% and 10% significance levels, respectively. If there is no sign, no significant correlation was found.

<sup>1</sup> CEO intrinsic options awarded.  
<sup>2</sup> CEO estimated options awarded.

**Table 7: Pairwise Correlation Matrix (Cont.) - FTSE 350 CEOs' Compensation Indicators with Control Variables**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	
(1) Total Cash	1																					
(2) T. Non-Cash	0.552***	1																				
(3) Total Pay	0.838***	0.863***	1																			
(4) Duality Role	-0.119***	-0.062***	-0.157***	1																		
(5) Board Size	0.366***	0.260***	0.352***	-0.065***	1																	
(6) Nonexecutives	0.454***	0.386***	0.462***	-0.143***	0.796***	1																
(7) Independents	0.436***	0.394***	0.468***	-0.143***	0.651***	0.806***	1															
(8) Audit Comm.	0.0101	0.0412*	0.0301	-0.071***	0.047**	0.062***	0.075***	1														
(9) Rem. Comm.	-0.0018	-0.0203	-0.0152	-0.0209	-0.0036	0.0188	0.0149	0.321***	1													
(10) Nom. Comm.	0.191***	0.144***	0.202***	-0.080***	0.113***	0.143***	0.167***	0.099***	0.111***	1												
(11) Age	0.109***	-0.0265	0.0238	0.243***	0.109***	0.076***	0.07***	0.0081	-0.027	0.0303	1											
(12) Gender	0.069***	0.0413*	0.073***	-0.0263	-0.0257	-0.0015	0.0216	0.0069	-0.233***	-0.0055	-0.051***	1										
(13) Time-in-role	0.0196	-0.058***	-0.0434**	0.244***	-0.0276	-0.114***	-0.128***	-0.066***	-0.0076	-0.067***	0.335***	-0.0333*	1									
(14) Share Plans <sup>3</sup>	0.315***	0.380***	0.403***	-0.045**	0.120***	0.208***	0.211***	0.019	0.0131	0.072***	0.0341*	0.0409**	0.114***	1								
(15) Ex. Options <sup>4</sup>	0.111***	0.094***	0.116***	-0.0344*	0.0154	0.0323*	0.058***	0.0108	0.0159	0.0207	-0.0043	-0.0178	0.035*	0.071***	1							
(16) Un-Ex. Op. <sup>5</sup>	0.164***	0.142***	0.207***	-0.052***	0.026	0.052***	0.079***	0.0037	0.0194	0.0333*	-0.0085	-0.043**	-0.042**	0.057***	0.246***	1						
(17) Ex. Equity	0.093***	0.147***	0.156***	-0.0038	0.09***	0.111***	0.114***	-0.0214	-0.0013	0.0038	-0.0039	-0.012	0.003	0.260***	-0.0038	0.0124	1					
(18) Un-Ex. Eq.	0.057***	0.114***	0.119***	-0.0147	0.054***	0.086***	0.113***	0.0046	0.0083	0.0071	-0.0192	0.0297	-0.0282	0.227***	-0.0095	0.0042	0.568***	1				
(19) Debt-Asset	0.0158	0.0091	0.0148	-0.005	0.031	0.0259	0.0228	0.0015	0.0012	-0.0034	-0.007	-0.0023	-0.0071	-0.0049	-0.0031	-0.0041	-0.0026	-0.0044	1			
(20) Debt-Equity	0.008	-0.036*	0.0104	-0.0337*	0.0066	0.0352*	0.0246	0.045**	0.0068	-0.0112	-0.0397**	-0.0314	-0.0326*	-0.076***	-0.0003	-0.0484**	-0.0325*	-0.0153	0.0474**	1		
(21) Total Assets	0.517***	0.402***	0.519***	-0.099***	0.572***	0.609***	0.649***	0.05***	-0.0036	0.141***	0.098***	-0.0206	-0.151***	0.205***	0.0337*	0.064***	0.107***	0.073***	0.080***	0.094***	1	

*Notes:* The correlation levels of significance for the variables of CEOs' pay and control variables are based on the FTSE 350 registered corporations between 1999 and 2008. The table shows the significant values. \*\*\*, \*\*, and \* denote significance at 1%, 5% and 10% significance levels, respectively. If there is no sign, no significant correlation was found.

<sup>3</sup> CEO wealth share plans awarded.

<sup>4</sup> CEO exercised options awarded.

<sup>5</sup> CEO unexercised options awarded.



**Table 8: Pairwise Correlation Matrix - FTSE 350 Executive Compensation and Firm Performance at 2-interval Levels**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	
(1) Salary	1																					
(2) Bonus	0.5701***	1																				
(3) Pensions	0.5013***	0.3258***	1																			
(4) Other Pay	0.5544***	0.3408***	0.2723***	1																		
(5) Total Cash	0.8558***	0.8481***	0.5105***	0.5736***	1																	
(6) Equity	0.2666*	0.2809*	0.1721	0.2786*	0.2995**	1																
(7) LTIPs	0.4482***	0.457***	0.2538***	0.2797***	0.5024***	0.4417***	1															
(8) Options-1 <sup>6</sup>	0.0975***	0.1437***	0.0404	0.0213	0.1372***	0.1167	0.1356***	1														
(9) Options-2 <sup>7</sup>	0.093***	0.1076***	0.0097	0.0547*	0.1001***	0.2798	0.135***	0.8733***	1													
(10) T. Non-Cash	0.4371***	0.4406***	0.244***	0.2616***	0.4864***	0.598***	0.9689***	0.3533***	0.3252***	1												
(11) Total Pay	0.7523***	0.7467***	0.4563***	0.4833***	0.8646***	0.537***	0.7885***	0.3502***	0.294***	0.7897***	1											
(12) TQ - NY	-0.2324***	-0.0997***	-0.161***	-0.124***	-0.195***	0.0596	-0.0409**	0.1921***	0.197***	-0.049**	-0.166***	1										
(13) EPS - NY	0.1115***	0.1731***	0.052**	0.0614***	0.1388***	0.388***	0.0972***	0.0193	0.018	0.091***	0.135***	-0.0418**	1									
(14) ROE - NY	0.0169	0.1171***	-0.0197	-0.0148	0.0729***	0.0436	0.0579***	-0.0044	-0.0381	0.0344*	0.068***	0.0134	0.337***	1								
(15) ROA - NY	-0.0056	0.0841***	-0.0125	-0.0458**	0.0455**	-0.0978	0.0126	-0.0071	-0.0308	-0.0028	0.0319*	0.091***	0.55***	0.522***	1							
(16) TASST - NY	-0.0002	-0.1125***	-0.051**	-0.0051	-0.069***	0.104	-0.088***	0.0262	-0.0284	-0.092***	-0.078***	0.11***	0.041**	0.131***	0.242***	1						
(17) TQ - PY	-0.3094***	-0.152***	-0.198***	-0.1469***	-0.265***	0.0593	-0.056***	0.1983***	0.2032***	-0.056***	-0.204***	0.697***	-0.096***	-0.046**	-0.0507**	0.0225	1					
(18) EPS - PY	0.1941***	0.1578***	0.1553***	0.1095***	0.187***	0.0808	0.108***	-0.0766**	-0.0379	0.103***	0.158***	-0.121***	0.303***	0.053***	0.0826***	-0.0358*	-0.119***	1				
(19) ROE - PY	0.044**	0.0664***	0.0174	0.0047	0.075***	-0.0742	0.0241	-0.0679*	-0.068**	0.0101	0.059***	-0.032*	0.097***	0.352***	0.1452***	0.0564***	-0.032*	0.214***	1			
(20) ROA - PY	-0.0268	0.0046	-0.0087	-0.0858***	-0.0017	-0.2351	-0.037*	0.0102	0.0144	-0.023	-0.0047	0.073***	0.159***	0.16***	0.4279***	0.1927***	0.05***	0.419***	0.396***	1		
(21) TASST - PY	-0.0225	-0.1116***	-0.0619**	-0.0114	-0.079***	0.1145	-0.084***	0.0571	-0.0037	-0.07***	-0.079***	0.109***	0.056***	0.151***	0.2681***	0.9131***	0.099***	-0.0036	0.106***	0.275***	1	

*Notes:* The correlation levels of significance for the variables of board executive pay and firm performance are based on the FTSE 350 registered corporations between 1999 and 2008. The table shows the significant values. \*\*\*, \*\*, and \* denote significance at 1%, 5% and 10% significance levels, respectively. If there is no sign, no significant correlation was found.

<sup>6</sup> Boardroom executives' intrinsic options awarded.

<sup>7</sup> Boardroom executives' estimated options awarded.

**Table 8: Pairwise Correlation Matrix (Cont.) - FTSE 350 Executive Compensation Indicators with Control Variables**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(1) Total Cash	1																			
(2) T. Non-Cash	0.486***	1																		
(3) Total Pay	0.865***	0.789***	1																	
(4) Duality Role	-0.061***	-0.063***	-0.093***	1																
(5) Board Size	0.605***	0.333***	0.555***	-0.065***	1															
(6) Nonexecutives	0.431***	0.35***	0.455***	-0.143***	0.795***	1														
(7) Independents	0.432***	0.352***	0.468***	-0.143***	0.651***	0.806***	1													
(8) Audit Comm.	0.0119	0.0432**	0.031	-0.071***	0.047**	0.062***	0.075***	1												
(9) Rem. Comm.	-0.0015	-0.0221	-0.0159	-0.0209	-0.0036	0.0188	0.0149	0.321***	1											
(10) Nom. Comm.	0.162***	0.13***	0.173***	-0.080***	0.113***	0.143***	0.167***	0.098***	0.11***	1										
(11) Age	0.123***	-0.0301	0.049**	0.243***	0.109***	0.076***	0.071***	0.0081	-0.027	0.0303	1									
(12) Time-in-role	0.0273	-0.043**	-0.017	0.243***	-0.0276	-0.113***	-0.128***	-0.066***	-0.0076	-0.067***	0.334***	1								
(13) Share Plans <sup>8</sup>	0.318***	0.331***	0.419***	-0.0423**	0.209***	0.248***	0.284***	0.0229	0.0092	0.084***	0.0123	0.067***	1							
(14) Ex. Options <sup>9</sup>	0.17***	0.103***	0.158***	-0.0215	0.099***	0.048**	0.085***	0.0054	0.0052	0.0415**	0.0123	-0.0062	0.122***	1						
(15) Un-Ex. Op. <sup>10</sup>	0.186***	0.155***	0.223***	-0.0029	0.092***	0.0386**	0.083***	0.0036	0.0214	0.0445**	-0.0072	-0.045**	0.142***	0.351***	1					
(16) Ex. Equity	0.084***	0.139***	0.153***	0.0191	0.135***	0.115***	0.115***	-0.0186	0.001	0.0143	-0.0223	-0.0099	0.275***	-0.0242	-0.0108	1				
(17) Un-Ex. Eq.	0.042**	0.086***	0.094***	-0.0077	0.059***	0.071***	0.099***	0.0045	0.0078	0.0098	-0.0201	-0.0234	0.247***	-0.0207	-0.0082	0.309***	1			
(18) Debt-Asset	0.0292	0.0136	0.0257	-0.005	0.031	0.0259	0.0228	0.0015	0.0012	-0.0034	-0.007	-0.0071	0.0037	0.0009	-0.0037	-0.0025	-0.0035	1		
(19) Debt-Equity	0.0013	-0.0228	-0.0017	-0.0337*	0.0066	0.0352*	0.0246	0.0451**	0.0068	-0.0112	-0.039**	-0.0326*	-0.076***	-0.0029	-0.039**	-0.049***	-0.0213	0.0474**	1	
(20) Total Assets	0.578***	0.396***	0.572***	-0.098***	0.572***	0.609***	0.649***	0.051***	-0.0036	0.141***	0.098***	0.151***	0.272***	0.070***	0.071***	0.120***	0.069***	0.081***	0.094***	1

*Notes:* The correlation levels of significance for the variables of board executive pay and control variables are based on the FTSE 350 registered corporations between 1999 and 2008. The table shows the significant values. \*\*\*, \*\*, and \* denote significance at 1%, 5% and 10% significance levels, respectively. If there is no sign, no significant correlation was found.

<sup>8</sup> Boardroom executives' wealth share plans awarded.

<sup>9</sup> Boardroom executives' exercised options awarded.

<sup>10</sup> Boardroom executives' unexercised options awarded.

Because of the manner in which the compensation of both CEOs and boardroom members is influenced by both direct bonus payments and the awardance of LTIPs then it is of interest in the manner in which these variable pay components are positively and significantly correlated with corporate performance indicators (other than Q ratio and TASST) and also other components of compensation. This would lead to the possible naïve, hypothesis that higher the amounts of bonuses and LTIPs (as variable pay components) offered to CEOs and board executive members will be associated with better the levels of corporate performance.

As would be expected the performance indicators are quite highly intercorrelated; for example, ROA is associated with EPS and ROE by 55% and 52%, respectively, and TQ and TASST are even more highly correlated with their counterparts in different periods (70% and 91%, respectively). Within the corporate governance variables again as is to be expected board size is found to be positively and significantly correlated with the number of non-executive and independent directors (79.5% and 65%), respectively. Again not unsurprisingly the highest positive correlation identified – approximately 80 % – was between the number of non-executives and independent director. Corporate size is positively and significantly correlated with board size, non-executives, and independent directors (57%, 61%, and 65%, respectively), which demonstrates that larger-sized companies have larger boardrooms comprised largely of non-executives and independent directors. Although the pairwise correlation analyses show that all, but one, correlation coefficients are less than 80%,<sup>1</sup> there may nevertheless still be a multicollinearity issue between the regressors (Gujarati, 2004). In order to provide further confidence in the robustness of the models adopted a VIF test is used to check for the possibility of multicollinearity in the regression models.

### **5.1.1 Multicollinearity Tests**

Multicollinearity refers to the presence of a linear association between two or more independent variables, making it difficult to differentiate between the individual effects of the explanatory variables and regression estimators (Wooldridge, 2002; and O'Brien, 2007). As a result, it is impossible to determine the true relationship between the dependent variable and

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<sup>1</sup>Based on Gujarati (2004), it is proposed that multicollinearity may perhaps statistically threaten or violate the sensitivity analyses if the correlation level exceeds 80%.

the explanatory variables as the coefficient estimates may change erratically in response to small changes in the modelling.

Based on the correlation analyses incorporating all underlying variables, there may be a degree of multicollinearity (0.806) between the number of non-executive and independent directors, as well as the relationship between board size and non-executives (0.795) (see Tables 7 and 8). These findings are largely expected within corporate governance variables, consistent with prior literatures (such as Gubitta and Gianecchini, 2002) which show the difficulty of differentiating between non-executive and independent directors within the corporate board of directors. These levels of multicollinearity are close to the conventional optimal limit (i.e. 80%). Consequently the effects of incorporating both these variables within the same model will be discussed further.

The potential presence of multicollinearity is examined by the use of variance inflation factor (VIF). According to Wooldridge (2002) and O'Brien (2007), multicollinearity issues are likely to be relatively unimportant if the value of VIF is less than 10 and the tolerance factor ( $1/VIF$ ) is greater than 0.10. Table 9 shows the findings of the VIF and tolerance coefficients of each explanatory variable within both pay-performance and performance-pay frameworks. For the pay-performance framework, the results indicate that the highest VIF is 4.89 and the mean VIF is 1.95 for variables relating to CEOs, whilst the highest and average VIFs are 4.91 and 2.01, respectively, for board executives. The inversion shows the lowest and average tolerance factors ( $1/VIF$ ) for CEO related variables to be 0.2043 and 0.513 ( $1/1.95$ ), and 0.2037 and 0.498 ( $1/2.01$ ) respectively for board executives. For the performance-pay framework, the findings demonstrate that the highest VIF is 5.58 and the mean 2.28 for CEO related variables and the highest and average VIFs are 5.29 and 2.22, respectively for board executives. The lowest and overall tolerance factors ( $1/VIF$ ) for CEO related variables are 0.179 and 0.439 ( $1/2.28$ ), and 0.189 and 0.45 ( $1/2.22$ ) respectively for board executives. These outcomes suggest that VIFs and tolerance coefficients are within acceptable levels and give confidence in the likely limited impact of multicollinearity between the explanatory variables within the adopted regression models.

**Table 9: Variance Inflation Factor (VIF) Test of the Pay-Performance Framework**

Variables	CEOs	
	VIF	Tolerance 1/VIF
Non-executive Directors	4.89	0.204355
Total Assets-log	3.82	0.262056
ROA PY-log	3.55	0.282011
Independent Directors	3.38	0.296147
Board Size	3.06	0.327218
Tobin's Q PY-log	2.83	0.353097
EPS PY-log	1.94	0.516417
ROE PY-log	1.89	0.528063
TASST PY-log	1.63	0.61298
Time in Role	1.35	0.739162
Age	1.25	0.801072
Remuneration Committee	1.21	0.826138
Wealth Share Plans	1.17	0.853475
Duality Role	1.16	0.859009
Audit Committee	1.16	0.860202
Un-exercised Wealth Options	1.13	0.88505
Exercised Wealth Equity	1.13	0.887032
Gender	1.1	0.907857
Un-exercised Wealth Equity	1.1	0.90896
Exercised Wealth Options	1.09	0.916214
Nomination Committee	1.08	0.92195
<b>Mean VIF</b>	<b>1.95</b>	

Variables	Board Executives	
	VIF	Tolerance 1/VIF
Non-executive Directors	4.91	0.203755
Total Assets-log	3.87	0.258717
ROA PY-log	3.54	0.282301
Independent Directors	3.38	0.295606
Board Size	3.08	0.324271
Tobin's Q PY-log	2.85	0.350522
EPS PY-log	2.04	0.48962
ROE PY-log	1.89	0.528954
TASST PY-log	1.63	0.615382
Time in Role	1.33	0.753227
Age	1.25	0.799802
Un-exercised Wealth Options	1.24	0.809431
Exercised Wealth Options	1.21	0.826168
Wealth Share Plans	1.21	0.826266
Duality Role	1.16	0.862555
Audit Committee	1.16	0.864688
Exercised Wealth Equity	1.14	0.8746
Remuneration Committee	1.14	0.876532
Nomination Committee	1.08	0.921966
Un-exercised Wealth Equity	1.05	0.955788
<b>Mean VIF</b>	<b>2.01</b>	

**Table 9: Variance Inflation Factor (VIF) Test of the Performance-Pay Framework (Cont.)**

Variables	CEOs	
	VIF	Tolerance 1/VIF
Non-executive Directors	5.58	0.179073
Total Assets-log	5.42	0.184583
Independent Directors	4.28	0.233462
Board Size	3.84	0.260679
Growth Opportunity-log	3.71	0.269792
Bonus-log	2.09	0.478279
LTIPs-log	2.06	0.485615
Wealth Share Plans	1.35	0.742801
Remuneration Committee	1.28	0.783599
Time in Role	1.23	0.810892
Age	1.21	0.828878
Gender	1.2	0.833878
Duality Role	1.12	0.892221
Debt to Equity	1.11	0.89774
Debt to Assets	1.1	0.909505
Nomination Committee	1.09	0.917997
Audit Committee	1.09	0.918254
<b>Mean VIF</b>	<b>2.28</b>	

Variables	Board Executives	
	VIF	Tolerance 1/VIF
Non-executive Directors	5.29	0.189183
Total Assets-log	5.19	0.192539
Independent Directors	4.1	0.244189
Board Size	3.72	0.268871
Growth Opportunity-log	3.62	0.276366
Bonus-log	1.79	0.558406
LTIPs-log	1.5	0.664786
Wealth Share Plans	1.26	0.794351
Remuneration Committee	1.22	0.821032
Age	1.22	0.822519
Time in Role	1.13	0.881602
Duality Role	1.11	0.898514
Nomination Committee	1.11	0.90253
Debt to Equity	1.09	0.921412
Debt to Assets	1.08	0.923037
Audit Committee	1.06	0.944597
<b>Mean VIF</b>	<b>2.22</b>	

## **5.2 Fixed-Effect Equations Modelling**

In this section, the two-way relationships between the remuneration components and measures for CEOs and board executives and company performance are investigated over the period of examination by utilising fixed-effect equations modelling. According to this modelling, the typical value of the dependent variable changes when any one of the main independent variables changes, while the other control variables are held fixed under the following headings: pay-performance analysis, performance-pay analysis, and reflections on pay-performance and performance-pay results. The analytical findings of the multivariate regression analyses are expected to show a high level of consistency similar to the univariate descriptive analyses and the bivariate correlation analyses discussed above. The findings are discussed and compared with prior literature with a particular focus on relevant UK empirical studies.

### **5.2.1 Analyses of Pay-Performance Framework**

The first trend of two-way relationships is tested in this section, in which the impact of previous year accounting-based indicators of corporate performance on both the prime pay components (i.e. salary, bonus, and LTIPs) and the compensation measures (i.e. cash, non-cash, and total remuneration) for CEOs and board executives are examined separately. The pay-performance analyses for the three sub-time periods referred to above and sub-sector dichotomy between financial and non-financial companies are also reported.

#### **5.4.1.1 Remuneration Components of CEOs and Board Executives**

In this section - the significance of base salary, bonus, and LTIPs as the core compensation components for CEOs and board executives in FTSE 350 companies over the period 1999-2008 are investigated under the following three discussion headings: pay-performance results, results relevant to the control variables, and endogenous estimations.

##### **5.4.1.1.1 Discussion of Pay-Performance Results**

Table 10 shows the results of fixed-effect regressions with robust standard errors of remuneration components (i.e. salary, bonus, and LTIPs) with the previous-period indicators of corporate performance (as proxied by Tobin's Q, EPS, ROE, ROA, and TASST) for both corporate CEOs and board executives incorporating a number of related control variables.

**Table 10: Fixed-Effects Regressions - Salary, Bonus, and LTIPs as Functions of Corporate Performance at Previous Interval (t-1)**

	CEOs			Board Executives		
	(1)	(2)	(3)	(4)	(5)	(6)
	Salary	Bonus	LTIPs	Salary	Bonus	LTIPs
Constant	4.2120906*** (18.18)	2.913881*** (3.29)	3.1763669*** (4.4)	4.5658078*** (23.53)	2.533585*** (2.73)	3.6459815*** (3.84)
Tobin's Q PY-log	.02279962* (1.92)	.14362425*** (4.61)	.3056681*** (8.06)	.02583095** (2.57)	.18012652*** (5.68)	.32502072*** (6.86)
EPS PY-log	.02326518** (2.41)	-0.00260204 (-0.11)	.03724061* (1.69)	.02093347** (2.51)	0.00727145 (0.28)	.05707655* (1.71)
ROE PY-log	-.02062927** (-2.01)	.08268128*** (3.21)	.04100779* (1.76)	-.0216008** (-2.51)	.09672122*** (3.68)	.05913649* (1.88)
ROA PY-log	.02281504* (1.76)	-0.01848607 (-0.46)	0.01505427 (0.32)	.03457427*** (2.64)	-0.06140126 (-1.52)	-0.00882083 (-0.15)
TASST PY-log	.06090098*** (5.9)	.05108104* (1.91)	-0.03887797 (-1.23)	.06026576*** (6.92)	.04933045* (1.81)	-0.09924834 (-1.53)
Duality Role	-0.00573106 (-0.18)	-0.0428842 (-0.5)	0.08971772 (0.79)	0.0258179 (0.99)	-0.13253099 (-1.62)	0.00646531 (0.05)
Board Size	-0.0060255 (-1.26)	0.00394095 (0.32)	-.05425376*** (-3.7)	.16948291*** (41.81)	.15244016*** (12.13)	.05894225*** (3.29)
Non-executive Directors	.022064*** (2.9)	.11057682*** (5.78)	.07523806*** (3.31)	-.15850167*** (-24.66)	-.06949022*** (-3.51)	.01960111* (1.69)
Independent Directors	.01418475** (1.99)	-.05565646*** (-3.13)	.03898421* (1.83)	.00895682* (1.7)	-.0514097*** (-2.8)	.0056536* (1.81)
Audit Committee	-0.0960273 (-0.37)	-0.40548756 (-0.67)	0.16367111 (0.25)	-0.17837405 (-0.82)	-0.87567178 (-1.37)	-0.43845581 (-0.5)
Remuneration Committee	0.07467662 (0.98)	-0.17157974 (-0.85)	-.42485193* (-1.85)	0.0622315 (1)	-0.32397492 (-1.64)	-0.44424575 (-1.58)
Nomination Committee	.1081304*** (3.53)	.10044976* (1.73)	.14740425* (1.87)	0.0283112 (1.09)	.05555836* (1.68)	0.17961611 (1.41)
Age	.00590792*** (4.71)	-0.00106646 (-0.33)	-.01067889*** (-2.8)	.00399759*** (3.79)	-0.00105072 (-0.32)	-.01592241*** (-3.38)
Gender	.17821289*** (3.02)	.47137391*** (3.07)	0.07249123 (0.43)	-	-	-
Time in Role	.01114884*** (7.2)	.01543114*** (3.81)	-0.00232158 (-0.46)	.00615394*** (4.77)	.01198202*** (2.99)	0.00371614 (0.63)
Wealth Share Plans	2.203e-08*** (3.18)	1.310e-07*** (7.29)	2.887e-07*** (13.95)	9.237e-09*** (2.9)	6.978e-08*** (7.01)	1.120e-07*** (7.99)
Exercised Wealth Options	2.777e-08*** (2.77)	4.537e-08* (1.82)	5.646e-08* (1.92)	1.785e-08*** (3.53)	3.138e-08** (2.05)	2.19e-08* (1.71)
Un-exercised Wealth Options	6.602e-08*** (7.68)	1.148e-07*** (4.65)	1.487e-07*** (6.44)	2.294e-08*** (7.33)	0.000000009934 (1.05)	7.599e-08*** (5.9)
Exercised Wealth Equity	-0.000000004344 (-0.32)	6.752e-08** (2.02)	0.00000002429 (0.61)	-0.00000001796 (-0.43)	0.00000001921 (0.15)	-0.0000001096 (-0.62)
Un-exercised Wealth Equity	8.172e-08** (2.57)	.0000001249* (1.69)	-0.00000004839 (-0.5)	.00000001496* (1.69)	0.00000001725 (0.63)	-0.00000002834 (-0.72)
Total Assets-log	.19157808*** (23.25)	.20717629*** (9.88)	.35477431*** (14.67)	.192112*** (27.5)	.24949598*** (11.6)	.39859678*** (12.9)
Regulation dummy	.25024823*** (9.93)	-.25921756*** (-4.01)	.2266663*** (2.98)	.16290656*** (7.66)	-.31179649*** (-4.76)	.41791753*** (4.45)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2355	2032	1841	2347	2143	2015
F-value	90.82***	40.63***	48.52***	199.5***	47.3***	34.21***
Adjusted R <sup>2</sup>	0.5498	0.3844	0.4447	0.724	0.4012	0.4631

*Notes:* This table presents the results based on the estimation of equation (1) by using Stata. The model is estimated using firm-fixed effects by showing the impact of firm performance indicators on both CEO and board executive pay components controlling for separation between financial and nonfinancial companies and year; regression model include variables of duality role, board size, non-executive directors, independent directors, audit committee, remuneration committee, nomination committee, age, gender, time-in-role, wealth share plans, exercised and unexercised wealth options and equity, and total assets-log. Table 1 fully defines all the variables used. Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5%, and 10% significance levels, respectively. If there is no sign, no significant correlation was found. Because of the construction of the Gender variable for board executives it is omitted to avoid collinearity.



Columns 1 to 3 present results relating to CEO compensation variables, whereas columns 4 to 6 report similar estimates for board executives. The regression model reports good results, especially for base salary, as the constant coefficients are positively significant (at the 1% level), and the t-statistics<sup>2</sup> are large. The explanatory power of applied regression for salary (i.e. goodness-of-fit measure: adjusted R<sup>2</sup>) is higher than that for other pay components (e.g. bonus and LTIPs). However, even despite this, the specification and fit of all the regression equations are at least comparable, if not better than that found in prior empirical studies (e.g. Conyon and Peck, 1998; McKnight and Tomkins, 1999; Conyon and Sadler, 2001). The proportion of change occurring in board executives' pay components as a result of the change in company performance indicators is therefore quite marked. By locating the associated p-values of t-statistics under the normal distribution with a significance level at least 10%, the outcomes indicate that there is common robustness in the significance levels and overwhelmingly direct associations between the remuneration components and the accounting-based measures of firm performance, especially Tobin's Q and ROE, at least at the 10% level of significance, for both panels (i.e. CEOs and board executives).

In general, the signs on the coefficients of past performance measures and their sizes of t-statistics vary. It has been noted that CEO salary is positively related at various levels of significance to the majority of past performance indicators, except ROE, with 1% significance for TASST, 5% for EPS and ROE, and 10% for Tobin's Q and ROA. Board executives' salaries are positively and robustly significant with TASST and ROA, positively linked with a moderate level of significance to Tobin's Q and EPS, and negatively again with ROE. The lack of any positive link between ROE and salary is perhaps surprising and might be explicable along the lines, suggested by Palepu et al. (2004), regarding the possibility of large-sized companies to expose more to invested-asset financing rather than equity. CEO bonus payments and LTIPs are positively significant with Tobin's Q and ROE, and there are positive significant relationships (at the 10% level) between CEO bonus payments and TASST and LTIPs with EPS, consistent with the findings of Sapp (2008).

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<sup>2</sup>T-statistics for the intercept, which tests whether the average sums of the mean-paying are equal to zero, is completely nonnegative; located generally over the 1%, 5%, and 10% critical values of 2.58, 1.96, and 1.64, respectively.

The coefficients across the relationships with Tobin's Q vary in size, ranging, for instance, from 0.023 and 0.026 for CEO and board executive salary, respectively, to 0.14 and 0.18 for CEO and board executive bonus, and 0.305 and 0.325 for CEO and board executive LTIPs. These results suggest some significant economic variance in the relationships with the pay component. On average, salary, based on the previous example, will be higher by 2.3% for CEOs and 2.6% for board executives when the company's Tobin's Q is 100%, whereas bonuses will on average be 14% and 18% respectively higher for CEOs and board executives when Tobin's Q is 100% higher. The difference is even more pronounced for LTIPs where there is a respective average increase of 30.5% for CEOs and 32.5% for board executives when Tobin's Q is 100% higher.

Therefore it would appear the link between bonus and LTIPs (as variable compensation components for prior achieved performance), and the overall firm performance is stronger than the component 'salary' as paid for future unachieved performance. This finding is perhaps to be expected as the non-direct cash compensation components are more likely to closely relate to the indicators of company performance than salaries as cash pay, which are most often predetermined (Murphy, 1999). Although the absolute level of bonuses is lower than that of salary (see Table 5), bonus has a stronger relationship with company performance than there is for salary. The results suggest that insights connecting the compensation of CEOs and board executives with measures of firm performance might be better focused toward compensation composition than necessarily absolute amount of compensation.

Overall, the results strongly indicate a positive flow of influence from the accounting-based indicators of the FTSE 350 corporate performance to the level and structure of CEO and board executive remuneration. Therefore these findings can be interpreted as lending support to H1a (the agent-principal hypothesis), as CEOs and board executives are compensated for their intention to act in the best interests of the owners based on prior levels of corporate performance.

#### **5.4.1.1.2 Discussion of Results Relevant to the Control Variables**

Table 10 sets out the results relating to the control variables as pertaining to corporate governance and ownership and the board member and corporate characteristics. These results

and their relevance to pay components for CEOs and board executives within the pay-performance framework are discussed below.

First, the results are interesting in part for where there is an absence of significance. The relationships between CEO duality and the remuneration components of CEOs and board executives are not significant and if anything negative in their direction. This finding is consistent with the results of Benito and Conyon (1999), but contradictory to those of Core et al. (1999) and Sapp (2008). Of course here the sample numbers are low<sup>3</sup> in that few of the FTSE 350 do have such duality and when they do, as for example in the case of Marks and Spencer for some of the period under examination, there are specific reasons therefore.

Second, there is a significant negative link between board size and CEOs' LTIPs. This is again a little surprising and is possibly at variance with the findings of Ozkan (2011) where the results show board size to be positively and significantly associated with total CEO compensation in the UK context. Ozkan interpreted her finding on the basis of the larger the number of board members the less effective are the monitoring roles they can exercise and there is greater influence and authority of the chief executive. The negative relationship indicated by this study is more consistent with the earlier, US based, results of Yermack (1996) which suggests that CEOs receive higher compensation incentives in companies with smaller boards. However, there are positive relationships at a high level of significance between the number of board members and all the pay components of board executives. In that company size is controlled for separately this positive relationship could be interpreted in a number of ways - perhaps in terms of a lower level of domination by the CEO, perhaps in terms of personal relationships within corporate board of directors the mutuality of which impacts the level and structure of their compensation package.

Third, the number of non-executive directors is positively and significantly associated with the remuneration components of chief executives. This might perhaps be interpreted as indicating a weakness of non-executives' monitoring process of CEOs' pay – perhaps driven by the presence of personal contacts between the CEOs and the non-executives in the board. However, it could also be interpreted in terms of the role of non-executive directors in the

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<sup>3</sup>The low figure of FTSE 350 duality roles (7%) is highlighted above in Table 5.

provision of appropriate incentive packages for CEOs as a motivation for sustaining corporate performance – an interpretation consistent with the theorising of Fama and Jensen (1983) and the empirical findings of Ozkan (2007). There are however negative and significant associations between the number of non-executive directors and the salaries and bonuses of board executives, which might suggest that non-executive directors approach setting the compensation components of board executives in a manner different than they do in respect to the compensation of CEOs.

Fourth, the results indicate that the number of independent directors is positively related, albeit at differing levels of significance, with the salaries and LTIPs of both CEOs and board executives (consistent with Core et al. (1999)), but it is negatively and significantly associated with their bonus levels. In general, these findings support the study expectation that independent directors do have an influence in the determination of both CEO and board executive compensation packages - but the manner in which this influence is exercised is mixed.

Fifth, and interestingly, the study finds little in terms of significant relationships between the presence of board committees, especially audit and remuneration committees, in terms of their associations with CEO/executive compensation. This finding is consistent with Conyon and Peck (1998), and indicates that such committees appeared to play little role in shaping managerial compensation. However of course in interpreting this result it has to be noted that the sample size of firms without these committees is very low indeed so considerable caution should be exercised in any such interpretation. However, in previous studies where there has been much greater dispersion amongst sample firms in relation to the existence or otherwise of such committees there have been similar results. In the UK, Main and Johnston (1993) found that the presence of a remuneration committee had no influence on the structure of pay, measured by the percentage of options awarded of total pay. In another UK study, Benito and Conyon (1999) found that there was no evidence that the adoption of either a remuneration or nomination committees had an effect upon executive pay awards for a sample of 1093 quoted UK companies over the period 1985-1994. However, the results of the present study do show a varied but generally positive significant effect between the existence of nomination committees and the components of CEO pay (and here there is a slightly greater disparity in

the existence or otherwise of such a committee). This in turn might be reflective of either a direct or indirect influence of CEOs on nomination committees which in turn might give rise to focus and outcomes in relation to CEO compensation packages.

Relationships between levels of ownership and CEO and board executive remuneration show that wealth share plans and both exercised and un-exercised options are positively associated with high degrees of significance with the pay components of CEOs and board executives. This finding might be interpreted as chief-officers and board executives are exercising more control and power to benefit from the use of corporate resources, consistent with Holderness and Sheehan (1988) and Ozkan (2007). Also this result indicates that the interests of both executive members and corporate stockholders are more likely to be aligned, consistent with the pure agency perspective, in attempt to improve corporate performance (Watts, 1977; Craswell and Taylor, 1992; Ang et al., 2000; Leung and Horwitz, 2004). On the other hand, exercised and un-exercised equity are found to have negative relationships (albeit with only partial significance) with CEO salary and board executive bonuses and LTIPs, which might perhaps suggest that higher equity ownership would act to reduce the reliance of executive directors on fixed components of remuneration to achieve their rewards.

Findings in respect to CEO and board executive members' characteristics (for example age, sexual category, tenure) and their relationships to remuneration components also show mixed results. In accordance with the expectation of age, the longer the time that a CEO or board executive member has served, the higher the salary, a result consistent with Hogan and McPheters (1980) and Devers et al. (2007). However, there are no apparent significant relationships between the age of CEOs and board executives and their bonuses, consistent with Deckop (1988). This finding might be interpreted as bonuses are provided normally according to the actual individual performance rather than how old the CEO or board executive is. Interestingly, there is a significant negative link between the age of CEOs and board executives and their LTIPs. This might just be a statistical artefact but could perhaps be interpreted in terms that these incentive schemes are more likely to be awarded to younger executive members with the perspective that they will be more ambitious to seek to realise the corporate objectives based on the prospect performance levels.

Gender is found to be positively and significantly related with the level of CEO salary and bonuses, but insignificantly with CEO LTIPs. Clearly detailed investigation of gender relationships and issues are beyond the scope of this study but this finding is not entirely out of line with the perception that females are paid less than males globally because men normally spend more time in work compared with women as the latter still retain primary responsibility for housework and child care in their families, which in turn influences their progress in the field of work, consistent with the findings of Blau and Kahn (2000). Therefore the sexual factor (being male or female) has a direct impact on CEO salary and bonus. Again it can be conjectured that the positive (but not significant) relationship with LTIPs might possibly reflect actual, or perceived, outcomes rather than societal and institutional factors. However, the average effect of gender on the compensation components of boardroom executive is omitted as the corporate board normally consists largely of male rather than female directors.

Results also suggest that the longer the tenure of CEOs and board executives, the higher the amount of their salaries and bonuses. This again is not unexpected and is consistent with the results reported in McKnight and Tomkins (2004) - and perhaps with the suggestion in Hill and Phan (1991) that the longer the tenure of CEO and board executive roles in the company, the more control and power they are able to exercise over the remuneration setting process. However there is no significant association between the time-in-role of CEOs and board executives and LTIPs compensation, which again suggests that the mechanism underlying the award and achievement of LTIPs might be subject to different influences than those relating to salary and bonuses – and might perhaps be better modelled separately.

As expected, and as in almost every empirical study related to companies, firm size is a significant variable. It is positively and very significantly associated with the remuneration components of CEOs and board executives – perhaps most strikingly in respect to the variable pay components: bonus and LTIPs. This finding is entirely in line with that in previous literature (for example Conyon, 1997; Conyon and Murphy, 2000; John et al., 2010, etc.) which identifies corporate size as a key determinant of executive compensation. Large-sized companies are more complex in structure, requiring higher qualified and talented members to make crucial decisions regarding their running (Core et al., 1999; Zhou, 2000, etc.).

Consequently competitive remuneration packages are considered essential to attract talented executives who are rare and highly mobile (Murphy, 1999; and Sapp, 2008).

Finally, the regulation dummy is very significant and positive in relation to the salary and LTIP pay components of CEOs and board executives of non-financial companies – but is significantly and negatively associated with bonuses. Interpretation of this finding is not that straightforward, but it is perhaps in line with the widespread perception that bonus linked rewards are more dominant in the financial and banking service sector – and possibly that these bonuses are not linked in to a perspective of longer term performance and outcomes. The coefficients for the year dummy are not reported in the tables, as they are not of direct interest for the study. Generally, the results indicate positive and very significant associations within the remuneration components for both CEOs and board executive directors across the majority of the period under examination.

#### **5.4.1.1.3 Discussion of Endogenous Estimations**

Here a further set of estimations is undertaken adopting the Two-Stage Least Square (2SLS)<sup>4</sup> to extend the regression analyses of pay-performance framework with a view to investigating the presence of endogeneity links between the identical package of executive compensation and other instruments of corporate performance within the same set of control variables. This examination is consistent with Loderer and Martin (1997) and Black et al. (2006) in the line with do firms with higher performance levels provide sufficient amounts and appropriate structure of executive compensation?, therefore the examination here runs from the dependent variable (executive compensation) to corporate performance – but it does not move forward with more specific consideration of the causation of this relationship.

Table 11 examines the effect of 2-year lags of the prior year indicators of corporate performance on current year pay components (i.e. salary, bonus, and LTIPs) for CEOs and

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<sup>4</sup>Two-stage least squares regression (2SLS) is a technique of extending regression to cover models which violate the repetitive assumptions of ordinary least squares (OLS) regression, especially models where the researcher assumes that one or more predictors is correlated with the disturbance term of the dependent variable. 2SLS is an alternative method of maximum likelihood estimation (MLE) in estimating the path parameters of non-recursive models with correlated error among the endogenous variables in structural equation modelling (SEM). 2SLS can also be used to test the selection bias in quasi-experimental studies by involving a treatment group and a comparison group.

board executives. This assumes that two lags of performance indicators are appropriate variables, consistent with prior econometric literatures (such as Gujarati, 2004; Wooldridge, 2005) which recommend the lag approach especially when it is difficult to find variables that can serve as valid instruments. 2SLS is applied with robust standard errors. More than one instrument has been used to avoid over-identification; in addition, the Sargan statistic test<sup>5</sup> has been reported to indicate the degree of insignificance of the 2SLS model.

Statistically, the results indicate significant coefficients in the first stage residual as the majority of the coefficients of the instrumented performance indicators are positively related and highly significant with one-year lag – but vary in significance and sign with two-year lag for all pay components. These results therefore show the existence of endogeneity relationships between pay and performance. It surmised that these issues of endogeneity links are more likely to arise with variables derived from and proxying the discipline and manner of corporate governance (consistent with the majority of the literature and theoretical structures (including Murphy, 1999; Black et al., 2006; Coles et al., 2012; etc.)). The findings of the second stage show that all performance indicators (except ROE) are positively (except ROA) associated with varied significance levels with salaries of CEOs and board executives. Tobin's Q, ROE, and ROA are also positively (except ROA) and significantly related to CEO and board executive bonuses. Finally, ROE and TASST are positively and significantly linked to LTIPs of CEOs and board executives while ROA is negatively and significantly associated with LTIPs of board executives.

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<sup>5</sup>The Sargan statistic (or Hansen J) test have to be more than 0.05 and less than 1 for insignificance.



**Table 11: Estimations via 2SLS - Salary as a Function of Corporate Performance at Previous Interval (t-1)**

**CEOs**

	First Stage	First Stage	First Stage	First Stage	First Stage	Second Stage
	Tobin's Q PY-log	EPS PY-log	ROE PY-log	ROA PY-log	TASST PY-log	Salary
Fitted Value from Tobin's Q PY-log Equation						.14480563* (1.72)
Fitted Value from EPS PY-log Equation						.32655616*** (3.43)
Fitted Value from ROE PY-log Equation						0.10071486 (0.8)
Fitted Value from ROA PY-log Equation						-.44420267*** (-2.05)
Fitted Value from TASST PY-log Equation						.35150015** (2.01)
Tobin's Q PY-log (Lagged1)	0.4064149*** (12.29)					
Tobin's Q PY-log (Lagged2)	-0.0045876 (-0.14)					
EPS PY-log (Lagged1)		0.2708307*** (4.49)				
EPS PY-log (Lagged2)		0.066186* (1.71)				
ROE PY-log (Lagged1)			0.2768015*** (4.23)			
ROE PY-log (Lagged2)			0.1068357* (1.83)			
ROA PY-log (Lagged1)				0.2379646*** (3.59)		
ROA PY-log (Lagged2)				-0.1440941** (-2.28)		
TASST PY-log (Lagged1)					0.3098162*** (8.12)	
TASST PY-log (Lagged2)					-0.0661886* (-1.72)	
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1266	1266	1266	1266	1266	1266
F-value	26.21***	13.29***	10.73***	15.2***	15.21***	2.71
Centered R <sup>2</sup>	0.2098	0.1187	0.0981	0.1335	0.1333	
Sargan Statistic						0.1027

**Board Executives**

	First Stage	First Stage	First Stage	First Stage	First Stage	Second Stage
	Tobin's Q PY-log	EPS PY-log	ROE PY-log	ROA PY-log	TASST PY-log	Salary
Fitted Value from Tobin's Q PY-log Equation						.06315682* (1.75)
Fitted Value from EPS PY-log Equation						.29674012*** (4.78)
Fitted Value from ROE PY-log Equation						0.08810109 (1.05)
Fitted Value from ROA PY-log Equation						-.4014462*** (-2.8)
Fitted Value from TASST PY-log Equation						.37301785*** (3.25)
Tobin's Q PY-log (Lagged1)	0.4038979*** (12.23)					
Tobin's Q PY-log (Lagged2)	-0.0034581 (-0.11)					
EPS PY-log (Lagged1)		0.2684402*** (4.43)				
EPS PY-log (Lagged2)		0.0676211* (1.73)				
ROE PY-log (Lagged1)			0.2662598*** (4.07)			
ROE PY-log (Lagged2)			0.0979682* (1.68)			
ROA PY-log (Lagged1)				0.234033*** (3.52)		
ROA PY-log (Lagged2)				-0.1459215** (-2.3)		
TASST PY-log (Lagged1)					0.3124715*** (8.16)	
TASST PY-log (Lagged2)					-0.068018* (-1.77)	
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1259	1259	1259	1259	1259	1259
F-value	25.49***	12.44***	9.7	13.87***	12.7***	5.08***
Centered R <sup>2</sup>	0.2062	0.1126	0.09	0.1239	0.1146	
Sargan Statistic						0.0552

**Notes:** This table presents the results for the effect of (Log) corporate performance indicators at previous interval on (Log) **Salary** based on Two-Stage Least Squares regression estimation. The test has been estimated by using panel OLS; regression model include all control variables utilised under equation (1). Table 1 fully defines all the variables used. Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. Three, two, and one asterisks denote significance at 1%, 5%, and 10% levels, respectively. If there is no sign, no significant correlation was found.

**Table 11: Estimations via 2SLS (Cont.) - Bonus as a Function of Corporate Performance at previous interval (t-1)**

**CEOs**

	First Stage	First Stage	First Stage	First Stage	First Stage	Second Stage
	Tobin's Q PY-log	EPS PY-log	ROE PY-log	ROA PY-log	TASST PY-log	Bonus
Fitted Value from Tobin's Q PY-log Equation						.56045523* (1.81)
Fitted Value from EPS PY-log Equation						0.19399378 (0.91)
Fitted Value from ROE PY-log Equation						.56174733* (1.83)
Fitted Value from ROA PY-log Equation						-1.2988448** (-2.39)
Fitted Value from TASST PY-log Equation						0.66569092 (1.62)
Tobin's Q PY-log (Lagged1)	0.4395693*** (12.15)					
Tobin's Q PY-log (Lagged2)	0.0281173 (0.77)					
EPS PY-log (Lagged1)		0.2960712*** (4.61)				
EPS PY-log (Lagged2)		0.1021155* (1.76)				
ROE PY-log (Lagged1)			0.2346833*** (3.32)			
ROE PY-log (Lagged2)			0.170119*** (2.59)			
ROA PY-log (Lagged1)				0.2144406*** (2.92)		
ROA PY-log (Lagged2)				-0.2136644*** (-2.82)		
TASST PY-log (Lagged1)					0.319517*** (7.64)	
TASST PY-log (Lagged2)					-0.0842281** (-2)	
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1089	1089	1089	1089	1089	1089
F-value	23.57***	11.06***	7.25	10.54***	10.56***	1.17
Centered R <sup>2</sup>	0.2195	0.1166	0.0797	0.1118	0.112	
Sargan Statistic						0.0636

**Board Executives**

	First Stage	First Stage	First Stage	First Stage	First Stage	Second Stage
	Tobin's Q PY-log	EPS PY-log	ROE PY-log	ROA PY-log	TASST PY-log	Bonus
Fitted Value from Tobin's Q PY-log Equation						.38947038 * (1.88)
Fitted Value from EPS PY-log Equation						-0.09527586 (-0.42)
Fitted Value from ROE PY-log Equation						.42380037* (1.71)
Fitted Value from ROA PY-log Equation						-1.0828709** (-2.17)
Fitted Value from TASST PY-log Equation						0.3372776 (0.83)
Tobin's Q PY-log (Lagged1)	0.4020054*** (11.41)					
Tobin's Q PY-log (Lagged2)	0.0021657 (0.06)					
EPS PY-log (Lagged1)		0.2770154*** (4.39)				
EPS PY-log (Lagged2)		0.0845137* (1.68)				
ROE PY-log (Lagged1)			0.2334553*** (3.34)			
ROE PY-log (Lagged2)			0.1182378* (1.87)			
ROA PY-log (Lagged1)				0.2604968*** (3.73)		
ROA PY-log (Lagged2)				-0.2024251*** (-2.96)		
TASST PY-log (Lagged1)					0.3180558*** (7.8)	
TASST PY-log (Lagged2)					-0.080707* (-1.96)	
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1152	1152	1152	1152	1152	1152
F-value	21.34***	10.97***	7.28	11.88***	11.99***	2.91
Centered R <sup>2</sup>	0.1943	0.1103	0.076	0.1184	0.1193	
Sargan Statistic						0.1563

**Notes:** This table presents the results for the effect of (Log) corporate performance indicators at previous interval on (Log) **Bonus** based on Two-Stage Least Squares regression estimation. The test has been estimated by using panel OLS; regression model include all control variables utilised under equation (1). Table 1 fully defines all the variables used. Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. Three, two, and one asterisks denote significance at 1%, 5%, and 10% levels, respectively. If there is no sign, no significant correlation was found.

**Table 11: Estimations via 2SLS (Cont.) - LTIPs as a Function of Corporate Performance at previous interval (t-1)**

**CEOs**

	First Stage	First Stage	First Stage	First Stage	First Stage	Second Stage
	Tobin's Q PY-log	EPS PY-log	ROE PY-log	ROA PY-log	TASST PY-log	LTIPs
Fitted Value from Tobin's Q PY-log Equation						-0.16440703 (-0.48)
Fitted Value from EPS PY-log Equation						-0.00286345 (-0.01)
Fitted Value from ROE PY-log Equation						.20417945* (1.68)
Fitted Value from ROA PY-log Equation						-0.34175576 (-0.64)
Fitted Value from TASST PY-log Equation						.32040708* (1.72)
Tobin's Q PY-log (Lagged1)	0.3868075*** (10.79)					
Tobin's Q PY-log (Lagged2)	-0.0020568 (-0.06)					
EPS PY-log (Lagged1)		0.2647548*** (4.14)				
EPS PY-log (Lagged2)		0.076028 (1.28)				
ROE PY-log (Lagged1)			0.1942118*** (2.69)			
ROE PY-log (Lagged2)			0.1365785** (2.11)			
ROA PY-log (Lagged1)				0.2600019*** (3.52)		
ROA PY-log (Lagged2)				-0.2097833*** (-2.83)		
TASST PY-log (Lagged1)					0.3088859*** (7.3)	
TASST PY-log (Lagged2)					-0.0940617** (-2.21)	
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1066	1066	1066	1066	1066	1066
F-value	22.29***	11.02***	7.34	12.24***	9.91	1.09
Centered R <sup>2</sup>	0.2156	0.1196	0.083	0.1311	0.1089	
Sargan Statistic						0.0556

**Board Executives**

	First Stage	First Stage	First Stage	First Stage	First Stage	Second Stage
	Tobin's Q PY-log	EPS PY-log	ROE PY-log	ROA PY-log	TASST PY-log	LTIPs
Fitted Value from Tobin's Q PY-log Equation						0.3136668 (0.61)
Fitted Value from EPS PY-log Equation						0.6224695 (1.61)
Fitted Value from ROE PY-log Equation						.6967699* (1.73)
Fitted Value from ROA PY-log Equation						-1.992216** (-2.38)
Fitted Value from TASST PY-log Equation						1.422992** (2.07)
Tobin's Q PY-log (Lagged1)	0.3927246*** (11.51)					
Tobin's Q PY-log (Lagged2)	-0.0055661 (-0.17)					
EPS PY-log (Lagged1)		0.2499944*** (4.03)				
EPS PY-log (Lagged2)		0.0834406 (1.46)				
ROE PY-log (Lagged1)			0.2335047*** (3.44)			
ROE PY-log (Lagged2)			0.1189806* (1.96)			
ROA PY-log (Lagged1)				0.2323629*** (3.3)		
ROA PY-log (Lagged2)				-0.1853414*** (-2.73)		
TASST PY-log (Lagged1)					0.318513*** (7.9)	
TASST PY-log (Lagged2)					-0.0753336* (-1.88)	
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1148	1148	1148	1148	1148	1148
F-value	23.49***	10.83***	7.82	11.79***	10.78***	2.11
Centered R <sup>2</sup>	0.2103	0.1094	0.0814	0.1179	0.1089	
Sargan Statistic						0.2153

**Notes:** This table presents the results for the effect of (Log) corporate performance indicators at previous interval on (Log) LTIPs based on Two-Stage Least Squares regression estimation. The test has been estimated by using panel OLS; regression model include all control variables utilised under equation (1). Table 1 fully defines all the variables used. Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. Three, two, and one asterisks denote significance at 1%, 5%, and 10% levels, respectively. If there is no sign, no significant correlation was found.

### **5.4.1.2 CEO and Board Executive Remuneration Measures**

In this section, the significance of cash-based, equity-based, and total remuneration are explored further - the majority of previous studies having focused on overall pay. The analysis is reported under three headings: pay-performance results, results relevant to the control variables, and endogenous estimations.

#### **5.4.1.2.1 Discussion of Pay-Performance Results**

Table 12 shows the findings of fixed-effect regression equations with robust standard errors of remuneration measures (i.e. cash, non-cash, and total pay) for both CEOs and board executives with the previous-period indicators of firm performance, consistent with the similar set of control variables. Outcomes regarding the CEO remuneration measures are presented in columns 1 to 3, while analogous indicators for board executives are presented in columns 4 to 6.

Both the coefficients and t-statistics for the constants of cash and total remuneration suggest convergence at a 1% level of significance, whereas the findings relating to non-cash compensation are mixed in that they show positive significance for CEOs and negative significance for board executives. Again interpretation of this result is not that straightforward. Relatively equity-based compensation does form a larger part of CEO compensation, but the current study shows the difference is not that marked nor within CEOs compensation packages are there very large difference between cash and non-cash compensation (see Table 4). The higher percentage of board executive compensation represented by cash payments may be causal in terms of the negative relationship (see Figure 6). The statistical measures suggest that the modelling is quite robust - the goodness-of-fit measure for cash and total remuneration indicators stands up well as compared with prior studies (e.g. Main et al., 1996; Matolcsy, 2000; Conyon and Sadler, 2001) - which provides some reassurance that the model results are worthy of consideration and may represent real underlying economic factors. By locating the associated p-values of t-statistics under the normal distribution with a significance level at least 10%, the findings indicate that there is robustness in the significance levels and positive relationships between the remuneration measures and the indicators of firm performance, especially Tobin's Q and TASST, for both panels (i.e. CEOs and board executives).

**Table 12: Fixed-Effects Regressions - Cash, Equity-based, and Total Remuneration as Functions of Corporate Performance at Previous Interval (t-1)**

	CEOs			Board Executives		
	(1)	(2)	(3)	(4)	(5)	(6)
	Cash	Equity-based	Total Rem.	Cash	Equity-based	Total Rem.
Constant	4.1318139*** (12.83)	2.9728581*** (3.53)	4.1813778*** (10.56)	4.4830685*** (15.68)	-0.73862321 (-0.53)	4.3161275*** (12.14)
Tobin's Q PY-log	.06781359*** (4.1)	.35358073*** (8.36)	.13135168*** (6.46)	.07130237*** (4.82)	.36156548*** (7.38)	.156967*** (8.53)
EPS PY-log	0.01427815 (1.07)	.02655927* (1.8)	.02410775* (1.86)	.02159521* (1.76)	0.0140334 (0.35)	.02449403* (1.71)
ROE PY-log	.02841289** (2)	0.0132444 (0.39)	.03098867* (1.77)	.01466093* (1.86)	.03795067* (1.95)	.02542431* (1.81)
ROA PY-log	-0.0098365 (-0.45)	0.02611587 (0.5)	0.02001726 (0.75)	0.00913255 (0.47)	0.02350898 (0.38)	0.02612206 (1.09)
TASST PY-log	.06775544*** (4.72)	-0.04597493 (-1.27)	.04633526*** (2.63)	.0741291*** (5.78)	-.11107723*** (-2.68)	.03882536** (2.43)
Duality Role	-0.06825378 (-1.58)	0.05357018 (0.43)	-0.13053174 (-1.46)	-0.02684207 (-0.7)	-0.02935265 (-0.22)	-0.05254362 (-1.1)
Board Size	.01314931** (1.98)	-.0537252*** (-3.27)	0.00145651 (0.18)	.17424545*** (29.17)	.08033092*** (4.22)	.15165326*** (20.42)
Non-executive Directors	.0507808*** (4.8)	.08049844*** (3.11)	.04436255*** (3.41)	-.12332101*** (-13.02)	-0.02827743 (-0.93)	-.1057122*** (-8.97)
Independent Directors	-.03251024*** (-3.29)	.03578261* (1.71)	-0.00209707 (-0.17)	-.03024278*** (-3.43)	0.01303574 (0.47)	-0.01490498 (-1.36)
Audit Committee	-0.11964474 (-0.33)	0.02455587 (0.03)	-0.0821484 (-0.19)	-0.34156876 (-1.07)	-0.5341745 (-0.56)	-0.32193217 (-0.81)
Remuneration Committee	-0.04417191 (-0.42)	-0.43291746 (-1.64)	-.25950648** (-1.99)	-0.02529624 (-0.28)	-0.45740097 (-1.53)	-.21153517* (-1.86)
Nomination Committee	.14604831*** (3.43)	.49231763*** (4.19)	.27057986*** (5.16)	.04119965* (1.78)	.46295847*** (3.56)	.13822149*** (2.91)
Age	.00461136*** (2.65)	-.01765558*** (-4.03)	-.00418662* (-1.95)	.00264483* (1.7)	-.02185484*** (-4.35)	-.00398701** (-2.06)
Gender	.28318216*** (3.45)	-0.03250463 (-0.17)	.25538932** (2.53)	-	-	-
Time in Role	.01030815*** (4.79)	-0.00354343 (-0.62)	.00551129** (2.08)	.00690485*** (3.63)	0.00572305 (0.91)	.00571145** (2.42)
Wealth Share Plans	7.264e-08*** (7.56)	2.879e-07*** (11.97)	1.635e-07*** (13.83)	3.339e-08*** (7.12)	1.173e-07*** (7.7)	7.628e-08*** (13.09)
Exercised Wealth Options	3.857e-08*** (2.77)	7.021e-08** (2.04)	5.141e-08*** (3)	2.650e-08*** (3.55)	0.0000001984 (0.84)	2.063e-08** (2.22)
Un-exercised Wealth Options	8.362e-08*** (7)	1.234e-07*** (4.62)	1.353e-07*** (9.2)	2.667e-08*** (5.78)	6.442e-08*** (4.6)	4.733e-08*** (8.25)
Exercised Wealth Equity	3.395e-08* (1.8)	0.00000001757 (0.04)	4.774e-08** (2.06)	0.00000002543 (0.41)	0.00000002675 (0.14)	0.0000001034 (1.34)
Un-exercised Wealth Equity	8.158e-08* (1.84)	2.765e-07*** (2.82)	2.318e-07*** (4.26)	0.0000001693 (1.25)	9.711e-08** (2.33)	5.207e-08*** (3.08)
Total Assets-log	.19221235*** (16.78)	.39277556*** (14.22)	.26454093*** (18.79)	.20097899*** (19.52)	.44739725*** (13.65)	.27378418*** (21.38)
Regulation dummy	-0.0110227 (-0.31)	.24681177*** (2.81)	0.06488288 (1.51)	-.10353228*** (-3.3)	.46378363*** (4.64)	0.00516622 (0.13)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2355	1918	2356	2347	2107	2347
F-value	69.64***	44.16***	86.04***	119.34***	34.87***	115.35***
Adjusted R <sup>2</sup>	0.4827	0.4111	0.5361	0.61	0.3327	0.6017

*Notes:* This table presents the results based on the estimation of equation (1) by using Stata. The model is estimated using firm-fixed effects by showing the impact of firm performance indicators on both CEO and board executive pay measures controlling for separation between financial and nonfinancial companies and year; regression model include variables of duality role, board size, non-executive directors, independent directors, audit committee, remuneration committee, nomination committee, age, gender, time-in-role, wealth share plans, exercised and unexercised wealth options and equity, and total assets-log. Table 1 fully defines all the variables used. Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. \*\*\*, \*\*, and \* denote significant at 1%, 5%, and 10% significance levels, respectively. If there is no sign, no significant correlation was found. Because of the construction of the Gender variable for board executives it is omitted to avoid collinearity.

In general, the signs on the coefficients of past performance indicators are positive, but the size of their t-statistics varies. The results demonstrate that there are positive relationships with varied levels of significance between the remuneration measures and the indicators of company performance (especially Tobin's Q at 1% significance level) for CEOs and board executives on the overall selected data. EPS is associated positively at 10% significance with CEOs equity-based and total compensation, as well as board executive cash-based and total pay. ROE also has a positive significant link with cash based and total remuneration for both CEOs and board executives, in addition to non-cash remuneration for boardroom members. Surprisingly, ROA has no significant relationship with the remuneration measures of both CEOs and board executives. Finally, TASST is very significantly and positively associated with cash and total remuneration of CEOs and board executives.

In accordance with the findings of previous studies (e.g. Conyon, 1997; Ozkan, 2011), the coefficients across the relationships with Tobin's Q are large-sized, ranging, for example, from 0.068 and 0.071 for CEO and board executive cash pay, respectively, to nearly 0.35 and 0.36 for CEO and board executive non-cash pay, and 0.13 and 0.16 for CEO and board executive total remuneration. These results suggest some significant economic variance in the relationships with the pay measures. On average CEO cash, equity, and total compensation would be higher by approximately 6.8%, 35%, and 13%, respectively, when the company's Tobin's Q is higher by 100%. For board executives the corresponding figures are 7.1%, 36%, and 16%, respectively.

This would suggest that the link with equity-based compensation is noticeably stronger as a pay indicator for prior achieved firm performance than cash-based compensation as paid for future unachieved performance, consistent with (Murphy, 1999), and similar to the results of variable pay components. This finding supports the results of prior literature (for instance, Main et al., 1996; Conyon and Murphy, 2000) which reported a lower association between firm performance and CEO cash remuneration than that with equity based pay.

Overall, these outcomes imply the importance of pay composition in linking the remuneration of CEOs and board executives to company performance indicators. These therefore tend to lend support to H1a (the agent-principal hypothesis) whereby CEOs and board executives are

compensated for their intention to act in the best interests of the owners based on the prior levels of corporate performance.

#### **5.4.1.2.2 Discussion of Results Relevant to the Control Variables**

Table 12 sets out also the outcomes relating to the control variables (mechanisms pertaining to corporate governance and ownership, and the board member and corporate characteristics). These findings and their significance to remuneration measures for CEOs and board executives within the pay-performance framework are outlined below.

In terms of CEO duality there is a negative association, albeit with no significance, between duality role of CEO and chairman and the remuneration measures of CEOs and board executives. This outcome implies that the chairman/CEO duality position does not affect the volume and structure of CEO/board executive compensation package, and is consistent with the findings of Benito and Conyon (1999) and with the results reported above, in Table 10, relating to the pay components.

The results also show that board size is positively and significantly related to CEOs cash remuneration, whilst it is negatively and very significantly associated with CEOs non-cash compensation. This finding is consistent with that of Yermack (1996). It is also consistent with the results noted above, in Table 10, in respect to the relationship between board size and CEOs' LTIPs. This suggests that the more members on the corporate board there are, the higher the level of CEO cash pay and the lower the level of CEO equity pay. However, there does not seem to be a level of influence with CEOs total remuneration. This finding may provide evidence of greater pressure on the levels and structures of equity compensation package for CEOs when their boards are augmented with new members. Board size is positively and very significantly linked to all compensation measures of board executives. Given the control for company size this finding might perhaps be interpreted in terms of a lower level of domination by the CEO, or even in terms of personal relationships within corporate board of directors.

There is again a very significant positive link between the number of non-executive directors and the remuneration measures of CEOs, whilst the number of non-executive directors is

negatively and very significantly associated with the cash-based and total remuneration of board executives – again similar to the findings reported in Table 10. The positive association in relation to CEOs may perhaps indicate the ambition of non-executives directors to motivate CEOs with appropriate incentive packages for the purpose of enhancing firm performance (Fama and Jensen, 1983; and Ozkan, 2007), or possibly even the weakness of non-executives' monitoring process of CEOs' pay, or perhaps reflecting the likelihood of personal contacts between the CEOs and the non-executives in the board. The negative association with the compensation package for boardroom executives may also be reflective of the nature of interpersonal dynamics and relative power/control characteristics.

The results also show that the number of independent directors is negatively and very significantly related with the cash-based compensation of CEOs and board executives a result driven by the negative association with the amount of cash based bonuses. However, there are positive and significant links with the equity-based compensation of CEOs and board executives consistent with the LTIP findings reported above. In consequence overall there is no significant association between the number of independent directors and the total remuneration of CEOs and board executives. The mixed findings in terms of the relationships between the number of the independent directors and remuneration package of CEOs and board executives might possibly be interpreted as consistent with lending support to the study expectation that independent directors will act to moderate the pay ambitions of CEOs and board executives.

Again the results confirm those reported earlier, i.e. that the presence or otherwise of an audit committee has little if any association with either CEO or board executives remuneration – but again with the caveat that very few firms in the sample did not have an audit committee. However there are some more significant interactions between the existence of a remuneration committee and total compensation measure. These are perhaps a little surprising in that the existence of remuneration committee is negatively associated with overall compensation packages for both CEOs and board executives. This result could suggest the presence of other institutional and regulatory factors contributing to determining the level and structure of CEO and board executive remuneration. One possible mediating factor might be the positive and strong significant link between the existence or otherwise of a nomination committee on both



CEO and board executive pay which may in turn suggest a rather more complex and subtle relationship than the more conventional perspective that remuneration committees act to enhance rather than moderate board compensation.

The associations between the levels of ownership and pay measures of CEOs and board executives shows that wealth share plans and options' ownership are positively and significantly associated with the compensation measures of CEOs and board executives – again this is a finding similar to that reported earlier in Table 10. However, the variables of equity ownership are mixed in terms of their levels of significance. Again these results may be capable of differing interpretations. They may suggest that professional managers with large-sized holdings are exercising their power in designing their pay package, consistent with (Holderness and Sheehan, 1988; and Ozkan, 2007); or alternatively that the agents' interests are aligned with the interests of the principals in terms of increasing corporate progress and efficiency, a view consistent with prior literature (for example, Watts, 1977; Craswell and Taylor, 1992; Ang et al., 2000; Leung and Horwitz, 2004; etc.).

Associations between CEO and board executive members' characteristics and their remuneration indicators again do not throw up clearly definitive outcomes – although possibly not ones out of line with expectations. Age and tenure are positively and directly associated with cash based pay for both CEOs and board executives. This finding is consistent with Hogan and McPheters (1980) and Devers et al. (2007) - and also similar to the results presented in Table 10. However, negative significant relationships are reported between the age of CEOs and board executives and their equity-based and total compensation. This might be explicable in that the nature of equity-based compensation (which as reported above constitutes a large part of total remuneration) is likely to be related to actual performance rather than predetermined base levels in terms of age and experience.

CEO gender (male) is positively and significantly related to cash-based and total remuneration variables. This finding is completely consistent with a nature of career culture in which women are paid less than men (Blau and Kahn, 2000). However, and again interestingly, CEO gender is found to be insignificantly associated with their equity-based compensation. There might again be the possibility that more determinable performance outcomes are not related to

gender – which might underline this finding. Results of the effect of gender on the remuneration measures of board executives are omitted because boardroom seats are exclusively occupied by men.

To look more specifically at tenure, again not contrary to expectations, the results show that the length of working time for boardroom members still holding the same roles is positively and significantly associated with the cash compensation of CEOs and board executives and is also somewhat significant in terms of the relationship with the total remuneration of CEOs and board executives. This finding is consistent with that of Hill and Phan (1991) and McKnight and Tomkins (2004), and also to those reported for salary and bonus in Table 10. However, tenure is found to be not significantly related to the non-cash compensation of CEOs and board executives – which again might be in line with surmise as to the nature of compensation relating to actual performance rather than period in office.

Findings in respect to corporate size not unexpectedly show relationships with remuneration measures in accordance with prior empirical literature (Conyon and Murphy, 2000; John et al., 2010). Company size is found to be positively and significantly related to the remuneration measures of CEOs and board executives, especially as applicable to equity-based compensation packages. This finding would support the perspective that larger companies seek to hire talented board executives and for that endeavour provide appropriate incentive packages (Gregg et al., 1993; Murphy, 1999; Sapp, 2008).

In respect to the final to the dummy variables, the regulation (financial/non-financial) dummy is positively and significantly linked to the equity-base pay of CEOs and board executives of non-financial institutions (as consistent with the results reported in Table 10). It is negatively associated with the cash-based compensation of CEOs and board executives - which might relate to the perspective that bonus based compensation is a very important part of compensation packages in the financial sector. The coefficients of year dummy are not directly reported - but the outcomes do indicate positive and significant associations between the pay measures and the 10-year time dummy with a 2008 peak compensation for both CEOs and board executives displaying the largest positive coefficients.

#### **5.4.1.2.3 Discussion of Endogenous Estimations**

As an extension of the regression analyses of pay-performance framework, the 2SLS estimations with robust standard errors were undertaken for the purpose of determining whether there is an existence of endogeneity links between the measures of executive compensation and other instruments of corporate performance within the same set of control variables.

In this context, Table 13 reports the results of the effect of 2-year lags of the prior year indicators of corporate performance on current year remuneration measures (i.e. cash pay, non-cash pay, and total remuneration) of CEOs and board executives. The two lags of performance indicators were considered to be appropriate variables, consistent with Gujarati (2004) and Wooldridge (2005). The Sargan test statistic has been reported to verify the significance or otherwise of the 2SLS model.

The findings also show positive and very significant statistical associations between the pay measures and the first lag instrument of performance in the first stage residual – but they do vary in significance and sign with two-year lag for all remuneration measures. These results continue to indicate the presence of endogeneity links between pay and performance. This finding is likely to be explicable within a framework where endogenous links are likely to arise within the discipline of corporate governance (Murphy, 1999; Black et al., 2006; Coles et al., 2012). Furthermore, this finding indicates the possibility of the dependence of CEO and board executive compensation measures not only on the last year of company performance, but also on prior previous periods of corporate achievement. The second stage analysis shows that the cash-based pay of CEOs and board executives varies in significance and sign with performance indicators, positively with Tobin's Q and EPS, and negatively with ROA. Again there is a distinction between the results relating to CEOs and board executives. Tobin's Q and TASST are positively and significantly associated with CEOs equity-based and total pay; whereas EPS, ROE, and TASST are positively related and ROA is negatively linked to both the equity-based and total compensation of board executives.

**Table 13: Estimations via 2SLS - Cash Remuneration as a Function of Corporate Performance at Previous Interval (t-1)**

**CEOs**

	First Stage	First Stage	First Stage	First Stage	First Stage	Second Stage
	Tobin's Q PY-log	EPS PY-log	ROE PY-log	ROA PY-log	TASST PY-log	Cash Rem.
Fitted Value from Tobin's Q PY-log Equation						.13587204* (1.86)
Fitted Value from EPS PY-log Equation						.21426324* (1.85)
Fitted Value from ROE PY-log Equation						0.17159275 (1.12)
Fitted Value from ROA PY-log Equation						-.54011571** (-2.05)
Fitted Value from TASST PY-log Equation						0.22608695 (1.07)
Tobin's Q PY-log (Lagged1)	0.4064149*** (12.29)					
Tobin's Q PY-log (Lagged2)	-0.0045876 (-0.14)					
EPS PY-log (Lagged1)		0.2708307*** (4.49)				
EPS PY-log (Lagged2)		0.066186 (1.21)				
ROE PY-log (Lagged1)			0.2768015*** (4.23)			
ROE PY-log (Lagged2)			0.1068357* (1.83)			
ROA PY-log (Lagged1)				0.2379646*** (3.59)		
ROA PY-log (Lagged2)				-0.1440941** (-2.28)		
TASST PY-log (Lagged1)					0.3098162*** (8.12)	
TASST PY-log (Lagged2)					-0.0661886* (-1.72)	
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1266	1266	1266	1266	1266	1266
F-value	26.21***	13.29***	10.73***	15.2***	12.67***	1.44
Centered R <sup>2</sup>	0.2098	0.1187	0.0981	0.1335	0.1138	
Sargan Statistic						0.0745

**Board Executives**

	First Stage	First Stage	First Stage	First Stage	First Stage	Second Stage
	Tobin's Q PY-log	EPS PY-log	ROE PY-log	ROA PY-log	TASST PY-log	Cash Rem.
Fitted Value from Tobin's Q PY-log Equation						.1118929* (1.92)
Fitted Value from EPS PY-log Equation						.19227808** (2.15)
Fitted Value from ROE PY-log Equation						0.18978008 (1.57)
Fitted Value from ROA PY-log Equation						-.52926729** (-2.56)
Fitted Value from TASST PY-log Equation						.30326742* (1.84)
Tobin's Q PY-log (Lagged1)	0.4038979*** (12.23)					
Tobin's Q PY-log (Lagged2)	-0.0034581 (-0.11)					
EPS PY-log (Lagged1)		0.2684402*** (4.43)				
EPS PY-log (Lagged2)		0.0676211 (1.23)				
ROE PY-log (Lagged1)			0.2662598*** (4.07)			
ROE PY-log (Lagged2)			0.0979682* (1.68)			
ROA PY-log (Lagged1)				0.234033*** (3.52)		
ROA PY-log (Lagged2)				-0.1459215** (-2.3)		
TASST PY-log (Lagged1)					0.3124715*** (8.16)	
TASST PY-log (Lagged2)					-0.068018* (-1.77)	
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1259	1259	1259	1259	1259	1259
F-value	25.49***	12.44***	9.7	13.87***	12.7***	2.05
Centered R <sup>2</sup>	0.2062	0.1126	0.09	0.1239	0.1146	
Sargan Statistic						0.0665

*Notes:* This table presents the results for the effect of (Log) corporate performance indicators at previous interval on (Log) **Cash Remuneration** based on Two Stage Least Squares regression estimation. The test has been estimated by using panel OLS; regression model include all control variables utilised under equation (1). Table 1 fully defines all the variables used. Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. Three, two, and one asterisks denote significance at 1%, 5%, and 10% levels, respectively. If there is no sign, no significant correlation was found.

**Table 13: Estimations via 2SLS (Cont.) - Equity-based Remuneration as a Function of Corporate Performance at Previous Interval (t-1)**

**CEOs**

	First Stage	First Stage	First Stage	First Stage	First Stage	Second Stage
	Tobin's Q PY-log	EPS PY-log	ROE PY-log	ROA PY-log	TASST PY-log	Equity-based Remuneration
Fitted Value from Tobin's Q PY-log Equation						-0.17886108 (-0.43)
Fitted Value from EPS PY-log Equation						.27441983* (1.86)
Fitted Value from ROE PY-log Equation						0.2619809 (0.6)
Fitted Value from ROA PY-log Equation						-0.76785448 (-1.16)
Fitted Value from TASST PY-log Equation						.87673438* (1.67)
Tobin's Q PY-log (Lagged1)	0.3930446*** (11.05)					
Tobin's Q PY-log (Lagged2)	-0.0071916 (-0.21)					
EPS PY-log (Lagged1)		0.2669677*** (4.24)				
EPS PY-log (Lagged2)		0.0727556 (1.24)				
ROE PY-log (Lagged1)			0.2118857*** (2.99)			
ROE PY-log (Lagged2)			0.1210658* (1.9)			
ROA PY-log (Lagged1)				0.2700433*** (3.71)		
ROA PY-log (Lagged2)				-0.1974988*** (-2.7)		
TASST PY-log (Lagged1)					0.3110212*** (7.55)	
TASST PY-log (Lagged2)					-0.0948268** (-2.29)	
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1104	1104	1104	1104	1104	1104
F-value	23.08***	11.46***	8.12	13.05***	10.36***	2.05
Centered R <sup>2</sup>	0.2143	0.1193	0.0876	0.1337	0.1091	
Sargan Statistic						0.1169

**Board Executives**

	First Stage	First Stage	First Stage	First Stage	First Stage	Second Stage
	Tobin's Q PY-log	EPS PY-log	ROE PY-log	ROA PY-log	TASST PY-log	Equity-based Remuneration
Fitted Value from Tobin's Q PY-log Equation						0.33949352 (0.6)
Fitted Value from EPS PY-log Equation						.7768055* (1.84)
Fitted Value from ROE PY-log Equation						1.0347508* (1.84)
Fitted Value from ROA PY-log Equation						-2.6625762*** (-2.88)
Fitted Value from TASST PY-log Equation						2.0184372*** (2.7)
Tobin's Q PY-log (Lagged1)	0.3965895*** (11.69)					
Tobin's Q PY-log (Lagged2)	-0.0170129 (-0.52)					
EPS PY-log (Lagged1)		0.2519272*** (4.13)				
EPS PY-log (Lagged2)		0.0808884 (1.44)				
ROE PY-log (Lagged1)			0.2511963*** (3.77)			
ROE PY-log (Lagged2)			0.1122437* (1.88)			
ROA PY-log (Lagged1)				0.2450457*** (3.54)		
ROA PY-log (Lagged2)				-0.1780875*** (-2.66)		
TASST PY-log (Lagged1)					0.322903*** (8.17)	
TASST PY-log (Lagged2)					-0.0699207* (-1.78)	
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1183	1183	1183	1183	1183	1183
F-value	24.01***	11.37***	8.69	12.68***	11.61***	3.38
Centered R <sup>2</sup>	0.2081	0.1106	0.0868	0.1218	0.1127	
Sargan Statistic						0.2175

*Notes:* This table presents the results for the effect of (Log) corporate performance indicators at previous interval on (Log) **Equity-based Remuneration** based on Two Stage Least Squares regression estimation. The test has been estimated by using panel OLS; regression model include all control variables utilised under equation (1). Table 1 fully defines all the variables used. Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. Three, two, and one asterisks denote significance at 1%, 5%, and 10% levels, respectively. If there is no sign, no significant correlation was found.

**Table 13: Estimations via 2SLS (Cont.) - Total Remuneration as a Function of Corporate Performance at Previous Interval (t-1)**

**CEOs**

	First Stage	First Stage	First Stage	First Stage	First Stage	Second Stage
	Tobin's Q PY-log	EPS PY-log	ROE PY-log	ROA PY-log	TASST PY-log	Total Rem.
Fitted Value from Tobin's Q PY-log Equation						-0.00120209 (-0.01)
Fitted Value from EPS PY-log Equation						.19865808* (1.76)
Fitted Value from ROE PY-log Equation						0.1516648 (0.78)
Fitted Value from ROA PY-log Equation						-0.48780609 (-1.46)
Fitted Value from TASST PY-log Equation						.29825937* (1.81)
Tobin's Q PY-log (Lagged1)	0.4064149*** (12.29)					
Tobin's Q PY-log (Lagged2)	-0.0045876 (-0.14)					
EPS PY-log (Lagged1)		0.2708307*** (4.49)				
EPS PY-log (Lagged2)		0.066186 (1.21)				
ROE PY-log (Lagged1)			0.2768015*** (4.23)			
ROE PY-log (Lagged2)			0.1068357* (1.83)			
ROA PY-log (Lagged1)				0.2379646*** (3.59)		
ROA PY-log (Lagged2)				-0.1440941** (-2.28)		
TASST PY-log (Lagged1)					0.3098162*** (8.12)	
TASST PY-log (Lagged2)					-0.0661886* (-1.72)	
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1266	1266	1266	1266	1266	1266
F-value	26.21***	13.29***	10.73***	15.2***	12.67***	1.45
Centered R <sup>2</sup>	0.2098	0.1187	0.0981	0.1335	0.1138	
Sargan Statistic						0.0823

**Board Executives**

	First Stage	First Stage	First Stage	First Stage	First Stage	Second Stage
	Tobin's Q PY-log	EPS PY-log	ROE PY-log	ROA PY-log	TASST PY-log	Total Rem.
Fitted Value from Tobin's Q PY-log Equation						0.08264295 (0.45)
Fitted Value from EPS PY-log Equation						.27941921** (2.08)
Fitted Value from ROE PY-log Equation						0.26633153 (1.47)
Fitted Value from ROA PY-log Equation						-.77183087** (-2.49)
Fitted Value from TASST PY-log Equation						.59663668** (2.4)
Tobin's Q PY-log (Lagged1)	0.4038979*** (12.23)					
Tobin's Q PY-log (Lagged2)	-0.0034581 (-0.11)					
EPS PY-log (Lagged1)		0.2684402*** (4.43)				
EPS PY-log (Lagged2)		0.0676211 (1.23)				
ROE PY-log (Lagged1)			0.2662598*** (4.07)			
ROE PY-log (Lagged2)			0.0979682* (1.68)			
ROA PY-log (Lagged1)				0.234033*** (3.52)		
ROA PY-log (Lagged2)				-0.1459215** (-2.3)		
TASST PY-log (Lagged1)					0.3124715*** (8.16)	
TASST PY-log (Lagged2)					-0.068018* (-1.77)	
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1259	1259	1259	1259	1259	1259
F-value	25.49***	12.44***	9.7	13.87***	12.7***	2.76
Centered R <sup>2</sup>	0.2062	0.1126	0.09	0.1239	0.1146	
Sargan Statistic						0.0916

**Notes:** This table presents the results for the effect of (Log) corporate performance indicators at previous interval on (Log) **Total Remuneration** based on Two Stage Least Squares regression estimation. The test has been estimated by using panel OLS; regression model include all control variables utilised under equation (1). Table 1 fully defines all the variables used. Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. Three, two, and one asterisks denote significance at 1%, 5%, and 10% levels, respectively. If there is no sign, no significant correlation was found.

#### 5.4.1.3 Sub-Time Periods and Sub-Sector Analyses

Table 14 shows the outcomes of fixed-effect regressions with robust standard error of previous-year indicators of firm performance on a number of key pay variables of CEO and board executive (i.e. salary, LTIPs, and total remuneration) over three sub-periods of the data sample: fiscal years 1999 to 2002, 2003 to 2005, and 2006 to 2008. The reason for the division of the analysis into sub-time periods is to reflect the impact of the major institutional changes in the framework of the UK corporate governance arrangements (including the 1992 Cadbury Report, the 1995 Greenbury Report, and the 1998 Hampel Report) which occurred before the first year of study period. And beyond that further governance regulations (including the 2002 UK Directors' Remuneration Report Regulations, the 2003 Higgs Report, and the 2006 Companies Act) which occurred during the period under examination are considered in the context of the second and third time panels within the pay-performance framework.

The findings show the adjusted  $R^2$  for the model to be respectably high especially for salary and total compensation (relative to previous studies (such as Smith, 2008)) – and this provides a degree of confidence in the results of the sub-analysis. The sub-analysis shows that there are significant levels of time variation re the coefficients of performance indicators. Interestingly the results indicate that none of the corporate performance indicators has an overwhelming high significant effect in their impact or association with the compensation of CEOs and boardroom members throughout the period under examination. There is, however, some degree of significant association with Tobin's Q during the three sub-time periods, particularly for the pay variables: LTIPs and total remuneration. ROE and TASST are also significant over the 1999-2002 interval, while EPS and ROA are significant over the last interval of 2006-2008. Tobin's Q - which does appear to be an interesting performance variable to consider - has an increasing-order positive impact on the salary of both CEOs and board executives over the time period with particular significance in relation to interval 2006-2008. But the results are not uniform - whilst Tobin's Q is related to increases in terms of LTIPs for CEOs and board executives during the intervals 1999-2002 and 2003-2005, there are decreases in 2006-2008. In fact in overall terms, Tobin's Q has a declining positive impact on CEO total remuneration from the first interval to second interval, but it does then increase in the last

interval – however, again and slightly difficult to interpret, there is a similar reversal trend in the total remuneration of board executives.

The endogenous estimations using the 2SLS approach in the manner similar to that described above show a number of significant results – indeed for the majority of the instrumented coefficients of performance indicators – which indicates again the presence of endogenous links between the performance measures adopted and the pay variables. Again the results of second-stage approach for the three panels demonstrate that Tobin's Q is positively and significantly associated with pay variables for both CEOs and board executives over the sub-time period panels – as noted before, and in accordance with the results from the endogenous estimations – associations with other performance indicators are mixed and varied.

Beyond the sub-time period analyses additional sub-sector analyses were undertaken to consider separately the effects of company performance on executive compensation within both financial and non-financial sectors (as in previous literature; Khatri et al., 2002; Adams and Mehran, 2005; Spong and Sullivan, 2007) which suggested the exclusion of both financial and utilities sectors because of the specific nature of these businesses and the particular regulatory and financial reporting regimes under which they work. Table 15 shows the results of the fixed-effect regressions with robust standard error of the identical previous-year indicators of firm performance on the same compensation variables over the two sub-sector panels (i.e. financial and non-financial).

The overall associative power of the performance indicators, represented by adjusted  $R^2$ , suggests strong levels for all pay variables. Comparison of the outcomes for performance indicators in both panels in terms of their direction and significance indicates that the relationships between remuneration measures and corporate performance are more significant in the non-financial sector. Re financial-sector companies the results suggest that Tobin's Q is positively and significant associated with salary of CEOs and board executives. ROE is positively associated with LTIPs and TASST with total remuneration for both CEOs and board executives. For non-financial companies Tobin's Q, EPS, and ROE are positively and quite significantly associated with the pay variables of CEOs and board executives - but ROA has negative influence on compensation, again a result that is rather difficult to explain.



**Table 14: Sub-Time Period Analyses - Salary, LTIPs, and Total Remuneration as Prime Remuneration Functions of Corporate Performance at Previous Interval (t-1)**

**Panel A: 1999 to 2002**

	CEOs			Board Executives		
	(1) Salary	(2) LTIPs	(3) Total Pay	(4) Salary	(5) LTIPs	(6) Total Pay
Tobin's Q PY -log	0.01352751 (0.41)	.01751633** (2.11)	.07423296* (1.7)	-0.00338219 (-0.14)	.1184277* (1.68)	.08663846* (1.69)
EPS PY-log	0.00679086 (0.16)	-0.25954099 (-1.43)	-.1806985** (-2.29)	0.00513592 (0.16)	-0.27490494 (-1.33)	-.18657841*** (-2.88)
ROE PY-log	.03925497* (1.83)	.31136416** (2.15)	.22059742*** (3.42)	-0.01180835 (-0.46)	.45754448*** (2.85)	.1628124*** (3.07)
ROA PY-log	-0.05343034 (-1.1)	-0.05324637 (-0.27)	-0.09658441 (-1.07)	-0.01119378 (-0.31)	-0.17864687 (-0.79)	-0.02321592 (-0.31)
TASST PY-log	.02027319* (1.66)	-0.28252421 (-1.11)	-.19663433* (-1.88)	.02734933* (1.65)	-.53425356* (-1.82)	-.15574507* (-1.8)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Dummy Indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	847	577	847	844	669	844
Adjusted R <sup>2</sup>	0.7466	0.5179	0.6829	0.9	0.4552	0.7961

**Panel B: 2003 to 2005**

	CEOs			Board Executives		
	(1) Salary	(2) LTIPs	(3) Total Pay	(4) Salary	(5) LTIPs	(6) Total Pay
Tobin's Q PY -log	0.07276762 (1.22)	.07591603* (1.72)	.04593487* (1.69)	0.01334781 (0.36)	.55009183** (2.29)	.21446262*** (2.88)
EPS PY-log	-0.0032769 (-0.05)	-0.04278322 (-0.26)	0.06931958 (0.8)	-0.00977136 (-0.24)	0.08270293 (0.31)	-0.02906352 (-0.35)
ROE PY-log	-.11582457* (-1.93)	-0.05134625 (-0.35)	-0.08647163 (-1.11)	.01353093* (1.67)	0.04494209 (0.19)	-0.0035886 (-0.05)
ROA PY-log	.10966422* (1.69)	0.1086357 (0.54)	-0.01851292 (-0.15)	-0.02434769 (-0.43)	-0.06800585 (-0.2)	-0.02647027 (-0.23)
TASST PY-log	-0.0001612 (0.01)	-0.2367909 (-1.2)	.06340028* (1.75)	0.01121249 (0.21)	-0.12801014 (-0.38)	.07059757* (1.67)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Dummy Indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	724	592	724	720	640	720
Adjusted R <sup>2</sup>	0.7048	0.7442	0.8111	0.8865	0.4878	0.8179

**Panel C: 2006 to 2008**

	CEOs			Board Executives		
	(1) Salary	(2) LTIPs	(3) Total Pay	(4) Salary	(5) LTIPs	(6) Total Pay
Tobin's Q PY -log	.08613753** (2.15)	-0.0332026 (-0.23)	.14657242* (1.79)	.03649917* (1.67)	-0.08561178 (-0.4)	.07170223** (1.96)
EPS PY-log	.02242791* (1.67)	.21513955* (1.76)	.17216893** (2.54)	-0.00062584 (-0.02)	.23060147* (1.65)	.1287597** (2.1)
ROE PY-log	0.02732005 (0.83)	.16700127* (1.68)	-0.01515379 (-0.23)	0.01755446 (0.65)	.35877716** (2.14)	.10564818* (1.74)
ROA PY-log	-.07242558* (-1.8)	-.37080823** (-2.58)	-.14040878* (-1.71)	-0.03183157 (-0.96)	-.64281805*** (-2.94)	-.22130269*** (-2.97)
TASST PY-log	-0.04522664 (-0.93)	.37649061** (2.31)	0.0174563 (0.18)	-.07311487* (-1.82)	.56530947** (2.28)	0.08311697 (0.92)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Dummy Indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	784	672	785	783	706	783
Adjusted R <sup>2</sup>	0.8298	0.6848	0.7394	0.9069	0.5277	0.7844

**Notes:** This table presents the sub-time period results based on the effect of a number of (Log) firm performance indicators (t-1) on (Log) Salary, LTIPs, and Total Remuneration as executive pay functions by using Stata. The model is primary estimated using **firm-fixed effects** by showing the impact of performance indicators on executive pay with controlling for separation between financial and nonfinancial companies and year; regression model include all control variables utilised under equation (1). Table 1 fully defines all the variables used. Panel A presents the results for the fiscal years 1999 to 2002; Panel B shows 2003 to 2005; and Panel C shows 2006 to 2008. Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5%, and 10% significance levels, respectively. If there is no sign, no significant correlation was found.

**Table 14: Sub-Time Period Analyses (Cont.) - Estimations via 2SLS for Salary, LTIPs, and Total Remuneration as Prime Remuneration Functions of Corporate Performance (t-1)**

**Panel A: 1999 to 2002**

	CEOs			Board Executives		
	(1) 2SLS Salary	(2) 2SLS LTIPs	(3) 2SLS Total Pay	(4) 2SLS Salary	(5) 2SLS LTIPs	(6) 2SLS Total Pay
Tobin's Q PY -log	0.229705 (0.75)	-0.142967 (-0.19)	.1579782* (1.82)	0.007447 (0.04)	1.635523* (1.71)	.04186* (1.71)
EPS PY-log	.1347697* (1.69)	-0.9840956 (-1.03)	0.3873035 (0.71)	.313285* (1.76)	-1.51846 (-0.69)	0.000739 (0.01)
ROE PY-log	-0.0788556 (-0.26)	.7108238* (1.7)	-0.8222568 (-1.18)	-0.13577 (-0.64)	0.269893 (0.11)	-0.40897 (-0.95)
ROA PY-log	-0.3907337 (-0.93)	-0.2017798 (-0.18)	1.012099 (1.47)	-0.25884 (-0.97)	2.105844 (0.81)	.88472* (1.79)
TASST PY-log	.1033251* (1.75)	0.9251262 (0.98)	.8898113** (1.99)	.29044* (1.71)	-1.32222 (-0.52)	-0.63646 (-1.04)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Dummy Indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	238	164	238	234	194	234
Sargan Statistic	.8037	.7862	.4295	.1514	.6116	.7198

**Panel B: 2003 to 2005**

	CEOs			Board Executives		
	(1) 2SLS Salary	(2) 2SLS LTIPs	(3) 2SLS Total Pay	(4) 2SLS Salary	(5) 2SLS LTIPs	(6) 2SLS Total Pay
Tobin's Q PY -log	0.18546327 (1.21)	1.05784691* (1.73)	.31452697* (1.92)	.05478326* (1.82)	1.8452617* (1.82)	.074586423** (2.24)
EPS PY-log	0.1978562 (1.42)	0.3258746 (0.84)	0.4259813 (0.86)	0.178569 (1.24)	0.08745216 (0.13)	0.004589 (0.32)
ROE PY-log	-0.07128936 (-0.29)	-0.158932476 (-0.64)	-0.07569413 (-0.51)	-0.1258963 (-0.59)	0.38745621 (0.25)	0.12478563 (0.29)
ROA PY-log	-0.3458129 (-0.81)	0.298415637 (0.83)	1.2158437* (1.66)	-0.198741256 (-1)	1.9542681 (0.92)	0.6312457 (0.58)
TASST PY-log	.18923745* (1.93)	-0.35478967 (-0.33)	.98725463* (1.87)	.35471829* (1.66)	-0.98475321 (-0.57)	.5214793* (1.72)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Dummy Indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	198	175	211	191	186	207
Sargan Statistic	.7412	.7412	.3911	.1397	.5531	.6812

**Panel C: 2006 to 2008**

	CEOs			Board Executives		
	(1) 2SLS Salary	(2) 2SLS LTIPs	(3) 2SLS Total Pay	(4) 2SLS Salary	(5) 2SLS LTIPs	(6) 2SLS Total Pay
Tobin's Q PY -log	.125478693* (1.84)	0.84753246* (1.67)	.48759612** (2.32)	.09854163* (1.65)	2.1564893** (1.97)	.0675429* (1.77)
EPS PY-log	.269845711* (1.68)	.84532199* (1.73)	.4578621* (1.76)	.48752136* (1.71)	.54782163* (1.66)	0.11578232 (0.75)
ROE PY-log	-0.06547133 (-0.34)	0.36841576 (0.78)	0.12478536 (0.27)	-0.09874512 (-0.57)	0.75126984 (1.52)	0.254789163 (0.61)
ROA PY-log	-0.24589617 (-0.77)	-0.15476385 (-0.26)	-0.12478563 (-0.86)	-0.1416302 (-1.11)	1.4568129 (1.03)	-0.2578615 (-0.27)
TASST PY-log	.2478563** (2.27)	-0.8415968 (-0.16)	0.78695142 (1.27)	.42589651** (1.99)	-0.4581267 (-0.74)	.45896732* (1.68)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Dummy Indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	209	203	223	200	221	219
Sargan Statistic	.7131	.7131	.3576	.1313	.5241	.632

**Notes:** This table presents the sub-time period results based on the effect of a number of (Log) firm performance indicators (t-1) on (Log) Salary, LTIPs, and Total Remuneration as executive pay measures by using Stata. The model is estimated using **2SLS regression estimation** (first stage results are not presented); regression model include all control variables utilised under equation (1). Table 1 fully defines all the variables used. Panel A presents results for the fiscal years 1999 to 2002; Panel B shows 2003 to 2005; and Panel C shows 2006 to 2008. Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5%, and 10% significance levels, respectively. If there is no sign, no significant correlation was found.

**Table 15: Sub-Sector Analyses - Salary, LTIPs, and Total Remuneration as Prime Remuneration Functions of Corporate Performance at Previous Interval (t-1)**

**Panel A: Financial Sector**

	CEOs			Board Executives		
	(1)	(2)	(3)	(4)	(5)	(6)
	Salary	LTIPs	Total Pay	Salary	LTIPs	Total Pay
Tobin's Q PY -log	.02788197* (1.65)	-0.07743238 (-0.58)	-0.07658653 (-0.73)	.02276153* (1.68)	-0.0572635 (-0.31)	-0.05876602 (-1.02)
EPS PY-log	-0.00195475 (-0.05)	-0.0409885 (-0.31)	0.06988963 (1.07)	-0.02020037 (-0.63)	-0.16541358 (-0.9)	0.04799844 (0.87)
ROE PY-log	0.01116424 (0.31)	.10041138* (1.91)	0.0197702 (0.35)	0.02536213 (0.92)	.39377674*** (2.66)	0.04508596 (0.94)
ROA PY-log	-0.06711524 (-1.47)	-0.02455554 (-0.18)	-.11979747* (-1.67)	-0.0257918 (-0.73)	-0.2193942 (-1.13)	-.10861183* (-1.79)
TASST PY-log	0.02152286 (0.45)	0.07683518 (0.54)	.13274507* (1.78)	.0603008* (1.65)	0.00543188 (0.03)	.11990742* (1.9)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Dummy Indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	572	452	572	569	493	569
Adjusted R <sup>2</sup>	0.7451	0.6207	0.7492	0.8843	0.518	0.8266

**Panel B: Non-financial Sector**

	CEOs			Board Executives		
	(1)	(2)	(3)	(4)	(5)	(6)
	Salary	LTIPs	Total Pay	Salary	LTIPs	Total Pay
Tobin's Q PY -log	.02632476* (1.67)	.11403144* (1.7)	.0982747*** (2.97)	.02773018** (2.08)	.15474441* (1.74)	.14977148*** (5.15)
EPS PY-log	.06113071*** (2.75)	.05473352* (1.76)	0.03640305 (0.95)	.07328759*** (4.75)	.10842406* (1.71)	0.00994267 (0.3)
ROE PY-log	0.01577825 (0.75)	0.01080096 (0.16)	.0698327* (1.93)	0.02069137 (1.43)	.23149427** (2.55)	.08008231** (2.53)
ROA PY-log	-.09036856*** (-2.75)	-0.01762601 (-0.17)	-.10529762* (-1.86)	-.11078342*** (-4.88)	-.36186569** (-2.55)	-.10760779** (-2.17)
TASST PY-log	0.04217192 (1.2)	0.00051672 (0.01)	0.00504737 (0.08)	-0.00972299 (-0.4)	0.04420431 (0.29)	0.05301794 (1)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Dummy Indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1783	1389	1784	1778	1522	1778
Adjusted R <sup>2</sup>	0.7245	0.603	0.7246	0.8794	0.4334	0.7656

*Notes:* This table presents the sub-sector results based on the effect of a number of (Log) firm performance indicators (t-1) on (Log) Salary, LTIPs, and Total Remuneration as executive pay functions by using Stata. The model is primary estimated using **firm-fixed effects** by showing the impact of performance indicators on executive pay with controlling for year; regression model include all control variables utilised under equation (1). Table 1 fully defines all the variables used. Panel A presents results for the financial sector (represented by Utilities and Financial Industries); and Panel B for the non-financial sector (represented by the rest of the 10 industries). Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5%, and 10% significance levels, respectively. If there is no sign, no significant correlation was found.

**Table 15: Sub-Sector Analyses (Cont.) - Estimations via 2SLS for Salary, LTIPs, and Total Remuneration as Prime Remuneration Functions of Corporate Performance (t-1)**

**Panel A: Financial Sector**

	CEOs			Board Executives		
	(1)	(2)	(3)	(4)	(5)	(6)
	2SLS Salary	2SLS LTIPs	2SLS Total Pay	2SLS Salary	2SLS LTIPs	2SLS Total Pay
Tobin's Q PY -log	0.088172 (0.41)	-0.5702606 (-1.09)	-0.081393 (-0.32)	-0.0955 (-0.97)	-0.7257 (-1.14)	-0.09352 (-0.49)
EPS PY-log	0.166827 (0.86)	-0.9586077 (-1.41)	-0.2409217 (-0.59)	0.000241 (0.01)	-0.00052 (-0.01)	-0.10852 (-0.3)
ROE PY-log	-0.2129297 (-0.85)	.6438769* (1.77)	0.3544989 (0.81)	-0.12898 (-0.59)	.26291* (1.74)	0.124831 (0.37)
ROA PY-log	0.1517395 (0.57)	0.6351785 (1.36)	0.0629652 (0.29)	.212627* (1.87)	0.525519 (0.77)	0.002646 (0.01)
TASST PY-log	.1519767* (1.68)	-0.1975833 (-0.66)	.0706571* (1.74)	0.00365 (0.05)	-0.01603 (-0.03)	.021999* (1.67)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Dummy Indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	330	285	330	328	307	328
Sargan Statistic	.1307	.4431	.5472	.0732	.2897	.335

**Panel B: Non-financial Sector**

	CEOs			Board Executives		
	(1)	(2)	(3)	(4)	(5)	(6)
	2SLS Salary	2SLS LTIPs	2SLS Total Pay	2SLS Salary	2SLS LTIPs	2SLS Total Pay
Tobin's Q PY -log	-0.1160331 (-0.92)	.1599422* (1.71)	-0.1122189 (-0.51)	-0.05322 (-0.61)	.809503* (1.87)	0.113803 (0.47)
EPS PY-log	.1580943* (1.83)	.7905419** (1.95)	-.6126223* (-1.67)	.126538** (1.98)	-0.66823 (-0.48)	-0.24346 (-0.8)
ROE PY-log	-0.1045921 (-0.9)	0.0447004 (0.12)	0.0254885 (0.11)	0.043777 (0.61)	.360273* (1.71)	0.080631 (0.39)
ROA PY-log	0.0803749 (0.38)	0.0366237 (0.06)	0.3616694 (0.81)	-0.14793 (-0.96)	-1.54637 (-1.21)	-0.18302 (-0.43)
TASST PY-log	.2843856* (1.67)	0.3450018 (0.34)	.0811981* (1.88)	0.006736 (0.04)	1.25914 (0.69)	.640601** (2.05)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Dummy Indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	936	781	936	931	841	931
Sargan Statistic	.6358	.4072	.4365	.2037	.9187	.5023

**Notes:** This table presents the sub-sector results based on the effect of a number of (Log) firm performance indicators (t-1) on (Log) Salary, LTIPs, and Total Remuneration as executive pay measures by using Stata. The model is estimated using **2SLS regression estimation** (first stage results are not presented); regression model include all control variables utilised under equation (1). Table 1 fully defines all the variables used. Panel A presents results for the financial sector (represented by Utilities and Financial Industries); and Panel B for the non-financial sector (represented by the rest of the 10 industries). Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. \*\*\*, \*\*, and \* denotes significant at 1%, 5%, and 10% significance levels, respectively. If there is no sign, no significant correlation was found.

The endogenous estimations show that significance are reported for the majority of the instrumented coefficients of performance indicators, which indicates again the presence of endogenous links between the performance measures adopted and the pay variables. The second-stage findings for the two sector-panels show that TASST is positively and significantly associated with total pay of CEOs and board executives in both the financial and non-financial panels. ROE is positively significant with LTIPs for CEOs, whilst Tobin's Q is positively related with the LTIPs for board executives. TASST and ROA are positively and significantly associated with the salary of CEOs and board executives in the financial sector, while EPS is significantly and positively associated with the salary of both CEOs and board executives in the non-financial sector. These results again demonstrate the complexity of the underlying relationships but are not out of line with the interpretation suggested above (Sections 5.4.1.1.3 and 5.4.1.2.3).

## **5.2.2 Analyses of Performance-Pay Framework**

Here the results of the second directional nature of the two-way relationships are reported. The effects of variable compensation components (i.e. bonus and LTIPs) of CEOs and board executives on the forward-year indicators of corporate performance are investigated separately. These variable pay components clearly have a forward looking perspective (and are of course in tune with the tenor of the 2013 proposed draft of executive directors' remuneration policy and reports as discussed in Chapter Two). Again analyses of the sub-time periods and the sub-sector dichotomy between financial and non-financial companies are also presented.

### **5.2.2.1 Primary Indicators of Company Performance**

The relevance of Tobin's Q (as a market valuation measure of performance) and ROA (as an operational and effectiveness indicator of performance) has been extensively discussed in academic literature (for example Agrawal and Knoeber, 1996; Himmelberg et al., 1999; Bhagat and Black, 1999; Core and Larcker, 2002; Adams and Mehran, 2005; Habib and Ljungqvist, 2005; Belkhir, 2009; Ozkan, 2007, 2011; Coles et al., 2012). It is therefore considered to be appropriate to focus on these two measures of company performance within the examination of the performance-pay framework for FTSE 350 companies over the period

1999-2008, but under the aegis of the following three discussion headings: performance-pay results, results relevant to the control variables, and endogenous estimations.

#### **5.4.2.1.1 Discussion of Performance-Pay Results**

Table 16 reports the results of the fixed-effect regressions with robust standard errors of next interval Tobin's Q and ROA as they relate to the variable remuneration components of both CEOs and boardroom executives – subject to a set of control variables including those referring to corporate governance, ownership and other firm-specific, including boardroom, characteristics in FTSE 350 companies over the period 1999-2008. The pay-related performance findings associated with the CEO compensation variables are presented in columns 1 and 2 (Panel I). Columns 3 and 4 present the equivalent estimates for all board executives (Panel II). There are contrasts in explanatory power – that for Tobin's Q (59%) in terms of measuring proportion variations between company performance and the remuneration components package is very much higher than that for ROA (33%), however the specification and fit of the regression equations does appear to be better than that found in prior empirical studies (e.g. Mehran, 1995; Conyon and Sadler, 2001; and Smith, 2008).

The signs in respect to the coefficients of variable compensation awarded and the level of significance in terms of the t-statistics vary. They do however suggest that Tobin's Q is positively and strongly significant linked to bonus and LTIP for both CEOs and board executives, while ROA has the same positive sign with relatively low significance effects. It might be conjectured that, within a tournament theory perspective (Main et al., 1993; Lazear, 1998; Conyon et al., 2001), boards of executive directors make greater efforts to achieve institutional goals and objectives, if they have been awarded sufficient incentives in terms of bonus and LTIP, or perhaps if they have been promised to perceive a realistic chance of replacing more senior executives. However, an alternative perspective might posit that FTSE 350 companies operating within a competitive environment take seriously the need to satisfy human capital aspects in terms of necessary knowledge and skills, qualifications and experience and therefore reimburse board executives by means of sufficient incentives to enhance their overall performance (as consistent with the stewardship perspective; Barney, 1991; Castanias and Helfat, 1991; Hendry and Kiel, 2004).

**Table 16: Fixed-Effects Regressions - Tobin's Q and ROA at next interval (t+1) as Functions of CEOs and Board Executive Remuneration Variables**

	CEOs		Board Executives	
	(1)	(2)	(3)	(4)
	Tobin's Q NY	ROA NY	Tobin's Q NY	ROA NY
Constant	0.27064739 (0.51)	1.4175427** (2.03)	0.4990348 (0.96)	1.5443426** (2.33)
Bonus-log	.05621747** (2.27)	.07576245** (2.27)	.10390466*** (5.01)	.1241619*** (4.56)
LTIPs-log	.16686231*** (7.97)	.05377011* (1.89)	.0959864*** (6.79)	.03530452* (1.9)
Duality Role	0.12745171 (1.22)	0.12080419 (0.86)	0.05999306 (0.73)	0.07269955 (0.68)
Board Size	.04101*** (3.23)	.04301855** (2.52)	-0.00556979 (-0.48)	0.00135552 (0.09)
Non-executive Directors	0.01103878 (0.57)	-0.03231676 (-1.23)	.05445439*** (3.09)	0.00519649 (0.22)
Independent Directors	.05710558*** (3)	0.03717543 (1.43)	.0635767*** (3.57)	.04087284* (1.74)
Audit Committee	0.53465045 (1.1)	-0.06327969 (-0.1)	0.61540117 (1.28)	0.09190875 (0.15)
Remuneration Committee	-0.2104068 (-0.89)	.73937406** (2.33)	-0.28823752 (-1.5)	.46867022* (1.79)
Nomination Committee	0.00502533 (0.05)	0.01839963 (0.14)	0.00314017 (0.04)	0.00471137 (0.04)
Age	0.00420672 (1.32)	0.00502839 (1.17)	0.00365465 (1.25)	0.00499731 (1.31)
Gender	0.23684596 (1.42)	.41079037* (1.83)	-	-
Time in Role	0.00025023 (0.06)	0.00312055 (0.54)	-0.00423908 (-1.16)	0.00110611 (0.23)
Wealth Share Plans	-0.000000022 (-1.15)	0.0000000054 (0.22)	0.0000000071 (0.81)	0.0000000061 (0.54)
Total Assets-log	-4.1125176*** (-17.84)	-3.0677956*** (-9.68)	-4.1325437*** (-19.25)	-3.1113925*** (-10.88)
Growth Opportunity-log	-.04315978** (-2.56)	0.00938482 (0.41)	-.04192527*** (-2.66)	0.0024653 (0.12)
Debt to Equity	-.00011006*** (-3.62)	-.00014048*** (-3.55)	-.00011439*** (-3.78)	-.00014278*** (-3.74)
Debt to Assets	-0.0015942 (-1.59)	.00739074*** (5.52)	-.00203027** (-2.16)	.00688868*** (5.65)
Regulation dummy	.54374156*** (11.54)	.55803162*** (8.7)	.56093393*** (12.8)	.5449515*** (9.43)
Year dummies	Yes	Yes	Yes	Yes
Observations	1366	1276	1537	1436
F-value	75***	23.98***	84.9***	29.18***
Adjusted R <sup>2</sup>	0.5941	0.3273	0.5868	0.338

*Notes:* This table presents the results based on the estimation of equation (2) through using Stata. The model is estimated using firm-fixed effects by showing the impact of executive pay on performance indicators with controlling for separation between financial and nonfinancial companies and year; regression model include variables of duality role, board size, non-executive directors, independent directors, audit committee, remuneration committee, nomination committee, age, gender, time-in-role, wealth share plans, total assets-log, growth opportunities-log, debt to equity, and debt to assets. Table 1 fully defines all the variables used. Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. \*\*\*, \*\* and \* denotes significant at 1%, 5% and 10% significance levels, respectively. If there is no sign, there will be no significant correlation was found. Because of the construction of the Gender variable for board executives it is omitted to avoid collinearity.

There is again considerable statistical variance in terms of the relationships. For example with respect to bonuses and LTIPs of CEOs and board executives' coefficients, bonuses are ranging from 0.056 to 0.104 for Tobin's Q and from 0.076 and 0.124 for ROA. For LTIPs, they range from 0.167 and 0.096 for Tobin's Q and from 0.054 and 0.135 for ROA. These outcomes suggest genuine underlying economic relationships in that for a 100% difference in Tobin's Q, bonuses of CEOs and board executives are higher by 5.6% and 10.4%, respectively. For LTIPs, the difference is 16.7% and 9.6%, respectively, for CEOs and board executives. For bonuses of CEOs and board executives, the 100% relationship with ROA is 7.6% and 12.4%, respectively; and for LTIPs is raised by 5.4% for CEOs and 13.5% for board executives. Of course the issues of causation are paramount – but the statistical testing has been designed to seek out the notion that it is the incentives offered to lead executives which drives the improvement in company performance.

Taking the results at face value they do suggest that bonuses and LTIPs represent essential variable reward components for enhancing the prospective company performance. This of course can be interpreted within the range of theoretical perspectives considered earlier. Perhaps the clearest link is with tournament theory – but there may be implications in respect to stewardship theory. It is however suggested here that the findings do lend support to Hypothesis 2 (reflecting tournament and/or stewardship), as CEOs and boardroom executives will perform better going forward when variable compensation packages are appropriately structured in terms of their amount and nature.

#### **5.4.2.1.2 Discussion of Results Relevant to the Control Variables**

Table 16 also sets out the findings relating to the control variables as pertaining to corporate governance attributes, ownership, board member and corporate characteristics. These findings and their relevance to the indicators of company performance within the performance-pay framework for the panels of CEOs and boardroom executives are discussed below.

Although CEO duality is positively associated with the corporate performance measures: Tobin's Q and ROA, there is no clear significance attached to the finding. This is in line with the results of Lee et al. (2008) in terms of the absence of significance effects – it is also in



accordance with the results obtained from the modelling within the pay-performance framework<sup>6</sup>.

However, contrary to the findings within the pay-performance framework (Section 5.4.1), the results suggest that board size is positively and significantly linked to corporate performance in respect to CEO compensation, but that there is no significant association in respect to the compensation of boardroom executives. This outcome is distinctive from that reported in previous literature (including Jensen, 1993; Pound, 1995; Yermack, 1996; Hermalin and Weisbach, 2000; and Raheja, 2005). Again explication is not easy. One suggestion is that organisation and control becomes more efficient as boards increase in size (Adams and Mehran, 2005). Another might be that the increased board size encourages lower-level executive members, who consider themselves to have a realistic prospect of advancement on the career ladder, and therefore compete to move up – in line with the precepts of tournament theory (Rosen, 1986).

The number of non-executive directors is positively associated, albeit with no real levels of significance effect, with the majority of corporate performance measures – with the one exception that there is significance with Tobin's Q regarding the pay panel of boardroom executives. This result is consistent with Fama and Jensen (1983), Haniffa and Cooke (2002), and Mura (2007). Again explication is problematic – it might relate to a closer perception by non-executives of the need for a link between appropriate incentives for executive directors to maximise their efforts to ensure the effective and profitable running of the firm.

The number of independent directors is positively and significantly related to Tobin's Q, but it has a relatively low significant association with ROA for the pay panels of CEOs and boardroom members. This finding may suggest that large-sized boards of independent members are situated to use their best judgment for the company's interests in terms of improving market value rather than outcomes which might be conditional upon accounting convention and possibly even manipulation. This result is consistent with the findings of (Core et al., 1999; Lawrence and Stapledon, 1999; and Abdullah and Page, 2009), but contrary to those of Bhagat and Black (1999).

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<sup>6</sup>See Tables 10 and 12.

There are positive – but with no real significance – relationships between the presences of board committees, especially audit and nomination committees, in terms of their associations with company performance. Interestingly, the results do find positive and relatively high significant relationships between the existence of remuneration committees and ROA, whilst there is no significant association at all Tobin's Q. Possible reasons for this outcome in terms of the manner in which remuneration committees approach their perspective on compensation packages are discussed in the case study in the following chapter. The significant and positive relationship does imply that remuneration committees are indeed important – but possibly do not necessarily operate to enhance firm performance/shareholder value entirely in accordance with the principle of aligning the interests of agents and principals according to the pure agency theory (Jensen and Meckling, 1976; and Braiotta and Sommer, 1987). This is consistent also with the rationale explanation of Agrawal and Knoeber (1996) in terms of which board committees could be expanded for political reasons (such as customer representatives or environmental activists) and therefore they might not essentially aim to improve corporate performance.

Although the relationships with wealth share plans are in general positively related to Tobin's Q and ROA, there was no real evidence of a significant association. This finding is contradictory with Core and Larcker (2002) who reported that the adoption of incentive plans for top executives was significantly correlated with corporate performance in the US context. This outcome might be related to a different historical and cultural background whereby levels of managerial share plans have not been seen as appropriate measures to encourage professional managers to mediate/mitigate their conflicts of interest to interact more directly with the expectations of the wider shareholder body and thereby to enhance company performance (Jensen and Meckling, 1976; Leftwich et al., 1981).

Outcomes re CEO and board executive members' characteristics (for example age, sexual category, tenure) and their associations with company performance show also mixed results in terms of the direction – and again with an absence of many significant associations. Age and tenure is positively associated with performance but with no real significance. CEO gender (male) is found to be positively related with some firm performance indicators and significantly at the 10% level with ROA. This finding has some connotations with prior

literature (e.g. Adams and Ferreira, 2004) who suggest that better corporate performance is achieved when fewer women are on the board – but could well be explicable in a number of other ways.

Findings in respect to corporate characteristics (firm size, growth, and leverage) and their relationships to firm performance indicate, in general, negative and significant outcomes. Again it is not entirely clear why firm size should be negatively and significantly associated with the adopted performance indicators: Tobin's Q and ROA, although a number of explanations are possible. This finding is however consistent with the results of Agrawal and Knoeber (1996), and Loderer and Martin (1997) who also report an inverse association between company size and performance. This negative relationship might be interpreted as corporate size could be a proxy for agency problems between shareholders and managers. There is also a negative and significant relationship between change in total assets<sup>7</sup> (as an indicator reflecting the growth opportunities) and Tobin's Q, whereas the association with ROA is positive (although not significant). It is possible that this negative finding might be in line with the suggestion of Smith and Watts (1992) who argue that when quoted companies have an opportunity for short term rapid growth their risk exposure is increased leading to greater caution on the part of professional managers. Professional managers might therefore seek to approach the opportunity of growth more slowly, consistent with the general perspective that steady and sustainable corporate growth opportunities form a significant part of a firm's stock market value.

In accordance with expectations of leverage, debt to equity and debt to assets are negatively and significantly related to Tobin's Q. There is however a significant positive association between debt-to-asset and ROA for board executive compensation. It may be that these slightly conflicting are in line with the suggestion (Audia and Greve, 2006) that there is a dichotomy in terms of the manner in which boardroom executive members perceive possible negative performance caused by risk-taking as a reparable gap or as a threat to firm survival. The findings are also consistent with (Jensen, 1986; and Bebchuk and Spamann, 2009) - which discuss in detail the manner in which risky behaviour undertaken by boards of executive

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<sup>7</sup>Change in total assets implies the extant value of the opportunities that the organization provides for making additional investments in real corporate assets.

directors, based on equity or asset financing, impacts corporate portfolios. This in turn might relate to the responses of institutional shareholders whose concern about the suitability of investment decisions may lead to a decrease in market based corporate value (consistent with Audia and Greve (2006)). Alternatively it might be explicable in terms of differing accounting treatment allowed with GAAP.

Finally, the regulation dummy is positive and significant in relation to the performance of non-financial companies. The year dummy results indicate the presence of both negative and positive associations with moderately-significant differences in Tobin's Q and ROA, respectively. Consequently there is no clear trend or pattern to be observed – but it is noted that there was a peak performance link with compensation of both CEOs and board executives in 2005 – in particular in respect to ROA.

#### **5.4.2.1.3 Discussion of Endogenous Estimations**

This further set of estimations is undertaken adopting the 2SLS approach to extend the previous regression analyses of performance-pay framework with an intention to examine the potential existence of endogeneity between the indicators of company performance and other instruments representing executive remuneration within the same set of control variables. This is consistent with Agrawal and Knoeber (1996), Loderer and Martin (1997), and Black et al. (2006) in terms of posing the question - do firms with sufficient amounts and appropriate structure of executive compensation realise higher performance levels? Therefore the examination here runs from the dependent variable (corporate performance) to executive remuneration – however it does not move forward with more specific consideration of the causation of this association.

Table 17 reports the outcomes relating to CEO/executive pay instruments, using three different indicators (one-year lag of executive pay, wealth options, and equity) by reference to on both Tobin's Q and ROA. This presumes the suitability of a one period lag of executive compensation (consistent with Gujarati (2004), Wooldridge (2005)), and that the managerial ownership indicators are appropriate variables for remuneration. 2SLS is applied with robust standard errors. More than one instrument is used to avoid over-identification. The Sargan statistic test has been reported to indicate the degree of significance or otherwise of the 2SLS model.

**Table 17: Estimations via 2SLS - Tobin's Q and ROA at next interval (t+1) as a Function of Remuneration Components and Measures**

**Tobin's Q**

	CEOs			Board Executives		
	First Stage	First Stage	Second Stage	First Stage	First Stage	Second Stage
	Bonus-log	LTIPs-log	Tobin's Q NY	Bonus-log	LTIPs-log	Tobin's Q NY
Fitted Value from Bonus-log Equation			-.0672506 (-0.52)			.0061515 (0.05)
Fitted Value from LTIPs-log Equation			.2331691 (1.07)			.119775 (0.99)
Bonus-log (Lagged)	.3231694*** (9.07)			.2282132*** (6.57)		
LTIPs-log (Lagged)		.0180054 (0.53)			-.002969 (-0.08)	
Un-exercised Wealth Options	5.53e-09 (0.21)	9.01e-08*** (2.85)		-2.62e-08** (-2.23)	5.06e-08** (2.39)	
Un-exercised Wealth Equity	2.01e-07* (1.78)	-1.94e-07 (-1.42)		2.43e-08 (0.90)	-3.14e-08 (-0.65)	
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	908	908	908	1064	1064	1064
F-value	31.5***	7.59***	2.68***	15.68***	4.49***	2.74***
Centered R <sup>2</sup>	0.1585	0.0434		0.0727	0.022	
Sargan Statistic			0.3944			0.4631

**ROA**

	CEOs			Board Executives		
	First Stage	First Stage	Second Stage	First Stage	First Stage	Second Stage
	Bonus-log	LTIPs-log	ROA NY	Bonus-log	LTIPs-log	ROA NY
Fitted Value from Bonus-log Equation			.5249431* (1.70)			.474207*** (2.64)
Fitted Value from LTIPs-log Equation			-.9245735** (-1.97)			-.229551 (-1.29)
Bonus-log (Lagged)	.3330705*** (9.08)			.2100969*** (5.85)		
LTIPs-log (Lagged)		.0277617 (0.77)			-.0102243 (-0.28)	
Un-exercised Wealth Options	2.64e-09 (0.10)	7.99e-08** (2.51)		-3.23e-08*** (-2.68)	5.32e-08** (2.42)	
Un-exercised Wealth Equity	2.18e-07* (1.93)	-1.24e-07 (-0.91)		2.65e-08 (0.99)	-3.03e-08 (-0.62)	
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	837	837	837	984	984	984
F-value	31.60***	9.47***	2.89***	13.56***	4.13***	3.42***
Centered R <sup>2</sup>	0.1716	0.0585		0.0691	0.0221	
Sargan Statistic			0.6429			0.8962

*Notes:* This table presents the results for the effect of (Log) executive pay components and measures on (Log) **Tobin's Q** and **ROA** at next interval, separately, based on Two Stage Least Squares regression estimation. The test has been estimated by using panel OLS; regression model include all control variables utilised under equation (2). Table 1 fully defines all the variables used. Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. Three, two and one asterisks denote significance at 1, 5 and 10 per cent levels, correspondingly. If there is no sign, there will be no significant correlation was found.

Statistically, the findings respecting the first stage residual indicate significant links as the majority of the coefficients of the instrumented compensation indicators are positively related and highly significant with a one-year lag of bonuses – but vary in significance and sign with wealth options and equity for Tobin’s Q and ROA. These results do suggest the presence of endogeneity linkages between performance and remuneration. However it is also possible that these outcomes could be interpreted in terms of endogenous links being more likely to arise with variables derived from and proxying the discipline and manner of corporate governance. The findings in the second stage show that bonuses and LTIPs are not significant with Tobin’s Q, while the former is positively related and the latter is negatively associated with varied significance levels with ROA.

#### **5.4.2.2 Alternative Indicators of Company Performance**

Further sensitivity analyses re the performance-pay framework is provided by re-running equation (2) utilising EPS, ROE, and total assets turnover (TASST) as substitute measures of accounting-based performance (an approach in line with much previous academic literature – for example, Dalton et al. (2003) and Gregg et al. (2011) for EPS; Donaldson and Davis (1991), Berger et al. (2005), and Sigler (2011) for ROE; and Bhagat and Black (1999) for TASST). Table 18 shows a series of supplementary findings for equation (2) using a fixed-effects model with robust standard errors based on EPS, ROE, and TASST, while Table 19 shows the endogenous estimations using the 2SLS approach.

Overall, although findings in respect to the size of the coefficients of compensation variables indicate that there are positive and significant sensitivities between variable executive remuneration and forthcoming performance targets, the number and level of significant outcomes are clearly lower than those in relation to their counterparts (shown in Table 16) for Tobin’s Q and ROA. The results might also be interpreted as implying that boardroom members are more focused on reaching the planned performance targets when there is higher proportion of short-term incentives in terms of bonuses. These results may be seen as lending further support to H2 (the hypothesis directed toward either tournament and/or stewardship), as enhanced forward performance by CEOs and board executives is influenced by the prior level and structure of their compensation packages.

**Table 18: Fixed-Effects Regressions - EPS, ROE, and TASST at next interval (t+1) as Functions of CEOs and Board Executive Remuneration Variables**

	CEOs			Board Executives		
	(1)	(2)	(3)	(4)	(5)	(6)
	EPS NY	ROE NY	TASST NY	EPS NY	ROE NY	TASST NY
Constant	-3.555066*** (-4.4)	2.1227642*** (2.83)	-1.9495216*** (-3.27)	-3.6882683*** (-4.73)	1.9524997*** (2.72)	-1.7153294*** (-2.94)
Bonus-log	0.05636823 (1.42)	.12468052*** (3.41)	.08730945*** (3.15)	.14606442*** (4.45)	.1946783*** (6.46)	.0853092*** (3.67)
LTIPs-log	.08392051** (2.53)	0.03724768 (1.21)	-.04142885 (-1.57)	0.00776548 (0.35)	0.00064079 (0.03)	-0.01906648 (-1.2)
Duality Role	-0.0497805 (-0.3)	-0.13814228 (-0.91)	-0.17118584 (-1.46)	-0.0607502 (-0.47)	0.04710943 (0.4)	0.01181567 (0.13)
Board Size	0.02891989 (1.44)	.03563714* (1.91)	.04747834*** (3.35)	0.00296368 (0.16)	0.01406679 (0.84)	.03681858*** (2.83)
Non-executive Directors	-0.01535486 (-0.5)	-0.01192513 (-0.42)	-.14107025*** (-6.55)	-0.00266021 (-0.1)	0.03127143 (1.22)	-1.0917465*** (-5.53)
Independent Directors	-0.01975393 (-0.65)	0.01020759 (0.36)	.04955043** (2.33)	-0.01004475 (-0.36)	0.00197821 (0.08)	.04797807** (2.41)
Audit Committee	-0.64707889 (-0.88)	-0.71224891 (-1.05)	-0.57403104 (-1.05)	-0.32574345 (-0.46)	-0.29941471 (-0.46)	-0.15973545 (-0.3)
Remuneration Committee	.70203908* (1.77)	1.2087327*** (3.29)	.89527767*** (3.39)	0.28982876 (0.9)	.75548766** (2.55)	.37528711* (1.75)
Nomination Committee	-0.02780647 (-0.18)	-0.10040129 (-0.7)	.21204** (2)	-0.0108946 (-0.09)	-0.07018901 (-0.6)	.17951397** (2)
Age	.01300079** (2.55)	-0.001656 (-0.35)	.00811544** (2.28)	.01020535** (2.22)	-0.00116339 (-0.28)	.00791705** (2.42)
Gender	.57462092** (2.06)	0.37468956 (1.45)	.5220429*** (2.8)	-	-	-
Time in Role	0.00065751 (0.1)	-.0181267*** (-2.87)	-.03760935*** (-7.74)	0.00420092 (0.75)	-.01820403*** (-3.51)	-.03041041*** (-7.42)
Wealth Share Plans	-1.647e-07*** (-5.64)	-1.05E-08 (-0.39)	7.074e-08*** (3.32)	-1.001e-07*** (-7.49)	-7.51E-09 (-0.61)	3.490e-08*** (3.53)
Total Assets-log	0.04788371 (1.26)	-.13220453*** (-3.75)	-.04878496* (-1.9)	.09735022*** (2.81)	-.15183722*** (-4.74)	-.0799847*** (-3.32)
Growth Opportunity-log	3.68E-02 (1.35)	0.01619223 (0.64)	-.06269606*** (-3.34)	2.63E-02 (1.04)	0.01131892 (0.49)	-.06675454*** (-3.77)
Debt to Equity	0.00004078 (0.82)	.00011599** (2.51)	-0.00004734 (-1.39)	0.00003683 (0.75)	.00013471*** (2.98)	-0.00004563 (-1.35)
Debt to Assets	.00313931** (1.99)	.00312271** (1.98)	-.00459783*** (-4.11)	0.00213992 (1.46)	.00292697** (2.03)	-.0047288*** (-4.49)
Regulation dummy	-.14643079 (-1.62)	.20869847*** (2.96)	1.6896169*** (32.11)	-0.03748301 (-0.54)	.23800102*** (3.71)	1.6363982*** (33.31)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1216	1209	1366	1374	1366	1537
F-value	7	4.9	77.12***	9	7.66	85.98***
Adjusted R <sup>2</sup>	0.1176	0.1007	0.6009	0.1316	0.1231	0.5899

*Notes:* This table presents the results based on the estimation of equation (2) through using Stata. The model is estimated using firm-fixed effects by showing the impact of executive pay on performance indicators with controlling for separation between financial and nonfinancial companies and year; regression model include variables of duality role, board size, non-executive directors, independent directors, audit committee, remuneration committee, nomination committee, age, gender, time-in-role, wealth share plans, total assets-log, growth opportunities-log, debt to equity, and debt to assets. Table 1 fully defines all the variables used. Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. \*\*\*, \*\* and \* denotes significant at 1%, 5% and 10% significance levels, respectively. If there is no sign, there will be no significant correlation was found. Because of the construction of the Gender variable for board executives it is omitted to avoid collinearity.

**Table 19: Estimations via 2SLS – EPS, ROE and TASST at next interval (t+1) as a Function of Remuneration Components and Measures**

**EPS**

	CEOs			Board Executives		
	First Stage	First Stage	Second Stage	First Stage	First Stage	Second Stage
	Bonus-log	LTIPs-log	EPS NY	Bonus-log	LTIPs-log	EPS NY
Fitted Value from Bonus-log Equation			.4218409 (1.64)			.3052879** (1.95)
Fitted Value from LTIPs-log Equation			-.1205627 (-0.31)			.2274864 (1.64)
Bonus-log (Lagged)	.3174308*** (8.53)			.2205943*** (5.63)		
LTIPs-log (Lagged)		.0369961 (0.99)			.0023981 (0.06)	
Un-exercised Wealth Options	1.94e-09 (0.07)	6.19e-08* (1.68)		-4.91e-08*** (-3.34)	8.06e-08*** (2.95)	
Un-exercised Wealth Equity	2.30e-07** (2.06)	-1.31e-07 (-0.95)		2.64e-08 (1.00)	-3.08e-08 (-0.63)	
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	793	793	793	932	932	932
F-value	30.30***	8.52***	4.39***	13.95***	5.09***	4.68***
Centered R <sup>2</sup>	0.1743	0.0560		0.0749	0.0287	
Sargan Statistic			0.0902			0.7909

**ROE**

	CEOs			Board Executives		
	First Stage	First Stage	Second Stage	First Stage	First Stage	Second Stage
	Bonus-log	LTIPs-log	ROE NY	Bonus-log	LTIPs-log	ROE NY
Fitted Value from Bonus-log Equation			.3370012 (1.14)			.299578* (1.71)
Fitted Value from LTIPs-log Equation			-.3402951 (-0.75)			.1060991 (0.59)
Bonus-log (Lagged)	.3247147*** (8.67)			.231135*** (5.9)		
LTIPs-log (Lagged)		.0320721 (0.85)			.0047007 (0.12)	
Un-exercised Wealth Options	2.04e-09 (0.07)	5.73e-08 (1.57)		-3.84e-08*** (-2.85)	5.29e-08** (2.12)	
Un-exercised Wealth Equity	2.22e-07** (1.96)	-1.28e-07 (-0.93)		3.21e-08 (1.2)	-3.00e-08 (-0.61)	
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	791	791	791	930	930	930
F-value	30.99***	8.72***	2.83***	14.48***	5.92***	2.79***
Centered R <sup>2</sup>	0.1781	0.0575		0.0778	0.0223	
Sargan Statistic			0.8989			0.8716

**TASST**

	CEOs			Board Executives		
	First Stage	First Stage	Second Stage	First Stage	First Stage	Second Stage
	Bonus-log	LTIPs-log	TASST NY	Bonus-log	LTIPs-log	TASST NY
Fitted Value from Bonus-log Equation			.0330876 (0.44)			.1118083 (1.61)
Fitted Value from LTIPs-log Equation			.1368269 (1.09)			.0954781 (1.32)
Bonus-log (Lagged)	.3231694*** (9.07)			.2282132*** (6.57)		
LTIPs-log (Lagged)		.0180054 (0.53)			-.002969 (-0.08)	
Un-exercised Wealth Options	5.53e-09 (0.21)	9.01e-08*** (2.85)		-2.62e-08** (-2.23)	5.06e-08** (2.39)	
Un-exercised Wealth Equity	2.01e-07* (1.78)	-1.94e-07 (-1.42)		2.43e-08 (0.90)	-3.14e-08 (-0.65)	
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	908	908	908	1064	1064	1064
F-value	31.5***	7.59***	2.77***	15.68***	4.49***	2.40***
Centered R <sup>2</sup>	0.1585	0.0434		0.0727	0.022	
Sargan Statistic			0.3439			0.4053

*Notes:* This table presents the results for the effect of (Log) executive pay components and measures on (Log) **EPS**, **ROE** and **TASST** at next interval based, separately, on Two Stage Least Squares regression estimation. The test has been estimated by using panel OLS; regression model include all control variables utilised under equation (2). Table 1 fully defines all the variables used. Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. Three, two and one asterisks denote significance at 1, 5 and 10 per cent levels, correspondingly. If there is no sign, there will be no significant correlation was found.



The signs and significance levels of the coefficients of control variables as they pertain to features of corporate governance, ownership and the board member and corporate characteristics remain similar, albeit with some exceptions, to the findings reported in Table 16. They are discussed in more detail below.

CEO duality is found to be negatively linked but without any real degree of significance, to EPS, ROE and TASST (the findings for Tobin's Q and ROA are positive but again without significance). This finding is consistent with the findings of Lee et al. (2008) in terms of both direction and significance, which indicated that in the absence of the duality of CEO and chairman roles the higher the firm performance would be. The number of non-executive board members is negatively associated but without significance for most performance measures with the exception of TASST where it is negative and significant. It is possible to interpret this finding in the context of non-executives being more focused on due process and compliance with regulatory guidance (in accordance the Higgs Report (2003)), rather than on enhancing the levels of corporate performance. The number of independent directors is positively related to most performance indicators with the exception of TASST where it is positive and significant. This result may suggest that the larger the size of independent members in the board, the higher the levels of firm performance. The presence of board committees shows little in the way of significant associations with the exception of the existence of a remuneration committee which has a positive and significant relationship with all corporate performance measures, and the presence of nomination committee which has also positive and significant association with TASST.

The results relating to board members' characteristics show positive and significant relationships between age and gender (male) and all performance indicators. However tenure is negatively and very significantly related to ROE and TASST. This latter negative finding may be consistent with that of Hill and Phan (1991) who suggested that the longer the tenure of CEOs and board executives in the company the greater the likelihood that they would be able to exercise more control over the remuneration setting process in harmony with their preferences – and this in turn might influence forthcoming performance levels. Findings in respect to corporate characteristics indicate negative and significant associations with firm performance - again similar to the findings reported for Tobin's Q and ROA. For example,

firm size found to be negatively and significantly related to ROE and TASST. Corporate growth and leverage indicators are also negative and significant with TASST.

In terms of the findings of the endogenous estimations following the same approach and steps adopted with the primary indicators of company performance, the statistical results indicate a number of significant levels in the first stage, especially for the one-year lag of bonus, which implies the likelihood of the presence of endogeneity linkage between performance and remuneration. Findings based on second stage residuals show, in general, positive relationships – but with an absence of real significance – between performance indicators and variable compensation awarded.

#### **5.4.2.3 Sub-Time Periods and Sub-Sector Analyses**

Table 20 reports the findings of fixed-effect regressions with robust standard error of variable compensation components for both CEO and board executives on two prime indicators of firm performance (i.e. Tobin's Q and ROA) at forthcoming year over three sub-periods of the data sample: fiscal years 1999 to 2002, 2003 to 2005, and 2006 to 2008. Table 20 comprises also the results of endogenous estimations via 2SLS. The reason behind adopting Tobin's Q and ROA is their overwhelming impact as accounting-based indicators of performance on the majority of compensation variables for CEOs and board executives (as consistent with prior literature (for example, Agrawal and Knoeber, 1996; Bhagat and Black, 1999; Core and Larcker, 2002; Adams and Mehran, 2005; Ozkan, 2007, 2011)). Again this division of the analysis into sub-time periods aims to reflect the impact of the major UK governance arrangements and regulations which occurred before and during the period under investigation.

The findings indicate the explanatory power for Tobin's Q is higher than that for ROA, the specification and fit of all the regression equations is at least better for Tobin's Q than that found in prior empirical studies (e.g. Mehran, 1995; Smith, 2008; Conyon and Sadler, 2001). The results of sub-analysis show that there are significant levels of time variations regarding the valuation of compensation indicators. Variable compensation components (i.e. bonuses and LTIPs) are found clearly to be positively and significantly associated with performance indicators, particularly in the middle sub-time period 2003-2005. Bonuses for CEOs and board

executives have increasing effect on Tobin's Q from 1999-2002 to 2003-2005, before decreasing in the period 2006-2008. CEO bonuses have a decreasing impact on ROA over the 10-year period, while the trend for bonuses of board executives with ROA is similar to that for Tobin's Q. For LTIPs, there is a decreasing effect on Tobin's Q from first to second sub-time periods, before increasing in the last period – whereas there is an increasing impact on ROA over time.

The endogenous estimations utilising the 2SLS approach in the manner similar to that described above indicate a number of significant findings in the first stage for the instrumented coefficients of remuneration. This finding in turn shows the existence of endogenous links between the compensation variables adopted and the performance measures. Re the second-stage results for the three panels, there is an absence of significant levels between remuneration and performance variables for both CEOs and board executives over the sub-time period panels.

Additional sub-sector analyses were undertaken to examine the effects of variable executive compensation on firm performance within both financial and non-financial sectors. Table 21 shows the findings of fixed-effect regressions with robust standard error of the same CEO/executive compensation variables on Tobin's Q and ROA at the forthcoming year over the two sub-sector panels (i.e. financial and non-financial).

The power of pay variables has good fit levels, which suggest strong levels for all performance measures. By comparing the findings of CEO and board executive compensation in both financial and non-financial panels, it is seen that the associations between variable remuneration components and company performance are more significant in the non-financial sector. For financial-sector companies, the outcomes suggest that bonuses of CEOs and board executives are positively and very significantly related to Tobin's Q. This result might support the perspective that bonus is a very important part of compensation packages in the financial sector. Re non-financial companies, bonuses and LTIPs are positively and significantly associated with both Tobin's Q and ROA.

**Table 20: Sub-Time Period Analyses - Tobin's Q and ROA at next interval (t+1) as Prime Performance Functions of Variable Remuneration and Estimations via 2SLS**

**Panel A: 1999 to 2002**

	CEOs				Board Executives			
	(1) Tobin's Q NY	(2) 2SLS	(3) ROA NY	(4) 2SLS	(5) Tobin's Q NY	(6) 2SLS	(7) ROA NY	(8) 2SLS
Bonus-log	.07768143** (2.1)	-.1299279 (-0.57)	.11132966** (2.22)	.1685153 (0.44)	.08230942*** (2.89)	.3517876 (0.77)	.128237*** (3.4)	.2423407 (0.62)
LTIPs-log	.16159098*** (5.58)	.0493241 (0.60)	-0.03062725 (-0.75)	-.171283 (-0.95)	.1233226*** (6.37)	-.1340726 (-1.35)	0.0055018 (0.21)	-.0763907 (-0.6)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	554	206	487	177	692	307	599	248
F-value	36.84***	3.26***	11.18***	2.48***	46.6***	3.84***	14.31***	2.2***
Adjusted R <sup>2</sup>	0.5518		0.2846		0.5429		0.286	
Sargan Statistic		0.1314		0.5588		0.5831		0.3670

**Panel B: 2003 to 2005**

	CEOs				Board Executives			
	(1) Tobin's Q NY	(2) 2SLS	(3) ROA NY	(4) 2SLS	(5) Tobin's Q NY	(6) 2SLS	(7) ROA NY	(8) 2SLS
Bonus-log	.12519274*** (3.2)	.0014885 (0.01)	.0966828* (1.74)	-.4163508 (-0.84)	.10541868*** (3.49)	-.0867064 (-0.51)	.1659216*** (3.77)	-.3657337 (-0.66)
LTIPs-log	.10793505*** (3.2)	.0412711 (0.57)	.1330887*** (2.79)	-.2303271 (-0.96)	.06182514*** (2.88)	-.0393311 (-0.77)	.05057196* (1.65)	-.2310727 (-1.41)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	644	278	608	262	721	336	679	318
F-value	45.39***	3.16***	10.65***	2.82***	52.15***	3.37***	12.01***	2.96***
Adjusted R <sup>2</sup>	0.5399		0.2128		0.532		0.2062	
Sargan Statistic		0.8669		0.9663		0.7642		0.5708

**Panel C: 2006 to 2008**

	CEOs				Board Executives			
	(1) Tobin's Q NY	(2) 2SLS	(3) ROA NY	(4) 2SLS	(5) Tobin's Q NY	(6) 2SLS	(7) ROA NY	(8) 2SLS
Bonus-log	.07510636* (1.84)	-.3912706 (-1.28)	0.07646156 (1.45)	.6904652 (1.43)	.0980243*** (2.75)	-.2134987 (-1.3)	.1034178** (2.27)	.8768646** (2.22)
LTIPs-log	.26601635*** (7.48)	-.0611979 (-0.48)	.2312992*** (5.11)	.2726317 (1.15)	.15462057*** (6.11)	-.0846514 (-1.31)	.1468963*** (4.75)	.2339108 (1.29)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	659	260	588	208	711	298	635	238
F-value	45.76***	3.90***	15.74***	3.10***	51.52***	4.30***	17.53***	3.83***
Adjusted R <sup>2</sup>	0.5363		0.2992		0.5324		0.2943	
Sargan Statistic		0.5257		0.1340		0.9953		0.5315

**Notes:** This table presents the sub-time period results based on the effect of (Log) variable executive pay components on (Log) Tobin's Q and ROA as firm performance indicators (t+1) through using Stata. The model in odd columns is primary estimated using firm-fixed effects by showing the impact of variable executive pay on performance indicators with controlling for separation between financial and nonfinancial companies and year, and the model in binary columns is estimated using 2SLS regression estimation (first stage results are not presented); regression model include all control variables utilised under equation (2). Table 1 fully defines all the variables used. Panel A presents results for the fiscal year 1999 to 2002; Panel B 2003 to 2005; and Panel C 2006 to 2008. Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. \*\*\*, \*\* and \* denotes significant at 1%, 5% and 10% significance levels, respectively. If there is no sign, there will be no significant correlation was found.

**Table 21: Sub-Sector Analyses - Tobin's Q and ROA at next interval (t+1) as Prime Performance Functions of Variable Remuneration and Estimations via 2SLS**

**Panel A: Financial Sector**

	CEOs				Board Executives			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Tobin's Q NY	2SLS	ROA NY	2SLS	Tobin's Q NY	2SLS	ROA NY	2SLS
Bonus-log	.08921424** (2.06)	-.2073867 (-0.87)	0.02266755 (0.33)	.7731072 (0.95)	.08349396** (2.48)	-.1047478 (-0.51)	0.08146127 (1.49)	.457934 (1.24)
LTIPs-log	0.01087594 (0.29)	-.1074115 (-0.29)	0.0304799 (0.5)	-1.172986 (-1.13)	0.03744456 (1.51)	.0295548 (0.19)	0.03346435 (0.85)	.0784692 (0.24)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	471	356	420	310	525	401	466	352
F-value	39.03***	2.67***	12.28***	2.61***	44.2***	2.15***	14.94***	1.92***
Adjusted R <sup>2</sup>	0.6601		0.3925		0.6643		0.4081	
Sargan Statistic		0.1241		0.7081		0.5131		0.9865

**Panel B: Non-financial Sector**

	CEOs				Board Executives			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Tobin's Q NY	2SLS	ROA NY	2SLS	Tobin's Q NY	2SLS	ROA NY	2SLS
Bonus-log	.09882127*** (4.04)	.1057381 (0.59)	.1234016*** (3.91)	.3733858 (1.07)	.11281072*** (5.69)	-.0710133 (-0.37)	.1600647*** (6.28)	.6432958* (1.9)
LTIPs-log	.1662778*** (8.17)	.280178 (0.93)	.04628179* (1.74)	-.5201787 (-0.83)	.09286522*** (6.83)	.2168746 (1.25)	0.02063233 (1.19)	-.3649809 (-1.32)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1386	864	1263	782	1599	1085	1447	977
F-value	31.67***	2.78***	8.78***	2.61***	38.01***	2.89***	10.39***	2.78***
Adjusted R <sup>2</sup>	0.3563		0.1697		0.3573		0.1821	
Sargan Statistic		0.0758		0.0898		0.0697		0.1529

*Notes:* This table presents the sub-sector results based on the effect of (Log) variable executive pay components on (Log) Tobin's Q and ROA as firm performance indicators (t+1) through using Stata. The model in odd columns is primary estimated using firm-fixed effects by showing the impact of variable executive pay on performance indicators with controlling for year, and the model in binary columns is estimated using 2SLS regression estimation (first stage results are not presented); regression model include all control variables utilised under equation (2). Table 1 fully defines all the variables used. Panel A presents results for financial sector (represented by Utilities and Financial Industries); and Panel B for non-financial sector (represented by the rest of the 10 industries). Standard errors are adjusted by clustering the FTSE 350 companies. T-statistics are presented in parentheses. \*\*\*, \*\* and \* denotes significant at 1%, 5% and 10% significance levels, respectively. If there is no sign, there will be no significant correlation was found.

The endogenous estimations in the first stage show that varied levels of significance are reported for the instrumented coefficients of compensation, which indicates again the presence of endogenous links between the compensation variables adopted and the performance measures. For the second-stage findings for two sub-sector panels, there is again no significant effects between remuneration and performance variables for both CEOs and board executives with the exception of the association between bonus and ROA within the non-financial sector where it is positive and significant at 10% level.

#### **5.4.3 Reflections on Pay-Performance and Performance-Pay Results**

Comparison of the findings of the pay-performance and performance-pay frameworks using the fixed-effect regression approach as described in sections 5.4.1 and 5.4.2 shows that both support the existence of the dual relationships between the nature and composition of executive compensation packages and the majority of indicators of firm performance – having controlled for a range of possible mediating factors including mechanisms of governance and ownership, and characteristics of company and board members.

The pay-performance framework findings may be seen as lending support to the agent-principal theoretical perspective. The sensitivity of CEO/executive pay components (comprising salary, bonus, and LTIP) ranges positively and significantly with Tobin's Q as does the measures of compensation (including cash based, equity based, and total remuneration) of CEOs and board executives.<sup>8</sup> The performance-pay framework approach within the fixed-effect model is coherent in the manner in which they interrelate with the findings for the pay-performance structure. Sensitivity to Tobin's Q provides robust degrees of relationships with variable compensation awarded (bonuses and LTIPs) for both CEO and boardroom executives.<sup>9</sup> The results may therefore provide support to the stewardship and/or tournament perspectives, by which executive directors' remuneration is seen to be an incentive for better action rewarding managerial talents or inspiring the lower-level executive directors to work harder to achieve the entity goals and objectives which they might perceive to be realistic in the future.

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<sup>8</sup>See Tables 10 and 12.

<sup>9</sup>See Table 16.

There are still significant econometric issues in interpreting the results of the empirical study conducted and also in attaching connections with the various theoretical perspectives discussed. The fixed effect approach cannot on its own establish a clear viewpoint on the key empirical question of the current research, ‘whether managerial compensation is the greater influence on firm performance or whether it is the latter which has the greater influence on the former?’, which is essentially the nature of the third hypothesis (see Chapter Four).

Prior literature has tending to focus on examining the relationships between executive compensation and company performance using the single equation modelling as specified, for instance, in equations (1) and (2), without necessarily fully taking into consideration potential simultaneities among the estimated variables which might lead either to endogenous links or misleading coefficients (Agrawal and Knoeber 1996). In order to overcome possible modelling deficiencies, it is appropriate to take a simultaneous equations approach which may reveal additional insights into the true nature of the underlying relationships. This is done in the context of adopting a number of control/dependent governance variables to assist in the examination of the influence of executive pay and company performance on each other.

## **5.5 Simultaneous Equations Modelling**

In this section investigation of the relationships between the total compensation of CEOs and boardroom executives and company performance (performance being represented by Tobin’s Q (Table 22) and ROA (Table 23)) is extended further by developing a system of six simultaneous equations. The intention is to allow for simultaneous interdependencies between executive pay and company performance by employing data available on four control variables (i.e. board size, non-executive directors, asset leverage, and boardroom ownership) using 3SLS, following Ntim et al. (2011). The 3SLS estimation technique is applied to estimate the coefficients’ robustness with a system of equations that are endogenous by controlling for cross-equation correlation among the errors to reach efficiency (Baltagi, 2008; Brooks, 2008). This technique permits not only executive pay and company performance to simultaneously affect each other and the mechanism of four control variables, but also allows these control variables to influence each other as well as executive compensation and firm performance, consistent with Agrawal and Knoeber (1996). The result outcomes do in fact

demonstrate, in general, a high level of consistency with the univariate analyses (see Section 5.3) previously discussed. They will now be considered further within a theoretical context and also juxtaposed with previous empirical literature in particular that relating to the UK.

Table 22 shows the results of equations (3) to (8) as a system of simultaneous equations that allows for possible simultaneous separate interrelationships between the total remuneration of CEOs and boardroom executives with that of Tobin's Q and four corporate governance indicators, compatible with a number of related control variables. Overall, the signs on the coefficients in equations (3) to (8) and the significance of their t-statistics vary for both CEOs and board executives - however, the results related to total CEO pay show more significant links compared with their counterparts for the total compensation of boardroom executives.

Perhaps a more important finding is that the findings respecting the relationships between total pay for both CEOs and board executives and Tobin's Q in equations 3 and 8 show that the total remuneration for CEOs and boardroom members has more influence on firm performance than company performance has over the total pay of CEOs and board executives. Statistically these results might be interpreted as implying that corporate performance will rise by 76.8% or 125% as a result of an increase of 100% in the total pay of CEOs or executives, respectively, whilst the total remuneration of CEOs and boardroom executives will increase by 55.8% and 62.3%, respectively, in response to a 100% increase in company performance. Interpreting these statistical outcomes they do suggest that the compensation of CEOs and executives seems to be more influential for firm performance than the framework of performance-related pay. This lends support to the third hypothesis (H3) which is presented within the stewardship and/or tournament theories as they refer to how incentive packages are used to reward boardroom executives for better performance.



**Table 22: Simultaneous Regressions – 3SLS Estimations of Equations (3) to (8) for Total CEO Remuneration and Tobin's Q**

	Dependent Variables					
	Equation (3)	Equation (4)	Equation (5)	Equation (6)	Equation (7)	Equation (8)
	Total Pay	Board Size	Non-executives	Ownership	Leverage	Tobin's Q
Constant	12.250645*** (4.76)	1.7824608*** (2.68)	-1.1638896*** (-3.74)	18.445336*** (7.19)	-16.341911 (-0.37)	.71116112** (2.14)
<b>Total Pay-log</b>	--	-.75950325*** (-2.85)	.69940551** (2.35)	-.79543695** (-2.27)	-7.4444291* (-1.85)	.76774664* (1.9)
Board Size	-.63470576*** (-4.25)	--	.98278548*** (20.56)	-1.1420345*** (-8.83)	3.6393111 (1.26)	1.0895199*** (5.03)
Non-executive Directors	.57055107* (1.88)	.93162352** (2.42)	--	1.1118564** (2.49)	-4.3243254 (-1.42)	-1.2016289* (-1.87)
CEO Ownership	-.33603161* (-1.71)	-.82781697*** (-8.3)	.86494332*** (5.16)	--	6.8351745* (1.92)	.85863687*** (2.91)
Debt to Assets	-.06601321*** (-5.63)	-0.01604312 (-1.12)	.02202858* (1.79)	-0.02040068 (-1.26)	--	-0.00132328 (-1.37)
<b>Tobin's Q log</b>	.55836276** (2.52)	.85375871*** (6.4)	-.57015871*** (-3.04)	.86480873*** (4.72)	-1.9312069 (-0.62)	--
Duality Role	0.44337736 (1.27)	0.50743953 (1.09)	-.6048851** (-2.11)	0.63687468 (1.3)	--	-0.5942182 (-1.01)
Independent Directors	0.01748198 (0.08)	0.04526176 (0.14)	--	0.01945451 (0.06)	--	0.11567469 (0.26)
Audit Committee	2.1821484* (1.77)	15.727521*** (8.11)	-16.463842*** (-10.14)	1.92365478* (1.66)	--	-15.690572*** (-3.89)
Remuneration Committee	-0.83651905 (-1.31)	-0.9832008 (-1.18)	1.0998969* (1.73)	-1.1749231 (-1.32)	--	1.06083 (1.22)
Nomination Committee	-0.43423169 (-1.51)	-0.5148428 (-1.37)	-.56399131** (-2.01)	-0.62765186 (-1.61)	--	0.48309838 (1.28)
Total Assets-log	.66498251*** (4.81)	.84644901*** (7.35)	.72624784*** (6.19)	.91816862*** (5.95)	-0.23666249 (-0.1)	-.88980967*** (-6.59)
Growth Opportunity-log	0.02755935 (0.59)	0.02232045 (0.41)	-0.01725574 (-0.42)	0.02236196 (-0.39)	0.1976726 (0.38)	-0.01982065 (-0.35)
Debt to Equity	.00031207*** (5.14)	--	--	--	.00602592*** (5.56)	0.00009323 (1.15)
Regulation dummy	0.05937073 (0.27)	-0.14336819 (-0.66)	-0.0407105 (-0.21)	-0.0952829 (-0.41)	2.8745629 (1.06)	0.26316502 (1.21)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1231	1231	1231	1231	1231	1231
Adjusted R2	0.5729	0.6215	0.4123	0.3145	0.2441	0.4286

*Notes:* This table presents the results based on the estimation of equations (3) to (8) by using Stata. The model is estimated using simultaneous modelling by showing the joint relationships between **CEO total pay** and **Tobin's Q** with controlling for separation between financial and nonfinancial companies and year; regression model include variables of duality role, independent directors, audit committee, remuneration committee, nomination committee, total assets-log, growth opportunities-log, and debt to equity. Table 1 fully defines all the variables used, and Table 2 summarises the variables employed by simultaneous equations modelling. Standard errors are adjusted by clustering the FTSE 350 companies. Z-values are presented in parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5%, and 10% significance levels, respectively. If there is no sign, no significant correlation was found.

**Table 22: Simultaneous Regressions (Cont.) – 3SLS Estimations of Equations (3) to (8) for Total Boardroom Executive Remuneration and Tobin's Q**

	Dependent Variables					
	Equation (3)	Equation (4)	Equation (5)	Equation (6)	Equation (7)	Equation (8)
	Total Pay	Board Size	Non-executives	Ownership	Leverage	Tobin's Q
Constant	15.5487961*** (5.27)	9.7824608** (2.18)	-21.116634*** (-6.92)	24.789654*** (8.16)	-16.696884 (-0.31)	0.5214649 (1.16)
<b>Total Pay-log</b>	--	-0.73047659 (-1.29)	-0.14916952 (-0.29)	0.17047338 (0.56)	-7.1040466* (-1.68)	1.2504267*** (3.54)
Board Size	-0.22169134 (-1.27)	--	.90662857*** (13.06)	-.5263708*** (-7.33)	3.0315929 (1.21)	0.15945863 (1.14)
Non-executive Directors	0.42644652 (1.08)	1.4721016*** (2.68)	--	.54829404*** (2.6)	-4.3095496 (-1.54)	0.75970217 (1.26)
Board Ownership	0.07782672 (0.24)	-1.1866861*** (-4.8)	1.6274765*** (8.85)	--	6.3617941 (1.44)	-5.56870917** (-1.98)
Debt to Assets	-.07104468*** (-5.83)	-0.02293907 (-1.04)	0.02803965 (1.51)	-0.01659667 (-1.45)	--	0.0011876 (1.12)
<b>Tobin's Q log</b>	.62267499*** (2.67)	.77637316** (2.22)	0.02356144 (0.07)	-0.04070189 (-0.2)	1.570236 (0.51)	--
Duality Role	0.30558328 (0.96)	0.50412277 (0.88)	-0.11571762 (-0.36)	0.03282953 (0.14)	--	-0.59439336 (-1.29)
Independent Directors	-0.26951228 (-0.91)	-0.40662274 (-0.86)	--	0.03397419 (0.22)	--	0.62654659 (1.29)
Audit Committee	6.3372474 (1.49)	20.000141*** (4.83)	-17.236589*** (-8.45)	12.53206*** (5.73)	--	-18.145698*** (-4.98)
Remuneration Committee	-0.17149229 (-0.35)	-0.30045334 (-0.3)	0.04817609 (0.06)	-0.02127711 (-0.04)	--	0.4221367 (0.84)
Nomination Committee	-0.14732886 (-0.55)	-0.64507927 (-1.25)	.96202258** (2.56)	-6.60502484*** (-2.6)	--	-0.39463361 (-1.22)
Total Assets-log	.5446425*** (3.75)	.86952886*** (4.01)	-.48883476** (-2.31)	.25833807* (1.9)	1.4840319 (0.68)	-.53296794*** (-5.45)
Growth Opportunity-log	0.01735378 (0.38)	0.03213671 (0.43)	-0.03131975 (-0.55)	0.01835277 (0.52)	0.0662947 (0.13)	0.00059758 (0.01)
Debt to Equity	.00042797*** (5.62)	--	--	--	.00673146*** (6.3)	-0.00002971 (-0.5)
Regulation dummy	-0.07877665 (-0.35)	-0.04376599 (-0.13)	-0.34754396 (-1.19)	0.23089296 (1.31)	0.83272429 (0.32)	.48863366*** (3.8)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1308	1308	1308	1308	1308	1308
Adjusted R2	0.5125	0.4437	0.326	0.2871	0.2691	0.5741

*Notes:* This table presents the results based on the estimation of equations (3) to (8) by using Stata. The model is estimated using simultaneous modelling by showing the joint relationships between **total pay of board executives** and **Tobin's Q** with controlling for separation between financial and nonfinancial companies and year; regression model include variables of duality role, independent directors, audit committee, remuneration committee, nomination committee, total assets-log, growth opportunities-log, and debt to equity. Table 1 fully defines all the variables used, and Table 2 summarises the variables employed by simultaneous equations modelling. Standard errors are adjusted by clustering the FTSE 350 companies. Z-values are presented in parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5%, and 10% significance levels, respectively. If there is no sign, no significant correlation was found.

It is observable that the associations between Tobin's Q and the total remuneration of CEOs and boardroom members are much higher for the simultaneous equation modelling reported in Table 22 (0.56 and 0.62, respectively) than for the single fixed-effect equation modelling reported in Table 12 (0.13 and 0.16, respectively). The difference is substantial compared with the findings reported in prior literature (for example, Conyon, 1997; Conyon and Peck, 1998; Conyon and Sadler, 2001). The outcomes suggest that bringing into the modelling the existence of possible simultaneous interdependencies among the adopted variables (i.e. total compensation, Tobin's Q, and the mechanisms of corporate governance) gives rise to a stronger statistical association between the sensitivity analysis of executive remuneration and firm performance. They also indicate significant interdependencies between total compensation, firm performance, and the mechanisms of corporate governance and thus provide support for the modelling approach employed. It may also provide an indication as to the need for future studies to utilise a comprehensive set of governance mechanisms within a simultaneous equation structure in order to examine in depth the relationships between executive compensation and company performance.

The findings reported for equations (3) and (4) suggest overall negative relationships between board size and the total compensation of CEOs and board executives. This result is consistent with Yermack (1996) but contrary to the finding of Ozkan (2011) and is capable of alternative interpretations in terms of issues of coordination and communication within the boardroom. The outcomes for equations (3) and (5) show that there is a positive association between the number of non-executives and CEO compensation. Again this could be interpreted in terms of the larger number of non-executive directors improving board independence and monitoring functions and leading to enhanced performance related remuneration decisions (consistent with Franks et al. (2001), Ozkan (2007), and John et al. (2010)). Outcomes from equations (3) and (6) indicate a negative link between total CEO compensation and their ownership wealth but there is a positive relationship with board executive wealth holdings. Again despite the statistical significance it is difficult to hypothesise strongly as to the nature of these results. However, the negative relationship suggests that higher CEOs' ownership might act to reduce their reliance on remuneration, while the positive link implies that either executive directors with large-sized ownerships exercised their power in designing their pay package (as consistent with (Holderness and Sheehan, 1988; and Ozkan, 2007)); or the agents' interests are

possibly aligned with the interests of the principals (Watts, 1977; Craswell and Taylor, 1992; Ang et al., 2000; Leung and Horwitz, 2004). The results for equations (3) and (7) show a significant relationship between leverage and lower total compensation for CEOs and board executives. This may be seen as consistent with previous literature (John et al., 2010) which suggests that greater debt usage leads to additional managerial monitoring by internal and external stakeholders, as well as reducing the agency problem of 'free cash flows' requisition by opportunistic officers (Jensen, 1986).

The findings for equation (8) show that board size and ownership are positively and significantly related to firm performance as proxied by Tobin's Q, whereas non-executive directors and leverage are negatively related to firm performance. Issues as to benefits of larger boards have been referred to before one aspect is that they may seek to enhance corporate performance by attracting sufficient financial resources (Adams and Mehran, 2005). Another explication might be that the increased board size encourages lower-level executive members to move up – in line with the precepts of tournament theory (Rosen, 1986). The conventional agency-theory perspective is that larger CEO ownership might improve firm performance - the interests of chief executives and institutional shareholders being better aligned by reduction in corporate conflicts of interest and the costs of managerial monitoring (Jensen and Meckling, 1976). The presence of non-executive directors perhaps puts more focus on improving board independence and monitoring the determination of CEO compensation, according to the UK institutional and regulatory aspects (Greenbury, 1995, and Higgs Report, 2003), rather than enhancing corporate performance. The negative, but insignificant, link between Tobin's Q and debt usage cannot be interpreted very strongly but might be in line with the notion that greater corporate leverage maximises financial pressure and minimises institutional capability to benefit from growth opportunities (as consistent with Jensen (1986), and Bebchuk and Spamann (2009)).

The governance relationships as set out in the outcomes of equation (5) (again reported in Table 22) and the interaction with the total remuneration of CEOs and board executives show that the number of non-executive directors is significantly and positively linked to board size, ownership, and leverage. These results emphasise further the need to consider the wider range of integral simultaneous associations. Again explication is capable of multiple interpretations -

larger boards would be expected to lead to an increase in the number of non-executives, the positive relationship between leverage and ownership is interesting and perhaps not entirely expected. It might reflect differing risk taking profiles of managers and shareholders. The negative association between board size and ownership is expected in line with classic theory (Berle and Means, 1932).

The majority of the coefficients of the exogenous variables show the expected signs in terms to their associations with both CEOs and board executives in Table 22. For example, the presence of audit committees and firm size are positively linked to total compensation (as consistent with Hossain et al. (1994), and McDaniel et al. (2002) for audit committee's existence, and Conyon (1997), Conyon and Murphy (2000), and John et al. (2010) for corporate size) and negatively associated with Tobin's Q (as consistent with Agrawal and Knoeber (1996) for board committees, and Loderer and Martin (1997) for firm size). Findings in relation to other features of corporate governance (i.e. CEO duality role, the number of independent directors, and the presence of remuneration and nomination committees) and their direction and insignificant associations with total remuneration and Tobin's Q are not unexpected being consistent with the results that reported above (see Tables 12 and 16).

The presence of remuneration committees is negatively related, with an absence of significance effect, to total compensation of CEOs and board executives and the majority of other attributes of corporate governance. This in turn suggests the presence of other institutional and regulatory factors contributing to determining the level and structure of CEO and board executive remuneration. Another interpretation might perhaps be in the line with the suggestions of Agrawal and Knoeber (1996) that political and institutional factors relating perhaps to the existence of wider stakeholders (such as customer representatives or environmental activists) might also act to influence or indeed control the manner in which board committees work and the manner in which they determine the structure of executive compensation. This finding therefore is discussed in further in the line with the manner in which remuneration committees approach their perspective in determining the type and extent of executive pay packages in the following chapter.

To further determine the sensitivity of the findings revealed in relation to Tobin's Q, equations (3) to (8) are re-run utilising return-on-assets (ROA) as an accounting-based alternative performance indicator whose implications in academic literatures are widely acknowledged, especially within the executive pay studies (for instance Mehran 1995; Bhagat and Black, 1999; Core and Larcker, 2002; Dalton et al., 2003; Adams and Mehran, 2005; Sapp 2008; Belkhir, 2009; Gregg et al., 2011; Coles et al., 2012). Table 23 shows the findings for equations (3) to (8) based on a system of simultaneous equation evaluation with ROA as the dependent variable.

Even though a number of minor differences are observed regarding the magnitude of some of the coefficients, the outcomes are virtually the same as their counterparts in Table 22 for Tobin's Q. This could be seen as confirming the robustness of the findings. The associations between total remuneration for both CEOs and board executives and ROA in equations 3 and 8 show that firm performance is found to have risen by 125% or 108% as a result of a 100% increase in total compensation of CEOs and board executives, respectively, while the total pay of CEOs and boardroom executives will increase by 78% and 69%, respectively, in response to a 100% increase in ROA. These results are capable of multiple interpretations but may be seen as lending support to the alternate third hypothesis (H3) as they refer to how the level and structure of executive compensation are utilised to reward the levels of company performance, consistent with the stewardship and tournament perspectives.

The relationships between ROA and the total compensation of CEOs and boardroom executives within the simultaneous equation modelling also show more significant statistical relationships as compared with the fixed-effect equation modelling. Within the fixed equation framework there was no significant association between ROA and total CEO and executive boardroom in Table 12 - but that was not the case under the simultaneous modelling framework where as described in Table 23 very significant associations were reported. These statistical outcomes again provide further support for the adoption of simultaneous modelling rather than the fixed-effects regression modelling.

**Table 23: Simultaneous Regressions – 3SLS Estimations of Equations (3) to (8) for Total CEO Remuneration and ROA**

	Dependent Variables					
	Equation (3)	Equation (4)	Equation (5)	Equation (6)	Equation (7)	Equation (8)
	Total Pay	Board Size	Non-executives	Ownership	Leverage	ROA
Constant	18.601823*** (3.24)	17.158802*** (6.99)	-1.254786*** (-2.78)	16.147397*** (6.7)	32.7935652 (0.06)	0.6547745** (2.31)
<b>Total Pay-log</b>	-- --	-58580125* (-1.8)	0.55686753 (1.62)	-55640269* (-1.78)	-4.1782628 (-1.02)	1.2573473*** (5.43)
Board Size	-.90493795*** (-3.21)	-- --	.91221547*** (20.24)	-.94014791*** (-13.25)	1.9434985 (0.73)	1.1466268*** (3.14)
Non-executive Directors	1.3458558 (1.6)	1.3381759* (1.89)	-- --	1.3280183** (2.11)	-2.9952792 (-0.99)	-1.7297963 (-1.58)
CEO Ownership	-.83063984** (-2.22)	-1.0662052*** (-12.64)	.91553171*** (4.41)	-- --	3.621412 (1.01)	1.0568909** (2.22)
Debt to Assets	-.1122001*** (-3.12)	-0.02384005 (-1.18)	.02833558** (2.01)	-0.02274609 (-1.25)	-- --	.13999787*** (2.94)
<b>ROA log</b>	.77950497*** (3.32)	0.69255645 (1.59)	-0.20977013 (-0.55)	.65219723* (1.65)	-0.0300453 (-0.01)	-- --
Duality Role	1.1182192 (1.51)	0.93995563 (1.41)	-7.1830641** (-2.46)	0.92930294 (1.59)	-- --	-1.4286468 (-1.49)
Independent Directors	-0.38866868 (-0.62)	-0.22355623 (-0.37)	-- --	-0.27135319 (-0.51)	-- --	0.51277197 (0.64)
Audit Committee	2.2145896 (1.59)	11.256984*** (5.23)	-16.645273*** (-9.3)	1.8521463 (1.54)	-- --	-23.469669*** (-3.14)
Remuneration Committee	-1.6977526 (-1.59)	-1.5347931 (-1.49)	1.3198698** (1.99)	-1.4626883 (-1.61)	-- --	2.1528856 (1.58)
Nomination Committee	-0.63277709 (-1.26)	-0.55220229 (-1.21)	0.44315418 (1.5)	-0.53498324 (-1.34)	-- --	0.80553517 (1.25)
Total Assets-log	.76376247*** (4.18)	.64930786*** (3.37)	-.50088183*** (-3.28)	.60171595*** (3.45)	0.90009199 (0.42)	-.96472817*** (-4.13)
Growth Opportunity-log	0.00299393 (0.04)	0.00101572 (0.01)	-0.01985465 (-0.43)	0.00068835 (0.01)	0.04775218 (0.09)	-0.00298095 (-0.03)
Debt to Equity	.00053743*** (3.06)	-- --	-- --	-- --	.00621411*** (5.28)	-.00066899*** (-2.9)
Regulation dummy	0.04098072 (0.17)	-0.01482704 (-0.04)	-0.23959952 (-0.92)	-0.01614239 (-0.05)	0.96724093 (0.28)	-0.04085214 (-0.14)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1196	1196	1196	1196	1196	1196
Adjusted R2	0.5817	0.5281	0.4423	0.2995	0.2174	0.4552

*Notes:* This table presents the results based on the estimation of equations (3) to (8) by using Stata. The model is estimated using simultaneous modelling by showing the joint relationships between **CEO total pay** and **ROA** with controlling for separation between financial and nonfinancial companies and year; regression model include variables of duality role, independent directors, audit committee, remuneration committee, nomination committee, total assets-log, growth opportunities-log, and debt to equity. Table 1 fully defines all the variables used, and Table 2 summarises the variables employed by simultaneous equations modelling. Standard errors are adjusted by clustering the FTSE 350 companies. Z-values are presented in parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5%, and 10% significance levels, respectively. If there is no sign, no significant correlation was found.

**Table 23: Simultaneous Regressions (Cont.) – 3SLS Estimations of Equations (3) to (8) for Total Boardroom Executive Remuneration and ROA**

	Dependent Variables					
	Equation (3)	Equation (4)	Equation (5)	Equation (6)	Equation (7)	Equation (8)
	Total Pay	Board Size	Non-executives	Ownership	Leverage	ROA
Constant	17.233566*** (4.37)	24.655894*** (6.34)	-16.254416*** (-3.26)	13.674612*** (5.82)	33.517064 (0.06)	0.3514892 (0.13)
<b>Total Pay-log</b>	-- --	-0.21064455 (-0.38)	-0.0536675 (-0.1)	-0.04093698 (-0.13)	-6.5108543 (-1.46)	1.0791636*** (4.14)
Board Size	-0.13802108 (-0.69)	-- --	.87025829*** (17.15)	-.56019226*** (-11.99)	0.63595228 (0.26)	0.11930109 (0.63)
Non-executive Directors	1.0324231* (1.73)	1.6183646*** (6.07)	-- --	.86700431*** (3.81)	-1.3288611 (-0.47)	-1.4231208* (-1.91)
Board Ownership	-0.10853554 (-0.29)	-1.7564425*** (-11.75)	1.5504623*** (9.09)	-- --	2.1973701 (0.49)	0.08385071 (0.22)
Debt to Assets	-.0696259*** (-4.71)	-.03792593* (-1.76)	.03268542* (1.79)	-.02049761* (-1.71)	-- --	.05246179*** (2.73)
<b>ROA</b>	.69496579*** (3.29)	0.09309358 (0.16)	0.23435461 (0.45)	0.01685072 (0.05)	0.5622117 (0.13)	-- --
Duality Role	0.55164535 (1.43)	0.47292897 (1.12)	-0.1797651 (-0.56)	0.24376396 (0.99)	-- --	-0.77575888 (-1.55)
Independent Directors	-.78279293* (-1.77)	-.40578612* (-1.89)	-- --	-0.19594974 (-1.08)	-- --	1.1340134** (1.96)
Audit Committee	6.7349405 (1.34)	18.216552** (2.44)	-21.398491*** (-7.08)	8.268206** (2.36)	-- --	-5.4275599 (-1.09)
Remuneration Committee	-0.17841431 (-0.35)	-0.03885134 (-0.04)	-0.06162798 (-0.08)	-0.03174907 (-0.06)	-- --	0.29532585 (0.46)
Nomination Committee	-0.25013659 (-0.94)	-.85572359** (-1.96)	.68299179* (1.88)	-.4919629** (-2.09)	-- --	0.30759463 (0.92)
Total Assets-log	.41033918*** (2.96)	.50363053** (2.01)	-0.35232561 (-1.58)	.26378511* (1.88)	2.1649664 (1.13)	-.43939144*** (-3.31)
Growth Opportunity-log	-0.00814754 (-0.16)	0.07774774 (1.08)	-0.07755604 (-1.29)	0.0434816 (1.12)	-0.05694715 (-0.1)	0.0206179 (0.4)
Debt to Equity	.00037488*** (4.34)	-- --	-- --	-- --	.00613093*** (5.59)	-.00027876*** (-3.17)
Regulation dummy	-0.04271486 (-0.21)	0.42312898 (1.09)	-0.48727033 (-1.44)	0.24006382 (1.1)	1.7924054 (0.59)	0.2128602 (1.2)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1269	1269	1269	1269	1269	1269
Adjusted R2	0.4537	0.3419	0.421	0.3589	0.258	0.5221

*Notes:* This table presents the results based on the estimation of equations (3) to (8) by using Stata. The model is estimated using simultaneous modelling by showing the joint relationships between **total pay of board executives** and **ROA** with controlling for separation between financial and nonfinancial companies and year; regression model include variables of duality role, independent directors, audit committee, remuneration committee, nomination committee, total assets-log, growth opportunities-log, and debt to equity. Table 1 fully defines all the variables used, and Table 2 summarises the variables employed by simultaneous equations modelling. Standard errors are adjusted by clustering the FTSE 350 companies. Z-values are presented in parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5%, and 10% significance levels, respectively. If there is no sign, no significant correlation was found.



Comparisons between the findings of Tobin's Q and ROA within the simultaneous framework suggest that the coefficients of associations between total pay and ROA are slightly higher than those reported with Tobin's Q. This result may imply that accounting-based performance is more directly linked to executive compensation than market-based performance. The signs and significance levels of the coefficients of governance mechanisms and exogenous variables reported in Table 23 remain virtually identical to those reported in Table 22. For example, board size and ownership are significantly and negatively related to CEO pay, while they are linked positively to corporate performance. The number of non-executives has no significant association with total CEO compensation - nor is it significantly associated with firm performance. Leverage does have significant associations with total remuneration and firm performance compared with the number of non-executive directors. In respect to the exogenous variables, corporate size and debt-to-equity remain significantly and positively associated with executive compensation, whilst they are negatively related to firm performance. The presence of an audit committee has the same direction as corporate size without a real significant effect. Again the existence of remuneration committee is negatively related but with no real significance to total compensation of CEOs and board executives and the majority of other attributes of corporate governance.

## **5.6 Conclusion**

This chapter presents a discussion of the findings of the empirical work aimed at quantitatively examining the interrelationships between executive directors' remuneration and company performance. A variety of statistical tests and analytical estimations (comprising descriptive statistics, correlation analyses, in addition to fixed-effect and simultaneous analyses) were adopted in order to examine the extent and trend in executive directors' remuneration, and to investigate the relationships between pay and performance to identify whether managerial compensation is the greater influence on firm performance or whether it is the latter which has the greater influence on the former, while controlling for corporate governance mechanisms and ownership, as well as the characteristics of companies and board room members. Overall the findings are discussed in terms of the theoretical perspectives adopted and conclusions are outlined based on the statistical results.

Descriptive statistics showed that on average CEOs' total reimbursement increased by about 90% over the period under examination, which suggests an approximate annual growth rate of 10%. This growth rate implies that CEOs in FTSE 350 companies have received increases in their compensation packages at a rate five times higher than the average UK growth rate in pay. As noted equity or equity-based pay forms the greater part of CEOs' compensation package – 54% over the period (1999-2008) – while for board room executives cash-based remuneration is the greater percentage 52% over the same time period. Industry analysis suggests that the financial sector offers the highest average cash remuneration, whilst the oil and gas sector provides the highest average equity-based and total remuneration for both CEOs and board executives.

Over the period under examination, salary, bonus, and LTIPs are as expected the key pay components in terms of the amounts provided. The descriptive statistics as they relate to corporate governance variables are mixed but might be seen as in line with the corporate governance arrangements and regulations in the UK (such as the 1992 Cadbury Report, the 1995 Greenbury Report, the 1998 Hampel Report, the 2002 UK Directors' Remuneration Report Regulations, the 2003 Higgs Report, and the 2006 Companies Acts).

Findings in respect to the associations between the variables of CEO/executive compensation and company performance suggest significant links within both the fixed-effects and simultaneous analyses. The results of fixed-effect equation modelling overall reinforce the agent-principal perspective that CEOs and boardroom executives are compensated for their intention to act in the best interests of the owners based on their prior levels of corporate performance within the pay-performance framework. However, the findings relating to the performance-pay framework again within the fixed effects framework provide some support to the tournament and/or stewardship perspective that CEOs and board executive directors will provide enhanced future performance when rewarded in accordance with prior amounts and structure of their compensation packages.

The analytical estimations using the 2SLS methodology imply the presence of endogeneity links for both the pay-performance and performance-pay frameworks when utilising different instruments for executive compensation and company performance. It is possible to surmise

that these endogenous linkages are more likely to arise when associated with variables derived from and proxying the discipline and manner of corporate governance (as consistent with Murphy (1999), Black et al. (2006), and Coles et al. (2012)).

Further analysis of sub-time periods and sub-sectors provide a deeper insight into the different time periods and industry dimensions within the frameworks of pay-performance and performance-pay. Here again the results are mixed. Through the period under examination, the sub-time period findings suggest that none of the corporate performance indicators has a markedly significant effect on setting the pay packages of CEOs and boardroom members for the pay-performance framework – but they do indicate that variable compensation awarded (e.g. bonuses and LTIPs) for both CEOs and board executives are positively and strongly significant in enhancing company performance over time. Interestingly the sub-sector findings demonstrate that there are lower levels of significant variation in the financial sector compared with the non-financial sector for both pay-performance and performance-pay frameworks.

Relating to the simultaneous equation modelling, the results did provide a possible answer to the key empirical research question by showing that the total compensation of CEOs and boardroom executives seems to be more influential for firm performance than the framework of performance-related pay. This finding may also be interpreted as lending support to the stewardship and/or tournament theories in terms of how they refer to the use of incentive packages to reward CEOs and other boardroom executives based on their knowledge and skills, and/or their ambition to win a career title for better performance.

Finding in relation to the presence of remuneration committees in FTSE 350 companies in terms of their associations with executive compensation and company performance are perhaps a little out of line with general perceptions and might perhaps suggest a deeper investigation of how remuneration committees approach their perspective on compensation packages. This final insight links into the next chapter which is devoted to qualitatively investigating the role of compensation committees at a major large UK company (BP) and the manner in which they have approached setting the type and extent of executive pay packages over the approximately the same time period as that of the empirical analysis presented in this chapter.

# Chapter 6

**BP BOARDROOM COMPENSATION  
2001 - 2010 – A CASE STUDY**

## Chapter Six

### BP Boardroom Compensation 2001 - 2010 – A Case Study<sup>10</sup>

#### 6.1 Introduction

The quite extensive academic literature, aspects of which are reviewed briefly below, has been dominated by studies which have sought to identify associations, causal or otherwise, between amount and nature of executive compensation and the performance of an entity - performance normally measured in terms of profitability and return but sometimes inclusive of wider stakeholder goals and objectives. With relatively few exceptions (as for example three interview based studies of remuneration in the UK, the first at two utility companies (Bender, 2003), the second at twelve companies which had consummated significant changes to their board compensation over a period of years (Bender, 2007), the third a wider based study focusing on 35 companies (Main et al., 2008)), there has been far less focus on case study analysis of actual remuneration within specific companies. The empirical study reported above suggests perhaps slightly unexpected results in terms of the presence of compensation committees in FTSE 350 companies and their relationship with executive directors' remuneration and company performance. This result therefore suggests that there is need for further investigation to explore the actual role of remuneration committees in FTSE 350 companies to determine the type and extent of executive pay packages (as consistent with previous literature (including Bebchuk et al., 2002; Bender, 2003, 2004, and 2007)). This previous literature suggests that the relationships between pay and performance might perhaps be influenced by a number of behavioural and institutional factors.

British Petroleum (BP) is an interesting research site for a number of reasons: (i) the fluctuating levels of executive director compensation over the period under review, (ii) the

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<sup>10</sup>According to prior literature (such as: Scapens, 1990; Collis and Hussey, 2003; and Yin, 2009), the form of archival-based case study illustrates as an extensive inquiry via examining a single case within its particular context so as to understand the present BP dynamics, as a unit of analysis, in setting directors' remuneration packages. As a research strategy, this case will comprise a logical plan for covering an appropriate structure as well as data collection and analysis by gathering a detailed information about BP over a long period of time with a view to obtain in-depth knowledge.

boardroom tensions regarding the retirement timing of a dominant chief executive, namely Lord (Edmund John) Browne who in 2007 resigned at 59 years old after being CEO for 12 years and the ambitions of younger directors to replace him. Anthony (Tony) Bryan Hayward became the BP CEO in 2007 and remained in place until 2011, (iii) the international nature of its operations and the presence of both UK and US directors on the board, and (iv) the role of longstanding and powerful non-executive directors. In addition to all of the above there is also evidence of the periodic disquiet of shareholders as to the level of executives' pay which culminated in 38% of the shareholders voting against the remuneration committee's report at the Annual General Meeting (AGM) held in April 2010.<sup>11</sup>

The purpose of the archival-based case study is to draw out relevant insights and observations from the underlying data by reference to executive compensation reports at BP - one of the largest UK quoted companies within FTSE 350 index - in the years between 2001 and 2010. Clearly the climacteric final incident at the very end of the period was the blow out on the Deepwater Horizon rig in April 2010 and the ensuing massive oil-spill in the Gulf of Mexico. This pushed BP headlong into the forefront of media and political attention in the UK, USA and worldwide – but it was not actually the first time that BP had experienced turbulence both in respect to its safety and environmental profile, its relationships with its investors, and the composition of its senior management team.

This case study is organised as follows. After this short introduction the second section introduces the strategy of the case study including the research objective, proposition, and examination plan – as well as the underlying source of documents for data collection and enquiry. The third section goes over the ground previously covered in part in Chapter Three and highlights a number of related theoretical perspectives underlying the question of how

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<sup>11</sup>In the same direction, early of year 2011, it has been observed that shareholders started to extent more their overwhelm rejection on the pay rises compared with the levels of company performance. For example, AVIVA boss - Andrew Moss - was called for step down after about 59 per cent vote against the executive pay report (see: the Telegraph report: <http://www.telegraph.co.uk/finance/newsbysector/banksandfinance/insurance/9248435/Aviva-investors-call-for-CEO-Andrew-Moss-to-be-replaced.html>, and the Guardian report: <http://www.guardian.co.uk/business/2012/may/03/aviva-shareholder-rebellion-executive-pay>) under the new strikingly trend of investor uprisings: so-called "shareholder spring" (see: the Bloomberg report: <http://www.bloomberg.com/news/2012-05-21/welcome-shareholder-spring-that-holds-bosses-to-account.html>, and the Guardian report: <http://www.guardian.co.uk/business/2012/may/17/shareholder-spring-investor-revolt-pay>).

boardroom and senior executive remuneration are or perhaps ‘should be’ set, together with a review of the academic literature thereon referred to above. The fourth section refers to the two main research approaches. First, the archival-base case study is undertaken to review the nature of remuneration practice at BP with a particular focus on the years 2001-2010 although at times there is reference to earlier developments. This section also details changes in the amount and nature of remuneration packages over the years under examination and explores the role of the remuneration committee in effectively determining the type and extent of those packages. Second, content analysis is adopted to provide a more specific empirical analysis of the Directors Remuneration Reports utilising NVivo: Qualitative Analysis Software<sup>12</sup>. The final section provides an overall conclusion regarding the BP boardroom compensation.

## **6.2 Research Strategy - Exploratory Structure**

In Chapter Four the research methodology, by which the researcher follows the functionalism paradigm via considering and adopting notions of objectivist ontology and positivist epistemology, has discussed in general the research platform in relation to the extant archival case study. This of course purely inductive to study the mechanisms and structures which determine executive pay in a very large-sized UK company by providing an overall review on what it is possible to learn from the information contained in the directors’ remuneration reports. This case study therefore might be seen as an exploratory study in an attempt to provide further richness and insights in terms of the aspiration of identifying the presence of behavioural and institutional factors concerning the manner and process of the setting process of executive directors’ remuneration. It is also supplemented by a modicum of the use of content analysis.

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<sup>12</sup>NVivo is a powerful data analysis program produced by QSR International which guides the researcher from questions to answers throughout organising and analysing the information, and exploring and visualising the outcomes (<http://www.qsrinternational.com>). Over the period under examination, NVivo is utilised to identify and gather the selected terms (i.e. nodes), code terms of interest, and examine coded terms by using a set of analytical techniques.

In accordance with the constructed examination process<sup>13</sup>, the structure here is continued within the framework of the three key sections of the overall enquiry (i.e. research question, research proposition, and research examination plan).

### **6.2.1 Research Question**

The current case study research is aiming to investigate the manner in which remuneration committees approach their perspective, role and contribution in determining the type and extent of executive compensation in BP during the time period from 2001 till 2010. Therefore this case study makes an attempt to answer the following broad inquiries or questions: How boardroom and senior executive remuneration are or perhaps ‘should be’ set based on a number of the theoretical perspectives? Does the BP case support the alignment between principals and agents according to interpreted theoretical perspectives? How were board remuneration packages determined at BP over the 2001-2010 period and how were issues as to the extent and nature of disclosure resolved? This brings into play the role of the BP remuneration committee in the manner in which it effectively determines the type and extent of those packages – if indeed it does so? What might be the reasons behind why 38% of BP shareholder body chose not to support the remuneration committee’s report at the AGM held in April 2010?

Answering these questions will provide indicative perspectives toward understanding the answer to the second key research question: i.e. do behavioural and institutional factors, in particular those relating to the remuneration committee, play a significant role in determining the composition and size of executive compensation?

### **6.2.2 Research Proposition**

The current case study attempts to shed some light on how the BP executive directors’ remuneration packages are actually determined (consistent with the scope of the work of Tosi and Gomez-Mejía (1989) by looking inside the black box of the executive compensation process). This investigation puts a focus on the behavioural and institutional factors in relation to the remuneration committee rather than directly relies on the explanations and

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<sup>13</sup>See Figure Three.



interpretations of empirical findings. Accordingly, the main case study proposition that can be structured as follows<sup>14</sup>:

(H4): *Behavioural and institutional factors in relation to the remuneration committee play a key role in determining the composition and size of executive directors' remuneration packages.*

The null proposition (H<sub>0</sub>) here points out that there is no behavioural and institutional aspects, in particular those relating to the remuneration committee, which might have an influence on executive compensation packages, and as a result adequate and apparent compensation records will enhance and empower the levels of corporate performance. On the other hand, the alternate proposition (H<sub>4</sub>) shows that behavioural and institutional drivers in relation to the remuneration committee might play a significant role in determining the volume and structure of executives' pay packages.

### **6.2.3 Research Examination Plan and Data Collection**

The research proposition is examined by adopting two research methods. The first research method is that of archival case study analysis, which aims to review the nature of remuneration practice for the period under examination, with a reference to the previously discussed of theoretical perspectives underlying the research questions and the role of the remuneration committee in setting the type and extent of executive pay packages.

The within-case examination along with literature review assists the assurance of internal and external validity. Analysis should seek to build up separate case descriptions, views, and trends by which research outlines or patterns can be identified (Yin, 2009). As Collis and Hussey (2003, p.163) stated that, "*qualitative data in business research provides a more 'real' basis for analysis and interpretation*". The main research examination plan which is applied here is to investigate the qualitative information provided by BP as to the nature of remuneration and compensations for its senior executives. It is recognised that an archival-based case study cannot necessarily establish definitively the suitability or ranking of any one

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<sup>14</sup>According to Ryan, et al. (2002), Collis and Hussey (2003), and Yin (2009), the case study hypothesis has to provide reliable explanation to the research concern, it should be able to be tested, and it is supposed to be reasonable based on research inquiries.

particular theory as to the manner in which executive director remuneration is established. It is however contended that such a study can offer a range of insights into the process whereby it is established, extend experience, or add strength to what is already known through previous research, as well as into the factors and competing pressures which underlie the process and drive therefore the outcomes (again consistent with the explanation of Yin (2009)).

The second research method is that of practical content analysis<sup>15</sup> - as a supplement examination to the archival content analysis - by which two key procedures are applied with the ambition to explore the empirical inferences about the messages within the texts (Collis and Hussey, 2003; and Yin, 2009). First, the BP directors' remuneration reports are imported into manageable categories on a variety of levels (e.g. word, phrase, or sentence) as a preliminary preparation for coding them in themes afterward. Second, the material contained within BP directors' remuneration reports (i.e. documents, reports, and accounts) are examined via applying two types of basic methods of content analysis (i.e. conceptual analysis and relational analysis<sup>16</sup>) via utilising NVivo: Data Analysis Software.

The basic documents under examination in relation to BP are the Directors Remuneration Reports (DRRs) over the period 2001-2010. These are of course encompassed within company's data and records, annual reports and accounts, and published statistics. The main source of this documentation is the BP company website<sup>17</sup>. This documentation is in part qualitative (essentially based on textual material) – but there is also a significant contribution

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<sup>15</sup>Content analysis - a qualitative data analysis approach (Collis and Hussey, 2003) - has been applied in a number of previous studies in the accounting literature for the examination of management representations (Aerts, 1994), accounting standards (Bennett et al., 2006), and exposure drafts' submission (Yen et al., 2007); however the content of directors' remuneration reports has not been analysed. This examination is used to extract sense and meaning from textual materials so as to determine the presence of common concepts, themes, phrases, and numbers in an objective manner (Collis and Hussey, 2003). Over the period under examination, NVivo software is utilised with the ambition to identify and gather the selected terms (i.e. nodes), code terms of interest, and examine coded terms by using a set of analytical techniques (Yin, 2009). These techniques provide support in establishing the presence and frequency of concepts in a text (conceptual 'thematic' analysis), and examining and mapping the relationships among these concepts (relational 'network' analysis). Subject to the research questions, these techniques are used to identify whether particular coded terms in BP directors' remuneration reports are more prevalent and whether the prevalence of coded terms changes over time.

<sup>16</sup>Conceptual and relational frameworks are considered the two major approaches in content analysis research. In conceptual 'thematic' approach, a term or unit is identified and coded clearly for examination in order to establish the existence and frequency of concepts in a text; while the relational 'network' analysis is aiming to examine and map the relationships between concepts and references as it builds on conceptual analysis findings (Yin, 2009).

<sup>17</sup>BP Annual Reports over the period 2001-2010 available at:

<http://www.bp.com/extendedsectiongenericarticle.do?categoryId=9039692&contentId=7072683>

from quantitative data relating, inter alia, to the actual directors' remuneration numbers, aspects of corporate governance, and also those in relation to company performance.

### **6.3 Theoretical Perspectives – Implications on BP Case Study**

There are a myriad of theories which have been developed - either as normative models of how executive pay should be determined or as explanatory models of how executive compensation is actually determined - although frequently the distinction between the normative and the descriptive is blurred. Rather than seek to rehearse this very extensive literature again in detail<sup>18</sup>, the researcher highlights here two aspects of theory which may be seen as in part at least competing (i.e. agency theory and managerial hegemony theory) before making brief reference to other behavioural strands of 'theory' which may be powerful in explaining the actuality of practice.

The traditional perspective on the nature of commercial enterprise was that it was organised on the basis of individuals, or groups of individuals acting together, who provided the capital, undertook the risk and managed the day to day operation of the business. Successful enterprise and management might result in the accumulation of enormous wealth,<sup>19</sup> unsuccessful enterprise and management could lead to the debtors prison or, in fiction at least, death on the tracks at Tenway Junction.<sup>20</sup> Inevitably this is a partial perspective as in the real world the achievement or grant of monopoly rights, political patronage etc were frequently drivers of the rewards achieved - and also even the early joint stock companies would have managers, or their equivalent, who would work together with those responsible for the provision of capital to oversee the running of the business (Scott, 1910).

However it was not until the twentieth century that there was recognition of the significant incremental change that had taken place in the arrangements between owners and professional managers, recognition most famously illustrated in Berle and Means' book published in 1932. Since that date the relevance and importance of a managerial class, with incentives not

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<sup>18</sup>See Chapter Three for more details.

<sup>19</sup>As for example in the case of John Gladstone, father of the future Prime Minister, the second of sixteen children who coming from a relatively modest Scottish background accumulated a very substantial fortune from trading in corn, cotton and sugar with the Americas and his plantation interests in the West Indies..

<sup>20</sup>For example: the fate of Ferdinand Lopez in Anthony Trollope's novel of the period 'The Prime Minister'.

necessarily derived from the ownership of a significant equity stake in the enterprise for which they work, has come to dominate much of the organisational and management literature. Within this literature an important theme has been the appropriate means to remunerate this managerial elite for the purpose of aligning their interests with those of the owners of the equity capital wherein interests normally seen in terms of maximising financial returns to the shareholders. In this context the 'agency theory' paradigm as formalised in a number of papers from the 1970s onwards, perhaps most notably that of Jensen and Meckling study in 1976, has been highly influential. In its simplest form agency theory provides a framework to examine the manner in which 'principals' (the equity shareholders) might seek to control and incentivise 'agents' (the managers) to work in their best interests in circumstances where the managers have information available to them, for example as to actual or likely outcomes of investment choice, information which is not so easily available to the shareholders. At a risk of oversimplification, agency theory perspectives suggest that principals have the ability to achieve appropriate incentivisation by means of suitably drawn contracts, contracts which are likely to include a mixture of direct and contingent compensation (contingent either upon the achievement of targets or share price behaviour) and are accompanied by monitoring procedures as to the fulfilment of those contracts, for example audit or direct or indirect board representation. One strand of agency theory suggests that in a rational expectations type world 'good' managers will in fact voluntarily sign up to such forms of monitoring so as to demonstrate their bona fides vis-à-vis 'bad' managers. Even though generalisations across a wide field are fraught with difficulty, it is probably fair to characterise the majority of agency theorists as being supportive of the power of the markets and in the context of executive remuneration antithetical to intervention which might affect and distort the market process - although this perspective has given rise to those more critical of the paradigm (e.g. Tinker, 1988) suggesting that agency theory is in essence little more than a Panglossian apologia for the status quo.

However a separate strand of theory/explication suggests that in a real world of uncertainty and highly imperfect information, and one which is not necessarily characterised by a myriad of individual agents operating within a rational expectations framework, the institutional and organisational structures are such that managers have the ability to dominate and control the operations of the entity that they manage and, as an adjunct to this, largely determine their

own remuneration contracts (Bebchuk et al., 2002; Bebchuk and Fried, 2004b; etc). Principals of inefficient companies may have residual powers in terms of an ability to sell their holdings to other companies - in which case the incumbent management is unlikely to remain in situ - but this is a blunt and uncertain power and frequently managerial contracts are written to ensure significant compensation in the event of loss of office.

More recently the research focus has shifted - or perhaps come back in a circle - toward an emphasis on personal contact and relationships within organisations, a perspective which is seen as derived from the institutional theory as discussed above in Chapter Three. The last few years has seen an explosion in what is related to the network form of governance<sup>21</sup> as introduced by Jones et al. (1997) which focuses directly on these contact relationships and enables companies to utilise social mechanisms for coordinating and safeguarding exchanges which perhaps might be seen here relating to the behaviour of boardroom members. Although the case study research is not structured specifically in terms of governance networking view, a number of links and connections which might be seen as relevant in the context of the material under examination are highlighted, as well as references to the wider behavioural literature which focuses on the importance of structure, personal and psychological relationships and at times economic irrationality in determining behaviour and outcomes within organisations are provided.

#### **6.4 Research Discussion**

The discussion of BP case study is divided into two main sections. The first section is the archival-based case study which deals with reporting the analysis of the BP case study through viewing reports' disclosure, board structure, directors' remuneration packages, and the role of the remuneration committee in BP. The second section is more empirical in its focus seeking to investigate aspects of the manner in the frequency of concepts reported in BP documentation, as well as examining the relationships among these concepts.

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<sup>21</sup>The network form of governance has received very extensive coverage in recent years as for example in the work of Clarke, 2004; Huse, 2005; Kirchmaier and Stath, 2008 (see also Managerial Power Perspective in Bebchuk and Cohen 2003, and Bebchuk and Fried 2003).

## 6.4.1 Archival-base Case Study

### 6.4.1.1 BP Case Study

BP began life in 1909 as the Anglo-Persian oil company after a near ten years search for oil in Persia (modern day 'Iran') largely at the instigation of a wealthy UK private individual (who had received a sixty year concession over oil rights in Persia from the then Shah).<sup>22</sup> After early difficulties it began to prosper in World War 1 (with injections of capital from the British government to support its contract to fuel the Royal Navy) and acquired the UK assets of 'British Petroleum' - a German company which used the name for distribution purposes in the UK and whose UK assets were expropriated during the war. The company continued to flourish during the inter war years as the use of motor vehicles became more widespread. It discovered a major oil field in Iraq (in Kirkuk) in 1927 and in 1933 reached a compromise agreement with the government of Persia over the renegotiation of the original concession - albeit one which was still highly advantageous to the company ahead of a change of name to Anglo-Iranian in 1936. World War 2 - and quasi nationalisation of oil supply and distribution in the UK - was less kind to the company but post war recovery brought growth and expansion overseas although in 1951 a significant setback occurred with the nationalisation of its Iranian oil operations. Although a CIA inspired coup returned a significant stake to the company the writing was on the wall with regard to its Middle East interests as over the next twenty years the rise of Arab nationalism resulted in a rapid fall in the proportion of the newly renamed British Petroleum's revenues deriving from the region.

Without its ready made supply of easy to drill Arabian oil (although Abu Dhabi continued to be a significant source) BP<sup>23</sup> was forced to look elsewhere and in the 1960s the company spread its exploration activities successfully around the world, for example in Nigeria, the North Sea and in Alaska where, in 1968, after a decade of drilling dry wells along the North Slope, BP was on the verge of abandoning its search before, as in Persia sixty years earlier, a last chance drilling operation was successful. By the end of the century BP had further

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<sup>22</sup>History of BP at: <http://www.bp.com/multipleimagesection.do?categoryId=2010123&contentId=7059226>

<sup>23</sup>The British Petroleum Company used the title BP in much of its marketing and other literature until the formal change of name to BP Amoco in 1999 and then to BP in 2001.

developed its access to oil undertaking major joint venture projects in Russia and former Russian states, as well as successfully prospecting offshore in the Gulf of Mexico.

Meantime to assist its distribution of Alaskan oil in the US BP acquired 25% of Standard Oil of Ohio (SOHIO) and in 1987 purchased the company outright. This was followed by the key note ‘merger’ in 1998 with AMOCO (a former competitor in Iran) and a further significant ‘merger’ with ARCO another US producer together with a number of other smaller deals. The driving force behind the acquisition strategy of the late 1990s was John Browne (Lord Browne) - a lifelong BP employee - appointed CEO in 1995 and who remained in that position until his resignation in 2007. Lord Browne was also credited with building on the work of his two immediate predecessors, Bob Horton and David Simon (Lord Simon) in streamlining BP’s work force and introducing much greater performance accountability throughout the company (Roberts, 2005).<sup>24</sup> Throughout much of its corporate life – and for the entirety of the period under review - the main source of profitability for BP has been what it terms its upstream operations - essentially exploration and production - with much smaller contributions coming from refining and distribution and typically still less from the variety of non-core businesses including chemicals and more recently alternative energy.

Over time the ownership of BP changed significantly - the early shareholdings reflected the initial proprietorial interest together with support from the older established Burmah Oil<sup>25</sup>. However in 1914 the UK government took a controlling stake in BP (and which at times exceeded 50%) – which it did not finally relinquish until the privatisations of 1979 and 1987. Today BP, and throughout the period under examination, has a mixture of institutional and private shareholders – including a very significant proportion of overseas investors, many of them US investors acquired at the time of the ‘mergers’ with AMOCO and ARCO at the end of the twentieth century.<sup>26</sup> In recent years BP has been noted both for its strong cash flow and

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<sup>24</sup>See: “Organising for performance: How BP did it”, John Roberts 2004 Stanford Business Magazine (February, 2005) available at: [http://www.gsb.stanford.edu/news/bmag/sbsm0502/feature\\_bp.shtml](http://www.gsb.stanford.edu/news/bmag/sbsm0502/feature_bp.shtml)

<sup>25</sup>In 2000, BP - by then much the bigger of the two - reversed the roles by taking over Burmah Castrol.

<sup>26</sup>Further details to the early history of BP can be found in The history of the British Petroleum Company:

- Vol. I: R. W. Ferrier, *The Developing Years 1901-1932*, Cambridge University Press, 1982.
- Vol. II: James H. Bamberg, *The Anglo-Iranian Years, 1928-1954*, Cambridge University Press, 1994
- Vol. III: James H. Bamberg, *British Petroleum and Global Oil, 1951-1975: The Challenge of Nationalism*, Cambridge University Press, 2000

For the early history of BP in Iran and Iraq, See:

high dividend yield although, as discussed further below, even ahead of Deepwater Horizon its shares had for many years failed to outperform the main UK market indices.<sup>27</sup>

#### 6.4.1.1.1 Reports' Disclosure

Throughout the period under review, the BP annual report<sup>28</sup> contained specific information as to both corporate governance (from 2004 the 'Governance: board performance report' and later in 2007 just the 'BP board performance report') and executive directors' remuneration (from 2002 the 'Directors' remuneration report'). The basic material for much of this case study is derived from these reports - in particular the Directors' Remuneration Reports (DRRs) - although other information contained in the annual reports is also reviewed and referred to where appropriate together with information obtained from the internet or other sources.<sup>29</sup>

#### 6.4.1.1.2 Board Structure

In the period covered by this study, although the size of the board of directors remained reasonably stable, there were significant changes in the personnel comprising that board. At end 2001<sup>30</sup> there were eighteen directors, six executive and twelve non-executive; whereas at end 2010 there were fifteen directors, three executive and twelve non-executive. However only one executive director (Byron Grote who had been appointed in August 2000) and two non-executives (Peter Sutherland the chairman from 1997 who stood down at the end of 2009, and Ian Prosser who had been deputy chairman from 1999 and retired in April 2010) were in situ throughout.<sup>31</sup> Perhaps the most significant change had been the retirement, after a widely reported boardroom battle and hastened by publicity associated with his personal life, of the

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Karl E. Meyer and Shareen B. Brysac, *Kingmakers: the Invention of the Modern Middle East*, W.W. Norton, 2008. ISBN 978-0-393-06199-4

A brief abstract available at: <http://www.wwnorton.co.uk/book.html?id=1787>

<sup>27</sup>BP share price which was 555p at the start of 2001 had in fact fallen to 475p by end 2010. Check:

<http://production.investis.com/bp2/download/uk/>

Over this period the FTSE 100 decreased from 6198.1 to 5899.9. Check:

<http://uk.finance.yahoo.com/echarts?s=%5EFTSE#symbol=^ftse;range=20001127,20120218;compare=;indicator=volume;charttype=area;crosshair=on;ohlcvvalues=0;logscale=off;source=undefined>

<sup>28</sup>See <http://www.bp.com/extendedsectiongenericarticle.do?categoryId=9039692&contentId=7072683>

<sup>29</sup>The length of the Annual Report grew from 38 pages in 2001 to 251 pages in 2010. The Directors' Remuneration Report, or equivalent, expanded from 5 pages in 2001 to 12 pages in 2010.

<sup>30</sup>The BP Annual Report is normally published in February of the year following the calendar year to which it relates. In this paper, year references are to the year covered by the report not its date of publication.

<sup>31</sup>Sutherland would presumably not have participated directly in the board meetings immediately ahead of the 2009 Annual Report and Annual General Meeting.



CEO Lord Browne in 2007 and his replacement as CEO by his erstwhile protégé Tony Hayward who had joined the Board in 2003.

#### **6.4.1.1.3 Executive Directors' Remuneration Packages**

Throughout the period under examination the composition of the remuneration packages available to executive directors remained broadly similar comprising: a basic salary, an annual performance bonus payable in cash, fully paid shares under longer term incentive plans 'performance shares', and for part of the period 'share options' dependent upon the achievement of performance targets - a pattern which, with variations thereon, is common across the great majority of large UK quoted companies. In addition over the period all executive directors participated in pension schemes - some received resettlement or accommodation allowances and there were occasional (but not insignificant) one-off payments to directors under the heading 'retention allowances'. The determination of the criteria under these headings to be used in assessing the amount of remuneration to be received by individual directors, throughout the period, was the responsibility of the 'remuneration committee', a board committee consisting entirely of non-executive directors - whose recommendations are subject to the approval by the full board and ultimately by the shareholder body. As noted above - and below - there has been quite extensive criticism in some years of these recommendations, but in no year under consideration did the shareholders not approve the proposals put before them.

In Table 24 Panel A shows the disclosed remuneration of the BP executive directors (including the CEO) in post at the end of each calendar year between 2001 and 2010 under the headings of annual salary, bonus, pension, other cash payments and the grant of fully paid performance related shares as well as share options at market price. Panel B (also in Table 24) presents the disclosed remuneration of the CEO under the same headings. The figures are derived from BoardEx data base and it is not that easy to reconcile these numbers with those contained within the company annual reports<sup>32</sup> - particularly those in respect to the Long Term Incentive Plan, as shown below during the discussion. They do however contain valuations of

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<sup>32</sup>Data bases are occasionally criticised about the values of components included, especially for those which are not easy to extract from the companies' annual reports and accounts (such as LTIPs, options, etc), which they are more likely to be subjected to the individual diligence.

the options which are not easy to obtain from the annual reports, although values were calculated by BP based on a Black and Scholes model for the purpose of relating the proportion of pay which was directly linked to performance. The figures are heavily influenced by the changing pattern of board composition as new directors came onto the board, for instance the replacement in the early years of the decade of Ford (retired in 2002), Buchanan (2002), Chase (2003), Olver (2004) and finally in 2007 Lord Browne, by the younger generation of Grote (appointed in 2000), Allen, Hayward, Manzoni (all appointed in 2003), Conn (2004), and Inglis<sup>33</sup> (2007, who resigned in 2010 as well as Hayward) which initially resulted in lower basic salary payments for the incoming directors. They also show the domination in terms of relative remuneration by Lord Browne over the period 2001-2006 and the significant increases in terms of both salary and bonus achieved in 2007 by the other directors following Lord Browne's departure in that year - most notably by the new CEO Tony Hayward - and which together with the one-off retention awards of £1.5m shares made to both Conn and Inglis in February 2008 compensated for the non-award of any performance shares in this year.

These increases accelerated in 2008 together with the return of performance share awards, albeit at modest levels relative to those in previous years, and continued propelled by enhanced bonus and performance share awards in 2009 - and in this year for the first time, the compensation package of Tony Hayward in respect to salary and bonus matched that of Lord Browne in the earlier part of the decade - although it still lagged significantly behind in terms of performance shares and share options. In 2010 - consequent to Deepwater Horizon - there were, with minor exceptions, no rises in salary or bonuses for the executive directors. There were also significant boardroom changes with both Hayward and Inglis leaving the board and the appointment of Dudley as CEO.

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<sup>33</sup>Manzoni - who had been seen as a contender for the position of CEO left the board in 2007, and Allen - a close associate of Lord Browne left in 2008. The only other change in the executive directors in the period under examination occurred in 2009 when Robert Dudley, who had previously been the managing director of the joint venture with TNK, joined the board. In 2010, following the Deepwater Horizon catastrophe and its aftermath, Andy Hayward stepped down and was replaced by Dudley and not long after Inglis head of exploration and production left the board.

*Table 24: BP Executive Directors' and CEO's Compensation Packages with Descriptive Statistics*

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Median	SD	Min.	Max.
<b>Panel A: Executive Directors' Compensation Packages from 2001 till 2010 (£,000)</b>														
Salary	3,702	2,743	3,421	3,248	3,699	3,879	3,104	3,197	3,751	2,343	3,309	488.894	2,343	3,879
Bonus	5,159	3,437	4,582	5,079	4,217	2,168	4,078	4,657	6,494	238	4,011	1,744.1	238	6,494
DC Pensions	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Others	695	302	262	217	206	216	265	277	479	405	332	154.41	206	695
Value of Equity Awarded	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Value of LTIP Awarded	13,748	9,350	15,599	14,484	26,317	21,515	15,447	16,391	4,278	1,552	13,868	7,376.9	1,552	26,317
Intrinsic Value of Options Awarded	0	0	1,858	2,426	3	2	0	0	0	0	429	912.755	0	2,426
Estimated Value of Options Awarded	6,499	3,417	5,474	6,274	5	7	0	2	2	0	2,168	2,910.49	0	6,499
Total Remuneration during the Period	29,108	18,947	29,076	29,085	34,238	27,569	22,629	24,247	14,525	4,538	23,396	8,740.98	4,538	34,238
Number of Executives	6	4	6	6	6	6	5	4	5	3	5	1.1005	3	6
Average Pay														
<b>Panel B: CEO's Compensation Packages from 2001 till 2010 (£,000)</b>														
Salary	1,193	1,203	1,316	1,382	1,451	1,531	877	998	1,045	760	1,176	252.99	760	1,531
Bonus	1,772	1,588	1,882	2,280	1,750	900	1,262	1,496	2,090	0	1,502	659.4	0	2,280
DC Pensions	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Others	55	49	79	82	90	95	14	15	23	365	87	102.48	14	365
Value of Equity Awarded	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Value of LTIP Awarded	4,457	3,947	5,699	6,509	12,472	10,066	4,344	4,444	1,183	376	5,350	3,668.67	376	12,472
Intrinsic Value of Options Awarded	0	0	847	1,365	0	0	0	0	0	0	221	482.05	0	1,365
Estimated Value of Options Awarded	3,256	2,220	2,662	3,523	0	0	0	0	0	0	1,166	1,543.08	0	3,523
Total Remuneration during the Period	10,678	8,958	11,559	13,694	15,673	12,497	6,483	6,938	4,318	1,501	9,230	4,426.84	1,501	15,673

*Notes:* This table recaps a number of descriptive statistics for BP executives' and CEO's remuneration components from 2001 until 2010, amounts are presented through British Pounds. All pay components are rounded to the nearest thousand. Panel A reports statistics relating to BP board executives, while Panel B presents similar figures for BP CEO pay. The average pay components are derived from the total remuneration during the period over the number of executives.

The following sub-sections detail the nature of executive compensation components and the developments of achievements' criteria for these pay components over the period under the respective headings of: base salary, annual bonus, long term incentives, performance shares, share options, pensions, other remuneration, as well as non-executive directorship.

#### **6.1.1.1.1 Base Salary**

Salaries for executive directors were significantly increased in 2001:

*'Taking into account this advice and the fact that base salaries had not previously been increased since October 1999, the committee decided to increase Lord Browne's salary by 47% and the other executive directors' salaries by an average of 15% for 2001.'*<sup>1</sup>

Changes in future years reflected both the generational shift in the composition of the board and also changes in job description – but on an individual basis saw significant increases across the period under examination. The only executive director in post throughout (Grote) saw his base salary more than double from \$665,000 in 2001 to \$1,380,000 in 2009 and 2010 too. In 2003 Allen, Hayward and Manzoni all received a base salary of £367,000. By 2006 - the year before the board room changes of 2007 - their salaries had risen to £463,000 for each individual. Conn who received £400,000 pro rata in 2004 saw his basic salary rise to £690,000 in 2009 and 2010 too. In 2009, Hayward's salary had risen to £1,045,000, although he had of course stepped up to be the CEO in 2007 (and in fact his basic salary was still below the £1,531,000 received by Lord Browne in 2006 – in 2007, Lord Browne also received an ex gratia payment equivalent to one year's salary of £1,575,000). In 2010 Hayward's salary received £958,000 as a last fixed sum before leaving the board, as well as Dudley's salary rose to \$1,175,000 compared with his start in 2009 by \$750,000 due to his role as group chief executive at the end of the year. However Dudley's salary had been reported as \$1,000,000 in 2009 and \$1,700,000 in 2010 by adding the amount of non-cash benefits and other emoluments.<sup>2</sup>

These increases in salaries were well in excess of any form of match with UK inflation or earnings indices for the relevant period - and ahead, albeit by rather less, of average increases

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<sup>1</sup>Annual Report, (2001), p.36

<sup>2</sup>Annual Report, (2009), p.84; and Annual Report, (2010), p.114

in remuneration of the BP work force.<sup>3</sup> Furthermore they are important in that they form the baseline for the annual cash bonus payable subject to the achievement of the targets - and as these targets were routinely achieved - then the increasing level of base salary effectively acted as a multiplier to the annual bonus received. They also form the base for the calculation of the number of performance shares that might be awarded - as is discussed further below.

#### **6.1.1.1.2 Annual Bonus**

The nature of bonuses - which in general more than doubled the basic salary payments in every year - are investigated by taking the nature of these bonuses into consideration, and also the manner in which the criteria for the bonuses has been set as discussed in increasing detail in the respective executive directors' remuneration reports.

Salient features of change over the period were an increase in the percentage of base salary which could be awarded - in 2001 it was 100% (110% for the CEO) going up to 150% in exceptional circumstances, in 2005 it rose to 120% (130% for the CEO), and remained at that level thereafter although the 150% ceiling remained (except it had risen to 165% for the CEO). Throughout the remuneration committee discretion has been claimed to award higher or lower bonuses than those achieved according to the targets. The extent to which this discretion was exercised in any year is not that clear, although it would appear that normally it moved the numbers up with the salient exception of 2006, the only year for which the bonus in aggregate did not match base salary, where there was a significant reduction:

*'While the quantitative assessment generated a near-target score, the remuneration committee also considered broader qualitative factors. These included the findings of internal and external reports on operational and safety issues in the US business. On balance, the committee judged that bonus levels should be reduced by 50% from the level they would otherwise have been.'*<sup>4</sup>

In addition the annual bonus amounted to only just over 50%. However this was very much a one-off and by 2009 bonuses amounted to approximately 170% (and 200% for the CEO) well above the specified normal maximum.

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<sup>3</sup>Calculation of the increase in pay for BP employees is complicated because the numbers are reported in dollars and affected by exchange rate movements and also the significant shrinkage and change in composition of the work force over the period.

<sup>4</sup>Annual Report, (2006), p.69

The proposed targets themselves also changed across the individual years although maintaining a mix of financial and non-financial targets throughout - and the amount of detail given as to the nature of the targets and feedback on their achievement increased significantly and all (but monotonically) over the period under review. In respect to targets for 2002, there is just reference to ‘a mix of financial targets and leadership objectives’ without providing any such information related to these types of objectives. For 2003, slightly more detail as to the aspects of corporate performance in general was provided:

*‘Executive directors’ annual bonus awards for 2003 will again be based on a mix of demanding financial targets and other leadership objectives, established at the beginning of the year. In addition to business performance, they cover areas such as people, safety, environment and organization.’<sup>5</sup>*

In 2004, there was no significant change – but rather more detail was provided as to what constituted good performance:

*‘Executive directors’ annual bonus awards for 2004 will be based on a mix of demanding financial targets relating to the company’s annual plan and leadership objectives established at the beginning of the year. In addition to stretching milestones and long-run metrics to track the enactment of strategy, they include areas such as people, safety, environment and organization.’<sup>6</sup>*

For 2005, more information was provided as to the breakdown of the targets (i.e. the achievement criteria) in to financial, strategic, and individual performance factors by 50, 30, and 20 percents, respectively:

*‘Executive directors’ annual bonus awards for 2005 will be based on a mix of demanding financial targets, based on the company’s annual plan and leadership objectives established at the beginning of the year, in accordance with the following weightings:*

- *50% financial measures from the annual plan principally on cash flow.*
- *30% annual strategic metrics and milestones taken from the five-year group business plan. There is a wide range of measures, including those relating to people, safety, environment, technology and organization, as well as operational actions and business development.*

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<sup>5</sup>Annual Report, (2002), p.34

<sup>6</sup>Annual Report, (2003), p.109

- *20% individual performance against leadership objectives and living the values of the group which incorporates BP's code of conduct.*<sup>7</sup>

Although the breakdown between financial and non-financial remained the same for 2006 in levels of proportions, there was a significant shift away from cash flow toward the accounting data in terms of the financial metrics:

*'Executive directors' annual bonus awards for 2006 will be based on a mix of demanding financial targets, based on the company's annual plan and leadership objectives established at the beginning of the year, in accordance with the following weightings:*

- *50% financial and operational metrics from the annual plan, principally earnings before interest, tax, depreciation and amortization (EBITDA) and return on average capital employed (ROACE).*
- *30% annual strategic milestones taken from the five-year group business plan, including those relating to technology, operational actions and business development.*
- *20% individual performance against leadership objectives and living the values of the group, which incorporates BP's code of conduct.*<sup>8</sup>

There was no significant change for 2007 (although 'cash costs' were reinstated together with EBITDA and ROACE as an identified financial metric), or for 2008 other than slight reductions in the weighting for financial data and individual performance:

*'Bonus for 2008 will reflect the business priorities of safety, people and performance as articulated by Dr Hayward. Of the 120% 'on-target' bonus, 50 will be measured on financial results, principally earnings before interest, taxes, depreciation and amortization (EBITDA), return on average capital employed and cash flow; 25 will be based on safety as assessed by the safety, ethics and environment assurance committee (SEEAC); 25 on people, behaviour and values; and 20 on individual performance, which will primarily reflect relevant operating results and leadership.'*<sup>9</sup>

For 2009, there was further individualization:

*'The group chief executive's and group chief financial officer's bonuses will be based 70% on group performance against key metrics in the annual plan, 15% on safety performance and 15% on people. The chief executives of Exploration and Production and Refining and*

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<sup>7</sup>Annual Report, (2004), p.120

<sup>8</sup>Annual Report, (2005), p.165

<sup>9</sup>Annual Report, (2007), p.64

*Marketing will have 50% of their bonuses determined on the above basis and 50% on the performance of their respective businesses.’<sup>10</sup>*

For 2010, more radical changes were proposed with an increase in the proposed uplift levels (150% on target and maximum of 225% of salary)<sup>11</sup> - but with one third payable in deferred shares and subject to assessment of safety and environmental performance over the three year period.<sup>12</sup>

For 2011, information was unchanged other than focusing more on a number of corporate performance metrics - particularly in both short and long terms:

*‘The approach for 2011 aligns closely with the group template for reinforcing safety and risk management, rebuilding trust and reinforcing value creation. There is a balance of long-term and near-term objectives weighted towards the top priorities of risk identification and management, safety and compliance, and talent and capability development. Group measures for executive directors will focus on:*

- *Safety and operational risk metrics – including full implementation of the S&OR functional model.*
- *Short-term performance – including key financial and operating metrics.*
- *Long-term performance – including progress on key projects and reserves replacement.*
- *People – including a new performance and reward framework.’<sup>13</sup>*

Progressively over the period more details were given as to the proposed targets and also as to the outcomes relating to those targets. Space does not permit a full rehearsal/narrative of these disclosures, but there is a clear contrast, for instance, between the bonus in years 2001 and 2009. In 2001, bonus entirety consisted of:

*‘Executive directors’ annual bonus awards for 2001 were based on a mix of financial targets and leadership objectives established at the beginning of the year. Assessment of all the targets showed that, compared with a target performance of 100 points, 135 points were achieved, resulting in bonus awards as shown in the summary of remuneration on page 32.’<sup>14</sup>*

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<sup>10</sup>Annual Report, (2008), p.79

<sup>11</sup>Annual Report, (2009), p.85

<sup>12</sup>Together with an option to defer a further third

<sup>13</sup>Annual Report, (2010), p.114

<sup>14</sup>Annual Report, (2001), p.36



However, in 2009, bonus' proposed targets and related outcomes are discussed in details as follows:

*'The annual bonus awards for 2009 reflect the excellent performance achieved across the business and are set out in the table on page 83.*

*Performance measures and targets were set at the beginning of the year based on the group's annual plan. Group results formed the basis for Dr Hayward's, Mr Dudley's and Dr Grote's annual bonus and were weighted 70% on financial and operating results (including profit, cash flow, cash costs, production, reserves replacement, Refining and Marketing profitability, refining availability, and installed wind capacity), 15% on safety (both metrics and progress on plans), and 15% on people (including organizational changes and employee attitudes). Mr Conn's and Mr Inglis's annual bonuses were based 50% on the group results as above, and 50% on their respective business unit results (also a mix of financial, operating, safety and people measures). The target level of bonus for executive directors was 120% of salary with committee judgement to award up to 150% for exceeding targets and above that level to recognize exceptional performance.*

*Targets were exceeded on virtually all key measures during 2009, a number by a substantial margin and resulting in bonuses averaging 170% of salary.*

*All key safety and operating metrics (including days away from work case frequency (DAFWCF), recordable injury frequency (RIF), oil spills, loss of primary containment, and process safety high potential incidents) showed good results and significant improvements in all cases from 2008. Implementation of the operating management system (OMS) progressed ahead of plan and is now successfully installed at 70 operating entities including all major downstream sites. People metrics were also exceeded. Major organizational restructuring was completed including reducing the number of group leaders and senior level leaders in excess of plan. The employee survey results showed significant improvement in key aspects such as safety and compliance and performance culture, as well as overall employee satisfaction.*

*Exceptional results were achieved on financial and operating measures. Replacement cost profit was some \$5billion above plan after adjusting for the oil price and other environmental factors. Cash costs were reduced substantially. Production increased by more than 4% while unit production costs reduced by 12%. The reserves replacement ratio was 129%, continuing an industry-leading performance. Refining and Marketing cash costs were reduced by 15%, and refining availability increased to 94%. Refining and Marketing profitability exceeded plan after adjusting for a dramatically weaker industry environment. Exploration and Production achieved major project start-ups in the Gulf of Mexico, Indonesia and Trinidad & Tobago. Exploration successes included the Tiber discovery in the Gulf of Mexico and new access for future growth was secured in Iraq, Indonesia and Jordan as well as new acreage in the Gulf of Mexico.*

*The excellent results achieved during 2009 reflect the strong leadership of the executive team and their continuing focus on safety, people and performance.*<sup>15</sup>

In addition, this is illustrated further in the 2010 report where separate disclosures as to the annual and deferred bonuses included the following:

*‘Annual bonus*

*The 2010 annual bonus results were dramatically affected by the Gulf of Mexico accident. In the judgement of the committee and the group chief executive this overrode the normal metrics for bonus outcomes. As indicated in the table on page 112, no bonus was paid to Mr Dudley, Dr Hayward or Mr Inglis for 2010. Mr Conn and Dr Grote similarly received no bonus for their group portion and were limited to an ‘on-target’ level for their segment/functional portion (accounting for 30% of their overall bonus opportunity). Both of these met or exceeded targets and made important contributions to the stabilization of the business following the accident.*

*The total bonus to Mr Conn was £310,500 and to Dr Grote \$621,000. Of the total for each, one-third is paid in cash, one-third is deferred on a mandatory basis and one-third is paid either in cash or voluntarily deferred at the individual’s discretion. These amounts are shown in the table on page 112.*

*Deferred bonus*

*One-third of the bonus awarded to Dr Grote and Mr Conn is deferred into shares on a mandatory basis under the terms of the deferred bonus element. Their deferred shares are matched on a one-for-one basis and will vest in three years contingent on an assessment of safety and environmental sustainability over the three-year deferral period.*

*Both individuals may elect to defer an additional third into shares on the same basis as the mandatory deferral.*

*All deferred bonuses are converted to shares based on an average price of BP shares over the three days following the company’s announcement of 2010 results (£4.84/share, \$46.68/ADS).’<sup>16</sup>*

#### **6.1.1.1.1.3 Long Term Incentives**

Throughout the period under examination the base salary and annual bonus were paid wholly in cash. However, as noted above, there were longer term share based incentive plans in operation throughout. The Executive Directors’ Long Term Incentive Plan (EDLTIP),<sup>17</sup> which was approved by shareholders in April 2000, included the potential for the award of fully paid

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<sup>15</sup>Annual Report, (2009), p.84

<sup>16</sup>Annual Report, (2010), p.114

<sup>17</sup>The acronym was later shortened to EDIP.

shares, share options, or cash. Through until 2010 the main component has been the award of fully paid shares based on the achievement of performance targets over a three-year rolling period, ending at the close of the relevant year. These shares would not vest for another three years but - although there were provisions for discretion to be exercised in the vesting, no subsequent performance targets were set.<sup>18</sup> In 2001 through to 2004 share options granted at market price were also important and nearly 10m options were granted - but in 2004 the remuneration committee stated that they did not intend to use the grant of share options in future periods - and with the exception of small numbers flowing through from previous schemes, none have been awarded since. Nor have there been any direct cash awards.

*‘The share element of the EDIP will provide the long-term performance-based component of the executive directors’ remuneration package. There is no current intention to make further share options grants.’<sup>19</sup>*

Successful performance against the targets set gave rise to the potential for very significant rewards beyond the annual salary and bonus. In 2001 awards of £10.8m were made<sup>20</sup>.<sup>21</sup> In 2002 they were £3.2m, in 2003 £3.5m, in 2004 £4.7m, in 2005 £8.0m, and in 2006 £4.9m. However in 2007 there was only an award of £0.4m to a director who had left during the year (Lord Browne)<sup>22</sup> and - although the awards were on an upward trajectory in 2008 £1.4m and 2009 £2.5m, they were still well below the levels achieved in the first half of the decade. Nor there have been any EDIP awards in 2010.

In terms of share options, approximately 2.2m were granted in 2001 (more than half of them to Lord Browne), 2.1m in 2002 (more than 60% to Lord Browne), 2.7m in 2003 (all but 50% to Lord Browne), 2.7m in 2004 (more than 50% to Lord Browne), after which - as noted above - the use of share options within the reward package was discontinued and has not been reinstated.

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<sup>18</sup>There is no evidence of any awards once made been subsequently reduced.

<sup>19</sup> Annual Report, (2004), p.119

<sup>20</sup>In 2001 only the number of shares awarded to each individual director was disclosed, but the comparative value figures were disclosed in 2002.

<sup>21</sup>The value calculations are based upon straight multiplication of the number of shares and their then market value - no adjustment appears to have been made in respect to the three-year vesting period.

<sup>22</sup>This was based on the wind down of a previous incentive plan.

#### 6.1.1.1.4 Performance Shares

Within the LTIP framework, performance shares were - and are - intended to provide the opportunity for executive directors to obtain very significant additional remuneration for strong performance. The potential number of shares to be awarded has throughout been based on multipliers of salary. No specific detail as to these multipliers was provided in 2001, 2002 and 2003 - in 2001 there was disclosure of the maximum number of shares per director that could be awarded under the commencing plan (2002-2004), but the equivalent information was not provided in 2002 or 2003. It was not until the 2004 Annual Report that full detail regarding the maximum (subject to the exercise of discretion by the remuneration committee) future awards available under the 2005-2007 scheme was provided.

*'The maximum number of performance shares that may be awarded to an executive director in any one year will be determined at the discretion of the remuneration committee and will not normally exceed 5.5 x base salary and, in the case of the group chief executive, 7.5 x base salary'*<sup>23</sup>

The same formula was used in 2005, 2006 and presumably in 2007 - although it is not specifically referred to. In 2008, there is reference to a maximum of 5.5 of the base salary for any executive director without any special reference to the CEO - but it is clear from the change in 2009 (to reflect the greater weight being given to the annual bonus) that his differential had been maintained:

*'The share element of the EDIP has been a feature of the plan, with some modifications, since its inception in 2000. To reflect the introduction of the deferred matching element, the maximum number of shares that can be awarded will be reduced from 7.5 times salary to 5.5 times salary for the group chief executive and from 5.5 times salary to 4.75 times salary for the chief executive of Exploration and Production, and to four times salary for the other executive directors.'*<sup>24</sup>

In 2010, no significant change provided other than the maximum number of shares awarded to the chief executive of Exploration and Production was unmentioned.

Over the period, targets set for the award of performance shares focused largely - but not entirely - on comparisons with other oil and gas companies based on three performance measures (i.e.

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<sup>23</sup>Annual Report, (2004), p.120

<sup>24</sup>Annual Report, (2009), p.85

SHRAM, ROACE, and EPS growth). In 2001 reporting on the outcome of the 1998-2000 plan, it was noted:

*'The share element compares BP's performance against oil majors over three years, on a rolling basis. This has been assessed in terms of a three-year shareholder return against the market (SHRAM), return on average capital employed (ROACE) and earnings per share (EPS) growth.'*<sup>25</sup>

For the 1998-2000 plan, the award for which was made in 2001 - the comparators were Chevron, Texaco, ExxonMobil, Shell and TotalFinaElf - and this was the case for the 1999-2001 plan as well for which an award was recommended in 2001. For the 2000-2002 and 2003 plan, the comparator group was ExxonMobil, Shell, TotalFinaElf, ChevronTexaco, ENI and Repsol-YPF. But in 2001, it was decided to change the comparator base for 2002-2004 plan to the FTSE All World Oil and Gas index:

*'The comparator group of companies used for the SHRAM performance condition in the share element has been reduced so much by industry consolidation that the committee has decided for the 2002-2004 Plan to change to the FTSE All World Oil and Gas Index weighted by market capitalization. The committee is satisfied that this change does not make the performance targets of the Plan less demanding.'*<sup>26</sup>

The 2004 Report provided further detail as to the relevant criteria for the awards running through to 2006 by specifying the four key comparators (i.e. ExxonMobil, Shell, Total, and ChevronTexaco):

*'The primary measure is BP's shareholder return against the market (SHRAM), which accounts for nearly two thirds of the potential total award, the remainder being assessed on BP's relative return on average capital employed (ROACE) and earnings per share growth (EPS).*

*BP's SHRAM is measured against the companies in the FTSE All World Oil & Gas Index. Companies within the index are weighted according to their market capitalization at the beginning of each three-year period in order to give greatest emphasis to oil majors. BP's ROACE and EPS growth are measured against ExxonMobil, Shell, Total and ChevronTexaco.'*<sup>27</sup>

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<sup>25</sup>Annual Report, (2001), p.34

<sup>26</sup>Ref o/s - Annual Review, (2001), p.34

<sup>27</sup>Annual Report, (2004), p.121

But significantly, the basis had been changed for awards after that date based on TSR as a financial performance indicator to be 100%, 70% and 35% for achieving first, second or third position correspondingly:

*'For share element awards in 2005, the performance condition will relate to BP's total shareholder return (TSR) performance against the other oil majors (ExxonMobil, Shell, Total and ChevronTexaco) over a three-year period. TSR is calculated by taking the share price performance of a company over the period, assuming dividends to be reinvested in the company's shares. All share prices will be averaged over the three months before the beginning and end of the performance period and will be measured in US dollars. At the end of the performance period, the TSR performance of each of the companies will be ranked to establish the relative total return to shareholders over the period. Shares under the award will vest as to 100%, 70% and 35% if BP achieves first, second or third place respectively; no shares will vest if BP achieves fourth or fifth place.'*<sup>28</sup>

This base was maintained in 2006 and 2007, but revised again in 2008 by including 'ConocoPhillips' to the previous four comparators, and the balanced scorecard for non-financial performance measures to the TSR based on the same weighting:

*'Performance conditions for the 2009-11 share element will be somewhat modified from previous years. First, the peer group of oil majors against which we compare will be increased to include ConocoPhillips as well as ExxonMobil, Shell, Total and Chevron as previously. This change reflects ConocoPhillips' significant growth over the last few years, providing it with similar scale and global reach to the other oil majors.*

*Second, vesting of the shares will be based 50% on total shareholder return (TSR) versus the competitor group and 50% on a balanced scorecard of underlying performance versus the same competitors. The underlying performance will be assessed on three measures reflecting key priorities in BP's strategy – in Exploration and Production, hydrocarbon production growth, in Refining and Marketing, improvement in earnings per barrel, and group increase in underlying net income. Both Exploration and Production growth and Refining and Marketing earnings improvement are key strategic objectives for the group and this inclusion aligns key measures with both executive director priorities as well as key drivers of value for shareholders. Group increase in underlying net income acts as a holistic measure of success reflecting revenues, costs and complexity as well as safe and reliable operations.*

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<sup>28</sup>Ref o/s - Annual Review, (2004), p.121

*All the above measures will be compared with the five other oil majors to determine the overall vesting result. The methodology used will rank each of the five other majors on each of the measures. BP's performance will then be compared on an interpolated basis relative to the performance of the other five. For performance between second and third or first and second, the result will be interpolated based on BP's performance relative to the company ranked directly above and below it. As in previous years, performance shares will vest at 100%, 70% and 35% for performance equivalent to first, second and third rank respectively and none for fourth or fifth place. The three underlying measures will be averaged to form the balanced scorecard component.*

*The committee considers that this combination of measures provides a good balance of external as well as internal metrics reflecting both shareholder value and operating priorities. As in previous years, the committee will exercise its discretion, in a reasonable and informed manner to adjust vesting levels upwards or downwards if it concludes the above quantitative approach does not reflect the true underlying health and performance of BP's business relative to its peers. It will explain any adjustments in the next directors' remuneration report following the vesting, in line with its commitment to transparency.'*<sup>29</sup>

This structure was maintained in 2009, but the weighting given to non-financial measures increased from half to two-thirds:

*'Performance conditions for the 2010-12 share element will continue the structure used in the 2009-2011 plan.*

*Vesting of shares will be based, as to one-third, on BP's TSR compared with other oil majors over a three-year period and as to two-thirds, on a balanced scorecard of underlying performance. BP's TSR performance will be compared with the other oil majors—ExxonMobil, Shell, Total, ConocoPhillips and Chevron.'*<sup>30</sup>

In 2010, the weighting of performance shares returned back to half for financial measures and the other half will be based on value creation, reinforcing safety and risk management, and rebuilding trust rather than balanced scorecard standard.

*'Performance conditions for the 2011-2013 share element will be aligned with the strategic agenda that has evolved in response to last year's events. This focuses on value creation, reinforcing safety and risk management, and rebuilding trust.*

*Vesting of shares will be based 50% on BP's total shareholder return (TSR) compared to the other oil majors, reflecting the central importance of restoring the value of the company. A further 20% will be based on the reserves replacement ratio, also relative to*

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<sup>29</sup>Annual Report, (2008), p.82-83

<sup>30</sup>Annual Report, (2009), p.86

*the other oil majors, reflecting a central element of value creation. The final 30% will be based on a set of strategic imperatives for rebuilding trust; in particular, reinforcing safety and risk management culture, rebuilding BP's external reputation, and reinforcing staff alignment and morale.'*<sup>31</sup>

As the overall figures above suggest initially the outcomes under the plan were very encouraging, for example:

*'For the 1998-2000 LTPP BP's performance was assessed in terms of three-year shareholder return against the market (SHRAM) in relation to the following companies: Chevron, ExxonMobil, Shell and Texaco. BP came first in the 1998-2000 Plan, and the Remuneration Committee made the maximum award of shares to executive directors in 2001.*

*For the 1999-2001 Plan BP's SHRAM again exceeded ChevronTexaco, ExxonMobil and TotalFinaElf, but came second to Shell.*

*The Remuneration Committee has also considered profitability and growth targets for the 1999-2001 Plan, i.e. return on average capital employed (ROACE) and earnings per share (EPS) growth. On both measures BP came first in assessing performance against the same oil companies.*

*Based on an initial performance assessment of 175 points out of 200, the committee expects to make an award of shares to executive directors...'*<sup>32</sup>

But relative performance began to decline particularly in respect to comparison of shareholder return. In 2002: *'BP's SHRAM came in at sixth place among the comparator group, fourth place on EPS growth and first place on ROACE'*<sup>33</sup> - which gave rise to a performance assessment of 80 points out of 200. An identical performance sixth, fourth and first was achieved in 2003 - but in that year the performance assessment was increased to 85 points. Things did not improve in 2004 - the first year of the use of the FTSE All World Oil & Gas index which saw a performance assessment of *'75 points out of 200 (0 for SHRAM, 50 for ROACE and 25 for EPS growth)'*<sup>34</sup> - a performance and assessment which was exactly

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<sup>31</sup>Annual Report, (2010), p.115

<sup>32</sup>Annual Report, (2001), p.35

<sup>33</sup>Annual Report, (2002), p.38

<sup>34</sup>Annual Report, (2004), p.125



repeated in 2005. In 2006, matters were still worse with a performance assessment of ‘60 points out of 200 (0 for SHRAM, 50 for ROACE and 10 for EPS growth)’<sup>35</sup>.

In 2007, a nadir was reached with - for the first time in the period under consideration - no shares being awarded based on the overall assessment of compensation committee - although a number of good performing areas were achieved:

*‘Performance for the 2005-2007 share element was assessed relative to the TSR of the company compared with the other oil majors—ExxonMobil, Shell, Total and Chevron. BP’s TSR result, reflecting past operating problems, was last relative to the other majors. The committee also reviewed the underlying business performance relative to competitors, including financial (ROACE, EPS, cash flow etc.) and non-financial (HSE etc.) indicators. While this showed some areas of strong performance, the committee’s overall assessment, considering both the TSR result and the underlying performance, was that performance failed to meet satisfactory levels and consequently no shares will vest in the Plan for 2005-2007.’*<sup>36</sup>

In 2008 operating under the new criteria based on TSR comparison with other oil majors, the company again signally failed to meet the targets set – however the remuneration committee decided to use its discretion to make awards amounting to £1.4m. It justified this accordingly:

*‘Performance for the share element is assessed relative to the TSR of the company compared with the other oil majors – ExxonMobil, Shell, Total and Chevron. Recognizing the inherent imperfections in a TSR ranking, the EDIP rules give the committee power to adjust (upwards or downwards) the vesting level derived from the TSR ranking if it considers that the ranking does not fairly reflect BP’s underlying business performance relative to the comparators. This is designed to enable a more comprehensive review of BP’s long-term performance, with the aims of tempering anomalies created by relying solely on a formula-based approach.*

*For the 2006-2008 plan, BP was fifth relative to the other majors in terms of TSR when calculated on a common currency (US dollar) basis as originally anticipated. However, unusually large currency movements at the end of this period were an extraneous influence on this result. On a local currency basis, the TSRs of BP, Shell and Total were tightly bunched together. The committee also reviewed BP’s underlying business performance relative to the comparator companies over the full three-year period. This review included financial measures (earning per share growth, ROACE, free cash flow, net income), operating measures (production, reserves replacement and Refining and Marketing*

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<sup>35</sup> Annual Report, (2006), p.69

<sup>36</sup> Annual Report, (2007), p.66

profitability), and nonfinancial measures (health, safety and environmental and reputation). Again, the performance of the European comparators was quite similar: BP led the group on some measures (notably free cash flow and reserves replacement) but lagged on Refining and Marketing profitability.

The committee concluded that the TSR result, by itself, was not a fair reflection of BP's relative underlying performance over the period. After thorough consideration, the committee determined that 15% of the shares under the 2006-08 award should vest – this being a fair reflection of the overall results achieved and consistent with its approach to the clustering of results, as anticipated in the EDIP rules approved by shareholders in 2005.

...

Lord Browne also held an award under the 2006-08 share element related to long-term leadership measures. These focused on sustaining BP's financial, strategic and organizational health. Performance relative to the award was assessed by the chairman's committee and, based on this assessment, no shares were vested.<sup>37</sup>

In 2009, a rather similar story unfolded:

*'This momentum of improvement is also apparent over the three-year performance period covered by the 2007-2009 share element under the EDIP. Performance for the share element is assessed relative to the other oil majors –ExxonMobil, Shell, Total and Chevron. The committee follows the assessment process approved by shareholders in determining the vesting of shares that had been awarded at the start of 2007. It first compares the total shareholder return (TSR) of each of the majors and then reviews underlying performance metrics across the same group. Given the small peer group, similarity of their businesses, and general imperfections in measurement, there will be occasions when results of some or all of the companies are tightly clustered. In such circumstances, a small difference in TSR performance or calculation methodology could produce a large, and inappropriate, difference in vesting level. To counter this the committee has the obligation to review both relative TSR and underlying performance to ensure a balanced judgement is made. Such was the case with regard to the 2007-2009 metrics.*

*The TSR result was tightly clustered for 2007-2009 with BP coming fourth based on our established methodology but very close to third place. As required by the plan, the committee reviewed a number of financial and operating metrics to assess relative underlying performance. These included the average change over the three years of EPS, ROACE, free cash flow, net income, production growth and Refining and Marketing profitability. The review of underlying performance showed BP in a strong relative*

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<sup>37</sup>Annual Report, (2008), p.81

*position. BP came first on change in EPS growth, ROACE, free cash flow and production, on adjusted net income BP ranked second and on Refining and Marketing profitability it came third. Based on the full review and combining both the TSR and underlying analysis, the committee judged BP to be tied for third place and thus shared the vesting outcome for third and fourth place (35% and 0% respectively) as set out in the plan rules. The resulting 17.5% vesting for eligible participants is also shown in the table ...'*<sup>38</sup>

This decision resulted in £2.5m being awarded to the four executive directors (i.e. Conn, Dudley, Grote, and Inglis), although BP came fourth in terms of TSR comparison with its comparators. In 2010, another nadir was reached with no shares being awarded - for the second time in the period under consideration - due to the massive oil-spill accident in the Mexican Gulf.

*'Results for the 2008-2010 share element were also strongly affected by the Gulf of Mexico accident. BP's Total Shareholder Return (TSR) for the three-year period was lowest among the peer group of oil majors. The company's underlying performance relative to the peer group actually remained quite strong on the metrics historically used to test the fairness of the TSR result. The committee felt, however, that because of the seriousness of the Gulf of Mexico accident, the TSR ranking was an appropriate result. No shares, therefore, vested under the plan for any executive director.'*<sup>39</sup>

#### **6.1.1.1.5 Share Options**

Although the LTIP framework still enables the use of share options effectively these options have not been awarded since 2004 - however they were quite a significant part of the remuneration package in the early years of the period under examination. The criteria for the award of option shares in the years 2001-2004 was based on comparative returns, but in this case the comparison was with a wider group of companies - as noted in the 2001 Annual Report:

*'The share option element reflects BP's performance relative to a wider selection of global companies. The committee will take into account BP's total shareholder return (TSR) compared with the TSR for the FTSE Global 100 group of companies over the three years preceding the grant.'*<sup>40</sup>

Options vested in equal proportions over the three years subsequent to the grant and had a life of seven years - and the same basis was used for 2002, 2003 and 2004. In terms of how these

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<sup>38</sup>Annual Report, (2009), p.84

<sup>39</sup>Annual Report, (2010), p.114

<sup>40</sup>Annual Report, (2001), p.34

options were allocated (and over the period more than half of them went to Lord Browne), very little information is provided other than the statement in 2003 that:

*'In accordance with the framework approved by shareholders in 2000, it is the committee's policy to continue to exercise its judgement in 2004 to decide the number of options to be granted to each executive director.'*<sup>41</sup>

Nor is any information as to valuation provided - although Black and Scholes in 1972 type valuations were calculated by the company for the purposes of estimation of the proportion of executive director remuneration which was performance based.

#### **6.1.1.1.1.6 Pensions**

Until quite recently, the very significant sums provided to directors and senior executives in terms of pension contributions made on their behalf have received relatively little attention. This has to an extent changed consequent to the introduction of further requirements for disclosure - and also the impact of revelations as to particular cause celebres e.g. that of the chief executive of RBS referred to above. The basic construction of the BP scheme as it applied to UK based directors<sup>42</sup> was set out in the 2001 Annual Report as follows:

*'Scheme members' core benefits are non-contributory. They include a pension accrual of 1/60th of basic salary for each year of service, subject to a maximum of two-thirds of final basic salary; a lump-sum death-in-service benefit of three times salary; and a dependant's benefit of two-thirds of the member's pension. The Scheme pension is not integrated with state pension benefits.*

*Normal retirement age is 60, but Scheme members who have 30 or more years' pensionable service at age 55 can elect to retire early without an actuarial reduction being applied to their pension.*

*Pensions payable from the Fund are guaranteed to be increased annually in line with changes to the Retail Prices Index, up to a maximum of 5% a year.*

*Directors accrue pension on a non-contributory basis at the enhanced rate of 2/60ths of their final salary for each year of service as executive directors (up to the same two-thirds limit). None of the directors is affected by the pensionable earnings cap.'*<sup>43</sup>

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<sup>41</sup>Annual Report, (2003), p.110

<sup>42</sup>There is also significant detail provided as to the separate schemes relevant to US based directors – but space does not permit detailed exposition of these.

<sup>43</sup>Annual Report, (2001), p.37

More information on the eligibility of executives for pension payments was added to the BP pension scheme as it applied to UK based directors in the 2002 Annual Report as follows:

*'In accordance with the company's long-standing practice for executive directors who retire from BP on or after age 55 having accrued at least 30 years' service, Mr Chase will receive an ex-gratia lump sum as a superannuation payment from the company equal to one year's base salary following his retirement. Lord Browne will remain eligible for consideration for such a payment. In the case of these individuals, all matters relating to such superannuation payments will be considered by the remuneration committee. Any such payments would be in addition to their pension entitlements referred to above. None of the other executive directors is eligible for consideration for a superannuation payment - as the remuneration committee decided in 1996 that appointees to the board after that time should cease to be eligible for consideration for such a payment.'*<sup>44</sup>

No significant change occurred in 2003. In 2004, the UK government had announced important proposals on pensions, the impact of which was to be reviewed by the committee in 2005 in conjunction with BP studies into the wider effects of the new legislation for employees.<sup>45</sup> In 2005, no change happened. Further information on the amendments of BP pension scheme in terms of the executive retirement age and setting of new pension allowance was added in the 2006 Annual Report as follows:

*'The rules of the BP Pension Scheme have recently been amended such that the normal retirement age is 65. Scheme members can retire on or after age 60 without reduction. Special early retirement terms apply to pre-1 December 2006 service for members with long service as at 1 December 2006.*

*In April 2006, the UK government made important changes to the operation and taxation of pensions. The remuneration committee decided to deliver pension benefits in excess of the new lifetime allowance of £1.5 million set by the legislation via an unapproved and unfunded pension arrangement paid by the company direct.'*<sup>46</sup>

No change occurred in 2007. More information was provided in 2008, 2009 and 2010 Annual Reports related to Mr Inglis participation - as a member in the BP Pension Scheme - gave rise to a US federal tax liability as he was based in Houston - the amounts mentioned later on in

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<sup>44</sup>Annual Report, (2002), p.39

<sup>45</sup>Annual Report, (2004), p.122

<sup>46</sup>Annual Report, (2006), p.71

section: Other Remuneration. Therefore the committee approved to discharge this US tax liability under a tax equalization arrangement in respect of each year.<sup>47</sup>

Indicative figures show the speed at which the value of the benefit accruing to the executive directors rose. At end 2001, Lord Browne had accrued \$16.3m dollars in terms of transferable value<sup>48</sup>, five years later at end 2006 this had raised to £21.7m. For Hayward, the increase was even more dramatic - at end 2002, his transferable value was £1.3m, seven years later it had risen to £10.8m. For Grote, over the same period the increase was from \$3.5m to \$12m. Furthermore, the rules of the scheme appear to have been generous in the instance of early retirement. For example, the 2007 Annual Report notes that:

*'Dr Allen is due to retire on 31 March 2008 and will be entitled to take an immediate unreduced pension. The figures in the table relate to 2007 and so do not include anticipated incremental cost of the unreduced pension (£1.36 million).'*<sup>49</sup>

#### **6.1.1.1.1.7 Other Remuneration**

Beyond these basic constituents of compensation, there were also a variety of additional benefits covering travel provision, relocation and accommodation allowances, disclosure of consultancy contracts with former directors etc. Perhaps the most striking individual components of these non-standard aspects of compensation were the £1.575m ex gratia lump sum payment to Lord Browne following his resignation in 2007, and the one-off retention awards of £1.5m shares made to both Conn and Inglis in February 2008. The following sets out some details of the disclosures relating to the period 2001-2010.<sup>50</sup>

In 2001, resettlement allowances for Mr Ford and Dr Grote were \$440,000 and \$300,000 respectively<sup>51</sup>, while in 2002 these allowances were \$300,000 for Dr Grote, and \$110,000 for Mr Ford<sup>52</sup>.

Resettlement allowance for Dr Grote was \$175,000 in 2003. Besides this Mr Chase was engaged as a consultant to BP in relation to the TNK-BP transaction, following his retirement

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<sup>47</sup>Annual Reports for period 2008/09/10 in pages 83/86/116 respectively.

<sup>48</sup>These figures were not disclosed until 2002 – the 2001 figure is a comparative.

<sup>49</sup>Annual Report, (2007), p.68

<sup>50</sup>Through the period, there were payments relating to the cessation of contract for directors.

<sup>51</sup>Annual Report, (2001), p.34

<sup>52</sup>Annual Report, (2002), p.36

in May 2003. He received \$50,000 gross per month plus expenses throughout the consultancy agreement which ended in May 2004. In July 2003, Mr Chase was also appointed as a BP nominated director of TNK-BP Limited<sup>53</sup>. He received emoluments of \$120,000 from TNK-BP Limited during 2003.<sup>54</sup>

Compensation for Mr Manzoni amounting to £50,000 paid relating to expatriate costs prior to his appointment as an executive director in 2004. Moreover, Mr Olver was appointed on 1 July 2004 as a consultant to BP in relation to its activities in Russia following his retirement from BP p.l.c., and he had previously been appointed as a BP nominated director of TNK-BP Limited effectively on 20 April 2004. He received £150,000 in fees in 2004 and - as a director, deputy chairman and chairman of the audit committee of the joint-venture company - he received \$90,000 in fees from TNK-BP Limited throughout the consultancy agreement. Furthermore, Mr Chase continued as a consultant to BP in relation to the TNK-BP transaction ended in May 2004 and he left the board of TNK-BP Limited in March 2004. He received \$250,000 in 2004 and - as a director, deputy chairman and chairman of the audit committee of TNK-BP Limited - he received \$30,000 in fees from that company throughout the consultancy agreement.<sup>55</sup>

In 2005, Mr Olver continued as a consultant to BP in relation to its activities in Russia and served as a BP-nominated director of TNK-BP Limited. He received £300,000 in fees in 2005 in addition to reimbursement of costs and support for his role throughout the consultancy agreement. In addition, he is entitled to retain fees paid to him by TNK-BP up to a maximum of \$120,000 a year for his role as a director, deputy chairman and chairman of the audit committee of TNK-BP Limited.<sup>56</sup>

Mr Olver still continued as a consultant to BP in relation to its activities in Russia and served as a BP-nominated director of TNK-BP Limited until 30 September 2006. He received £225,000 in fees in 2006 as well as reimbursement of costs and support for his role throughout the consultancy agreement. Additionally, he was entitled to retain fees paid to him by TNK-BP up to a maximum of \$120,000 a year for his role as a director, deputy chairman and chairman of

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<sup>53</sup>A joint-venture company owned 50% by BP

<sup>54</sup>Annual Report, (2003), p.112-113

<sup>55</sup>Annual Report, (2004), p.123and126

<sup>56</sup>Annual Report, (2005), p.171

the audit committee of TNK-BP Limited. On the other hand, Mr Miles<sup>57</sup> received £150,000 per annum since he was appointed as a director and non-executive chairman of BP Pension Trustees Limited in October 2006 for a term of three years.<sup>58</sup>

Lord Browne resigned from the BP board on 1 May 2007, and he was awarded a lump sum ex gratia superannuation payment of one year's salary worth £1,575,000 in addition to the his pay package. On the other hand, Mr Manzoni resigned from the board as well on 31 August 2007, and he was awarded compensation for loss of office equal to one year's salary worth £485,000 besides his remuneration parcel. Additionally, he received £30,000 regarding statutory rights and retained his company car.<sup>59</sup>

In 2008, a non-cash benefits amount of £212,000 includes costs of London accommodation provided to Mr Inglis. In addition, BP discharged Mr Inglis a US tax liability arising on his participation in the UK pension scheme amounting to \$553,175 throughout a tax equalization arrangement. On the other hand, Dr Allen left the company at the end of March 2008. He was entitled to one year's salary worth £510,000 as compensation for loss of office in accordance with his contractual entitlement, as well as a pro rata bonus for 2008 and continued full participation in the 2006-08 and 2007-09 share elements, according to the normal rules of the plan. Additionally, he received £30,000 in respect of statutory rights and retained his company car. In February 2008 it was considered appropriate to strengthen the retention element of remuneration for two executive directors (namely: Mr Conn and Mr Inglis) as restricted shares amounting to £1.5m.<sup>60</sup>

Disclosures in 2009 reflect Mr Dudley's remuneration package since his appointment as executive director on 6 April 2009. A non-cash benefits amounting to \$304,000 includes costs of London accommodation and any tax liability thereon provided to Mr Dudley. In addition, BP discharged Mr Inglis a US tax liability arising from his participation in the UK pension scheme amounting to \$90,314.<sup>61</sup>

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<sup>57</sup>Non-executive director of BP until April 2006

<sup>58</sup>Annual Report, (2006), p.73

<sup>59</sup>Annual Report, (2007), p.65

<sup>60</sup>Annual Report, (2008), p.80and84

<sup>61</sup>Annual Report, (2009), p.83



During 2010, a non-cash benefits amount of \$564,000 provided to Mr Dudley includes costs of London accommodation and any tax liability thereon. On 30 November 2010, Dr Hayward left the board, and awarded compensation for office loss equal to his salary for entire one year - worth £1,045,000 - besides his remuneration package, as well as £30,000 regarding statutory rights. On 31 October 2010, Mr Inglis left also the board, and awarded compensation for office loss equal to one year's salary - worth £690,000 - besides his pay package. In addition, he received a further £200,000 for costs related to both repatriation and relocation consistent with his international assignment arrangements. Furthermore, BP discharged Mr Inglis a US tax liability arising from his participation in the UK pension scheme amounting to \$1,260,000.<sup>62</sup>

#### **6.1.1.1.1.8 Non-executive Directorships**

Over the period under examination, BP board executive directors held a number of non-executive directorship positions in other companies. Chronologically - in 2001 - Browne was a non-executive director of Goldman Sachs Inc<sup>63</sup> as well as Intel Corporation, Buchanan was a non-executive director of Boots (where Ian Prosser had been a non-executive director from 1984 till 1996 and the chairman until 1999), Chase was a non-executive director of Computer Sciences Corp and Diageo, Ford was a non-executive director of USG Corp and Olver of Reuters Group.<sup>64</sup>

In 2002, Chase added Tesco to his list of non-executive directorships and Hayward who appointed as executive director of BP in February 2003 became a non-executive director of Corus Group.<sup>65</sup> Buchanan, Chase, Olver and Ford had all given up their executive directorships by the end of 2003. In 2004, Conn became a non-executive director of Rolls-Royce (from January 2005) and Manzoni a non-executive director of SABMiller.<sup>66</sup> It is interesting to note that at that time BP did not comply with the provisions of the (then) Combined Code in terms of disclosing the fees received by executives for outside services – stating in the annual report:

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<sup>62</sup>Annual Report, (2010), p.112

<sup>63</sup>See: <http://contracts.corporate.findlaw.com/compensation/employment/2289.html>

<sup>64</sup>Annual Report, (2001), p.39

<sup>65</sup>Annual Report, (2002), p.43

<sup>66</sup>Annual Report, (2004), p.128

*'The amount of fees received by executive directors in respect of their service on outside boards is not disclosed since this information is not considered relevant to BP.'*<sup>67</sup>

In 2006, Browne stood down as a non-executive director at Intel and Grote became a non-executive director at Unilever NV and Unilever plc.<sup>68</sup> In 2007, Browne left the company and there was more detailed disclosure as to the policy re non-executive directorships and for the first time disclosure of the extent of fees received:

*'The board encourages executive directors to broaden their knowledge and experience by taking up appointments outside the company. Each executive director is permitted to accept one non-executive appointment, from which they may retain any fee. External appointments are subject to agreement by the chairman and must not conflict with a director's duties and commitments to BP. During the year, the fees received by executive directors for external appointments were as follows: Tony Hayward Corus £62,250 and Tata Steel £177, Iain Conn Rolls Royce £57,166, Byron Grote Unilever PLC £31,000 and Unilever NV €45,000, and Andy Inglis BAE Systems £39,661'*<sup>69</sup>

In 2008, Hayward stood down as a non-executive director of Corus but became a non-executive director and senior independent director of Tata Steel and Inglis became a non-executive director of BAE Systems.<sup>70</sup>

*'During the year, the fees received by executive directors for external appointments were as follows: Tony Hayward Tata Steel £83,000, Iain Conn Rolls Royce £65,000, Byron Grote Unilever PLC £33,500 and Unilever NV €48,625, and Andy Inglis BAE Systems £86,754'*<sup>71</sup>

In 2009, Hayward stood down as a NED at Tata Steel and the relevant disclosure details were as follows:<sup>72</sup>

*'During the year, the fees received by executive directors for external appointments were as follows: Tony Hayward Tata Steel £29,000, Iain Conn Rolls Royce £65,000, Byron Grote Unilever PLC £36,000 and Unilever NV €52,250, and Andy Inglis BAE Systems £90,000'*<sup>73</sup>

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<sup>67</sup>Annual Report, (2004), p.117

<sup>68</sup>Annual Report, (2006), p.65-66

<sup>69</sup>Annual Report, (2007), p.71

<sup>70</sup>Annual Report, (2008), p.68-69

<sup>71</sup>Annual Report, (2008), p.86

<sup>72</sup>Annual Report, (2009), p.67

<sup>73</sup>Annual Report, (2009), p.90

In 2010, Hayward and Inglis left the company and the relevant disclosure note was as follows:<sup>74</sup>

*‘During the year, the fees received by executive directors for external appointments were as follows: Iain Conn Rolls Royce £65,000, Byron Grote Unilever PLC £33,000 and Unilever NV €47,500, and Andy Inglis BAE Systems £49,280’<sup>75</sup>*

#### **6.1.1.1.2 The Remuneration Committee**

The remuneration committee at BP is a long standing one. At the start of investigation period it was chaired by Robin Nicholson - who in a varied career had been an academic scientist, managing director of the European subsidiary of a Canadian nickel mining company, as well as a civil servant (as Chief Scientific Officer, Cabinet Office, 1983-1985) before taking up an executive directorship at Pilkington in 1986 and a non-executive directorship at Rolls Royce in 1986. He joined the BP board in 1987. He remained a board member of BP until the 2005 AGM when he retired at the age of 70. His replacement as chair of the remuneration committee was Dr DeAnne Julius - an American economist living in England<sup>76</sup> who had worked with the World Bank, British Airways and Shell before a four year spell (1997-2001) on the Monetary Policy committee of the Bank of England. She became a non-executive director of BP in 2001, as well as a non-executive director on a number of other boards – including Lloyds TSB from 2001-2007 where she was a member of the remuneration committee, and she is currently on the remuneration committee of Serco and Jones, and Lang Lasalle. Each member of the remuneration committee was (and is) subject to re-election every three years<sup>77</sup> – but Julius and Prosser (BP’s deputy chairman, previously CEO of Bass and until 2003 Intercontinental hotels<sup>78</sup>) were members of the committee throughout the period under review and Davis,

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<sup>74</sup>Annual Report, (2010), p.84

<sup>75</sup>Annual Report, (2010), p.118

<sup>76</sup>Although her first full time employment was apparently as a CIA analyst at the time of the Vietnam War

<sup>77</sup>It is unclear whether this referred to internal reelection to the remuneration committee or reelection as a director at the AGM – which is now an annual process.

<sup>78</sup>*‘Sir Ian is a fixture of the FTSE 100 having sat on the boards of five blue chips including Boots and Lloyds TSB. He is still deputy chairman of BP and is the senior independent non-executive on the board of GlaxoSmithKline, the drugs giant. His heroes are James Hanson, the great conglomerate builder, and Lord Browne, whose capture of Amoco helped transform BP’s fortunes.*

*People who have worked with him say those of a weak disposition easily get steamrolled in the face of Sir Ian’s strongly held views, although a confident, well-argued case will lead to a change of mind.*

*A physically imposing figure, his allies say he has great skills in chairing meetings and can be extremely charming when organising and cajoling for things to get done.’*

See: <http://www.independent.co.uk/news/business/news/sir-ian-prosser-chief-with-a-mission-to-win-over-sainsburys-sceptics-569982.html>

previously an AMOCO director, was a member from 2001 through to the 2009 AGM.<sup>79</sup> Knight - an American BP board member since 1987 (and also on the IBM remuneration committee throughout the period)<sup>80</sup> - was a member from 2001 to 2005. In 2004, Bryan - a director of BP since 1998 having previously been a director of AMOCO - joined the committee. Bryan was contemporaneously a non-executive director of General Motors and Goldman Sachs (where he was a member of the remuneration committee) and remained a member of the BP remuneration committee until retiring at the age of 70 in April 2007. Also in 2004 Tom McKillop joined the BP board and became a member of the remuneration committee. McKillop - a chemist and CEO of Zeneca and then AstraZeneca from 1993 to end 2005 - had been a non-executive director of Lloyds TSB from 1999-2004 and then became chairman of the Royal Bank of Scotland (RBS). He resigned from this position after the collapse and government bail-out of RBS in 2008 and, somewhat reluctantly, stood down as a director of BP at the 2009 AGM following shareholder concerns as to his suitability as a non-executive director. In 2009, there were two additions to the committee: Anthony Burgmans and George David. Burgmans had joined the BP board in 2004 having previously been an executive director and then vice-chairman of Unilever and is a member of a number of Dutch supervisory boards. David joined the board in 2008 having previously been CEO of United Technologies Group (UTC) from 1994-2008 (and chairman 1997-2007). From 2002-2008, he was a board member at Citigroup – leaving the board following criticism of board members’ failure to protect investors and other stakeholders.<sup>81</sup> In 2010, Ian Davis joined as a new member of the BP’s remuneration committee. He had joined the BP’s board in April 2010 having previously pursued a career at

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<sup>79</sup>In 2009, Erroll Davis became a board member at General Motors.

<sup>80</sup>Knight had been a highly successful chair of a US technology firm Emerson Electric – ‘*CalPERS placed Emerson on its "focus" list in July 2004 after becoming dissatisfied with its classified board and with a retirement package for Knight it maintained was excessive.*’

See: <http://www.allbusiness.com/human-resources/employee-development/1052703-1.html>

<sup>81</sup>George David stepped down as the day-to-day boss of United Technologies Corp. almost two years ago, but the money keeps rolling in from his long run at the top. David's total compensation at UTC in 2009, his last year as chairman, came to \$65.3 million

(in 2004 his highest paid year total compensation from UTC had been \$84m)

See: [http://www.tradingmarkets.com/news/stock-alert/utx\\_former-utc-chief-george-david-pulls-in-65-million-in-2009-810020.html](http://www.tradingmarkets.com/news/stock-alert/utx_former-utc-chief-george-david-pulls-in-65-million-in-2009-810020.html)

In 2009, in the rather public divorce action between him and his, thirty years younger, second wife David itemised his weekly expenditure as \$200,000 a week – approximately half of which went on the running costs of his yacht.

See: [http://www.google.com/search?hl=en&q=george+david+utc+divorce&aq=1&aqi=g2&aql=&oq=George+David+UTC&gs\\_rfai=](http://www.google.com/search?hl=en&q=george+david+utc+divorce&aq=1&aqi=g2&aql=&oq=George+David+UTC&gs_rfai=)

(the boat capsized in the 2011 Fastnet Race – fortunately all on board – including David - were rescued without serious injury).

Bowater and then McKinsey where he rose to be the managing partner in UK and Ireland and then chairman and worldwide managing director. He retired as senior partner of McKinsey in July 2010.

Apart from the formal members of the committee, other interested parties were in attendance - perhaps most significantly the BP chairman throughout the period Peter Sutherland.<sup>82</sup>

Sutherland's career had taken him from a background in law and politics in Ireland, at 34 years old as the youngest ever Irish Attorney General, into the European Commission as its youngest ever Commissioner and then general director of GATT (now the World Trade Organisation). He was a non-executive director of BP over the period 1990-1993 and then was reappointed in 1995. He became chairman in 1997 and retained that post until end 2009. Sutherland was chairman of Allied Irish in the early 1990s and subsequently became a non-executive director and chairman of Goldman Sachs International - a position which he still holds. He was a non-executive director and member of the remuneration committee of RBS from 2001 until 2009 when he resigned following the government rescue operation.<sup>83</sup>

The remuneration committee met between five (2001, 2002, 2006) six (2003, 2005, 2007, 2008, 2010) seven (2004) and eight (2009) times a year. When provided - the attendance records suggest that the chairman was almost invariably in attendance. There is also some evidence of attendance by the CEO and other executive directors:

*'The committee consults the group chief executive on matters relating to other executive directors who report to him. He is not present when matters affecting his own remuneration are considered. The chairman of the board also attends meetings when appropriate.'*<sup>84</sup>

*'Lord Browne (group chief executive) was consulted on matters relating to the other executive directors who report to him and, together with Dr Allen (group chief of staff),*

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<sup>82</sup>'The chairman of the board also attends committee meetings.' (Annual Report, 2004, p.116)

'Mr Sutherland, as chairman of the board, attended all committee meetings.' (Annual Report, 2006, p.73)

<sup>83</sup>'Described as a 'larger than life' character, he insists that his reported £150million fortune is not an important part of his life.' (It is not entirely clear from his CV how he managed to amass so much money in a career, a significant part of which has been devoted to public service – although as he apparently gives financial advice to the Pope, it may be that he had divine inspiration on his side.)

See: [http://www.thisismoney.co.uk/news/article.html?in\\_article\\_id=491892&in\\_page\\_id=2](http://www.thisismoney.co.uk/news/article.html?in_article_id=491892&in_page_id=2)

See: [http://www.powerbase.info/index.php?title=Peter\\_Sutherland](http://www.powerbase.info/index.php?title=Peter_Sutherland) for more detailed coverage of Peter Sutherland's career.

<sup>84</sup>Annual Report, (2001), p.37

*on matters relating to the performance of the company. Neither was present when matters affecting his own remuneration were considered.’<sup>85</sup>*

However little detail as to executive director attendance is provided in subsequent reports. The committee also engaged outside advisers/consultants to provide advice on specific compensation issues, as follows:

*‘The committee is serviced independently of the executive management and actively seeks advice from external professional consultants.’<sup>86</sup>*

*‘Advice is provided to the committee by the company secretary’s office, which is independent of executive management and reports to the non-executive chairman. Mr Gerrit Aronson, who is an independent consultant within the company secretary’s office, was appointed in 2000 by the committee as its secretary and special adviser. He does not provide any other services to the group.*

*The committee, in consultation with Mr Aronson and the company secretary, also appoints external professional advisers to provide specialist advice and services on particular remuneration matters. This allows for a range of external independent opinion to be sourced by the committee. This advice is then subject to an independent review by Mr Aronson. The committee assesses the advice it receives, applying its own judgement. Procedures to ensure the independence of advice are subject to annual review.*

*During 2002, the following people provided advice or services on specific matters to the committee that materially assisted it in its consideration of matters relating to executive directors’ remuneration:*

- Mr Sutherland (chairman); Lord Browne (group chief executive), who was consulted on matters relating to the other executive directors who report to him and on matters relating to the performance of the company. He was not present when matters affecting his own remuneration were considered; Mr Iain Macdonald (group vice president, planning, performance management and control, for the company), who provided to the committee some of the company’s calculations for the performance-related pay which were then subject to independent verification by Ernst & Young as auditors; Mr Aronson; Miss Hanratty (company secretary); and Mrs Sarah Martin (senior counsel, company secretary’s office). Only Mr Aronson among those above was appointed by the committee.*
- Towers Perrin who, during 2002, have been the committee’s principal advisers on matters of executive directors’ remuneration and who also provided some ad hoc remuneration and benefits advice to parts of the group, mainly comprising pensions*

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<sup>85</sup> Annual Report, (2003), p.109

<sup>86</sup>Ref o/s - Annual Report, (2001), p.37

*advice in Canada; Kepler Associates, who advised on the selection of the shareholder return against the market performance benchmark for the Executive Directors' Incentive Plan and tracked BP's performance against this benchmark (they provided a similar service in relation to the Long Term Performance Plan for senior executives); Freshfields Bruckhaus Deringer, Allen & Overy and Martin Moore, QC, all of whom provided legal advice on specific matters to the committee and who provide ad hoc legal advice to the group; and Ernst & Young in their capacity as auditors, who reviewed and reported to the committee on the calculations of BP's performance in respect of financial targets that form the basis for performance-related pay for the executive directors, and who also provide audit, audit-related and taxation services to the group. All the above were appointed separately by the committee or the secretary to the committee to provide the advice or services that it sought, except for Kepler Associates, who were appointed by the group chief executive and subsequently provided information to the remuneration committee.'*<sup>87</sup>

In 2003, Towers Perrin became the committee's principal adviser:

*'The committee appointed Towers Perrin as its principal external adviser during 2003 on matters of executive directors' remuneration. Towers Perrin also provided some limited ad hoc remuneration and benefits advice to parts of the group, mainly comprising pensions advice in Canada.'*<sup>88</sup>

In 2004, the remuneration committee sought outside advice in terms of the appropriate parameters for compensation from academic staff, as follows:

*'In 2004, the committee consulted three independent academics, Michael Jensen, professor emeritus of Harvard Business School, and professors Sir Andrew Likierman and James Dow, both of London Business School, in connection with its fundamental review of remuneration policy.'*<sup>89</sup>

Subsequent disclosures as to the extent of outside support have been relatively limited – for example, the 2008 Annual Report states simply:

*'The committee is independently advised.'*<sup>90</sup>

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<sup>87</sup>Annual Report, (2002), p.33

<sup>88</sup>Annual Report, (2003), p.109

<sup>89</sup>Annual Report, (2004), p.119

<sup>90</sup>Annual Report, (2008), p.75

### 6.1.1.1.3 Reaction and Feedback

Over the last fifteen years, there have been intermittent expressions of concern by the media, shareholders and other stakeholders as to the level of remuneration provided by BP to its executive directors - a number of relevant quotations are contained in Figure 9 - but it was not until the 2009 AGM that there was a significant organised protest against aspects of the directors remuneration report. As reported in one newspaper:

*'Shareholders of BP have been urged to next week vote against the oil giant' remuneration report by PIRC, the corporate governance watchdog.*

*BP'S chief executive, Tony Hayward, was awarded a 41 per cent pay rise in 2009 despite the company's profits coming in more than 50 per cent down on the previous year. It said: "PIRC considers that combined remuneration was excessive in the year under review and is also concerned regarding the lack of transparency surrounding the performance conditions attached to the Executive Directors Incentive Plan."'<sup>91</sup>*

This did in fact result in a protest vote far higher than is common with 38% of votes not supporting the directors' remuneration report.

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<sup>91</sup>See, the Independent report:

<http://www.independent.co.uk/news/business/news/pirc-urges-no-vote-on-bp-director-pay-1938347.html>



**Figure 9: Concerns of Relevant Parties on BP Executives' Remuneration - Quotations**

**The Independent report - under the title: "Golden handshake boosted Lord Simon's BP pay packet to pounds 599,000" - states the following:**

*'LORD SIMON of Highbury, who resigned as chairman of BP last May to take up a ministerial post in Tony Blair's government, received pounds 599,000 from the company in 1997, including a discretionary payment of pounds 240,000 in recognition of his 36 years service.*

*Lord Simon's total pay from BP was almost six times the amount Mr Blair drew as Prime Minister and nearly 12 times the amount he was entitled to as a minister of state in the House of Lords.*

*A BP spokesman said the decision to make the ex gratia payment of pounds 240,000 to Lord Simon was not unusual. "The board decided to give him an honorarium, which is quite common when people retire from BP."*

*The annual report also shows John Browne, BP's chief executive, took home pounds 1.76m, including pounds 821,000 awarded to him under the company's long-term performance plan. This year he stands to receive a maximum award worth pounds 815,000 under the scheme.*

*The 365 BP executives who are participate in the plan stand to receive shares worth pounds 22m this year. Awards under the scheme are based on growth in total shareholder return.*

*In the three years from 1995 to 1997 - the period over which the 1998 award will be based - BP's total shareholder return was 19.5 per cent, beating the market.*

*In 1996 Mr Browne's total remuneration was higher at pounds 2.46m but this included a pounds 1.72m payment under a previous five-year incentive scheme.*

*Mr Browne's remuneration, excluding his long-term share award, rose by 25 per cent to pounds 938,000, reflecting the bumper year enjoyed by BP.'*<sup>92</sup>

<sup>92</sup> See, the Independent report: <http://www.independent.co.uk/news/business/golden-handshake-boosted-lord-simons-bp-pay-packet-to-pounds-599000-1150815.html>

**The Find Article report - under the title: “executives strike rich BP bonuses” - states the following:**

*‘Four other BP executives will earn over [pounds sterling]1m. Deputy chief executive Rodney Chase stands to get [pounds sterling]1.4m, finance director John Buchanan [pounds sterling]1m.*

*Retiring directors Russell Seal and Rolf Stomberg should get [pounds sterling]1.3m and [pounds sterling]1.2m.*

*Stomberg also gets a [pounds sterling]1.5m pension fund top-up.*

*BP says: ‘The company put in an all-time record performance - [pounds sterling]2.8bn profits. It earned the best return on capital of all major oil companies. That deserves reward, and rewards help to achieve performance.’”<sup>93</sup>*

**The Mail Online report - under the title: “BP shareholders outrage at Lord Browne's £72m goodbye” - states the following:**

*‘One shareholder, Mike Porter, said BP had “broadly underperformed” the FTSE 100 index. Another, John Farmer, added that the company's performance was “arguably pathetic” and called upon the board to justify pay packages.*

*BP chairman Peter Sutherland said: “It is important to discuss remuneration in the context of overall performance. For example, our net income growth is higher than our two largest competitors last year.*

*“We have to retain the best that we have, and we believe that they are the best.””<sup>94</sup>*

<sup>93</sup> See, the Find Article report: [http://findarticles.com/p/news-articles/daily-mail-london-england-the/mi\\_8002/is\\_1998\\_March\\_17/executives-strike-rich-bp-bonuses/ai\\_n35936500/](http://findarticles.com/p/news-articles/daily-mail-london-england-the/mi_8002/is_1998_March_17/executives-strike-rich-bp-bonuses/ai_n35936500/)

<sup>94</sup> See, the Mail Online report: <http://www.dailymail.co.uk/news/article-448171/BP-shareholders-outrage-Lord-Brownes-72m-goodbye.html>

### 6.1.1.2 Case Study Report

From a theory perspective it is difficult to find significant support in this case study for a pure agency theory type world in which contracts are drawn up so as to maximise effort and expertise on behalf of the shareholders. Of course one always has to consider the counterfactual - what would the position be without the remuneration packages put in place? However, it is far from clear what the linkages are or were between the designed packages and actual performance. There is perhaps stronger evidence linking toward a managerial hegemony perspective but one heavily mediated by the presence of powerful non-executive directors and the institutional presence of the remuneration committee.

The composition of the remuneration packages available to BP executive directors remained broadly similar over the period, comprising basic salary, annual performance bonus payable in cash, fully paid shares under LTIPs in the form of 'performance shares'. For the early part of the period under examination there were share options dependent upon the achievement of performance targets. There have also been as noted above not inconsiderable additional benefits in terms of pension schemes, in addition to resettlement or accommodation allowances, and one-off payments to directors under the heading 'retention allowances'.

This study aims to shed some light on relevant behavioural and institutional factors, in particular those relating to the remuneration committee, which might have a significant role in setting the executive pay packages. In the outcome of the reward metrics a varying range of financial (i.e. SHRAM, ROAEC, EPS growth, etc) and non-financial (i.e. individual and strategic factors, including safety, environment, organisation, etc) targets were comfortably achieved easily and provided the support for the basic cash bonus - but at almost no stage were BP able to match competitors in respect to the total share return (TSR). Notions relating to the 'balanced scorecard' have changed in their emphasis over time more recently giving greater emphasis to non-financial factors (such as value creation, reinforcing safety and risk management, and rebuilding trust). What is intriguing is that as previously noted the BP remuneration committee frequently changed the manner in which it set performance targets and indeed on more than one occasion recommended payments to boardroom executives even when these targets had not been achieved. For example, in 2009 annual review BP came fourth in terms of TSR comparison with its four comparators (i.e. Shell, ExxonMobil, Total, and Chevron) – and on that basis no

performance shares should have been awarded – but in fact the four executive directors at that time (Conn, Dudley, Grote, and Inglis) were awarded £2.5m.

Perhaps more importantly, in terms of personal contact and power relationships, one has to consider the relationship between Lord Browne and the likely influence of two highly influential non-executive directors (Sutherland as the company chairman, and Prosser as a significant member of the remuneration committee). It is difficult to assess their contributions to the deliberations of the remuneration committee throughout the period under examination - but it is possible to surmise that their role might have been more significant than it was formally set out to be. Further there were interlinked and complex power relationships/ networking in terms of common boardroom connections. These might have been particularly relevant in relation to the non-executive directors, who had directorships with companies (such as Lloyds TSB, Goldman Sachs, RBS, Boots, etc).

To conclude - the outcomes of the archival-based case study tend to suggest rejecting the null proposition (i.e. that behavioural and institutional aspects and constructions relating to the remuneration committee have a limited/no effect on executive directors' compensation packages). The case study does then lend a support to H4 which emphasises the importance of behavioural and institutional factors re compensation beyond pure agency or indeed other aspects.

### **6.1.2 Practical Content Analysis for DRRs**

The majority of the discussion and analysis in the archival case study is inductive and has offered an overall review on what is possible to understand from the information contained in the BP annual reports for the period under examination. It notes but does not seek to directly investigate the motives which might underlie the decision of 38 per cent of the BP shareholder body to vote against the compensation committee's report in April 2010 at the Annual General Meeting - although it might be conjectured that shareholder dissatisfaction at the share price performance might have been the most important factor. In order to add a little in terms of wider context the archival-based case study discussed above is supplemented by an exploratory and/or explanatory content analysis. Such an approach is consistent with the theorising of Collis and Hussey (2003) and Yin (2009), and seeks to relate certain keywords and the frequency of their repetition in

directors' remuneration reports to the manner in which BP sought to portray its remuneration policies. Clearly this is an area where the analysis and its interpretation can only be indicative - it is all but impossible to say whether the manner in which BP sought to profile and depict its remuneration policies actually drove what the policies were. However it is suggested that the exploratory analysis is of interest and might perhaps shed some light both on how BP perceived itself and how it wished other interested parties and stakeholders to perceive it.

In this section - the conceptual and relational approaches are examined by adopting three types of analyses (i.e. word counting analysis, matrix coding analysis, and word similarity analysis) utilising NVivo. A chart of pooled word-references after the conceptual approach is also provided.

#### **6.1.2.1 Analysis of Work Counting**

Table (25) demonstrates the results of searching process for a number of most repeated words via showing the word length, number and volume of references, and similar terms in the concept within BP directors' remuneration reports over the ten year period. Here the focus has been on three key words - 'Remuneration', 'Performance' and 'Governance' - although coding was also done for other words such as Executive, Director, Year, Committee, etc. The results suggest that the term 'Performance' related both to the overall BP activities (833 references - 0.67% of total word count), and to the core of the work of the executives' role (1701 - 2.2%). The term 'Governance' referred both to institutional authority and control exercised (88 - 0.04%), and to the corporate rules and regulations applied (137 - 0.10%). The term 'Remuneration' (including references to compensation and pay) was - perhaps not surprisingly - expressed in terms of the concept of what executive directors received in the form of salary (1222 - 1.92%), excluding other payment expressions (for example bonus, pension, option, allowance, etc.).

#### **6.1.2.2 Analysis of Matrix Coding**

Further matrix coding analysis as set out in Table (26) shows in more detail not only the frequency of terms' existence, but also the number of instances where the coding of two or more documents (the sources) within the ten year span and the nodes (the terms) overlap. This form of analysis also provides a check on contradictions or possible overlap between terms - such as the case of terms: 'Performance' and 'Executive', in addition to 'Governance' and 'Regulations'.

For example there is a ‘Performance’ overlap of 742 references in term ‘Executive’, while the term ‘Governance’ overlaps 21 times in term ‘Regulations’. The results suggest that there are 742 references from the 1701 ‘Executive’ references relate to *Executive Performance* and the rest refer therefore to the non-performance role of executives. In addition there are 21 references from the 137 ‘Regulations’ relate to *Rules of Corporate Governance* and the remainder refer to the non-governance regulations. On the other hand the references of term ‘Remuneration’ do not overlap with pay components (such as allowance, award, benefits, etc.) as it combines just the compensation in terms of salary in ‘Remuneration’ similar terms as mentioned above.

### 6.1.2.3 Chart of Pooled References

The chart in Figure (10) illustrates in brief the frequency of pooled references for the three key words - ‘Remuneration’, ‘Performance’ (whatever related to BP or executive member) and ‘Governance’ - as reported in separate in BP directors’ remuneration reports within years between 2001 and 2010.

In 2001, the references of remuneration package account for 195, while the BP and executive performance references consistent with 42 and 40, respectively. By 2002, the references of compensation package reach the peak of frequencies via 374, whilst in 2004 BP and executive performing roles reach the top numbering of references via 110 and 103, correspondingly. In 2006, the references of pay package, as well as BP and executive performances fall down through 248, 77, and 64, respectively, as the number of 2006 DRR pages decreased. In 2010, the relative weighting of remuneration references increased to 312, whilst BP and executive performance references received the less interest via reaching the minimum via 72 and 62, correspondingly. In contrast the references of ‘Governance’ have not showed a big interest by the remuneration committee in the DRR to link the regulations and rules - which governed the structure of board executive - with the executives’ pay and performance, in which the term ‘Governance’ ranged in declining order from 21 in 2002 till 5 in 2008 and 2010.

As a result the term: *BP Performance* had more significance and awareness in references (833<sup>95</sup> - 0.67%<sup>96</sup>) than the term: *Executive Performance* (742<sup>97</sup> - 0.96%<sup>98</sup>) in directors remuneration

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<sup>95</sup>833: See Word Counting Analysis in Table (25)

<sup>96</sup>0.67%: See Word Counting Analysis in Table (25)

reports, indicating that the BP remuneration committee put more focus to link executive directors' remuneration with the overall BP performance rather than the actual executive performance. This finding might explain - from the perspective of content analysis - why 38 percent of BP shareholders have voted in April 2010 against the remuneration committee's report. The references of term 'Governance' had little focus in directors remuneration reports (109<sup>99</sup> - 0.055%<sup>100</sup>), while 'Remuneration' references had the peak interest (3015<sup>101</sup> - 4.44%<sup>102</sup>).

#### 6.1.2.4 Analysis of Word Similarity

Finally word similarity analysis as set out in Figure 11 shows a relational table analysis of similarity between two terms via the coefficient of Pearson correlation<sup>103</sup>. The Pearson coefficients between each pair in all three cases ('Performance' and 'Remuneration', 'Governance' and 'Performance', and 'Governance' and 'Remuneration') are near to be -1, which means that there is least similar appearance or overlap in each case as a proof of no contradiction in node concepts and purposes. Two cluster analysis diagrams are created afterwards. First left-hand side figure is a horizontal tree diagram, which indicates how 'Governance' influence and control the relationship between 'Performance' and 'Remuneration', while second right-hand side graph is a 3D cluster diagram, which demonstrates how far the distances of overlap between the three key terms are.

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<sup>97</sup>742: See Matrix Coding Analysis in Table (26)

<sup>98</sup>0.96%: (742/Executive:1701)\*2.20%

<sup>99</sup>109: Governance 88 + Overlap 21

<sup>100</sup>0.055%: Governance 0.04% + Overlap {(21/137)\*0.10% }

<sup>101</sup>3015: Remuneration 1222 + Award 520 + Bonus 335 + Pension 259 + Option 212 + Benefits 167 + Allowance 300

<sup>102</sup>4.44%: Remuneration 1.92% + Award 0.74% + Bonus 0.49% + Pension 0.45% + Option 0.36% + Benefits 0.27% + Allowance 0.21%

<sup>103</sup>The Pearson correlation coefficient is a similarity metric which indicates the calculation of similarity between each pair of nodes by showing the number of times the first term row appears in the second term column.

Table 25: Analysis of Word Counting

Word	Length	Count	Weighted Percentage	Similar Words
executive	9	1701	2.20	action, actions, do, doing, executive, executives, implement, implementation, implemented, implementing, perform, <b>performance</b> , performances, performing, practicable, practice, practice', practices, run
directors	9	1166	1.99	director, directors, directors', managed, management
remuneration	12	1222	1.92	compensated, <b>compensation</b> , earn, earned, earning, earnings, earns, <b>pay</b> , remunerating, remuneration, <b>salaries</b> , <b>salary</b>
year	4	940	1.55	age, ages, annual, annually, class, day, days, year, years, years', yrs
share	5	902	1.45	contributed, contribution, contributions, deal, divided, part, partly, parts, percentage, portion, share, shared, shares, sharing
committee	9	693	1.20	commissioned, commissioning, committee, committees
award	5	520	0.74	award, awarded, awards, grant, granted, grants, present
plan	4	442	0.71	design, designed, plan, planned, planning, plans, prepared, programme, project, projects, provision, provisions
performance	11	833	0.67	acted, acting, acts, do, doing, functional, operated, operates, operating, operation, operational, operationally, operations, perform, <b>performance</b> , performances, performing
value	5	564	0.59	appreciation, assess, assessed, assesses, assessing, assessment, assessments, evaluate, evaluated, evaluation, evaluations, measure, measured, measurement, measures, measuring, rate, rated, rates, rating, respect, respective, respectively, respects, value, valued, values
set	3	604	0.56	adjust, adjusted, adjusting, adjustment, adjustments, arrangement, arrangements, background, circumstances, context, defined, determination, determine, determined, determines, determining, do, doing, fixed, limit, limited, limits, local, place, placed, places, position, positioning, positions, positive, prepared, put, scene, scope, set, sets, setting, specified
bonus	5	335	0.49	bonus, bonuses, incentive, incentives
shareholders	12	272	0.47	shareholder, shareholders, shareholders', shareholding
pension	7	259	0.45	pension, pensionable, pensions
option	6	212	0.36	alternative, choice, option, options, selected, selection
measures	8	398	0.33	amount, amounting, amounts, barring, calculated, calculating, calculation, calculations, careful, carefully, deliberations, measure, measured, measurement, measures, measuring, metric, metrics, standard, standards, stepped
contracts	9	247	0.29	contract, contracts, narrow, reduce, reduced, reducing, signed, take, takes, taking, undertaking
benefits	8	167	0.27	benefit, benefits, gain, profit, profitability, profits
practice	8	409	0.27	applied, applies, apply, applying, commitment, commitments, committed, do, doing, exercisable, exercise, exercised, exercises, exercising, good, much, operated, operates, operating, operation, operational, operationally, operations, practicable, practice, practice', practices, use, used, using, virtually
allowance	9	300	0.21	adjust, adjusted, adjusting, adjustment, adjustments, allow, allowance, allowances, allowing, allows, leave, leaving, margin, marginally, permits, permitted, provide, provided, provides, providing
regulations	11	137	0.10	<b>governance</b> , governed, government, order, regular, regularly, regulations, regulatory, rules
pay	3	126	0.06	compensated, <b>compensation</b> , give, gives, <b>pay</b>
compensation	12	68	0.04	compensated, <b>compensation</b> , cover, covered, covering, covers, repairs, right, rights
governance	10	88	0.04	authority, authorization, authorized, control, establish, established, establishing, establishment, <b>governance</b> , governed, government, organic, organization, regime

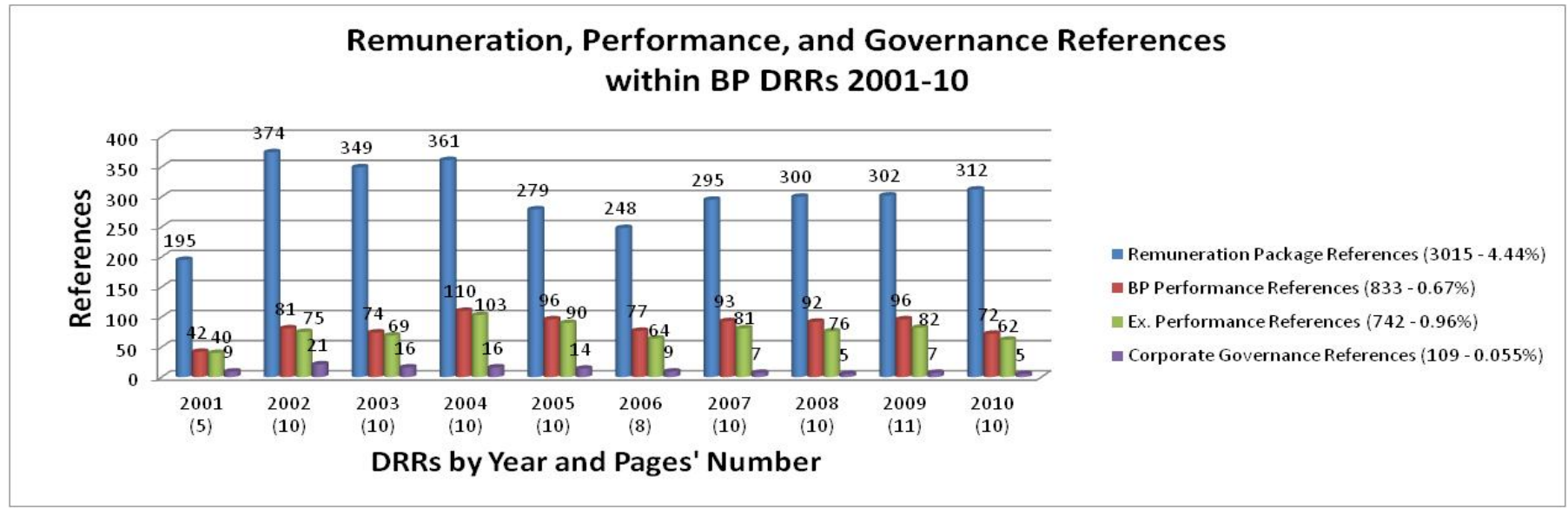


Table 26: Analysis of Matrix Coding

		Sources										Terms										
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Sources	1: DRR 2001	6	0	0	0	0	0	0	0	0	0	7	6	42	87	77	8	33	17	18	19	23
	2: DRR 2002	0	11	0	0	0	0	0	0	0	0	15	23	81	198	128	40	74	30	34	40	28
	3: DRR 2003	0	0	11	0	0	0	0	0	0	0	12	14	74	171	109	26	84	20	38	44	28
	4: DRR 2004	0	0	0	11	0	0	0	0	0	0	13	17	110	205	132	39	83	17	37	29	24
	5: DRR 2005	0	0	0	0	11	0	0	0	0	0	12	15	96	192	111	31	45	18	32	15	27
	6: DRR 2006	0	0	0	0	0	9	0	0	0	0	7	15	77	151	127	20	36	0	28	11	26
	7: DRR 2007	0	0	0	0	0	0	11	0	0	0	6	14	93	185	132	34	52	0	36	14	27
	8: DRR 2008	0	0	0	0	0	0	0	11	0	0	5	17	0	0	0	40	36	20	27	11	28
	9: DRR 2009	0	0	0	0	0	0	0	0	12	0	6	9	0	0	0	32	35	25	41	10	23
	10: DRR2010	0	0	0	0	0	0	0	0	0	11	5	7	72	163	132	30	42	20	44	19	25
Terms	11: Governance	7	15	12	13	12	7	6	5	6	5	88	21	0	0	0	0	0	0	0	0	0
	12: Regulations	6	23	14	17	15	15	14	17	9	7	21	137	0	0	0	0	0	0	0	0	0
	13: Performance	42	81	74	110	96	77	93	92	96	72	0	0	833	742	0	0	0	0	0	0	0
	14: Executive	87	198	171	205	192	151	185	173	176	163	0	0	742	1701	0	0	0	0	0	0	0
	15: Remuneration	77	128	109	132	111	127	132	138	136	132	0	0	0	0	1222	0	0	0	0	0	0
	16: Allowance	8	40	26	39	31	20	34	40	32	30	0	0	0	0	0	300	0	0	0	0	0
	17: Award	33	74	84	83	45	36	52	36	35	42	0	0	0	0	0	0	520	0	0	0	0
	18: Benefits	17	30	20	17	18	0	0	20	25	20	0	0	0	0	0	0	0	167	0	0	0
	19: Bonus	18	34	38	37	32	28	36	27	41	44	0	0	0	0	0	0	0	0	335	0	0
	20: Option	19	40	44	29	15	11	14	11	10	19	0	0	0	0	0	0	0	0	0	212	0
	21: Pension	23	28	28	24	27	26	27	28	23	25	0	0	0	0	0	0	0	0	0	0	259

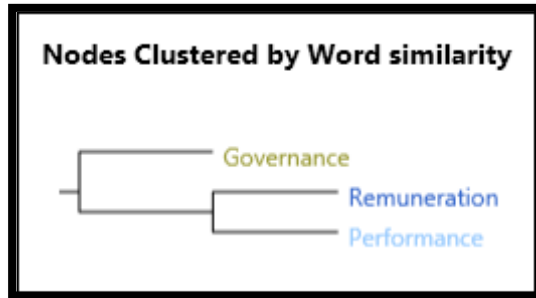
Remuneration Package	DRR 2001	DRR 2002	DRR 2003	DRR 2004	DRR 2005	DRR 2006	DRR 2007	DRR 2008	DRR 2009	DRR 2010	TOTAL
'Governance' overlap in 'Regulations'	2	6	4	3	2	2	1	0	1	0	21
'Performance' overlap in 'Executive'	40	75	69	103	90	64	81	76	82	62	742

Figure 10: Chart of Pooled References

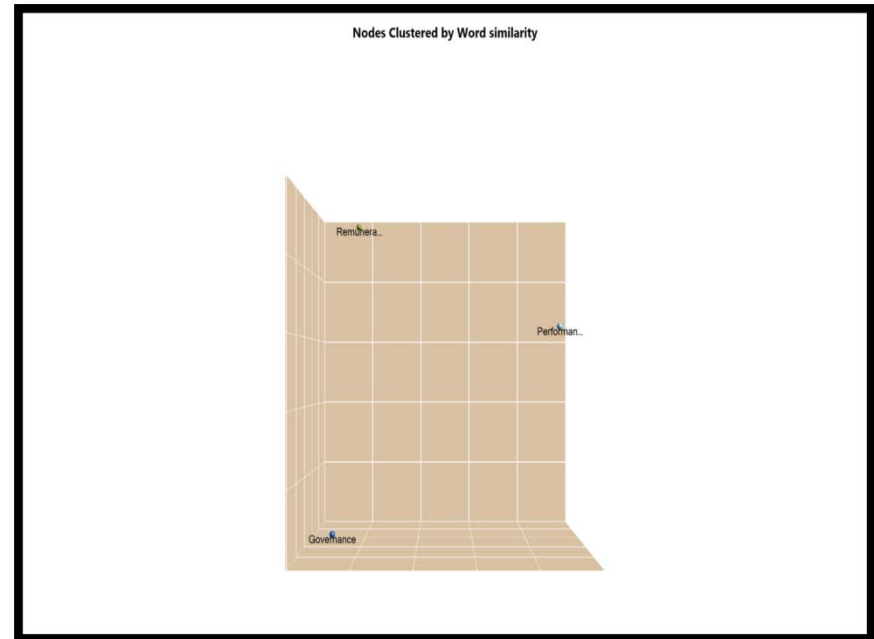


*Figure 11: Analysis of Word Similarity*

Node A	Node B	Pearson Correlation Coefficient
Performance	Remuneration	-0.04542
Governance	Performance	-0.0927
Governance	Remuneration	-0.12715



**Horizontal Dendrogram**



**3D Cluster Map**

## 6.1 Conclusion

This chapter has articulated the second significant part of the research examination process re the archival-based case study into remuneration in one very large-sized UK based company, BP. Consistent with different aspects of theory and the main research purpose the inductive approach has been adopted so as to better understand, utilising a qualitative study, possible modes of response to key research questions as to whether behavioural and institutional factors, in particular those relating to the remuneration committee, play an important role in determining the composition and size of executive compensation? In this context this chapter has reported the results of an archival-based study supplemented by the use of empirical based content analysis.

Re the underlying theoretical perspectives, the case study concludes that it is hard to find significant support for a pure agency theory; whilst there is perhaps stronger evidence linking toward a managerial hegemony perspective - but one heavily mediated by the existence of remuneration committee and the presence of powerful non-executive directors. Besides this, the case study shows little evidence that the compensation packages were dictated by mobility within the international labour market in the particular industry, although the retention payments made to both Conn and Inglis are of interest. Perhaps the most intriguing questions relate to the importance of personal contact and power relationships at boardroom level – but these are difficult to understand fully on the basis of just reported material alone.

In summary - many have questioned the validity of a pure agency theory model either as a normative or explicative model of executive compensation and many have pointed to the importance of personality and power relations within the boardroom as determinants of the amount of remuneration and who actually receives it. However to date there has been much less questioning of the role of the remuneration committee as an institutional construct and indeed of whether it constrains, obscures, or adds pseudo legitimacy to in terms of boardroom and senior management compensation. Inter alia this case study does call into question the manner in which the remuneration committee at BP operated over the years under examination and adds some weight to the more general questioning (e.g. Gwilliam and Marnet, 2009) as to whether the accepted governance paradigm of non-executive directors and boardroom

committees (i.e. audit, nomination, and remuneration) does in fact add anything significant to the quality of governance – or whether indeed it acts as an unintentional smokescreen to poor governance behaviour.

In the following chapter - the key research questions and findings of the current study are summarised, and the implications of these findings are reviewed by including those relating to the underlying theoretical perspectives and also those suggesting possible further study and research, both in the UK context and more generally.

# Chapter 7

## SUMMARY, CONCLUSIONS AND IMPLICATIONS

## Chapter Seven

### Summary, Conclusions and Implications

#### 7.1 Introduction

Global concerns as to possibly excessive compensation packages of boardroom executives and the manner in which these packages are actually linked to corporate performance have provided an underlying impetus to this study. Prior literature has focused primarily on a pay-performance framework, by which executive directors are paid well if they reach certain levels of corporate targets. There has been less emphasis on a performance-pay framework - in which the overall firm performance will be enhanced in the line with providing appropriate incentive schemes for their board members based on their knowledge and skills, or their ambition to win a prospect title in the company. Clearly executive compensation would be considered to be related to the enhancement of company performance but the issue investigated in the empirical part of this study is how the respective functional relationships operate.

Although there has been quite extensive previous empirical work there has been less focus on prior study analysis of actual executive remuneration within specific companies and the manner in which remuneration committees actually set executive compensation packages. This study has sought to add to this literature by means of a qualitative study of executive compensation in one particular company, BP.

In this concluding chapter, the research project is summarised and the main findings are reviewed. The work is placed in the context of prior literature with an attempt to explain its contribution to knowledge and highlight the research findings. In addition, the limitations of the work are noted and areas for forthcoming research are suggested. Finally, the implications of this work for practitioners are also discussed.

## 7.2 Summary of the Project

As this project has employed two different but arguably interrelated research approaches, the summary of the thesis is categorised under the following separate sections: Empirical Study and Case Study.

### 7.2.1 Empirical Study

The key research question that formed the empirical part of this thesis is:

**Whether managerial compensation is the greater influence on firm performance or whether it is the latter which has the greater influence on the former?**

This question is developed based upon a number of sometimes contradictory, sometimes interrelated, theoretical perspectives as they relate to executive compensation within a wider framework of notions of corporate governance.

Seeking to provide an at least indicative answer to the empirical research question, a deductive approach has been adopted to examine the interrelationships between executive compensation and company performance by analysing data under the frameworks of pay-performance (which has been intensively investigated in the literature – but studies have yielded conflicting results and been beset by issues of causality, timing, data availability, etc.<sup>1</sup>) and performance-pay (which received less attention in the literature to date). The numerics have been based on data from FTSE 350 companies and the analysis has adopted both fixed-effect and simultaneous equations modelling – an approach which has rarely been adopted before in the UK at least.

The specific empirical research question has infrequently been addressed in the extensive body of prior literature in the line with the associations between executive compensation and company performance. The majority of previous studies have either sought to relate the amount and type of compensation to some company related-variables (such as company size, boardroom size, duality role etc), or to establish one-way linkage between the nature of compensation and company performance via using single equation modelling without taking into consideration

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<sup>1</sup>However there are exceptions and it is unfair to characterise all prior empirical studies as fitting into this brief description which would be recognisable by a reviewer of that literature.



potential simultaneities among the estimated variables perhaps reflecting endogenous links. However, some previous academic papers (for example, Agrawal and Knoeber (1996), Ntim et al. (2011)) have suggested the wider empirical framework adopted in this study.

### **7.2.2 Case Study**

Here the main research direct question that the case study sought to address is:

**Do behavioural and institutional factors, in particular those relating to the remuneration committee, play a significant role in determining the composition and size of executive compensation?**

This question is of course a little different than that posed in the direct empirical study but is linked in that there are issues as to whether the institutional constituents are seeking to maximise company performance or to develop other agendas. There has been prior qualitative work of this nature – but again it is not the most extensive of literatures.

In order to address the case study question a largely descriptive approach is employed – it would be an exaggeration to say that it is formalised grounded theory but it is within that genre. This approach is utilised to investigate the actual role of the remuneration committee as to issues respecting the setting and indeed disclosure of senior compensation packages. The archival-based case study focused on BP is supplemented by an exploratory content analysis. As noted above, prior academic literatures have been dominated by studies which have sought to identify associations between executive pay and performance of an entity; whilst this case study perhaps goes a little further in seeking to investigate on how boardroom relationships are shaped and formed. There have been previous studies which have sought to do this for example (Bender, 2003, 2007; and Main et al., 2008) and the intention has been to extend and build on this work.

### **7.3 Research Contribution and Findings**

The current study contributes to the knowledge as to executive directors' remuneration and their associations with company performance throughout two different, but complementary, modes of investigation. The first is empirically focused and provides updated documentary and empirical

evidence on the linkages between the amount and composition of managerial compensation and the accounting-based indicators of company performance in FTSE 350 companies, compatible with a number of related control variables (including those referring to corporate governance, ownership and other firm-specific, including boardroom, characteristics). This aspect of the study itself adopts two slightly separate analytic approaches. First is the fixed-effect equation modelling of the pay-performance and performance-pay frameworks to examine separately the extent of relationships between managerial remuneration and company performance. Second is the simultaneous equation modelling to permit not only executive pay and company performance to simultaneously affect each other and the mechanism of control variables - but also allows more in-depth investigation of how these control variables influence each other as well as executive compensation and firm performance.

The second mode of investigation reviews the nature of remuneration practice at BP with an ambition to highlight the changes in the amount and nature of remuneration packages over the years under examination and to explore the role of the remuneration committee in setting the mechanisms and structures which determine the type and extent of those packages. This study employs again two slightly different, but linked, research methods. First is the archival-based case study to provide further insights regarding the likelihood of the presence of behavioural and institutional factors, particularly those relating to the remuneration committee, re the setting process of executive directors' remuneration. Second is an exploratory content analysis to highlight the nature of the manner of disclosure adopted by BP over the period under examination.

It is also suggested that this thesis makes a contribution in terms of its methodological approach. It adopts a mixed method (i.e. abductive) approach - via adopting both quantitative and qualitative research approaches - which is used extensively in pragmatically oriented fields of social science research (Johnson and Onwuegbuzie, 2004; Johnson et al., 2007; and Creswell and Clark, 2011), but to date has been more restricted in its application to executive compensation/corporate governance research. As mixed methods research attempt to maintain generalisation while capturing the specificity of the context (Johnson et al., 2007), this framework may be valuable to other researchers within the more general accounting discipline.

Finally the significant results from the two separate approaches are repeated below separately under the following sections: Empirical Study and Case Study.

### **7.3.1 Empirical Study**

This study examines the interrelationships between executive compensation and firm performance (taking into account not only the remuneration measures, but also the key components of executive pay, particularly bonus and LTIPs). Firm performance is proxied by a number of accounting-based financial indicators (especially Tobin's Q and ROA), within the FTSE 350 companies over the period 1999-2008. A number of related control variables (corporate governance features and ownership, and the board member and corporate characteristics) are incorporated.

Findings, derived from the fixed-effect regression model, suggest that two-way relationships between executive compensation and firm performance exist but may be difficult to interpret. The results showed sensitivity of salary and cash-base remuneration with firm performance indicators is comparatively weak to bonus, LTIPs, and equity-base compensation (a finding consistent with prior literature (for example, Murphy, 1999; Mehran, 1995; Matolcsy, 2000; Conyon and Sadler, 2001; etc.)).<sup>2</sup> This might suggest that the remuneration committees of FTSE 350 companies put more effort and focus to link the cash compensation of boardroom members to company performance than those related to non-cash compensation. The results also suggest a greater sensitivity of CEO remuneration package to firm performance as compared with the board executive directors – a result consistent with Sapp (2008).

The performance-pay framework analysis suggests a degree of coherence with that of the pay-performance framework. The sensitivity of Tobin's Q in relation to the variable components of compensation provides strong positive and significant relationships with bonus and LTIPs of

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<sup>2</sup>Tobin's Q, for example, is ranging from 0.023 and 0.026 for CEO and board executive salary, respectively, and 0.068 and 0.071 for CEO and board executive cash compensation. However - Tobin's Q is ranging, for example, from 0.31 and 0.33 for CEO and board executive LTIPs, respectively, and to nearly 0.35 and 0.36 for CEO and board executive non-cash compensation.

both CEO and boardroom executives (as consistent with (Conyon and Sadler, 2001; Smith, 2008)).<sup>3</sup>

The findings in relation to the framework of pay-performance may be seen as in line with an agency theory approach whereby CEOs and boardroom executives are compensated for their intention to act in the best benefit of the owners based on the prior levels of corporate performance (Berle and Means, 1932; Jensen and Meckling, 1976; Jensen and Murphy, 1990). However, the results in respect to the performance-pay framework can be seen as lending a support to notions of the tournament and/or stewardship whereby CEOs and board executive directors perform better in the future based on the prior amounts and structure of their compensation package (Lazear, 1998), or their actual managerial talents (Hendry and Kiel, 2004).

Re the results of simultaneous equations modelling these may be seen as suggesting that compensation of CEOs and board executives is more influential for firm performance going forward rather than the framework of performance-related pay. As noted before this finding may be seen as lending support to the stewardship and/or tournament theories as compared with those of agency theory – although how one actually interprets these results is fraught with complication.

Perhaps a surprising outcome has been that the existence or otherwise of a remuneration committee is insignificantly and if anything and negatively related to total CEO/executive remuneration. Perhaps too much should not be read into this in that over the period under examination virtually all the sample did form remuneration committees so the statistical outcomes might be a little fragile. But possibly this finding could be seen as supporting that of Agrawal and Knoeber (1996) in terms of the existence of political reasons (such as customer representatives or environmental activists) relating to the expansion of board committees, particularly remuneration committees, which might not essentially operate to control the amounts and structure of executive compensation. This in turn does support the perspective that behavioural and institutional factors are very important in relation to the setting of executive compensation.

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<sup>3</sup>Bonuses, for example, for CEOs and board executives are ranging from 0.056 to 0.104 for Tobin's Q, respectively; while LTIPs for CEOs and board executives range from 0.167 and 0.096 for Tobin's Q, respectively.

Reflections on the overall outcomes of interrelationships between managerial remuneration and company performance indicate that there is an interconnected temporal cycle between executive pay and performance, in which the increase in firm performance leads to an increment in executive pay which in turn will enhance more the levels of company efficiency afterwards as outlined in Figure 4 – but there is the capability for this association to be affected by a range of external and internal interests, including individual contact or power relationships as discussed further below with reference to the case study.

### **7.3.2 Case Study**

The case study sheds light on the nature and changes of remuneration committee reports at BP from 2001 to 2010 by adopting an archival-based technique supplemented by exploratory content analysis. This approach is consistent with the suggestion of Bender (2004) in the manner in which it seeks to tease out the actual role of a remuneration committee in the determination of executive compensation in a specific company.

As noted above the case study can be interpreted in a variety of ways. From a theory perspective it is difficult to find significant support for a pure agency theory type world in which contracts are drawn up so as to maximise effort and expertise on behalf of the shareholders. Of course one always has to consider the counterfactual - what would the position be without the remuneration packages put in place? However, it is far from clear what the linkages are or were between the designed packages and actual performance. There is perhaps stronger evidence linking toward a managerial hegemony perspective but one heavily mediated by the presence of powerful non-executive directors and the institutional presence of the remuneration committee.

Other insights offered include the lack of evidence that the packages were dictated by mobility within the international labour market – notwithstanding the retention payments made to both Conn and Inglis the lack of mobility at the highest levels of the company is strikingly singular. It might also be considered as to whether bringing onto the board non-executives more accustomed to a background of very high remuneration in North America might lead to a situation in which remuneration packages in the UK were advanced accordingly. Perhaps the most significant aspects to emerge are the importance of personal relationships and power at

boardroom level. At one level, the social contacts binding members of the board together included sailing, links to Cambridge University etc - but when there was a fracture in the nature of these contacts there were significant implications in terms of remuneration.

Clearly the falling out between Browne and Sutherland was a major driver in terms of the remuneration decisions taken in 2007. Institutionally it is difficult to say that the remuneration committee demonstrated any consistency of purpose – perhaps beyond that of acceding to the wishes of those powerful executive and non-executive directors who might be seen as acting as the committee’s puppet masters. Over the period under examination, the nature of the various incentive packages changed as did that of the targets which it was necessary to achieve in order to benefit from the packages. Although the rhetoric used - ‘demanding’, ‘stretching’, ‘rigorous’ - suggests that the targets associated with the cash bonus were difficult to achieve the reality was that they appear to have been all but fully achieved in almost all the years under examination. However the achievement of these targets was not associated with superior share price performance vis-à-vis other oil majors nor indeed against the wider UK stock market. One might consider whether the shift away from pure share return based incentives under the Long Term Incentive Plan toward more of a ‘balanced scorecard’ approach might have been associated with the fact that these other targets were rather more arbitrary and likely to be much more achievable. Similarly one might wonder why the comparator group – particularly in relation to share return – changed so frequently over the period, and of course why having failed to achieve targets the remuneration committee on more than one occasion decided that the near achievement of a target was in fact sufficient to justify payment as if that target had been achieved.

The supplementary content analysis is of course purely indicative as an interpretation of the manner in which BP remuneration committee and board approached issues as to the manner in which remuneration in the company is established and the links between performance and remuneration. Perhaps the most important thing that board executive members carefully consider these days is that institutional shareholders can make the change if they actually vote against their pay structure at the remuneration reports in AGMs, at this stage boardroom members start to be more cautious to listen to them. In BP case study, inferences can be made which are suggestive of a focus on BP’s overall performance rather than on the specific

activities and achievements of individual directors, which might explain why 38% of BP shareholder body voted in April 2010 against the remuneration committee's report.

#### **7.4 Limitations of this Study**

Inevitably there will be limitations in a wide-ranging study of this nature that could be addressed in future research in the line with both empirical research and case study. In respect to the empirical study, there are a number of possible issues in relation to the theoretical perspectives, examination methods, data sample and measurement and variables, which are worth noting, and therefore the findings should be interpreted in this context. There may also as in any longitudinal study utilising company data concerns as to the effect of survivorship bias and the manner in which companies have reorganised themselves during the period under examination.

The set of theoretical perspectives and examination approaches utilised here in this study are diverse and contrast in the area of executive compensation and company performance since the extant differences in companies are numerous and launched over several years, and therefore it is unlikely to depend on a particular empirical method for analysing, or on a theoretical explanation for interpreting the findings of all aspects within the discipline of corporate governance. The current study does not address in detail the FSA's Remuneration Code (2010) for the financial sector as this research puts a focus on examining executive directors' remuneration within the codes running before and within the overall period under investigation from 1999 till 2010 – however the 2010 Code has been explored in Chapter Two in terms of key recommendations of the Walker Report (2009), which supported to an extent by the Turner Report (2009).

There are also issues as to missing data - some measures relating to both executive compensation and corporate governance are not provided by the BoardEx database. However the existing panel of firm-years over the period under examination are significantly large compared with prior literatures (such as Conyon et al., 1995; Main et al., 1996; Cosh and Hughes, 1997; Conyon and Murphy, 2000; etc). The sample limitation to the top 350 UK companies may lead to another sampling disquiet regarding the impact of corporate size and the possible bias that this might introduce. But inevitably given the nature of corporate data this

will be the case – as indeed will be the whole idiosyncratic nature of corporate practice. As in any other study the reality is that one just tries to seek to control for this in the most appropriate fashion.

There may be limitations with respect to measures of variables - salary, bonus, and long-term incentive plans are the only executive pay components which are utilised in estimating the sensitivity relationships and it is possible that the introduction of other remuneration measures might have an effect although perhaps unlikely. Perhaps more importantly the findings of both fixed-effect and simultaneous examination analyses are restricted to a number of alternative mechanisms of corporate governance and related control variables. It is possible that other factors (such as shareholders' ownership, executive education and qualifications as reflections to the quality of the boardroom member, etc.) which are not utilised (because of the lack of data availability and the difficulty of identifying appropriate metrics) might also lead to differences in result outcomes in terms of pay and performance associations. However again it can be claimed that the set of control variables that is included in the empirical analyses covers the most significant economic and human determinants according to prior theoretical and empirical work.

Re the case study, this descriptive UK-based case study has examined the Directors Remuneration Reports in just one company, BP. Clearly single company case studies give rise to issues in terms of the generalisability of the results. In some ways BP might not be the most appropriate research site to choose – it is in a very specific industry and is highly multinational with particular associations in North America. But in some ways this makes it more interesting giving rise as it has done to fluctuating levels of executive compensation, boardroom tensions, the presence of both UK and US directors on the board, etc. Generalisation based on the circumstances of a single company is very problematic but it is contended that there is scope for insights and richness which can contribute to knowledge and awareness relating to the issues under examination.

Overall, from the researcher's perspective, such limitations in both empirical and case studies do not detract the validity of the current examination study.



## 7.5 Opportunities for Further Research

This examination study could be extended in several ways. As research methods varies and data coverage develops, prospect studies may need to consider other types of examination analyses (for example GMM<sup>4</sup>, ranked regression technique etc), or other additional attributes of corporate governance and control/exogenous variables (such as the market data for corporate control) which might perhaps affect the quality of remuneration governance via estimating the sensitivity relationships between executive compensation and corporate performance or corporate governance. There are still significant issues relating to causation and endogeneity and although this study has made a significant attempt to address these it may well be that other techniques might be more powerful. Clearly regulatory change, market change and just the tide of human history will mean that results posited by this study will not necessarily hold for future time periods and thereby provide the opportunity for future research and inquiry. Alternative control measures (such as the number of meetings held, the attendance rates at meetings of board and of the compensation committee, the timing spent at meetings in terms of hours, etc.) might be utilised and there is clearly scope for further behavioural investigation into the manner in which remuneration committees operate and their interaction with themselves, other board members, and wider stakeholders.

Researchers could possibly extend the number of case studies in different contexts and perhaps utilise interview technique (in this study at least one previous BP board member was approached but declined to participate). Also the role of the remuneration committees in setting executive compensation in the light of the UK Governance Code (2010) and the developed proposal for the reform of the disclosure and corporate governance framework for executive directors' remuneration (2013) could be investigated. These would allow more detail and insight into questions such as why did BP stop using options, and indeed how board members and others saw the construction of optimal remuneration packages? Here there might be scope for investigating the perceptions and views of institutional shareholders – which may themselves have changed over time. The findings of the qualitative research could also be utilised to develop new empirical studies – such as develop the associations between managerial compensation and

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<sup>4</sup>GMM refers to Generalized Method of Moments.

performance by utilising the actual executive performance measures instead of the overall company performance.

## **7.6 Implications for Practice**

In spite of this research has a number of potential limitations as discussed above, it might perhaps worth to suggest that the findings of this examination study add to the academic debate in the light of theory, and has significant implications mainly for the practice of remuneration committee members - who are involved in the compensation-setting decision.

In respect to the findings of the empirical examination, remuneration committees, particularly at large-sized companies, have to take in their considerations that the setting process of executive compensation should reflect not only the reimbursement of previous-period performance, but also a reasonable inspired pay for prospect targets - as consistent with the tournament and/or stewardship perspectives - in order to keep the boardroom members enthused over time to enhance the corporate performance.

Re the results of the content analysis of BP case study, the members of remuneration committees should also take in their consideration the importance of linking the executive compensation not only with the overall company performance, but also with the actual executive performance when they are determining and designing the amount and composition of executive pay – as their recommendations are subject to approval by the full board and ultimately by the shareholder body who are increasingly keen to observe the relationship between what are they actually receiving in terms of returns and management compensation.

The archival examination of BP showed the likely influence of powerful individuals and the interplay between those individuals at boardroom level. Whether it is possible to control via regulation or market forces, human nature based interaction is a difficult question to answer. The issues are undeniably important but it would be very difficult to frame controls which would prevent adverse consequences from such relationships – but might possibly be a question for both bodies internal to the firms and those external to consider.

## 7.7 A Final Word

This examination has aimed to shed some light on the black box<sup>5</sup> of executive directors' remuneration – perhaps looking through a glass darkly - by utilising a number of research techniques in order to examine the interrelationships between executive compensation and company performance – topics which have been extensively aired in the popular media and the academic literature. This thesis has added to the extant work by confirming a number of prior research results but also making a contribution in terms toward extending existing knowledge by means of focus on the level and structure of executive directors' remuneration packages. It has provided in-depth consideration as to the linkages and the direction between executive pay packages and corporate performance, as well as discussing the role of the remuneration committee in setting the mechanisms and structures which determine the types of boardroom compensation packages.

There is the possibility of varying interpretations of the study's finding. The empirical results point quite strongly toward a framework whereby it is performance that drives pay rather than pay-performance. A second stage of interpretation relates to the theoretical perspectives. It is conjectured that the empirical results provide significantly more support for the view the stewardship and/or tournament perceptions are more relevant than interpretations based on pure agency theory. The case study evidence is suggestive of the importance/influence of managerial hegemony – but heavily mediated by the roles of influential non-executive directors and remuneration committee – it also points up the significant influence of personal contacts and relationships at boardroom level. In conclusion the outcomes of this research endeavour, although not necessarily definitive in themselves, provide a fascinating set of insights into the manner in which senior executive pay is set in the UK – and may indeed be of value to future research in this field.

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<sup>5</sup>This likening is consistent with the study of Tosi and Gomez-Mejía in 1989.

# REFERENCES

## REFERENCES

- Abdullah, A. and Page, M. (2009), *Corporate Governance and Corporate Performance: UK FTSE 350 Companies*, Edinburgh, UK.
- Abowd, J. and Kaplan, D. (1999, April), "Executive Compensation: Six Questions That Need Answering", *The Journal of Economic Perspectives*, 13 (4), 145-168.
- Adams, R. and Ferreira, D. (2004, November), "Gender Diversity in the Boardroom", *ECGI-Finance Working Paper*, 1-30. Available at: [http://www.wiwi.uni-frankfurt.de/fileadmin/user\\_upload/dateien\\_abteilungen/abt\\_fin/Dokumente/PDFs/Allgemeine\\_Dokumente/Finance\\_Seminar\\_Series/Summer\\_term\\_2006/Adams.pdf](http://www.wiwi.uni-frankfurt.de/fileadmin/user_upload/dateien_abteilungen/abt_fin/Dokumente/PDFs/Allgemeine_Dokumente/Finance_Seminar_Series/Summer_term_2006/Adams.pdf)
- Adams, R. and Mehran, H. (2005, August), "Corporate Performance, Board Structure and its Determinants in the Banking Industry", *EFA 2005 Moscow Meetings*, 1-15. Available at: <http://ssrn.com/abstract=302593>
- Adkins, T. (2006), *CASE STUDIES IN PERFORMANCE MANAGEMENT: A Guide from the Experts*, Wiley.
- Aerts, W. (1994), "On the Use of Accounting Logic as an Explanatory Category in Narrative Accounting Disclosures", *Accounting, Organizations and Society*, 19(4-5), 337-353.
- Agrawal, A. and Knoeber, C. (1996, September), 'Firm Performance and Mechanisms to Control Agency Problems between Managers and Shareholders', *Journal of Financial and Quantitative Analysis*, 31(3), 377-397.
- Agrawal, A. and Nasser, T. (2012, September), 'Blockholders on Boards and CEO Compensation, Turnover and Firm Valuation', *Working Paper*, 1-59. Available at: <http://bama.ua.edu/~aagrwal/IDB-CEO.pdf>
- Agrawal, R. and Samwick, A. (1999, February), 'The Other Side of The Trade-off: The Impact of Risk on Executive Compensation', *Journal of Political Economy*, 107(1), 65-105.
- Alam, M. (2006), 'Stakeholder Theory', in Hoque, Z. (Ed.), *Methodological Issues in Accounting Research: Theories and Methods*, London: Spiramus, 207-219.
- Alcouffe, A. and Alcouffe, C. (2000, August), "Executive Compensation Setting Practices in France", *Long Range Planning*, 33(4), 527-543.
- Allen, M. (1981, March), "Power and privilege in the large corporation: corporate control and managerial compensation", *American Journal of Sociology*, 86(5), 1112-1123.
- Ang, J., Cole, R. and Lin, J. (2000, February), 'Agency Costs and Ownership Structure', *Journal of Finance*, 55(1), 81-106.
- Armstrong, M. (2006), *PERFORMANCE MANAGEMENT: KEY STRATEGIES AND PRACTICAL GUIDELINES (3<sup>rd</sup> ed.)*, UK and USA: Kogan-Page.
- Association of British Insurers (2009, December), "EXECUTIVE REMUNERATION – ABI GUIDELINES ON POLICIES AND PRACTICES", 1-20. Available at: [http://www.ivis.co.uk/PDF/ABI\\_Remuneration\\_Guidelines\\_Dec\\_2009.pdf](http://www.ivis.co.uk/PDF/ABI_Remuneration_Guidelines_Dec_2009.pdf)

- Attaway, M. (2000) 'A Study of the Relationship between Company Performance and CEO Compensation', *American Business Review*, 18(1), 77-85.
- Baird, J. and Stowasser, P. (2002, October), "Executive compensation disclosure requirements: the German, UK and US approaches", *GLOBAL COUNSEL CORPORATE GOVERNANCE: EXECUTIVE COMPENSATION*, 29-42.
- Baltagi, B. (2008), *Econometrics (4<sup>th</sup> Ed.)*, Springer.
- Bamberg, J. (1994), *The History of The British Petroleum Company: Volume 2 The Anglo-Iranian Years 1928–1954*, Cambridge University Press.
- Bamberg, J. (2000), *British Petroleum and Global Oil, 1951-1975: The Challenge of Nationalism*, Cambridge University Press.
- Banks, E. (2004), *Corporate Governance: Financial Responsibility, Controls and Ethics*, New York: Palgrave Macmillan.
- Barney, J. (1991, March). "Firm Resources and Sustained Competitive Advantage", *Journal of Management*, 17(1), 99-120.
- Batson, N. (2003, November), "Final Report of Neal Batson, court-appointed examiner", In re: Enron Corp., et al., United States Bankruptcy Court, Southern District of New York, *Case No. 01-16034 (AJG)*. Available at: [http://www.concernedshareholders.com/CCS\\_ENRON\\_Report.pdf](http://www.concernedshareholders.com/CCS_ENRON_Report.pdf)
- Bebchuk, L. and Cohen, A. (2003, October), "FIRMS' DECISIONS WHERE TO INCORPORATE", *Journal of Law and Economics*, 46(2), 383-425.
- Bebchuk, L. and Fried, J. (2003, July), "Executive Compensation as an Agency Problem", *Journal of Economic Perspectives*, 17(3), 71-92.
- Bebchuk, L. and Fried, J. (2004a), *Pay without Performance: The Unfulfilled Promise of Executive Compensation*, Harvard: University Press.
- Bebchuk, L. and Fried, J. (2004b, September), "Stealth Compensation Via Retirement Benefits", *Harvard Law School Discussion Paper No. 487*, 1-31. Available at: <http://www.law.harvard.edu/faculty/bebchuk/pdfs/Stealth-Compensation-Jan26.pdf>
- Bebchuk, L. and Spamann, H. (2009, June), "Regulating Bankers' Pay", *Harvard Law School Discussion Paper No. 641*, 1-43. Available at: [http://www4.gsb.columbia.edu/rt/null?&exclusive=filemgr.download&file\\_id=734265&rtc\\_contentdisposition=filename%3DRegulating\\_Bankers\\_Pay.pdf](http://www4.gsb.columbia.edu/rt/null?&exclusive=filemgr.download&file_id=734265&rtc_contentdisposition=filename%3DRegulating_Bankers_Pay.pdf)
- Bebchuk, L., Fried J. and Walker, D. (2002, June), 'Managerial Power and Rent Extraction in the Design of Executive Compensation', *the University of Chicago Law Review*, 69(3), 751-846.
- Belkhir, M. (2009), "Board of Directors' Size and Performance in the Banking Industry", *International Journal of Managerial Finance*, 5(2), 201-221.
- Bender, R. (2003, July), "How Executive Directors' Remuneration is determined in Two FTSE 350 Utilities", *Corporate Governance: An International Review*, 11(3), 206-217.
- Bender, R. (2004), *The Determination of Directors' Remuneration in Selected FTSE 350 Companies*, PhD Thesis, Business School, University of Warwick, 1-342.

- Bender, R. (2007, September), "Onwards and Upwards: Why Companies Change their Executive Remuneration Schemes, and Why This Leads to Increases in Pay", *Corporate Governance: An International Review*, 15(5), 709-723.
- Bender, R. and Porter, B. (2003), 'Setting Executive Directors' Remuneration in Listed Companies', *Journal of Applied Management Accounting Research*, 1(2), 27-47.
- Benito, A. and Conyon, M. (1999), "The governance of directors' pay: evidence from UK companies", *Journal of Management and Governance*, 3(2), 117-136.
- Bennett, B., Bradbury, M., and Prangnell, H. (2006, June), "Rules, Principles and Judgments in Accounting Standards", *ABACUS*, 42(2), 189-204.
- Berger, A., Clarke, G., Cull, R., Klapper, L. and Udell, G. (2005), "Corporate Governance and Bank Performance: A Joint Analysis of the Static, Selection, and Dynamic Effects of Domestic, Foreign, and State Ownership", *Journal of Banking and Finance*, 29(8-9), 2179-2221.
- Berle, A. and Means, G. (1932), *The Modern Corporation and Private Property*, New York: The Macmillan Company.
- Berry, T., Fields, L. and Wilkins, M. (2006, June), 'The Interaction among Multiple Governance Mechanisms in Young Newly Public Firms', *Journal of Corporate Finance*, 12(3), 449-446.
- Bhagat, S. and Black, B. (1999), "The Uncertain Relationship between Board Composition and Firm Performance", *Business Lawyer*, 54, 921-963.
- Bhagat, S. and Black, B. (2002), 'The Non-Correlation between Board Independence and Long-Term Firm Performance', *Journal of Corporation Law*, 27, 231-274.
- Bhagat, S. and Romano, R. (2009, July), "Reforming Executive Compensation: Focusing and Committing to the Long-Term", *Yale Journal on Regulation*, 26(2), 359-372.
- Blackburn, V. (1994, October), "The Effectiveness of Corporate Control in the US Corporations", *Corporate Governance: An International Review*, 2(4), 196-202.
- Black, B., Jang, H. and Kim, W. (2006, January), "Does Corporate Governance Predict Firms' Market Values? Evidence from Korea", *The Journal of Law, Economics and Organization*, 22(2), 366-413.
- Black, F. and Scholes M. (1972, May), "The Valuation of Option Contracts and a Test of Market Efficiency", *Journal of Finance*, 27(2), 399-417.
- Blau, F. and Kahn L. (2000, June), "Gender Differences in Pay", *Journal of Economic Perspectives*, 14(4), 75-99.
- Bogdan, R. and Taylor, S. (1975), *Introduction to Qualitative Research Methods: A Phenomenological Approach To The Social Sciences*, New York: John Wiley & Sons.
- Bose, S. and Chatterjee, D. (2009, December), "Corporate Governance Practices-Self Regulation Vis-à-Vis Legislation", *Advances In Management*, 2(12), 60-65.
- BP Annual Reports (2001-2010). Available at:  
<http://www.bp.com/en/global/corporate/investors/annual-reporting/archive.html>

- Braiotta, L. and Sommer, A. (1987), *The Essential Guide to Effective Corporate Board Committees*, Englewood Cliffs, New Jersey: Prentice-Hall.
- Brealey, R., Myers, S., and Allen, F. (2008), *Principles of Corporate Finance (9<sup>th</sup> Ed.)*, McGraw-Hill.
- Brigham, E. (1991), *Fundamentals of Financial Management (6<sup>th</sup> Ed.)*, London: Dryden Press.
- Brooks, C. (2008), *Introductory Econometrics for Finance (2<sup>nd</sup> Ed.)*, Cambridge: University Press.
- Brown L. and Caylor, M. (2009, February), "Corporate Governance and Firm Operating Performance", *Review of Quantitative Financial Accounting*, 32(2), 129-144.
- Brown, S., Blackmon, K., Cousins, P. and Maylor, H. (2001), *Operations Management: Policy, Practice and performance Improvement*, Oxford: Butterworth-Heinemann.
- Bryman, A. (2001), *Social Research Methods*, Oxford: University Press.
- Bull, R. (2008), *Financial Ratios*, CIMA Publishing.
- Burrell, G. and Morgan, G. (1979), *Sociological Paradigms and Organizational Analysis*, London: Heinemann.
- Cadbury, A. (1992, December), "The Financial Aspects of Corporate Governance", London: GEE.
- Carter, E. and McMahon, F. (2005) *IMPROVING EMPLOYEE PERFORMANCE Through Workplace Coaching: a Practical Guide to Performance Management*, UK and USA: Kogan-Page
- Castanias, R. and Helfat, C. (1991, March), 'Managerial Resources and Rents', *Journal of Management*, 17(1), 155-171.
- Chance, D., Kumar, R. and Todd, R. (2000, March), "The 'Repricing' of Executive Stock Options", *Journal of Financial Economics*, 57(1), 129-154.
- Chapman, C. (Ed.). (2005), *Controlling Strategy: Management, Accounting, and Performance Measurement*, USA: Oxford University Press.
- Christian, D. and Ludenbach, N. (2013), *IFRS Essentials*, Chichester: Wiley.
- CIMA Technical Briefing (2002, July), *Latest Trends in Corporate Performance Measurement*, London, 1-16.
- Cimasi, R. (2008, January), "Diagnosing the Value of Executive Stock Options", *Physician's News*. Available at: <http://www.physiciansnews.com/2008/01/20/diagnosing-the-value-of-executive-stock-options/>
- Cohen, R., Hall, B. and Viceira, L. (2000, March), "Do Executive Stock Options Encourage Risk-Taking?", USA: *Harvard University*, 1-19. Available at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.201.5885&rep=rep1&type=pdf>
- Coles, J., Daniel, N. and Naveen, L. (2006, February), "Managerial Incentives and Risk-taking", *Journal of Financial Economics*, 79(2), 431-468.



- Coles, J., Lemmon, M. and Meschke, F. (2012, January), "Structural Models and Endogeneity in Corporate Finance: the Link between Managerial Ownership and Corporate Performance", *Journal of Financial Economics*, 103(1), 149-168.
- Collis, J. and Hussey, R. (2003), *Business Research (2<sup>nd</sup> Ed.)*, New York: Palgrave Macmillan.
- Committee of Corporate Governance (2000, May), "THE COMBINED CODE - PRINCIPLES OF GOOD GOVERNANCE AND CODE OF BEST PRACTICE", 1-14. Available at: [http://www.ecgi.org/codes/documents/combined\\_code.pdf](http://www.ecgi.org/codes/documents/combined_code.pdf)
- Conyon, M. (1997, July), "Corporate Governance and Executive Compensation", *International Journal of Industrial Organization*, 15(4), 493-509.
- Conyon, M. and Leech, D. (1994, August), "Top pay, company performance and corporate governance", *Oxford Bulletin of Economics and Statistics*, 56(3), 229-247.
- Conyon, M. and Murphy, K. (2000, November), "The Prince and the Pauper? CEO Pay in the United States and United Kingdom", *Economic Journal*, 110(467), 640-671.
- Conyon, M. and Peck, S. (1998, April), "Board Control, Remuneration Committees, and Top Management Compensation", *The Academy of Management Journal*, 41(2), 146-157.
- Conyon, M. and Sadler, G. (2001, June), 'Executive Pay, Tournaments and Corporate Performance in UK Firms', *International Journal of Management Reviews*, 3(2), 141-168.
- Conyon, M., Core, J. and Guay, W. (2005, June), "How High Is US CEO Pay? A Comparison with UK CEO Pay", *Working Paper*, 1-44. Available at: [http://w4.stern.nyu.edu/accounting/docs/How%20High%20Is%20US%20CEO%20Pay.conyon\\_core\\_guay.Paper%205.pdf](http://w4.stern.nyu.edu/accounting/docs/How%20High%20Is%20US%20CEO%20Pay.conyon_core_guay.Paper%205.pdf)
- Conyon, M., Core, J. and Guay, W. (2011), "Are U.S. CEOs Paid More Than U.K. CEOs? Inferences from Risk-adjusted Pay", *The Review of Financial Studies*, 24(2), 402-438.
- Conyon, M., Gregg, P. and Machin, S. (1995, May), "Taking Care of Business: Executive Compensation in the United Kingdom", *The Economic Journal*, 105(430), 704-714.
- Conyon, M., Peck, S. and Sadler, G. (2001, July), "Corporate tournaments and executive compensation: Evidence from the UK", *Strategic Management Journal*, 22(8), 805-815.
- Conyon, M., Peck, S., Read, L., and Sadler, G. (2009, February), "Compensation Consultants and Executive Pay: Evidence from the United States and the United Kingdom", *Academy of Management Perspectives*, 23(1), 43-55.
- Core, J. and Larcker, D. (2002, June), 'Performance Consequences of Mandatory Increases in Executive Stock Ownership', *Journal of Financial Economics*, 64(3), 317-340.
- Core, J., Holthausen, R. and Larcker, D. (1999, March), 'Corporate Governance, Chief Executive Officer Compensation, and Firm Performance', *Journal of Financial Economics*, 51(3), 371-406.
- Core, J., Guay, W. and Rusticus, T. (2006, April), 'Does Weak Governance Cause Weak Stock Returns? An Examination of Firm Operating Performance and Investors' Expectations', *The Journal of Finance*, 59(2), 655- 687.

- Cosh, A. and Hughes, A. (1997, July), "Executive Remuneration, Executive Dismissal and Institutional Shareholdings", *International Journal of Industrial Organization*, 15(4), 469-492.
- Cowen, S., Ferreri, L. and Parker, L. (1987, March), "The impact of corporate characteristics on social responsibility disclosure: a typology and frequency based analysis", *Accounting, Organizations and Society*, 12(2), 111-122.
- Craswell, A. and Taylor, S. (1992, January), "Discretionary disclosure of reserves by oil and gas companies: an economic analysis", *Journal of Business Finance and Accounting*, 19(2), 295-308.
- Creswell, J. and Clark, V. (2011), *Designing and Conducting Mixed Methods Research (2<sup>nd</sup> Edition)*, Sage.
- Dalton, D., Daily, C., Certo, S. and Roengpitya, R. (2003, February), 'Meta-Analyses of Financial Performance and Equity: Fusion or Confusion?', *The Academy of Management Journal*, 46(1), 13-26.
- Dalton, D., Daily, C., Johnson J. and Ellstrand, A. (1999, December), 'Number of Directors and Financial Performance: A Meta-Analysis', *The Academy of Management Journal*, 42(6), 678-686.
- Davis, J., Schoorman, F. and Donaldson, L. (1997, January), 'Toward a Stewardship Theory of Management', *The Academy of Management Review*, 22(1), 20-47.
- Deckop, J. (1988, January), "Determinants of Chief Executive Officer Compensation", *Industrial and Labor Relations Review*, 41(2), 215-226.
- Dedman, E. (2002, December), "The Cadbury Committee Recommendations on Corporate Governance – a Review of Compliance and Performance Impacts", *International Journal of Management Reviews*, 4(4), 335-352.
- Deloitte (2004, November), "Report on the Impact of the Directors' Remuneration Report Regulations", 1-56.
- Deloitte (2008, March), "Directors' Remuneration Disclosure Checklist for Quoted Companies (Companies Act 2006)", 1-24.
- Denis, D., Denis, D. and Sarin, A. (1997, August), 'Ownership Structure and Top Executive Turnover', *Journal of Financial Economics*, 45(2), 193-221.
- Department for Business Innovation and Skills (2012, June), "Director' Pay – Consultation on Revised Remuneration Reporting Regulations", 1-53.
- Department for Business Innovation and Skills (2013, March), "The Large and Medium-Sized Companies and Groups (Accounts and Reports) (Amendment) Regulations 2013", 1-19.
- Devers, C., Cannella, A., Reilly, G. and Yoder, M. (2007, November), 'Executive Compensation: A Multidisciplinary Review of Recent Developments', *Journal of Management*, 33(6), 1016-1072.
- Dignam, A. and Lowry, J. (2006), *Company Law (4<sup>th</sup> Ed.)*, Oxford: University Press.

- Dinga, A. (2011), *Corporate Ownership and Control Structure and Firm Performance: Evidence from Control Potential, Agency, and Control Dominance-Contestability Perspective on UK Listed Firms*, PhD thesis, Durham University.
- DiMaggio, P. and Powell, W. (1983, April), "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields", *American Sociological Review*, 48(2), 147-160.
- Donaldson, L. (1985), *In Defence of Organization Theory: A Reply to the Critics*, Cambridge: University Press.
- Donaldson, L. (1995), *American Anti-management Theories of Organization: A Critique of Paradigm Proliferation*, Cambridge: University Press.
- Donaldson, L. and Davis, J. (1991, June), 'Stewardship theory or agency theory: CEO governance and shareholder returns', *Australian Journal of Management*, 16(1), 49-64.
- Dong, M. and Ozkan, A. (2008, February), "Institutional investors and director pay: an empirical study of UK companies", *Journal of Multinational Financial Management*, 18(1), 16-29.
- Doucouliaagos, H., Haman, J. and Askary, S. (2007, December), "Directors' Remuneration and Performance in Australian Banking", *Corporate Governance: An International Review*, 15(6), 1363-1383.
- Dougherty, C. (2002), *Introduction to Econometrics (2<sup>nd</sup> Ed.)*, Oxford: University Press.
- Drury, C. (2000), *Management and Cost Accounting (5<sup>th</sup> Ed.)*, London: Thomson Business Press.
- Duan, J. and Wei, J. (2005, May), "Executive Stock Options and Incentive Effects due to Systematic Risk", *Journal of Banking & Finance*, 29(5), 1185-1211.
- Eisenhardt, K. (1989, January), "Agency theory: An assessment and review", *The Academy of Management Review*, 14(1), 57-74.
- European Commission (2009, April), "Directors' pay: Commission sets out further guidance on structure and determination of directors' remuneration", *EUROPA: Press Releases*, IP/09/673, 1-2.
- Fabozzi, F. and Peterson, P. (2003), *Financial Management and Analysis (2<sup>nd</sup> Ed.)*, Chichester: Wiley.
- Falato, A., Li, D. and Milbourn, T. (2011), "To Each According To His Ability? CEO pay and the market for CEOs", *Working Paper*, 1-51. Available at: [http://apps.olin.wustl.edu/faculty/milbourn/CEO\\_Ability\\_July2011.pdf](http://apps.olin.wustl.edu/faculty/milbourn/CEO_Ability_July2011.pdf)
- Fama, E. (1980, April), "Agency Problems and the Theory of the Firm", *Journal of Political Economy*, 88(2), 288-307.
- Fama, E. and Jensen, M. (1983, June), "Separation of Ownership and Control", *Journal of Law and Economics*, 26(2), 301-326.
- Feder, R. (1997), *Valuation Strategies in Divorce (4<sup>th</sup> Ed.)*, USA: ASPEN Publishers.
- Fernandes, N., Ferreira, M., Matos, P. and Murphy, K. (2009, August), "The Pay Divide: (Why) are U.S. Top Executives Paid More?", *ECGI Working Paper Series in Finance*, Working Paper N°. 255, 1-52.

- Fernandes, N., Ferreira, M., Matos, P. and Murphy, K. (2013), "Are US CEOs Paid More? New International Evidence", *The Review of Financial Studies*, 26(2), 323-367.
- Ferrier, R. (1982), *The History of The British Petroleum Company: Volume 1 The Developing Years 1901-1932*, Cambridge University Press.
- Financial Reporting Council (2002, October), "The United Kingdom Directors' Remuneration Report Regulations 2002", 1-10.
- Financial Reporting Council (2003, July), "THE COMBINED CODE ON CORPORATE GOVERNANCE", 1-84.
- Financial Reporting Council (2006, June), "THE COMBINED CODE ON CORPORATE GOVERNANCE", 1-25.
- Financial Reporting Council (2008, June), "THE COMBINED CODE ON CORPORATE GOVERNANCE", 1-32.
- Financial Reporting Council (2012, September), "THE UK CORPORATE GOVERNANCE CODE", 1-34.
- Financial Service Authority (2010, July), "Revising the remuneration code, Consultation Paper 10/19", 1-46.
- Financial Service Authority (2010, December), "Revising the remuneration code: Feedback on CP10/19 and final rules, Policy Statement 10/20", 1-45.
- Finkelstein, S. and Hambrick, D. (1989), 'Chief Executive Compensation: A Study of the Intersection of Markets and Political Processes', *Strategic Management Journal*, 10(2), 121-134.
- Finkelstein, S. and Hambrick, D. (1996), *Strategic Leadership: Top Executives and Their Effects on Organizations*, St Paul: West Publishing Company.
- Fitzsimons, P. (1999, July), "Human Capital Theory and Education", *Encyclopedia of Philosophy of Education*, 1-5. Available at: [http://www.ffst.hr/ENCYCLOPAEDIA/doku.php?id=human\\_capital\\_theory\\_and\\_education](http://www.ffst.hr/ENCYCLOPAEDIA/doku.php?id=human_capital_theory_and_education)
- Forker, J. (1992), "Corporate Governance and Disclosure Quality", *Accounting and Business Research*, 22(86), 111-124.
- Franks, J., Mayer, C. and Renneboog, L. (2001, July), 'Who disciplines management in poorly performing companies?', *Journal of Financial Intermediation*, 10(3-4), 209-248.
- Fraser, I. and Henry, W. (2003), *The Future of Corporate Governance: Insights from the UK*, Great Britain: Antony Rowe Ltd.
- FTSE, "The UK index Series", *Financial Times Security Exchange*. Available at: [http://www.ftse.com/Indices/UK\\_Indices/index.jsp](http://www.ftse.com/Indices/UK_Indices/index.jsp)
- Garvey, G. and Mawani, A. (2007, April), "Executive Stock Options and Dynamic Risk-Taking Incentives", *Managerial Finance*, 33(4), 281-288.
- General Accounting Office (2004, July), "Mutual Funds: SEC Should Modify Proposed Regulations to Address Some Pension Plan Concerns", *United States General Accounting Office*, GAO-04-799, 1-43. Available at: <http://www.gao.gov/assets/250/243339.pdf>

- Gertner, R. and Kaplan, S. (1996, December), "The Value-Maximizing Board", *Working Paper, University of Chicago and NBER*, 1-24. Available at: <http://faculty.chicagobooth.edu/steven.kaplan/research/gerkap.pdf>
- Gibbons, R. and Murphy, K. (1990, February), "Relative Performance Evaluation for Chief Executive Officers", *Industrial and Labor Relations Review*, 43(3), 30–51.
- Gibbons, R. and Murphy, K. (1992, August), "Does executive compensation affect investment?", *Journal of Applied Corporate Finance*, 5(2), 99–109.
- Gillen, M. (2006, July), "A Comparison of Business Income Trust Governance and Corporate Governance: Is There a Need for Legislation or Further Regulation?", *McGill Law Journal*, Vol. 51(2), 327-383.
- Ghosh, S. (2007, June), "Leverage, Managerial Monitoring and Firm Valuation: A Simultaneous Equation Approach", *Research in Economics*, 61(2), 84-98.
- Gomez-Mejia, L. and Wiseman, R. (1997, June), 'Reframing Executive Compensations: An Assessment and Outlook', *Journal of Management*, 23(3), 291-374.
- Greenbury, R. (1995, July), "Directors' Remuneration: Report of a Study Group Chaired by Sir Richard Greenbury", London: GEE.
- Gregg, P., Jewell, S. and Tonks, I. (2011, October), "Executive Pay and Performance: Did Bankers' Bonuses Cause the Crisis?", *International Review of Finance*, 12(1), 89-122.
- Gregg, P., Machin, S. and Szymanski, S. (1993, March), 'The Disappearing Relationship between Directors' Pay and Corporate Performance', *British Journal of Industrial Relations*, (31)1, 1-9.
- Gubitta, P. and Gianecchini, M. (2002, December), "Governance and Flexibility in Family-Owned SMEs", *Family Business Review*, 15(4), 277-297.
- Gugler, K. (Ed.) (2001), *Corporate Governance and Economic Performance*, Oxford: University Press.
- Gujarati, D. (2004), *Basic Econometrics (4<sup>th</sup> Ed.)*, New York; London: McGraw-Hill.
- Gwilliam, D. and Jackson, R. (2008, September), "Fair value in financial reporting: Problems and pitfalls in practice: A case study analysis of the use of fair valuation at Enron", *Accounting Forum*, 32(3), 240-259.
- Gwilliam, D. and Marnet, O. (2009), "Audit Within the Corporate Governance Paradigm: a Cornerstone Built on Shifting Sand?", *Economics, Finance and Accounting Applied Research Working Paper Series*, 1-80. Available at: <http://www.st-andrews.ac.uk/business/ecas/7/papers/ECAS-GwilliamMarnet.pdf>
- Habib, M. and Ljungqvist, A. (2005, November), "Firm Value and Managerial Incentives: A Stochastic Frontier Approach", *Journal of Business*, 78(6), 2053-2094.
- Hall, B. (1998, August), "The Pay to Performance Incentives of Executive Stock Options", *NBER Working Paper No. 6674*, 1-49. Available at: <http://www.nber.org/papers/w6674>
- Hall, B. (2000, March), "What You Need to Know about Stock Options", *Harvard Business Review*, 1-9. Available at: <http://www.hbs.edu/faculty/Pages/item.aspx?num=6004>

- Hall, B. and Leibman, J. (1998, August), "Are CEOs really paid like bureaucrats", *Quarterly Journal of Economics*, 113(3), 653-691.
- Hall, B. and Murphy, K. (2002, February), "Stock Options for Undiversified Executives", *Journal of Accounting and Economics*, 33(1), 3-42.
- Hall, B. and Murphy, K. (2003, May), "The Trouble with Stock Options", *The Journal of Economic Perspectives*, 17(3), 49-70.
- Haniffa, R. and Cooke, T. (2002, August), "Culture, Corporate Governance and Disclosure in Malaysian Corporations", *ABACUS*, 38(3), 317-349.
- Haniffa, R. and Hudaib, M. (2006), "Corporate Governance Structure And Performance Of Malaysian Listed Companies", *Journal of Business Finance and Accounting*, 33(7-8): 1034-1062.
- Hampel, R. (1998, January), "Committee on Corporate Governance – Final Report", London: GEE.
- Harris, M. and Raviv, A. (1979), "Optimal Incentive Contracts with Imperfect Information", *Journal of Economic Theory*, 20, 231-259.
- Hausman, J. and Taylor, W. (1981, November), "Panel Data and Unobservable Individual Effects", *Econometrica*, 49(6), 1377-1398.
- Hendry, K. and Kiel, G. (2004, October), "The role of the board in firm strategy: Integrating agency and organizational control perspectives", *Corporate Governance*, 12(4), 500-520.
- Hengartner, L. (2006), "Explaining Executive Pay: the Roles of Managerial Power and Complexity", PhD Thesis, *Graduate School of Business Administration, The University of St. Gallen*, 1-230.
- Hermalin, B. and Wallace, N. (2001, July), "Firm Performance and Executive Compensation in the Savings and Loan Industry", *Journal of Financial Economics*, 61(1), 139-170.
- Hermalin, B. and Weisbach, M. (2003, April), "Boards of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature", *Economic Policy Review*, 9(1), 1-38.
- Higgs, D. (2003, January), "Review of the Role and Effectiveness of Non-Executive Directors", London: The Department of Trade and Industry.
- Hill, C. and Phan, P. (1991, September), "CEO Tenure as a Determinant of CEO Pay", *The Academy of Management Journal*, 34(3), 707-717.
- Himmelberg, C., Hubbard, R. and Palia, D. (1999, July), "Understanding the Determinants of Managerial Ownership and the Link between Ownership and Performance", *Journal of Financial Economics*, 45, 353-384.
- Hoechle, D. (2007), "Robust Standard Errors for Panel Regressions with Cross-Sectional Dependence", *Stata Journal*, 7(3), 281-312.
- Hogan, T. and McPheters, L. (1980, April), "Executive compensation: performance versus personal characteristics", *Southern Economic Journal*, 46(4), 1060-1068.

- Holderness, C. and Sheehan, D. (1988, January), “The role of majority shareholders in publicly held corporations: an exploratory analysis”, *Journal of Financial Economics*, 20, 317–346.
- Horton, J. and Serafeim, G. (2009, December), “Security Analyst Networks, Performance and Career Outcomes”, *Journal of Finance*, 1-37.
- Horton, J., Serafeim, G. and Tuna, I. (2010), “Social Networks: The Impact on Firms’ Information Environment and Corporate Communication”, *AAA 2010 Financial Accounting and Reporting Section (FARS) Paper*, 1-39.
- Hossain, M., Perera, M. and Rahman, A. (1995, March), “Voluntary Disclosure in the Annual Reports of New Zealand Companies”, *Journal of International Financial Management and Accounting*, 6(1), 69-87.
- Hossain, M., Tan, L. and Adams, M. (1994), ‘Voluntary Disclosure in an Emerging Capital Market: Some Empirical Evidence from Companies Listed on the Kuala Lumpur Stock Exchange’, *International Journal of Accounting*, 29(4), 334-351.
- Huse, M. (2005, March), “Accountability and Creating Accountability: A Framework for Exploring Behavioural Perspectives of Corporate Governance”, *British Journal of Management*, 16(1), pp. 65-79.
- Jensen, M. (1986, May), “Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers”, *American Economic Review*, 76(2), 323-329.
- Jensen, M. (1993, July), “The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems”, *The Journal of Finance*, 48(3), 831-880.
- Jensen, M. and Meckling, W. (1976), “Theory of a Firm: Managerial Behavior, Agency Costs and Ownership Structure”, *Journal of Financial Economics*, 3(4), 305-360.
- Jensen, M. and Murphy, K. (1990, April), “Performance Pay and Top-Management Incentives”, *Journal of Political Economy*, 98(2), 225-264.
- Jensen, M., Murphy, K. and Wruck, E. (2004, July), “Remuneration: Where we’ve been, how we got to here, what are the problems, and how to fix them”, *ECGI Finance Working Paper No. 44*, 1-105.
- John, K., Mehran, H. and Qian, Y. (2010, September), “Outside Monitoring and CEO Compensation in the Banking Industry”, *Journal of Corporate Financial*, 16(4), 383-399.
- Johnson, H. and Kaplan, R. (1987), *Relevance Lost: The Rise and Fall of Management Accounting*, Harvard: Business School Press.
- Johnson, R. and Onwuegbuzie, A. (2004), ‘Mixed Methods Research: a Research Paradigm Whose Time Has Come’, *Educational Researcher*, 33(7), 14-26.
- Johnson, R., Onwuegbuzie, A. and Turner, L. (2007), ‘Toward a Definition of Mixed Methods Research’, *Journal of Mixed Methods Research*, 1(2), 112-133.
- Jones, C., Hesterly, W. and Borgatti, S. (1997, October), “A general theory of network governance: Exchange conditions and social mechanisms”, *Academy of Management Review*, 22(4), 911-945.
- Joskow, P., Rose, N. and Shepard, A. (1993, March), ‘Regulatory Constraints on CEO Compensation’, *Brookings Papers on Economic Activity: Microeconomics*, 1, 1-72.

- Kahle, K. M. and Shastri, K. (2004, December), "Executive Loans", *Journal of Financial and Quantitative Analysis*, 39(4), 791-811.
- Kang, J. and Shivdasani, A. (1995, May), "Firm Performance, Corporate Governance, and Top Executive Turnover in Japan", *Journal of Financial Economics*, 38(1), 29-58.
- Kaplan, R. (1984, July), "The Evolution of Management Accounting", *Accounting Review*, 59(3), 390-418.
- Kaplan, S. (1994a, June), "Top Executive Rewards and Firm Performance: A Comparison of Japan and the United States", *Journal of Political Economy*, 102(3), 510-546.
- Kaplan, S. (1994b, April), "Top Executives, Turnover and Firm Performance in Germany", *Journal of Law, Economics and Organization*, 10(1), 142-159.
- Kaplan, S. (1998, February), "Top Executive Incentives in Germany, Japan and the US: A Comparison", 1-14.
- Kato, T. (1997, July), "Chief Executive Compensation and Corporate Groups in Japan: new evidence from micro data", *International Journal of Industrial Organization*, 15(4), 455-467.
- Kay, I. and Van Putten, S. (2007), *Myths and realities of executive pay*, Cambridge: University Press.
- Keasey, K. (2006), "Executive Compensation in the UK", *Journal of Financial Regulation and Compliance*, 14(3), 235-241.
- Keasey, K. and Wright, M. (Eds.) (1997), *Corporate Governance: Responsibilities, Risks, and Remuneration*, Chichester: Wiley.
- Keasey, K., Thompson, S. and Wright, M. (Eds.) (1997), *Corporate Governance: Economic, Management, and Financial Issues*, Oxford: University Press.
- Khatri, Y., Leruth, L. and Piesse, J. (2002, September), "Corporate Performance and Governance in Malaysia", *International Monetary Fund, Working Paper no. 02/152*, 1-25. Available at: <http://www.imf.org/external/pubs/ft/wp/2002/wp02152.pdf>
- Khurshed, A., Lin, S. and Wang, M. (2011, February), "Institutional Block-Holdings of UK Firms: Do Corporate Governance Mechanisms Matter?", *European Journal of Finance*, 17(2), 133-152.
- Kim, K. and Nofsinger, J. (2007), *Corporate Governance (2<sup>nd</sup> Ed.)*, USA: Pearson International.
- Koh, W. and Liu, S. (2012), "Implicit Relative Performance Evaluation: Evidence from UK FTSE 350 Firms", In, *British Accounting and Finance Association's Annual Conference, Brighton, GB*, 17 Apr 2012.
- Korczak, P. and Liu, X. (2013, July), "Do Executives Hold on to Equity-Linked Incentives? The Role of Minimum Shareholding Policies", *working papers series*, 1-36. Available at: <http://ssrn.com/abstract=2105647>
- Krambia-Kapardis, M. and Psaros, J. (2006, March), "The Implementation of Corporate Governance Principles in an emerging economy: A Critique of the situation in Cyprus", *Corporate Governance: An International Review*, 14(2), 126-139.



- Kubo, K. (2000), "The Determinants of Executive Compensation and its Effect on Company Performance in Japan and in the UK", PhD Thesis, *London School of Economics and Political Science*, 1-323.
- Kulich, C., Trojanowski, G., Ryan, M., Haslam, S. and Renneboog, L. (2011, March), "Who Gets the Carrot and Who Gets the Stick? Evidence of Gender Disparities in Executive Remuneration", *Strategic Management Journal*, 32(1), 301-321.
- Larcker, D. and Rusticus, T. (2010, April), "On the Use of Instrumental Variables in Accounting Research", *Journal of Accounting and Economics*, 49(3), 186-205.
- Lawrence, J. and Stapledon, G. (1999, September), "Is Board Composition Important? A Study of Listed Australian Companies", *working papers series*, 1-49. Available at: <http://ssrn.com/abstract=193528>
- Lazear, E. (1998), *Personnel Economics for managers*, USA: John Wiley & Sons, Ltd.
- Lazear, E. and Rosen, S. (1981, October), 'Rank-Order Tournaments as Optimum Labor Contracts', *Journal of Political Economy*, 89(5), 841-864.
- Lee, K., Lev, B., and Yeo, G. (2008, April), "Executive Pay Dispersion, Corporate Governance, and Firm Performance", *Review of Quantitative Finance and Accounting*, 30(3), 315-338.
- Leftwich, R., Watts, R. and Zimmerman, J. (1981), "Voluntary Corporate Disclosure: The Case of Interim Reporting", *Journal of Accounting Research*, 19, 50-77.
- Leonard, J. (1990, February), "Executive Pay and Firm Performance", *Industrial and Labor Relations Review*, 43(3), 13-29.
- Leung, S. and Horwitz, B. (2004, October), "Director Ownership and Voluntary Segment Disclosure: Hong Kong Evidence", *Journal of International Financial Management and Accounting*, 15(3), 235-260.
- Loderer, C. and Martin, K. (1997, August), "Executive Stock Ownership and Performance: Tracking Faint Traces", *Journal of Financial Economics*, 45(2), 223-255.
- Main, B. and Johnston, J. (1993), 'The Remuneration Committees and Corporate Governance', *Accounting and Business Research*, 23, 351-362.
- Main, B., Bruce, A. and Buck, T. (1996, November), "Total Board Remuneration and Company Performance", *Economic Journal*, 106(439), 1627-1644.
- Main, B., Jackson, C., Pymm, J. and Wright, V. (2008, May), "The Remuneration Committee and Strategic Human Resource Management", *Corporate Governance: An International Review*, 16(3), 225-238.
- Main, G., O'Reilly, C. and Crystal G. (1994), "Over here and over there: a comparison of top executive pay in the UK and the USA", *Contribution to Labour Studies*, 4, 115-127.
- Main, G., O'Reilly, C. and Wade, J. (1993, October), "Top executive pay: Tournament or Teamwork?", *Journal of Labor Economics*, 11(4), 606-628.
- Mallin, C. A. (2007), *Corporate Governance (2<sup>nd</sup> Ed.)*, Oxford: University Press.
- Marshall, J. (2009, June), "Executive Remuneration in UK Banking", *House of Common Library, Standard Note BT04970*, 1-19.

- Matolcsy, Z. (2000, January), 'Executive Cash Compensation and Corporate Performance during Different Economic Cycles', *Contemporary Accounting Research*, 17(4), 671-692.
- Mayer, C. (1997, March), "Corporate Governance, Competition, and Performance", *Journal of Law and Society*, 24(1), 152-176.
- McDaniel, L., Martin, R. and Maines, L. (2002, January), "Evaluating Financial Reporting Quality: The Effects of Financial Expertise vs. Financial Literacy", *The Accounting Review*, 77(s-1), 139-167.
- McKnight, P. and Tomkins, C. (1999), 'Top Executive Pay in the United Kingdom: A Corporate Governance Dilemma', *International Journal of the Economics of Business*, 6(2), 223-243.
- McKnight, P. and Tomkins, C. (2004, February), "The Implications of Firm and Individual Characteristics on CEO Pay", *European Management Journal*, 22(1), 27-40.
- Mehran, H. (1995, June), "Executive Compensation Structure, Ownership, and Firm Performance", *Journal of Financial Economics*, 38(2), 163-184.
- Messier, W. F. Jr. (2003), *Auditing and assurance services: a systematic approach (3<sup>rd</sup> Ed.)*, Boston: McGraw-Hill.
- Moll, J., Burns, J. and Major, M. (2006), 'Institutional Theory', in Hoque, Z. (Ed.), *Methodological Issues in Accounting Research: Theories and Methods*, London: Spiramus, 183-205
- Morck, R. and Steier, L. (2005, January), "The Global History of Corporate Governance – An Introduction", *NBER Working Paper No. 11062*, 1-47. Available at: <http://www.nber.org/papers/w11062>
- Mulligan, E. (2012), 'New Institutional Sociology and the Endogeneity of Law', in Oats, L. (Ed.), *Taxation: A Fieldwork Research Handbook*, USA and CANADA: Routledge, 80-96.
- Mura, R. (2007, September), "Firm Performance: Do Non-Executive Directors Have a Mind of Their Own? Evidence from UK Panel Data", *Financial Management*, 36(3), 81-112.
- Murphy, K. (1985, April), "Corporate Performance and Managerial Remuneration: An Empirical Analysis", *Journal of Accounting and Economics*, 7(1-3), 11-42.
- Murphy, K. (1986, March), "Top Executives Are Worth Every Nickel They Get", *Harvard Business Review*, 64(2), 125-132.
- Murphy, K. (1999), 'Chapter 38: Executive compensation', in ASHENFELTER, O. and LAYARD, R. (Eds.), *Handbook of Labor Economics*, Vol. 3a, Amsterdam: Elsevier Science, 2485-2563.
- Muth, M. and Donaldson, L. (1998, January), "Stewardship Theory and Board Structure: A Contingency Approach", *Corporate Governance: An International Review*, 6(1), 5-28.
- Narasimhan, M. and Jaiswall, M. (2007, July), "Role and Functioning of Remuneration Committee in Improving Corporate Governance", *Journal of Corporate Governance*, 6(3), 18-34.
- National Association of Pension Funds (2011, November), "Corporate Governance Policy and Voting Guidelines", 1-39. Available at:

[http://www.napf.co.uk/PolicyandResearch/DocumentLibrary/0201\\_Corporate\\_Governance\\_Policy\\_Voting\\_Guidelines\\_Nov\\_2011\\_COMPLETE.aspx](http://www.napf.co.uk/PolicyandResearch/DocumentLibrary/0201_Corporate_Governance_Policy_Voting_Guidelines_Nov_2011_COMPLETE.aspx)

- Ness, K. And Mirza, A. (1991, September), "Corporate Social Disclosure: A Note on a Test of Agency Theory", *British Accounting Review*, 23(3), 211-217.
- Ntim, C., Lindop, S., Osei, K. and Thomas, D. (2011), "Executive Director Pay, Corporate Governance and Performance in South Africa: A Simultaneous Equation Approach", *In, British Accounting Association's Annual Conference, Birmingham, GB, 05 Apr 2011.*
- O'Brien, R. (2007, October), "A Caution Regarding Rules of Thumb for Variance Inflation Factors", *Quality & Quantity*, 41(5), 673-690.
- Organization for Economic Co-Operation and Development (2004), "OECD Principles of Corporate Governance", 1-66. Available at:  
<http://www.oecd.org/corporate/ca/corporategovernanceprinciples/31557724.pdf>
- Ozkan, N. (2007, December), "Do Corporate Governance Mechanisms Influence CEO Compensation? An Empirical Investigation of UK Companies", *Journal of Multinational Financial Management*, 17(5), 349–364.
- Ozkan, N. (2011), "CEO Compensation and Firm Performance: An Empirical Investigation of UK Panel Data", *European Financial Management*, Vol. 17(2), 260–285.
- Ozkan, N., Singer, Z. and You, H. (2012, April), "Mandatory IFRS Adoption in Europe and the Contractual Usefulness of Accounting Information in Executive Compensation", *Journal of Accounting Research*, 50(4), 1077-1107.
- Paddock, J. (2003), *Tolley's Directors' Remuneration: a Practical Guide*, UK: LexisNexis Tolley.
- Palepu, K., Healy, P. and Bernard, V. (2004), *Business Analysis and Valuation (3<sup>rd</sup> Ed.)*, CENGAGE Learning.
- Palia, D. (2001), "The Endogeneity of Managerial Compensation in Firm Valuation: A Solution", *The Review of Financial Studies*, 14(3), 735-764.
- Perry, T. and Zenner M. (2001, December), "Pay for Performance? Government Regulation and the Structure of Compensation Contracts", *Journal of Financial Economics*, 62(3), 453-488.
- Pettigrew, A. and McNulty, T. (1995, August), "Power and influence in and around the boardroom", *Human Relations*, 48(8), 845-873.
- Pindyck, R. and Rubinfeld, D. (1998), *Econometric Models and Economic Forecasts (4th Ed.)*, New York and London: McGraw-Hill.
- Polo, A. (2007, March), "Corporate Governance of Banks: The Current State of The Debate", *Munich Personal RePEc Archive*, Paper No. 2325, 1-16. Available at: [http://mpra.ub.uni-muenchen.de/2325/1/MPRA\\_paper\\_2325.pdf](http://mpra.ub.uni-muenchen.de/2325/1/MPRA_paper_2325.pdf)
- Pound, J. (1995, March), "The Promise of the Governed Corporation", *Harvard Business Review*, 73(2), 89-98.
- Powell, W. and DiMaggio, P. (Eds.) (1991), *The New Institutionalism in Organizational Analysis*, Chicago, Illinois: University of Chicago Press.

- Punnose, E. (2008, January), "A Profitability Analysis of Business Group Firms vs. Individual Firms in the Indian Electrical Machine Manufacturing Industry", *The IUP Journal of Management Research*, 7, 52-76.
- Raheja, C. (2005, June), "Determinants of Board Size and Composition: A Theory of Corporate Boards", *Journal of Financial and Quantitative Analysis*, 40(2), 283-306.
- Rogers, D. (2005), "Managerial Risk-taking Incentives and Executive Stock Option Repricing: A Study of US Casino Executives", *Financial Management*, 34(1), 95-121.
- Rogers, W. (1993, May), "Regression Standard Errors in Clustered Samples", *Stata Technical Bulletin 13*, 19-23.
- Rosen, S. (1982), "Authority, Control, and the Distribution of Earnings", *The Bell Journal of Economics*, 13(2), 311-323.
- Rosen, S. (1986, September), 'Prizes and Incentives in Elimination Tournaments', *The American Economic Review*, 76(4), 701-715.
- Rosenstein, S. and Wyatt, J. (1990, August), "Outside Directors, Board Independence and Shareholder Wealth", *Journal of Financial Economics*, 26(2), 175-191.
- Rossetti, C. and Choi, T. (2008, August), "Supply Management under High Goal Incongruence: An Empirical Examination of Disintermediation in the Aerospace Supply Chain", *Decision Sciences*, 39(3), 507-540.
- Rubery, J. (1995, September), 'PERFORMANCE-RELATED PAY AND THE PROSPECTS FOR GENDER PAY EQUITY', *Journal of Management Studies*, 32(5), 637-654.
- Rupp, W. and Smith, A. (2002, June), 'Study of the Dispersion of CEO Compensation in the Metals Industry', *American Business Review*, 20(2), 57-66.
- Ryan, B., Scapens, R. and Theobald, M. (2002), *Research Method and Methodology in Finance and Accounting (2<sup>nd</sup> Ed.)*, England: South-Western Cengage Learning.
- Sapp, S. (2008, March), "The Impact of Corporate Governance on Executive Compensation", *European Financial Management*, 14(4), 710-746.
- Saunders, M., Lewis, P. and Thornhill, A. (2007), *Research Methods for Business Students (4<sup>th</sup> Ed.)*, England: Pearson Education Limited.
- Scapens, R. (1990), "RESEARCHING MANAGEMENT ACCOUNTING PRACTICE: THE ROLE OF CASE STUDY METHODS", *British Accounting Review*, 22, 259-281.
- Scheer, A., Jost, W., Heb, H. and Kronz, A. (Eds.) (2005), *Corporate Performance Management*, Springer.
- Scott, W. (1910), *The Early History of Joint-Stock Companies of 1720*, Cambridge: University Press.
- Scott, W. (2009), *Financial Accounting Theory (5<sup>th</sup> Ed.)*, Toronto: Pearson Prentice Hall.
- Sigler, K. (2011, April), "CEO Compensation and Company Performance", *Business and Economics Journal*, 31, 1-8.

- Smith, C. and Watts, R. (1992, December), "The Investment Opportunity Set and Corporate Financing, Dividend and Compensation Policies", *Journal of Financial Economics*, 32(3), 263-292.
- Smith, G. (2008), "EXECUTIVE COMPENSATION, CORPORATE BOARDS AND INSTITUTIONAL INVESTOR MONITORING", PhD Thesis, *School of Banking and Finance, The University of New South Wales*, 1-303.
- Solomon, J. (2007), *Corporate Governance and Accountability (2<sup>nd</sup> Ed.)*, West Sussex: John Wiley & Sons, Ltd.
- Spira, L. (2003, July), "Audit Committees: Begging the Question", *Corporate Governance*, 11(3), 180-188.
- Spira, L. and Bender, R. (2004, October), "Compare and Contrast: Perspectives on Board Committees", *Corporate Governance*, 12(4), 489-499.
- Spong, K. and Sullivan, R. (2007, September), "Corporate Governance and Bank Performance", *Working Paper Series*, 1-30. Available at: <http://ssrn.com/abstract=1011068>
- Stathopoulos, K., Espenlaub, S. and Walker, M. (2004, January), "UK Executive Compensation Practices: New Economy vs. Old Economy", *Journal of Management Accounting Research*, 16(1), 57-92.
- Subramaniam, N. (2006), 'Agency Theory and Accounting Research: An overview of some Conceptual and Empirical Issues', in Hoque, Z. (Ed.), *Methodological Issues in Accounting Research: Theories and Methods*, London: Spiramus, 55-77
- The High Pay Commission (2011a, September), "What Are We Paying for? Exploring Executive Pay and Performance", *Incomes Data Services (IDS): Discussion Paper*, 1-40.
- The High Pay Commission (2011b, November), "Cheques with Balances: Why tackling High Pay is in the National Interest", *Incomes Data Services (IDS): Final Report*, 1-74.
- Thomas, M., Miles, G. and Fisk, P. (2006), *The Complete CEO: The Executive's Guide to Consistent Peak Performance*, UK: CAPSTONE Publishing Limited.
- Thomsen, S. and Pedersen, T. (2000, June), 'Ownership Structure and Economic Performance in the Largest European Companies', *Strategic Management Journal*, 21(6), 689-705.
- Thomsen, S., Pedersen, T. and Kvist, H. (2006, January), 'Blockholder Ownership: Effects on Firm Value in Market and Control based Governance Systems', *Journal of Corporate Finance*, 12(2), 246-269.
- Tinker, T. (1988), "Panglossian Accounting Theories: The science of Apologising in Style", *Accounting, Organizations, and Society*, 13(2), 165-189.
- Tosi, H., and Gomez-Mejia, L. (1989, June), 'The Decoupling of CEO Pay and Performance: An agency theory perspective', *Administrative Science Quarterly*, 34(2), 169-189.
- Tosi, H., Werner, S., Katz, J. and Gomez-Mejia L. (2000, April), "How Much Does Performance Matter? A Meta-Analysis of CEO Pay Studies", *Journal of Management*, 26(2), 301-339.
- Tricker, R. (1994), *International Corporate Governance: text, readings and cases*, New York: Pearson Prentice Hall.

- Turner, L. (2009, March), "The Turner Review: A regulatory response to the global banking crisis", *Financial Services Authority*, 1-126. Available at: [http://www.fsa.gov.uk/pubs/other/turner\\_review.pdf](http://www.fsa.gov.uk/pubs/other/turner_review.pdf)
- Tyson, S. and Bournois, F. (Eds.) (2005), *Top Pay and Performance: International and Strategic Approach*, ELSEVIER.
- Udemgba, B. and Igwebuike, J. (2009, July), "STOCK OPTIONS BACKDATING SCANDALS: What do market participants think about the investigations?", *Journal of Behavioral Studies in Business*, 1-11. Available at: <http://www.aabri.com/manuscripts/09196.pdf>
- UK Companies Act (1985). Available at: [http://www.legislation.gov.uk/ukpga/1985/6/pdfs/ukpga\\_19850006\\_en.pdf](http://www.legislation.gov.uk/ukpga/1985/6/pdfs/ukpga_19850006_en.pdf)
- UK Companies Act (2006). Available at: [http://www.legislation.gov.uk/ukpga/2006/46/pdfs/ukpga\\_20060046\\_en.pdf](http://www.legislation.gov.uk/ukpga/2006/46/pdfs/ukpga_20060046_en.pdf)
- Walker, D. (2009, November), "A Review of Corporate Governance in UK Banks and Other Financial Industry Entities: Final Recommendations", 1-184. Available at: [http://webarchive.nationalarchives.gov.uk/+http://www.hm-treasury.gov.uk/d/walker\\_review\\_261109.pdf](http://webarchive.nationalarchives.gov.uk/+http://www.hm-treasury.gov.uk/d/walker_review_261109.pdf)
- Watts, R. (1977, April), "Corporate Financial Statements: A Product of the Market and Political Processes", *Australian Journal of Management*, 2(1), 59. Reprinted in: R. Ball and C. Smith (Eds.), (1992), *The Economics of Accounting Policy Choice*, New York: McGraw-Hill.
- White, H. (1980, May), "A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity", *Econometrica*, 48(4), 817-838.
- Wilkinson, N. (2005), *Managerial Economics: A Problem-Solving Approach*, Cambridge: University Press.
- Williamson, J. and Kleiner, B.H. (2004), "The Use of Options in Compensation Packages", *Management Research News*, 27(4/5), 23-31.
- Wooldridge, J. (2002), *Econometric Analysis of Cross Section and Panel Data*, London: The MIT Press.
- Wooldridge, J. (2005), *Introductory Econometrics: A Modern Approach (3<sup>rd</sup> Ed.)*, New York; London: McGraw-Hill.
- Yen, A., Hirst, E. and Hopkins P. (2007), "A Content Analysis of the Comprehensive Income Exposure Draft Comment Letters", *Research in Accounting Regulation*, 19, 53-79.
- Yermack, D. (1996, February), "Higher Market Valuation of Companies with a Small Board of Directors", *Journal of Financial Economics*, 40(2), 185-211.
- Yermack, D. (1997, June), "Good Timing: CEO Stock Option Awards and Company News Announcements", *The Journal of Finance*, 52(2), 449-476.
- Yin, R. (2009), *Case Study Research: Design and Methods (4<sup>th</sup> Ed.)*, USA: SAGE Publications, Inc.

- Young, S. and Yang, J. (2011, March), "Stock Repurchases and Executive Compensation Contract Design: The Role of Earnings per Share Performance Conditions", *The Accounting Review*, 86(2), 703-733.
- Yu, H. and Main, B. (2012, May), "Political Intervention, Corporate Governance and Firm Performance: An Empirical Investigation in Japan and Taiwan", *Accounting and Finance Research*, 1(1), 134-151.
- Zhou, X. (2000, February), "CEO Pay, Firm Size and Corporate Performance: Evidence from Canada", *Canadian Journal of Economics*, 33(1), 213-251.