Director Remuneration and Performance:
A Study of Top UK Companies 1996 - 1998

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by

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Abstract

This thesis is concerned with director remuneration and its linkage to performance. The study examines the top UK PLCs' boards of directors' remuneration practices in the period 1996-1998. A typical board will be made up of the following director groups: the Chairperson (CH), the Chief Executive Officer (CEO), the executive directors (ED) and the non-executive directors (ND). Each director will receive remuneration income dependent on their contract and their role. This research identifies four sources of remuneration that a director may receive: as salary (SAL), short-term bonus (STB), longer-term incentive (LTI) and ownership income (OI). These remuneration sources sum together and may be described as the director's remuneration income portfolio (DRIP). The DRIP profile for each director is an important concept in this study. It reflects the nature of the director's role as expressed through their remuneration profile and how it impacts on the board's remuneration structure.

Company remuneration strategy is often based on policies linked to performance measures. Designing remuneration strategies that reward activities and support corporate strategies that create value seems a logical step in aligning the mutual interests of shareholders and directors in an agency model. A remuneration strategy and its policies are reflected in remuneration practice, which is disclosed in the annual report and accounts of a company. Using this data a director dataset was collected for the years 1996, 1997 and 1998. Statistical methods are employed to establish if the DRIP profiles of each director group are different using descriptive statistics and ANOVA analysis.

A range of relationships between remuneration (REM) components and performance (PER) measures in the director groups are found in these REMPER models. The models have different levels of explanatory power and different explanatory variables (labelled as performance drivers). The REMPER models are the outcome of a four-stage process culminating in a stepwise multivariate regression model (SMR) which establishes the best model indicated by the use of the adjusted R^2. The REMPER models use linear and logarithmic basis to provide a framework to evaluate and determine directors' remuneration in companies. This enables academics and practitioners together with other stakeholders to consider concerns of remuneration practice. This study extends existing research and reveals that remuneration relationships are more complex than other studies have revealed.

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People look forward to the future and often forget the past, particularly all those summer days and nights that were spent undertaking this endeavour, rather than more hedonistic pursuits.

DAE

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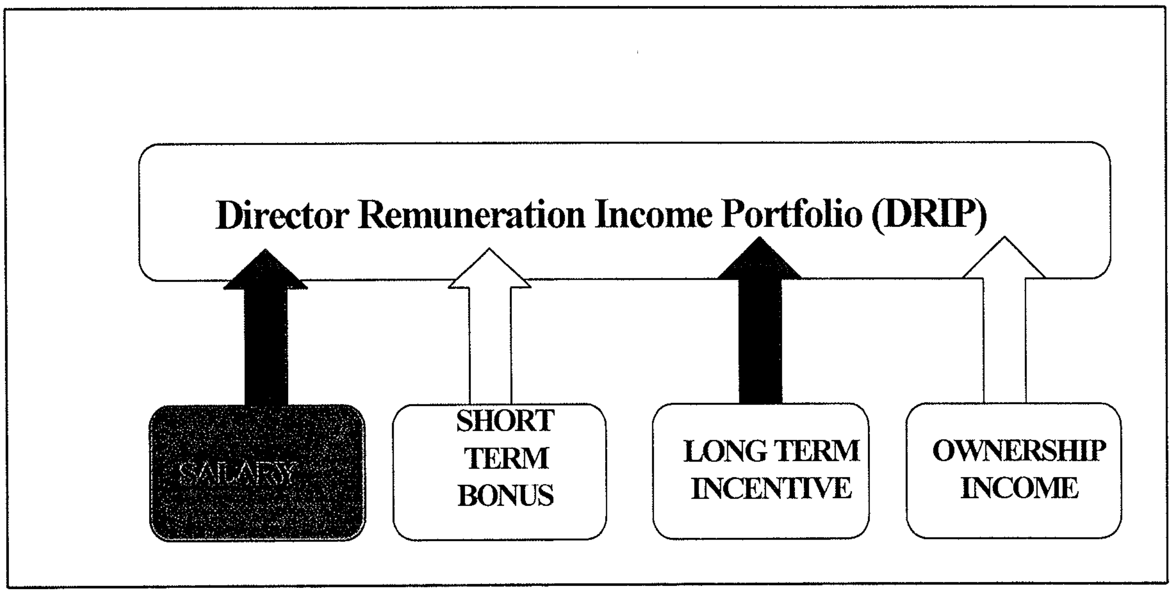
Chapter One: Introduction

1.1 Purpose of Research

The aim of this research is to identify the components of the remuneration of all directors in the top UK companies in the period 1996-1998 and identify its linkage to performance. The empirical evidence is provided by the research datasets, which allow the analysis of directors' remuneration. It is then possible to identify the nature of the links between remuneration and performance to ascertain the efficacy, logic, and rationale of how individual remuneration is determined. This is undertaken for all four director groups and the four forms of remuneration that sum to a director's total income for the period, and is given the term 'Director's Remuneration Income Portfolio' (or DRIP). On identifying the four components of a director's DRIP, performance measures are selected (as suggested and informed by the literature) to formulate a model.

Figure 1.1: The Director Remuneration Income Portfolio



This model contains dependent remuneration and independent performance variables to determine which performance variables provide the highest level of explanatory power of association and may be termed 'performance drivers' for each form of remuneration. In so doing, this research provides a powerful tool, method and empirical evidence to evaluate remuneration practice. It provides a tool for interested stakeholders to view or consider remuneration policy and a method by which to examine the relationship between remuneration and performance measures. Finally this research provides evidence on the nature and level of the relationship between remuneration and performance for the years 1996, 1997 and 1998. In so doing, it builds on, extends and develops the literature and understanding of the area, thereby making a contribution to knowledge.

To achieve this aim the research will:

- identify the range of director remuneration sources for the different director groups
- examine the importance of each remuneration source by type of director group
- identify the range of remuneration practices in each director group to ascertain whether all directors receive the same income profile
- identify the relationship between different types of remuneration and performance for each director group
- formulate a model of remuneration determination, which identifies the performance measures that provide the highest level of association in explanatory power for each director group.

An editorial from the journal of the Institute of Management[1] observed:

"Much reporting of good practice on executive compensation has been suggested by a number of committee reports. However, little empirical evidence has been produced to support the reports on the actual practice or policy in the determination of executive compensation levels in terms of quantitative analysis of the level, structure, form or mix of UK executive compensation".

Editor IOM (1995)

This research addresses many of the issues raised in the quotation.

Initially, the study identifies the sources of remuneration for all directors of the board. A typical UK board is made up of the following director groups: the chairperson (CH), the Chief Executive Officer (CEO), the executive directors (ED) and the non-executive directors (ND). Each director will receive remuneration that is dependent on the range of roles undertaken and as defined in their contract. This research identifies four sources of remuneration in the form of cash income that a director may receive:

- salary (SAL)
- short-term bonus (STB)
- longer-term incentive (LTI)
- ownership income (OI)

These four remuneration sources sum together to form the total cash income received by a director in a year and may be described as a director's remuneration income portfolio (DRIP). This concept allows the examination of the importance of each remuneration source (DRIP component) in relation to the whole and may be expressed in absolute (monetary), logarithmic (monetary) and in relative (percentage) terms. The distribution of these remuneration components within a director's DRIP may be described and displayed as a DRIP profile. This profile may vary within a director group and between director groups. For example a director may receive 100% of his/her DRIP in salary. Another may receive 50% in salary, 10% in short term bonus, 30% in long term incentive and 10% in ownership income. This identifies how important each source of remuneration is to the DRIP in percentage terms and allows directors' DRIPS to be compared in relative terms on a level playing field, irrespective of the monetary level of remuneration. Using this measure enables the comparison of DRIP profiles within and between director groups and the formulation of relative benchmarks. Alternatively, using a natural number or logarithmic monetary values provides an absolute benchmarking facility, by which to compare practice that reflects the richness and diversity of the DRIPs within and between the four director groups.

On identifying the importance of each component of the DRIP for each director group, the research then focuses on which performance measures provide the highest level of association with each component DRIP. This model both formulates the data relationship of remuneration and performance variables and provides a mechanism that identifies which remuneration variable provides the highest level of explanatory power, i.e. which performance measures best explain remuneration practice. Specifically, a number of models with DRIP components as a dependent variable are formulated with a range of performance independent variables. In so doing, the research establishes the performance measures providing the most explanatory power in the model and identifies the performance drivers of remuneration policy.

This analysis provides the opportunity to formulate a model that identifies the level of remuneration for an identified level of performance. This is a powerful practical tool for those involved with the process of remuneration policy determination, particularly the remuneration committee and its advisers who can apply such a model to guide their corporate practice. When doing this, two main issues seem to arise and this reflects the two research questions to be addressed in this thesis:

1. In the top UK PLC companies' boards in 1996, 1997 and 1998 were the DRIP profiles of the four director groups the same?

2. In the top UK PLC's boards in 1996, 1997 and 1998 were the DRIP components linked to performance measures in the four director groups?

Previous research in this area, and the contribution it has made to our understanding, is discussed in Chapter Two.

Companies have the challenge of recruiting the most competent directors for their boards. Amongst the range of motivating factors that may prompt directors to apply for board posts is the remuneration package offered. The models developed in this research will allow those who are responsible for attracting, retaining and rewarding these directors to be better able to offer appropriate contracts to attract the best people for their company. The contract offered reflects company policy on how it seeks to influence director activities to achieve prescribed objectives. These objectives are identified by shareholders or their representatives, i.e. the remuneration committee, by determining the level and nature of remuneration. As a result, the level of the DRIP components, i.e. SAL, STB, LTI and OI, are often linked to some performance measure. These performance drivers would, in turn, be linked to value creation reflected in company strategy.

The remuneration of executives and directors has attracted and gained the attention of a range of interested stakeholder groups, as evidenced in the published media. For example, when the Chair of British Gas, Cedric Brown's salary was increased by 75% at the time of the organisation's privatisation[2], this created a furore of social outrage. Derek Evans, Chair of British Aerospace, received over one million pounds as a short-term bonus for turning around the performance of the company, which again resulted in social outrage[3]. In the US, the long-term incentive of Michael Eisner of Disney Corporation and resulted in over one billion dollars gain, again it made interesting headlines[4]. The ownership income in the form of a dividend received by Sir David Sainsbury[5] of forty four million in 1998 reflects his historic, inherited interest in the company. These four examples are representative of a whole range of extreme remuneration values, which are extremes within their director groups (or in statistical terms outliers of remuneration practice). The rationale, logic and explanation of these extremes are sometimes difficult to justify to interested stakeholders. However, by examining the level of remuneration in relation to appropriate performance measures (on which they are often based), provides a starting point for considering the linkages between remuneration and performance.

As an educationalist and finance specialist, the issue of value creation in a corporate environment is an area of personal and professional interest. From my experience, value creation is a recurring theme in the boardrooms of large UK companies and it is the role of the board to generate value-generating strategies. Facilitating the identification of the performance measures which contribute to value creation provides an opportunity for advising remuneration committees to link performance measures to the different components of the directors' remuneration, i.e. their DRIPs.

This process also provides the motivation for directors to pursue activities that will maximise the package of remuneration as outlined in their individual director contract. Linking director remuneration to performance measures that create value, will align the interests of the directors, the shareholders and the wider stakeholder community, who all benefit from the value creation process.

1.2 Scope and Context

There are three key features that make this study different from other research in the field. Firstly, this research data is based on all directors of the top 100 UK boards over the period of years 1996, 1997, and 1998. This provides clarity of dataset definition that other studies lack. Secondly, other studies in this area have used a wide variety of senior managers, often called 'executives' as their dataset populations. However, these may not have been directors of the board. For example Rabin[6] in her research identified some 18 different roles that made up her 'executive' dataset definition. In this study the research is concerned with director remuneration, i.e. members of the board, and the form of income for the duties they perform. Thirdly, this research examines all types of directors that make up the board, which allows the comparison between these groups. Other studies have typically focused on either a director group – e.g. CEO, or the chair, or total board. A key factor that makes the current research possible was the implementation of the Greenbury report[7], which was effective at the end of 1995. It made the disclosure of remuneration details of all directors as a requirement of London Stock Exchange membership. Before 1995 there was a paucity of data and this undoubtedly limited remuneration research.

This area of research is often given the term 'executive compensation', a term used in the US. It has enjoyed other labels that broadly reflect the same general area of research, such as 'pay performance', 'boss's pay' and 'directors' remuneration' - the term used in this study.

Outside the scope of this research is directors' remuneration that is not disclosed in the Company Annual Report (CAR) and Accounts, because it is not public data. In addition, directors often receive benefits in kind, pension and other payments (compensation for loss of office). These elements of remuneration have varying levels of disclosure and are not included in this study because of this inconsistency. Although in some cases important, their significance to the majority of directors is comparatively small.

In this introduction an overview has been provided stating the main aims, the scope of the research and its importance to the key stakeholders in the remuneration process. In Chapter Two a literature review relevant to directors' remuneration is undertaken where the academic literature that relates to UK boards, their directors and their remuneration, and its links to performance, is examined. A range of theoretical research strategies is then examined in Chapter Three. From this, the most appropriate research method to address the research questions is selected and a rationale given for the choice. The practical process of data collection and the formulation of the dataset are described, which provides the empirical basis for this study. Using this dataset, an outline of the various types of statistical analysis and measures are identified and used to explain the nature of remuneration practice, particularly the treatment of particular outlier director cases. To address the two research questions and their hypotheses, the statistical measures are used to meet the objectives of this research. Chapter Four discusses a range of statistical and data issues that are identified and their impact on the research strategy and the results. In Chapter Five the results of the statistical analysis will be reported. These results will be expressed in graphical, diagrammatical and statistical terms to enable the audience to view the analysis and the results from a number of different perspectives. In Chapter Six, the conclusions, based on the results provided in the previous chapter, are outlined and the implications for the determination of remuneration policies and their practice are considered. In this final chapter this thesis' contributions to knowledge are identified and how it extends the literature in the area, together with indicating future areas for research.

Chapter Two: Review of Literature

2.1 Introduction: Key Definitions and Terms

This chapter reviews the literature that is relevant to the aim of this research, which is to identify the remuneration components and income profile (DRIP) of directors and the main performance drivers in their determination in the top UK 100 companies during the period 1996-1998. The literature has adopted a number of theoretical approaches and these are identified, considered and conclusions drawn as to their value in the context of the research for this thesis.

Past researchers into issues of director remuneration and their links to performance have adopted a number of different definitions, terms and data variables in their research. To better enable us to understand the complexities of the existing literature, it would be helpful for us to identify these differences before starting to consider the maze of literature available.

Title or label of the area of study:
In the literature the area is referred to by a number of similar and associated terms, which reflects the scope of the research area. Terms often used include executive compensation, director compensation, CEO compensation, board compensation, executive remuneration, board remuneration, bosses' pay, executive pay and directors' pay. These labels reflect the focus of the researchers' study. For example, the term 'executive' encompasses senior managers of the organisation, which may include directors.

The study of compensation and performance is typically referred to in the literature as compensation-performance, compensation-performance relationship or compensation-performance linkage.

Title or label of director income-compensation or remuneration:
Remuneration is the term given to the income received by directors in the UK for their board activities. In the US and elsewhere the term compensation is often used. Remuneration and compensation are effectively the same but have a different popularity of

use. In this chapter the two terms 'remuneration' and 'compensation' are used synonymously. Other terms are used including pay, wage and income, and these also appear in the literature. In the literature review, the term used reflects the term adopted in the literature under consideration.

Data subject of study:
Empirical research needs a data subject to study. The extensive use of the term 'executive' has resulted in a lack of clarity and precision in the definition of the data subject. When research is cited it is often the level of the relationship that is highlighted, without reference to the subject of the dataset. The term 'executive' has been used in studies to incorporate a number of specific concepts, e.g. the Chief Executive Officer (CEO), the president, chair, top three/five compensated executives and the board. In Rabin's thesis [6] some 18 job titles/roles were identified as encompassing the concept of executive. These were represented in this survey's dataset, and reflect the diversity and flexibility of this term.

Dataset study period:
Some data items are only available in certain time periods. The availability of this data determines the time period of the dataset studied. For example, the total board remuneration in the UK can be studied from the year 1967 (Companies Act 1967). Also, the study of all types of remuneration of individual directors of the board can be studied from the 31st December 1995 (as a result of the Greenbury Report[7]). However, contemporary research has tended to consider remuneration in study periods of 3 years, for example, Conyon and Leech[8], McKnight[9] and Main[10]. As a result, the data period is heavily influenced by the availability of data.

Performance measures:
In reviewing the range of terms used to describe 'performance measures' in research on executive compensation, it was found that these terms were being drawn from a number of financial environments: from accounting measures, accounting ratios, stock market measures, economic value measures and a mixture of hybrid measures. These have been used in both absolute and relative terms to identify a relationship with remuneration. A feature in the literature is the concept of a 'lagged effect'. This is where the impact on one variable is not in the same year, but one, two, three or many years in the past. This lagged

effect is measured as a relationship in the same way as 'same year' comparisons. For example, sales revenue in 1997 and the salary in 1998, have a relationship; this would be termed a one year lagged effect. Typically, what might be undertaken is a comparison between salary in 1998 and the sales revenue figure in 1997/6/5, whenever the lagged effect is being tested.

2.2 An Introduction to the Remuneration Studies and Corporate Governance

In order to position the contribution of this thesis it is important to examine the heritage and tradition of the research literature regarding the remuneration of directors and its links to performance. We need to examine how boards function, what their roles are and how they determine their policies (specifically remuneration policy). These board issues are the province of corporate governance which is concerned with the activities of the board and its directors. At a board level, corporate governance is concerned with the activities of a group of directors, who collectively determine the policies of a company. The board, as a collective of directors, operates in an environment where it has to address stakeholders' interests. In contrast, directors are individuals who undertake roles to carry out the function of the board. These roles are conducted by different types of director, who are remunerated according to the activities they undertake. The remuneration received by a director is set by the remuneration committee of the board and this committee is typically made up of non-executive directors.

The linking of remuneration and performance provides a basis for a rationale to justify the decisions of the remuneration committee of the board should there be any challenge from an interested stakeholder. Without such a rationale it would make the process of remuneration determination a lottery, a chance, good fortune or some other ill-conceived or illogical process. If one accepts the need for such a rational process, it begs the question on what criteria this might be based; it requires a metric or indicator of economic or organisational activity. Organisations have found the financial function is often best able to provide a plethora of performance measures on which to base remuneration policy. Armstrong and Murlis[11] acknowledge the use of financial performance measures in their handbook of remuneration and reward - a standard guidebook in corporate personnel departments. This typifies the literature that has investigated the relationship between remuneration and performance. In the review of the literature of the area, the wide range of remuneration sources, performance measures, dataset subjects, research time periods and research approaches adopted will be examined.

Corporate governance is concerned with the operation of good practice in relation to policies formulated by the board of directors. One function of the board is the determination of remuneration policy and is, therefore, subject to corporate governance practice. Corporate governance is seen as an assurance mechanism to ensure that directors do not follow their own unconstrained self-interests. So, corporate governance practice, and its affect on the board, its directors and remuneration policy, is of prime importance to research in this area. As a result, a consideration of the literature as it relates to corporate governance, and its impact on remuneration, is reviewed.

2.3 Literature Review: Remuneration Studies and Corporate Governance

McNulty and Pettigrew[12] identify three main academic perspectives on board functions: the resources perspective, the strategic perspective and the corporate governance perspective. Corporate governance is concerned with the conduct of good policies, practice, processes and reporting of companies' board of directors' functions. This is in order to meet the needs and demands of the interested stakeholders they serve. Dunlop[13] observes that –

> "Corporate governance has been widely regarded as the evaluation of the performance of the executive directors of the company by, or for the company stakeholders".
>
> Dunlop (1998)

Sheridan and Kendall[14] see that corporate governance involves the quality assurance of the operations of the board. They express this view:

> "Management is concerned with the company's operations, governance is with ensuring that the executives do their jobs properly".
>
> Sheridan and Kendall (1992)

Shivdansi and Yermack[15] see the board of directors as a pivotal mechanism for monitoring the managers within public organisations. According to Skapinker[16], companies that exhibit good corporate governance practice often command a higher market value due to stakeholder satisfaction at the quality, level of disclosure and transparency of management action. Shleifer and Vishny[17] see corporate governance as a means by which most advanced western economies have mobilised capital, enabling it to be available to companies in order that they may create value for the company on behalf of the shareholders. The suppliers of finance (shareholders) elect the board of directors to manage the company on their behalf, and earn a suitable return on their investment by creating economic value. Shleifer and Vishny[17] acknowledge the enormous practical value of corporate governance and the debate on the mechanisms of its effectiveness. Easterbrook and Fischel[18] and Romano[19] outline a very optimistic view of the effectiveness of the US governance system in serving the interest of shareholders and stakeholders. Cadbury[20] notes the widespread view that the good practice approach has been found to be a flexible and responsive approach to matters of corporate governance, and one that has been seen as a model for emulation by other countries. In contrast, Jensen[21,22] sees the system as deeply flawed, providing examples where the directors and other parties serve their own interests, i.e. examples of poor application of good practice and evidence of the pursuit of personal rather than company interests.

Shleifer and Vishny[17] note that there is constant talk of replacement of the Anglo Saxon governance system with its ‘unitary board’, with that of the two-tier model followed by Germany and Japan. This two-tier board has a management and supervisory board that is seen as superior by Roe[23] and Charkham[24], with them advocating its adoption as a better means of governance. This two-tier model, with management elected by shareholders and the supervising board appointed by a wider group of stakeholders (e.g. employees), combines together to form the board of directors. They also have advisory boards consisting of experts who are called in to give technical and external advice to assist the company. In contrast to the two-tier board, in the unitary board all directors are equal and share legal liability, all being collectively responsible for the company. Shleifer and Vishny[17] indicate that the Anglo Saxon system of the UK and US has provided some of the best corporate governance features in the world. This provides a benchmark for practice for other countries. In Barca[25] and Pagano, Panetta and Zingales[26] the Italian corporate governance experience is noted as being underdeveloped and as a result this has retarded the flow of capital to its companies. Boycko, Shleifer and Vishny[27] note that the virtual non-existence of corporate governance systems in Russia is cited as being the major reason for the virtual non existence of external supply of capital to companies and the wide scale diversion of assets outside the country. From these country examples, it can be seen that corporate governance makes a difference to economic and financial development. Corporate governance is clearly a world issue, but remains primarily a national focus with relevant international experiences to compare national practices.

2.3.1 Boards in a Stakeholder Environment

As the board is the highest level of management, it might be seen as the guardian of corporate governance good practice within the company. Stiles[28] notes that UK boards are under increasingly scrutiny to account for their performance and their role in achieving national competitiveness. He points to the impact and influence of the board on strategy within a national corporate governance environment to deliver such performance. A test of a national corporate governance system is the presence of mechanisms that provide and promote good practice. This avoids adverse stakeholder criticism of the board, potential director excesses and acts of self-interest. Poor behaviour and bad practice almost inevitably find their way into the popular media. In an environment of good practice, boards, by their good example, are often in the best position to regulate the potential excesses of their corporate colleagues.

Stakeholder theory provides a theoretical framework by which this environment can be analysed. The classical stakeholder approach of Freeman[29] provides a strategic management vehicle with which to analyse the stakeholders' claims to economic satisfaction. Freeman states:

> "the stakeholder approach is about groups and individuals who can affect the organisation, and is about managerial behaviour taken in response to these groups and individuals"
>
> Freeman (1984)

Dill[30] sees stakeholder theory as an umbrella for strategic management analysis, which enables the impact of policy to be assessed. This is certainly true in the case of the composition of the board and director remuneration strategy practice, which is of interest here. The claims, of the board and its directors, for income in the form of remuneration are a legitimate stakeholder claim on corporate resources.

Increasingly boards are under pressure to perform, and are scrutinised by a wide range of stakeholders[31,32]. Judge and Reinhardt[33] identify the impact of the pressure that has been exerted by institutional investors. The media articulates expectations on aspects of companies' future performance by suggesting what the implications on value and performance might be as a result of strategic decisions made by the board[34 35]. In their analysis of value creation, Nahapiet and Ghoshal[36] see social and intellectual capital as drivers of value. Fama and Jensen[37] see the board as the apex of the firm's decision control system and responsible for value creation as a major objective.

These external pressures on boards signal a change in stakeholder interest. Previously, there was some attention paid to the internal processes that took place within boards. However, now the concern is primarily about performance and this has meant the board's primary focus is on value creation. The change is noted by Dulewicz, MacMillan and Herbert[38], who indicate that the focus of interest and activity has moved from the input dimension of personal competencies and knowledge, to an output dimension of board tasks and indicators of 'good practice'. Their 'standards model' provides an input-process-output framework by which research activity surrounding corporate governance can be viewed. Both Forbes and Milken[39] and Pettigrew[40] confirm the view that the focus of board of directors' research has changed - from the issues of board composition (an internal perspective) to issues of performance (an external perspective). Aram and Cowen[41] also note the changed focus of attention in corporate governance issues. This change of focus, from internal board development to the external issue of performance, reflects the changed willingness of directors and CEOs to appreciate the mechanisms that create value. Aram and Cowen[53] see the board's composition and structure as key determinants of board effectiveness. They further observe that the relationship between the CEO and directors is crucial in value creation and provides directors with a framework by which to assess their decisions. Such value creation can be reflected in a range of performance metrics. For example, market value is one measure that is considered by many to be a major performance objective. Aram and Cowen[41] argue:

"The aggregate market value of the firm is increasingly accepted as the ultimate measure of an effective board. Shareholder value refers to the total return received from an investment in a company, as measured by a combination of stock price appreciation and dividend yield. Management and directors' goals, investment decisions and organisation systems should be based on this standard".

Aram and Cowen (1995)

They further argue that value-enhancing signals from the stock market strengthen the board's decision-making processes. A high potential board is a partnership in which all directors of the board can fulfil their fiduciary duties. From this value-creating partnership, a consideration of the role of each director needs to be undertaken and reflected in the different components of remuneration received. Thus, remuneration provides a feedback mechanism of success in particular dimensions of performance and, as such, may be viewed as a metric.

Corporate governance in the form of good practice compliance, is seen as a potential means to ward off statutory influence or regulation. On the positive side, good governance is crucial in promoting best practice and in increasing corporate value. Brancato[42] points to the importance of good governance for stakeholder groups, such as institutional investor groups. These shareholders are widely considered to be the most professional and important of the company's stakeholders. Windfrey[43] points to the importance of institutional investors in controlling board compensation and in particular that of the CEO. This study uses an agency theory framework to identify the relationship between remuneration and company activities, illustrating the influence of stakeholders on governance practice.

2.3.2 Board Structure and Composition

The structure of boards varies around the world. Some countries favour the unitary board structure of the UK and US. In contrast, other countries prefer the two-tier board, which is popular in continental Europe. In a typical unitary UK board, there are four types of director - a chair, CEO, executive directors and non-executive directors. The composition of the board and number of directors it contains will vary from one board to another, depending on the range of responsibilities and duties to be undertaken. The policy and practice of board composition, in terms of number of board members, type of director and background of directors, will vary from country to country. For example, a US board would generally have more non-executives than a UK board.

A concern that figures in the literature[44] is that of the power and influence of the CEO over the board in regard to important decisions, e.g. the appointment of new directors, their duties and 'recommendations' for reward strategy. The influence of the CEO should not be underestimated and has been the subject of some considerable study. Donaldson[45] identified approximately twenty measures of board composition in the literature, all designed to capture some aspect of board independence, e.g. proportion and number of inside (executive) and outside (non-executive directors) and inter-dependency of directors between boards. This reflects the concern that an individual (the CEO), through their power and influence, can control the board. The concern in a modern corporation is the potential for unbounded action of a director following their own self-interest. A criticism of board composition is that, in theory, it is elected by shareholders but, in practice, the directors, and particularly the CEO, have a significant influence on its membership. Mace[46] offers anecdotal evidence of this 'hand-picking' process at work. Lorsch and McIver[47] report evidence indicating the major influence of the CEO in this process. This is in contrast to the considerable amount of literature that points to the need to extend the importance of enlarging the domain of corporate governance beyond that of shareholders to other stakeholders. Muth and Donaldson[48] and other writers have suggested that these stakeholders should be represented on the board to uphold this wider stakeholder interest and ensure good corporate governance.

The separation of ownership and control in the modern corporation, initially brought to academic attention by Berle and Means[49], suggests that directors have insufficient interest (equity) in the company to act in its best interest and, as a consequence, act in their own interest. This potential conflict of interest is often seen as an agency theory problem[50]. The balance of these different types of director provides a board with a clear structure and reflects the company's operations. The size of the board, the number of directors, the distribution of members in different director groups and their remuneration, provides a new opportunity to view boards in a manner not previously represented in research. The size of the board seems to have no influence on the performance of the board, as indicated by Muth and Donaldson[48]. This suggests that the relationship between board and performance may be very weak or even non-existent. A number of narrative reviews have described the literature on board composition and performance as 'vexing, contradictory, mixed and inconsistent[51].

However, the individual director's relationship with performance measures may be significant, reflecting the individual nature of contracts, rather than with the collective board. Thus, the direction of research has focused on the individual director, and in particular the CEO, rather than groups of directors or the board as a whole. Consequently, there is a need to differentiate between individual types of director undertaking their roles and the remuneration they receive. It is at this level where the relationships between remuneration and performance are significant.

2.3.3 The Directors of the Board - their Types and their Roles

Hung[52] has considered the research on the roles of directors and identified six major roles being undertaken in boards:

1. Linking
2. Co-ordinating
3. Control
4. Strategic
5. Maintenance
6. Support roles

Considerable effort has been made to define and explain the functions of a board. The American Law Institute defines the functions of a board as:

1. Select, regularly evaluate, fix the compensation of and, where appropriate, replace the principal senior executives.
2. Oversee the conduct of the corporation's business to evaluate whether the business is being properly managed.
3. Review and, where appropriate, approve the corporation's financial objectives and major corporate plans and actions.

4. Review and, where appropriate, approve major changes, in and determinants of, other major questions of choice in respect of the appropriate auditing and accounting principles to be used in the preparation of the corporation's financial statements.
5. Perform such other functions as are prescribed by law or assigned to the board by the charter of the corporation.

It can be seen that the first function of a board is to set its remuneration policy and this will reflect a company's remuneration strategy. It can be argued that this is pre-eminent in the minds of directors, because it will influence their activities as board members. By directing their activities through a remuneration policy that aligns it with shareholders' aspirations and expectations of value creation, it provides a primary focus for the board.

The view of the Australian Independent Working party[53] is that the main function of a governing board's role is to ensure that corporate management is continuously and effectively striving for increased performance in a risky environment. Hilmer[54] sees the functions of the board from a performance view. He is quoted as follows:

> "What are the functions of the board that require greater emphasis if the main governance concern is with lifting the performance of the firm rather than being society's policeman?"
>
> Hilmer (1994)

The point has been made that each of the four types of directors of the board has different roles and duties. Clifford and Evans[55] identify three types of director/executive: insiders, 'grey area' and outsiders. Insider directors are typically company officers (CEO and the executive directors) who are employed full time to conduct their director duties, particularly to increase shareholder value. The grey directors are those who have some association by shareholding or options, consultant, professional adviser, supplier, customer or previous employee. Outsiders are those with no such association, other than through their directorship.

The directors of the board may be drawn from any one of the three Clifford and Evans types. Often the chairman is the past or ex-CEO or experienced person drawn from the corporate management community and increasingly becoming non-executive. This is in contrast to some chairs who often combine the post with that of CEO, who are clearly insiders concerned with the entrepreneurial endeavour of the business. The CEO and executive directors are clearly insiders. For the non-executive directors, these are drawn from the grey area and outsider directors. The remuneration profiles of these non-executives are very different, reflecting history, rather than their current non-executive role. The non-executives' presence on the board is to provide a wider perspective, representing social, environmental and economic issues of which the company needs to be aware, in order to best serve their stakeholders' interests.

It is now that we consider what these directors' roles may be and look at the research relating to them. Cadbury[20] sees the chair's role as managing the company's board of directors. The chair should ensure good processes within the board and the safeguarding of stakeholder interests in policy execution. Neuberger[56] has developed criteria that assists the evaluation of a chair's performance and this provides a framework with which to consider the role of the chair. He notes that in 1995 this process was not considered as an issue at all, whereas now it is more widely accepted, although not universally, and by no agreed method. He indicates that the role is clearly different from the 'rank and file' board members. The chair's duty is to the stakeholders, particularly shareholders, and this is best served by conducting good board practice. The Cadbury report[20] saw the role as follows:

> "chairmen should be able to stand back sufficiently from the day to day running of the business to ensure that their boards are in full control of the company's affairs and alert to their obligations to their shareholders"
>
> Cadbury (1992)

The CEO's role is to manage the company. This involves formulating strategies that will meet the expectations of the stakeholders, in particular shareholders in the form of an increase in their shareholder value. It is the practice in some companies to combine the role of CEO and chair. This issue has been subject to some debate, with the prevailing view that these roles should be held by different individuals. The logic of this is that the two roles are different and should be separate to prevent any potential conflict of interest. The Cadbury report[20] summarises the issue as follows:

"Given the importance and particular nature of the chairperson's role, it should be a matter of principle to separate it from that of the chief executive. If the two roles are combined in one person it represents a considerable concentration of power"

Cadbury (1992)

The separation of these two roles provides the CEO with the opportunity to focus on the primary objective of creating value, thus leaving the chair to run the board. Dayha, Lonie and Power[57] examine the case for this separation of roles and its impact on performance using accounting and stock measures. The findings indicate that the separation of these roles resulted in a short-term abnormal positive return and when the roles were combined it yielded a short term negative return. In addition, they also found that the stock market did respond to a qualitative change in board structure, indicating a clear value perspective in board structure and composition, which is in contrast to the findings of Donaldson[45].

The executive directors, as full time members of the board, are generally given an area of responsibility that reflects their professional and managerial background. Often they are responsible for a function, division or area of the business. The number and division of duties reflect the design factors that the chair and the CEO feel the business demands. The number of executive directors in top UK boards in 1998 ranged from none to twenty-six (established from this research's dataset). The executive director seems to have been a relatively neglected area for research, they embrace a wide variety of roles within their companies and act as a 'pool' of potential non-executive directors for other companies. As a group it represents a substantial proportion of the remuneration of the board.

The number, qualities and duties of non-executives on a board have been the subject of some considerable research. A key feature of a non-executive is their independence. As a result of the Cadbury committee, non-executive directors were seen as a necessary part of the corporate governance process. In 1998 there was a range of practice on UK boards - from there being no non-executives (Morrrisons), indicating non-compliance to good practice standards, to twenty six (Marks and Spencer).

O'Sullivan[58] observes that the research on the governance role of non-executives has focused on three main themes. These themes are concerned with the demand for non-executive monitoring, the process of non-executive monitoring and the benefits to shareholders of such monitoring role. There is certainly an increasing need and demand for these directors to serve on boards. The level of commitment and range of roles are expanding. O'Sullivan[59] reports that little is known of how they are recruited, but there is much interest in the extent to which they serve on other boards. There is a recurring concern expressed by stakeholders about the potential for self-interest when there are interlocking or inter-links between directors serving on reciprocal boards. Booth and Deli[60] report that serving directors hold, on average, 1.87 non-executive posts, with CEOs at 0.35. The 'main' or primary company employing the director would normally decide the number and type of directorships that a serving executive director may hold. However, this can be difficult to establish. The example of Sir Colin Marshall[61] represents an interesting case because he has served on a number of boards in a number of different capacities. The increasing requirement for non-executives to serve on boards, together with the increasing workload, does raise the question of whether there are sufficient directors with the requisite experience to meet these needs. As a result, it has been suggested that there is scope for the development of a new full-time professional non-executive 'class' or group to meet this need. The publication of the Myners' Report[62] provides evidence of this view, in that non-executives provide invaluable independent non–incentivised professional services to their boards and that their remuneration should better reflect this.

The point has been made that all directors of the board receive salary remuneration determined by the range of duties they undertake. However, the issue of whether chairs and non-executives should be involved in bonus and incentive schemes is an important question. It is often argued that the remuneration received from these performance-based payments compromises the conduct of the role and duties. Thus, the concept of being a 'independent' chair or non-executive and receiving no payment of bonus or incentive is in stark contrast to those chairs and non-executives who do receive such remuneration. Certainly, when one examines the remuneration profile of outlier chairs and non-executives, against independent chairs and non-executives they are clearly different, indicating a sub-population within the whole population of these two director groups. These outlier chairs and non-executive directors display remuneration profiles similar to their CEO and executive director colleagues and this is an important point that is often neglected in the literature. The question of whether the chair and non-executive directors should be involved with value creation is an important question, particularly when it is seen that the role of the CEO and executive directors are responsible for this role. At the very least, the position on this issue is at present ambiguous, unclear and exhibits a mix of practice. But such practice is changing and there is less ambiguity in that the four director roles are becoming clearer and better defined. This can be evidenced by the decreasing number of joint chair/CEOs. A decreasing number of non-executives receive incentive remuneration (short-term bonus or long-term incentive). More CEOs and executive directors are receiving incentive remuneration. These trends have tended to polarise and clarify the classic roles for these four types of directors outlined in the literature. The literature of good practice implies that they should adopt their classic roles, the chair runs the board representing shareholders' interests, the non-executives represent a wider professional and socially responsible role, with the CEO and executives directors focussed on creating value for shareholders and stakeholders. Examining remuneration practice enables a consideration of the range of different DRIP profiles within and between the four director groups, including director group sub-sets (independent/pure and mixed/incentivised role).

Much of the literature has sought to point to the benefit of the pursuit of good practice; this is well illustrated in Shleifer and Vishny[17], by case and cited research. However, anomalies of 'old practice' continue to exist in a minority of companies, for example - no non-executives (Morrisons) and the combined role of chair/CEO (Taylor Woodrow). The issue of board structure is particularly challenged by the degree of international influence on the 'UK' company structure. Examples like Unilever and Reed Elsevier (both Anglo-Dutch) have this international influence, reflecting continental European practice. The UK enjoys a much better level of remuneration disclosure than many countries including the US, which makes international comparisons difficult. However, occasionally international comparisons of remuneration practice are revealed. For example, when Orange was purchased by the much larger France Telecom, the Orange CEO's remuneration was four times greater than the CEO of France Telecom [63].

2.3.4 Development of Remuneration Studies and Corporate Governance in the UK

Corporate governance is seen by many as the mechanism that provides the best way to monitor, highlight and safeguard all stakeholders' interests in the public corporation. The Corporate Report[64] and The Watkinson Report[65] outline the responsibilities of the British publicly traded company, i.e. UK PLCs. In the 1970s and 80s the conduct of directors often gripped the public's attention in the context of corporate democracy and the safeguarding of stakeholders' interests. Interest in these issues stimulated academic and practitioner interest in a developing area that is now more commonly known as corporate governance.

The first book to use the title 'Corporate Governance' was published in 1984 by Tricker[66]. At various times corporate governance issues have generated media publicity which has triggered the attention of government, which has typically responded by initiating the establishment of a committee to examine practice with a view to making recommendations. The UK government invited Sir Adrian Cadbury to review and suggest a way forward for corporate governance. It was concerned with the practices, procedures and powers in UK companies and their boards of directors. It offered a framework to consider the practice and policies in which boards operate.

The Greenbury Committee[7] was established to consider the practice on remuneration of directors in the UK. Their recommendations provided more extensive disclosure of director remuneration, shareholding, the pensions and benefits received by directors. This provided a major step forward in disclosure and provides the data for this study. The Greenbury recommendations were subsequently adopted as a London Stock Exchange requirement for listing, which ensured their widespread compliance. The Hampel Committee[67] followed and continued the work of Cadbury, making further recommendations on more extensive disclosure and practice. A further report by Turnbull[68] sought to incorporate all these recommendations in a 'combined code' of practice.

The development of corporate governance in the UK, initiated by Cadbury, has taken the form of a voluntary code that used as its vehicle of change, the adoption of 'good practice'. This was seen to be a preferred route and style for the evolution of corporate governance in the UK environment. Using good practice as a force for "moral persuasion", this method for change was seen as a more effective method than statutory regulation to make progress on corporate governance development. Many authoritative practitioners (principally Cadbury) were of the opinion that this provided a more flexible and appropriate mechanism through which to meet the expectations of stakeholders, than the potentially inflexible statutory requirements. In this way, good practice was seen as a preferred mechanism in developing company practice to meet future pressures and requirements. The development of good practice seems to have appeased government sensitivities to media interest and calls to regulate the reported excesses by directors, particularly in the field of remuneration. It has already been noted that this mode of corporate governance development has prompted other countries to emulate this approach. Its perceived success in achieving progress in corporate governance development has made the 'good practice' approach popular and flexible in different national environments.

Undoubtedly, the good practice movement has influenced the developments of corporate governance practice within UK boards. Conyon and Mallin[69] identified a 'tolerance zone' where good practice and 'real world' practice has been aligned, but beyond this there was scope for improvement. Conyon and Mallin[1] point out that the first 17 recommendations of the Cadbury Committee[20] have been effectively implemented. These were largely matters of internal control and 'going concern' concept compliance. The remainder are in varying states of compliance, from largely effective to those that still remain lofty aspirations and problematic to implement. Many consider that the experience of the 'good practice' era in the UK has fared well in terms of meeting stakeholders' expectations and not warranted the, often suggested, intervention of government. This threat of government action in corporate governance, and particularly in remuneration policy, is perhaps best summarised by Margaret Beckett, Minister of State for Employment in 1998, when talking about potential government intervention:

> "if the excess of corporate pay awards was not moderated to reasonable levels, the Government would act"[70]
>
> Beckett (1998)

This unwelcome interest in companies' remuneration policies is typically ignited by extreme cases of particular directors whose excesses and extremes bring the potential threat of government intervention. However, this attention has generally abated for now, until the next case causes renewed interest. So, stakeholder interest in corporate governance continues to provide the potential to attract government attention, when new extreme cases are reported, e.g. Cedric Brown of British Gas[63], Chris Gent of Vodafone[71] and Colin Marshall of British Airways[72].

In the case of Cedric Brown, a parliamentary committee invited him to attend a meeting in order to explain the rationale and logic of his remuneration. This he was able to do using peer group and benchmark comparison, with comparable businesses and their performance measures. His remuneration was viewed in an appropriate environment and, in this context, he appeared to be relatively under-paid. Similarly, in the US, when Michael Eisner[73,74] of Disney was awarded a one billion-dollar performance award, a great furore of anguish and shock was raised by some stakeholders. However, shareholders were very happy at increasing their shareholder value by five times in five years, which meant the one billion represented a 5% award fee of the value created under his leadership. Both cases were considered with reference to performance measures, the award being determined by a rational process of a remuneration-performance relationship. Such cases raise the issue of accountability and performance, which are key to this area. Corporate governance provides 'good practice' mechanisms for accountability, but many argue that this has been at the expense of economic prosperity. Hampel[67] makes this point and suggests that in the future the emphasis should be placed on economic prosperity and not accountability which absorbs valuable director time in managing the political implications of high remuneration awards. This prosperity is generated by the company's directors undertaking their roles and pursuing value creating strategies. Vafeas[75] sees many corporate compensation packages with poor pay-performance relationships, resulting from the inefficient application of agency theory practice. The principals (shareholders) have found difficulty in expressing their economic objectives in the contracting relationship within the board and its committees (their agents). Concern for this dilemma prompted Vafeas and Theodorou[76] to explore the impact of 'good corporate governance' mechanisms on performance, which implies that good corporate governance practice is conducive to performance. This type of implied relationship is quite novel, and represents a means by which the qualitative corporate governance mechanisms can be related to quantitative performance metrics. Their work formulates a regression model with qualitative features of corporate governance. Such features include the percentage of non-executives on the board, the percentage of non-executives 'insider' and 'outsider' directors, and percentage of company's shares owned by directors and compares these to a number of measures of performance, including market to book ratios, stock return and return on assets. By this analysis a level of association may be ascertained, and signals a new way of linking issues of corporate governance to performance. Vafeas[76] develops his approach by examining director characteristics and their potential to serve on the compensation committee of the board. In this work, Vafeas again identifies corporate governance characteristics of directors, which are formulated in a model to express the likelihood of directors serving on the compensation committee. In both works, Vafeas found that:

1. the degree of share ownership was not a significant differentiator of governance, which confirms the earlier work of Mangel and Singh[77].
2. It shows that the wealth owning dimension of executives and directors is not a significant corporate governance issue.
3. Vafeas concludes that the structure of the compensation committee and the board has an impact on performance.

This research provides an insight and evidence of the linking of good corporate governance practice and performance in that ownership wealth and income dimensions of directors does not impact on compensation committee policies, but the committee structure does.

Conyon and Peck[78] suggest that the structure of the board by its composition of types of directors, is a primary influence on the remuneration of directors and senior managers. They conclude that the board is the main vehicle for internal corporate governance maintenance, which is concerned with monitoring senior managers and setting compensation. Often the remuneration committee makes peer and benchmark comparisons in order to maintain compensation parity with other similar companies, an issue considered by Murphy[79]. Often when recruiting they offer a little more compensation to new entrants in order to secure better quality management. Ezzamel and Watson[80] observe this activity as a 'bidding up' process, which raises the level of compensation in each successive round. This process is then repeated at ever increasing levels, for companies who need to acquire a new tranche of managers or directors. This suggests that the components of the director's remuneration profile lies more within its peer group, rather than the potential links to performance. The work of Veliyath[81] would indicate that some remuneration components are more significantly linked with their peer group rather than performance measures. For this reason a comparison of different director group DRIP profile needs to be considered, in addition to the more traditional approach in linking them to performance. Both issues are addressed in this study. The peer issue is addressed by the analysis of the DRIP profile of the four director groups in this research, with the focus on the significance of each source of remuneration to each director group, considered under the research question one of this thesis. This will be followed by consideration of research question two, which examines the linkages of remuneration to performance, which is where attention is now directed.

At present remuneration policies have generated a range of practice that reflects a range of motives and sentiments:

- There is the appropriate level of remuneration for a directorship, a price in a marketplace, but for each director's DRIP component there is a different market with different drivers of that remuneration.
- In a UK board there are four types of directorship with different roles and remuneration that reflect their role, but often there are examples where the director have a combination of roles and remuneration e.g. combined Chair/CEO director, incentivised non-executives.
- The different directorships have access to different remuneration sources in the DRIP. So the CEO and executive directors can generated the full range of the DRIP portfolio with Chair and non-executives only salary and ownership income. This is reflected in the DRIP profiles of each director and that of their group's norms and their members' remuneration distribution.
- Each component of the DRIP has a different importance to each director group, dependent on their company role and directorship.
- From commercial surveys and past research studies the focus has been on CEO, highest paid director or the whole board's total salary or total remuneration and not the full range of directors (4) or the full range of remuneration (4 DRIP sources). This highlights a gap in the current literature and the focus of this research study to address this gap in our understanding and contribute to the literature.

2.4 Introduction to Compensation/Remuneration and Links to Performance

This section is concerned with the literature that has considered the relationship between remuneration/compensation and the linkages to performance. Historically, researchers have sought to identify the relationship between compensation and some level of business activity, typically expressed in some form of performance measure. The earliest identified study, published in 1925, was by Taussig and Barker[82] who examined the relationship of capital and return on capital employed [ROCE] (labelled as invested capital) and compensation. The outcome of this study implies that compensation was higher in companies with higher capital and ROCE, indicating that size was the key performance driver. In addition, managers would additionally earn an extra payment based on some financial measure, typically earnings. US practice drew from the experience of Continental Europe where a Direktor or managing head would receive a fixed salary and a stated percentage or 'tantieme' of the net earnings, typically 5%. This early experience is the starting point of compensation and remuneration practice today; a salary for the performance of stewardship and managing activities and then an incentive based payment for good performance based on a financial metric.

The implications of the Taussig and Barker results is that those concerned with remuneration policy determination would see that capital and ROCE to be the main performance drivers of different forms compensation. This may make directors and managers more inclined to adopt capital and ROCE measures as performance drivers to provide a basis for the remuneration committee to design an executive contract to motivate the individual towards the pursuit of these measures as company objectives. It would be reinforced by remuneration on such criterion. From a director's point of view, the pursuit of a performance target provides a basis for additional remuneration from the company. This approach could be supported by empirical evidence of a remuneration survey or academic research, which would plot the levels of compensation and performance measures on a scatter diagram. From this dataset a 'line of best of fit' could be constructed, as a mechanism to formulate a correlation and regression model to demonstrate the linkage of the remuneration-performance relationship.

This relatively simple case illustrates the key question in this area of research, namely how to establish a link between compensation and performance. Although the ideal link would be one of causality, the state of research may permit the link to be appreciated in terms of 'levels of association'. Hence the research quest is for the most explanatory performance variable and then level of association with compensation. In so doing, there is an attempt at designing remuneration packages linked to performance measures.

This poses the question – do such linkages influence executive behaviour to achieve the performance objectives? The answer remains partially resolved, with research providing an indicator of a relationship, a basis for debate, a vocabulary of discussion and methodology by which a measured response to the research questions posed may be addressed. This is a challenge that the representatives of the shareholders, the remuneration committee, need to consider in aligning the mutual interests of stakeholders.

This section presents a consideration of the compensation variables that have been employed in the area, followed by the performance measures used and the studies that make up the body of literature in the US and the UK. Thereafter, a selection of authoritative views about the state and future direction of research in the area is identified. A review of the theoretical approaches adopted in the area is presented and, finally, the ways in which this thesis builds on the past research literature in the area is outlined.

2.4.1 Compensation Variables used in the Literature

A wide range of compensation concepts figures in the literature. In this section the type of remuneration that a director can receive is identified and, where these items have appeared in the literature, important issues in relation to their use are discussed. In Table 2.1 the main forms of compensation are identified and research authors' usage of these measures are shown in the table.

The remuneration/compensation that an executive may receive can be identified as follows:

1. Salary: In the executive compensation contract there is an element of fixed compensation for undertaking executive duties.
2. Bonus and performance related compensation: A reward element, in the form of a bonus, which would be based on the achievement of a goal or some performance related elements.
3. Benefits in kind: These may relate to a range of 'perks' including car usage, mobile telephone usage, private health insurance, etc.
4. Other income: Which may be special payments for roles or responsibilities or for the loss of office, etc.

5. Pension: These payments are contributions to a pension fund.
6. Some deferred actual or future compensation in a future period: This may take the form of cash, shares and/or options. It can be argued that the motive for the grant of shares options are to reward performance achievement and align the interest of executives with that of the shareholders in the longer term.
7. Ownership income (in the form of dividend) is derived by directors holding equity shares: They receive this income as a result of being shareholders, while serving as directors/executives of the organisation.

In much of the literature only salary and bonus are utilised. In many studies these two variables (salary and bonus) are combined together to constitute total compensation. Often they are not disclosed separately, which makes it difficult to identify the relationship between salary and bonus individually to different performance measures. The untangling of a multiple variables on both independent and independent sides of an equation, provides an almost insurmountable problem of untangling individual relationships.

Benefits in kind encompass a wide range of items including car allowance, use of a car, private health, mobile phone, etc, which are not standardised or uniform in their use, but reflect individual company practice. Many companies have discontinued their use, preferring to compensate directors in their salary. The problem with benefit as a form of income is that company practice and its disclosure varies so much, with the level of benefits varying significantly between directors. In some cases it can be a considerable part of total income. Pension contribution has been used in some of the studies but this is exceptional, e.g. Cosh[83]. Pension information is available on an inconsistently and irregular basis, particularly the amount of pension contributed by individual directors. It was disclosed in many companies before the Hampel Report[67], but the authors of this report were of the view that pension was not thought to be part of an appropriate form of director income or the subject of remuneration policy. Certainly from anecdotal evidence, in later life pension considerations are uppermost in directors' financial planning. These contributions are very important and a very valid area for remuneration research. However, this study is unable to incorporate pension into the DRIP concept because of the inconsistent disclosure of pension data. Hampel was of the view that it should not be regarded as part of a director's income. Pension arrangements reflect national practice in each country. In the UK, a company contributes to a full time director's pension, whilst in the United States executives provision of pension and retirement plans are a matter of personal arrangement.

The basis of awarding long-term incentive payments, and particularly their valuation, is one of the most contentious areas in this field of study. Typically, long-term incentive in the form of stock options or equity releases are granted on meeting some performance criteria. On being granted they can be exercised by the executive at some specified time in the future. This period, between the grant and the exercise of the option, is often referred to as the 'vesting' or maturing period. The norm for this period is three years, but may vary from two to nine years. The key features of option remuneration are the following:

1. Nominal price
2. Exercise price
3. Gain/loss (difference)
4. Number of options
5. Grant date
6. Exercise date
7. The maturing period or 'vesting period'
8. Expiry date of the option (when it is out of date)

At the end of the vesting period, the director may elect to convert the option into cash or shares or defer on these actions, often in anticipation of an increase in the value of the market value of the converted option's share. At the date of exercise, if the market price is higher than the exercise price, then a gain is occurring, often being referred to as - 'being in the money'. For some options this is not the case and no gain would arise, giving rise to the expression - 'under water', with no value gain on exercise. The value of options to directors during their vesting period is a key issue that impacts on their motivation and effort in striving for performance targets and the resultant remuneration. The value of the unexercised options to directors can be very variable over this period and very dependent on the option model adopted to calculate their value. The Black-Scholes[84] model is the most widely used and published in the US, but there are reservations in both the valuation method[9] and its applicability to an UK environment. Often directors' expectations are based on the assumptions that good performance and value creation by the company that will result in share price appreciation, which if the market is efficient this would result. In contrast often, a rising 'bull' market can be a more dominant and significant factor than individual company performance.

Rappaport[85] highlights the importance of stock options in US corporate management, identifying it as the fastest growing proportion of an executive's pay accounting for about 30% of the total compensation for US executives in the 1980s. In the UK, this proportion is also rising and some cases provide a substantial proportion of the total income. The use of stock options as executive incentives has implications for a number of aspects of the company policies. Eggington, Forker and Grout[86] set the scene for the UK, indicating the impact on different types of option schemes on accounting, tax, reporting statements and executive actions. The use of options in executive compensation is becoming more and more widespread. Their reporting has been described by Forker and Grant[86] in 1993 as 'very patchy', but the Greenbury[7] recommendations has made for more complete and standardised disclosure. Options are important sources of executive and director motivation to create corporate value and to generate remuneration. But they are difficult to incorporate into a schematic framework of analysis to study, because of the difficulty in establishing the value of an option.

Although the media highlights examples of directors who achieve large gains through exercising share options, there are many directors whose options lapse or are cancelled on leaving the company. A more difficult dilemma is the valuation of options that are in their vesting period or are mature vested options held for conversion to cash at an appropriate moment but unexercised. The value of these vesting and exercisable options is subject to different interpretations, depending on the value methodology employed. The valuation of options is typically undertaken using a Black-Scholes model[84], sometimes enhanced by the Merton[87] correction for dividends. But the model is based on estimates of the future and subject to much speculation and variation. Very few valuations of options outside of the US have been undertaken, often due to the lack of this provision on non-US commercial databases. The point that options are not traded in an open public market is a significant flaw in its utility in research. The dilemma of an option's value is problematic at all times other than when it is converted to shares or cash, when there is certainty. Studies using options values have challengeable assumptions about their valuation base. This point is well made by Bernhardt[88], who outlines the myriad of different varieties of options that are present and how option experience in Germany has impacted on governance issues in this national environment. Certainly, options are an important potential source of executive income, but often a flawed valuation of the worth in an executive's compensation income.

In spite of this reservation, a number of research studies have attempted to value unexercised options[127]. In a US environment these options are often valued using the Black-Scholes model whose values are available on commercial databases, which in some way explains its widespread use. Sarkar[89] compares options under a Black–Scholes formulated model to actual observed prices identifying the range of potential difference in valuation in an ex-ante and ex-post study. These values have been derived from a commercial database and are not part of the author's research design or calculation. A number of authors have challenged the efficacy and utility of this model and suggest this method yields higher valuation than on other assumptions, e.g. McKnight[90] and Fokker[91]. A more serious limitation of this valuation method is that the options are not part of an open, free and traded market in a public domain. This makes any valuation severely flawed, especially as they often assume a rising bull market of upward expectations.

Samuels and Cranna[92] raise a range of issues concerning the valuation of share options and use a small sample to generalise some of their results to the larger executive population in indicating the implications of options values to compensation. However, these models of option valuation do make assumptions about the future and are therefore subject to much divergent interpretation. Bey and Johnson[93] demonstrate the extent and potential value of executive stock options under different conditions, which summarises the potential range of their importance and value. As stated above, the only time that the value of an option is clear and precise is on conversion into shares or cash. Therefore, where a 'cash' perspective is adopted, this provides the director/executive with the opportunity to make a clear decision on its value and their expectations of the future. Valuation of options at all other times is based on 'some other indeterminate basis', be it theory (expectations model) or random speculation ('might bes' and 'could bes'). The motives of a director in conversion to cash of their options may be numerous, but the value is clear, and part of the director's portfolio of income (their DRIP) for the year. The reason and rationale for using a cash perspective is that it is real and reflects a decision to convert to cash or shares, on forming a view of the future. The decision to convert, and in which form, has income dimensions in terms of cash now or a stream of income in dividend form as ownership income. These seven remuneration sources sum to the portfolio of income received by an executive, but present difficulty in bringing together in a systematic framework to study policy and practice.

2.4.2 Performance Variables used in the Literature: the range of Accounting and Financial Performance Measures

Armstrong and Murlis[11] claim that the determination of executive compensation rests heavily on accounting and financial measures. These are considered to be appropriate proxies of performance. These measures might be sales, profits, earnings, dividends, capital employed, fixed assets, earnings per share (EPS), change in market price, change in shareholder/strategic value, etc. Such performance measures would reflect aspects of corporate performance on which executive compensation could be based. Some performance measures are taken at an absolute level, for example the sales revenue or the degree of change, for example changes in sales. Each measure of performance would reflect the range of activities that executives are encouraged to undertake in enhancing corporate performance and result in an appropriate form of compensation.

Each performance measure would reflect some dimension of the executive management role and be compensated accordingly. If this were the case, the way forward would be to identify which measure or measures would have utility in enhancing corporate performance and, as a result, be the most appropriate driver on which to base corporate performance, and then rewarded in the form of executive compensation. Such issues and policies have generated a wide range of interest from stakeholders, for example the public, government, shareholders and members of the academic community, expressed through the media. This interest by the academic community has taken the form of empirical analysis of executive compensation policy and practice by the selection of compensation variables and seeking to identify the extent of their relationship with a range of performance measures, typically those of an accounting and finance nature. In this academic literature review a number of types of performance measure can be identified.

In considering the literature, some six types of performance measure of a financial nature can be identified:

1. Financial accounting values

2. Accounting ratios
3. Stock market values
4. Stock market ratios
5. Specialist mixed approach measures - hybrid combinations of accounting and stock market measures
6. Strategic value measures

It may be said that the appeal of any accounting and financial measures is that they are quantifiable calculations yielding quantifiable results, although such processes and their results are far from uncontroversial in practice. They enjoy a privilege position over qualitative measurements, which are perceived as relatively more subjective, less dependable and unstable. Having said this, there is a wide range of choice amongst the various quantifiable measurement of performance.

Performance measures, like sales, profits, earnings before extra ordinary items, net income, etc., can all represent indicators of absolute size. Performance measures of relative performance would normally be expressed in ratio terms, for example return on total assets (ROTA), equity capital (ROE), capital employed (ROCE)/net assets (RONA) and accounting rate of return (ARR). Stock market performance may be measured by absolute changes in value, for example increase in share price or shareholder wealth. Whereas, relative performance may be expressed in ratio terms by, for example, rate of stock return (RSR) or rate of returns (ROR). Some measures, selected from two schools of thought, may be considered as hybrid specialist measures, being used for specific measurement purposes, e.g. operating income, divided by market value, as in Ante and Smith[94]. These performance measures use one measure from an accounting statement and one from the stock market environment. Other more specialist approaches may include different absolute or relative changes, as measured by economic value analysis, strategic/shareholder value analysis or free cash ratio returns. The literature illustrates a wide range of performance measures used in studying the compensation-performance relationship.

2.4.3 Summary of Compensation and Performance Variables used in the Previous Studies

Compensations Measures

A number of concepts of executive compensation have been used in the research studies and these have been identified in Table 2.1. Many studies have used the compensation measures of salary and bonus. Those who have used cash salary, plus bonus, include McGuire, Chiu and Elbing[95], Lewellen and Huntsman[96], Ciscel and Carroll[97], Hogan and McPheters[98], Hirschy and Pappas[99], Agrawal[100], Kerr and Bettis[101], Lambert and Larcker[102], Deckop[103], Ely[104], Clinch and Magliolo[105] and Bizjak, Brickley and Coles[106].

Some studies include longer-term and deferred compensation in its various forms. Murphy[107] used all types of compensation including options (using a Black Scholes valuation method). In other studies, other specifications of compensation are used, for example Ante and Smith[108] use three after-tax measures. They are:

1. salary and bonus
2. a measure including options but not shares
3. return on shares owned, less opportunity cost.

When comparing the scale of compensation to that of many performance measures many researchers have used logarithms to deflate the impact of scale and seek out different types of relationship. This approach has figured in a number of studies, for example Murphy[88], Ante and Smith[108], Abowd[109], Barro and Barro[110] and Sloan[111].

In considering the use of compensation variables, it can be seen that salary and bonus have been the main focus of attention. However, long-term incentive and ownership income, together with other more specialised forms of compensation (benefits, other and pension), have been relatively neglected areas of research. Some studies[102,105,107] have adopted the change in the compensation over time as a measure, identifying the relative change in money values over time, while most studies have used annual absolute values. Table 2.1 seeks to summarise the range of research and the compensation variables utilised.

TABLE 1: EXECUTIVE COMPENSATION COMPONENT VARIABLES UTILISED IN PREVIOUS STUDIES

TOTAL COMPENSATION	SALARY	BONUS	OTHER PAYMENTS (EQUITY, OPTIONS, DEFERRED LONGER TERM COMPENSATION, ETC.)
USA			
Taussig and Barker (1925)	McGuire, Chiu and Elbing (1962)	McGuire, Chiu and Elbing (1962)	Benston (1985) after tax future returns
	Lewellen and Huntsman (1970)	Lewellen and Huntsman (1970)	
	Ciscel and Carroll (1980)	Ciscel and Carroll (1980)	
	Hogan and McPheters (1980)	Hogan and McPheters (1980)	Hogan and McPheters (1980) (deferred compensation)
Hirschy and Pappas (1981)	Hirschy and Pappas (1981)	Hirschy and Pappas (1981)	Hirschy and Pappas (1981) (deferred compensation))
	Agrawal (1981)	Agrawal (1981)	
	Coughlin and Schmidt (1985)	Coughlin and Schmidt (1985)	
	Murphy (1985)	Murphy (1985)	Murphy (1985) (deferred compensation, options)
	Ante and Smith (1986)		Ante and Smith (1986) (options)
	Kerr and Bettis (1987)		
	Lambert and Larcker (1987)	Lambert and Larcker (1987)	
	Deckop (1988)	Deckop (1988)	
	Abowd (1990)	Abowd (1990)	
	Barro and Barro (1990)	Barro and Barro (1990)	
Gibbons and Murphy (1990)	Gibbons and Murphy (1990)	Gibbons and Murphy (1990)	
	Jensen and Murphy (1990)	Jensen and Murphy (1990)	Jensen and Murphy (1990) (increase in equity stock)
	ΔLeonard (1990)	ΔLeonard (1990)	
	Δ Ely (1991)	ΔEly (1991)	
	Clinch (1991)	Clinch (1991)	Clinch (1991) (change in options)
Belkaoui (1992)	Belkaoui (1992)	Belkaoui (1992)	Belkaoui (1992) (long-term compensation)
Janakiraman, Lambert and Larcker (1992)	Janakiraman, Lambert and Larcker (1992)		Janakiraman, Lambert and Larcker (1992) (Earning before ex-ord/equity)
	Clinch and Magliolo (1993)	Clinch and Magliolo (1993)	
	Gaver and Gaver (1993)	Gaver and Gaver (1993)	
Bizjak, Brickley and Coles (1993)	Bizjak, Brickley and Coles (1993)		

Conyon and Murphy2001	Conyon and Murphy2001	Conyon and Murphy2001	Conyon and Murphy2001
UK			
	Cosh (1975) (after tax)		
	Δ Gregg, Machin and Szymanski (1993)	Gregg, Machin and Szymanski (1993)	
	Conyon and Gregg (1994)	Conyon and Gregg (1994)	
McKnight (1996)	McKnight (1996)		
Conyon (1998)			
Conyon and Murphy (2000)	Conyon and Murphy (2000)	Conyon and Murphy (2000)	Conyon and Murphy (2000)
Conyon, Peck and Sadler (2001)	Conyon, Peck and Sadler (2001)		

TABLE 2: PERFORMANCE MEASURES USED IN PREVIOUS EXECUTIVE COMPENSATION STUDIES

SALES REVENUE	PROFIT	TOTAL ASSETS	CAPITAL EMPLOYED	RETURN ON SALES (ROS)	RETURN ON EQUITY (ROE)	RETURN ON CAPITAL EMPLOYED/ NET ASSETS (ROCE/RONA)	MARKET CAPITALISATI ON/ VALUE (MV)	RATE OF RETURN (STOCK MARKET RETURNS, Δ SHAREHOLDER RETURNS) (ROR)	OTHER MEASURES
USA									
Taussig and Barker (1925)	Taussig and Barker (1925)	Abowd (1990)		Deckop (1988)	Antle and Smith (1986)		Lewellen and Huntsman (1970)	Murphy (1984)	
Roberts (1956)	Roberts (1956)				Lambert and Larcker (1987)		Clinch and Magliolio (1993)	Benston (1985)	
McGuire, Chiu and Elbing (1962)	McGuire, Chiu and Elbing (1962)				Clinch (1991)		Lewellen and Huntman (1970)	Ante and Smith (1986)	
Marris (1963)	Lewellen and Huntsman (1970)				Abowd (1990)	Abowd (1990)		Coughlin and Schmidt (1986)	Abowd (1990) (op.income/ total assets)
						Ante and Smith (1986)		Ante and Smith (1986)	
Baumol (1987)	Winn and Shoehair (1988)							Kerr and Bettis (1987)	
Ciscel and Carrol (1980)	Ciscel and Carrol (1980)							Clinch (1991)	
ΔLeonard (1990)	ΔLeonard (1990)							Δ Jensen and Murphy (1990)	
ΔCoughlin and Schmidt (1985)								Coughlin and Schmidt (1985)	
Δ Jensen and Murphy (1990)	Δ Jensen and Murphy (1990)				Janakiraman, Lambert and	Δ Gibbons and Murphy (1990)		Δ Gibbons and Murphy (1990)	

SALES REVENUE	PROFIT	TOTAL ASSETS	CAPITAL EMPLOYED	RETURN ON SALES (ROS)	RETURN ON EQUITY (ROE)	RETURN ON CAPITAL EMPLOYED/ NET ASSETS (ROCE/RONA)	MARKET CAPITALISATION/ VALUE (MV)	RATE OF RETURN (STOCK MARKET RETURNS, Δ SHAREHOLDER RETURNS) (ROR)	OTHER MEASURES
					Larcker (1992)				
Veliyath (1999)									
								Conyon and Murphy2000	
UK									
Δ Cosh (1975)						Cosh (1975)			
Meeks and Whittington (1975)	Meeks and Whittington (1975)								
Gregg, Machin and Szymanski (1993) Δ ditto								Gregg, Machin and Szymanski (1993)	Gregg, Machin and Szymanski (1993) (EPS)
								Conyon and Gregg (1994)	
		McKnight (1996)							
			Conyon (1997)*						
		Vefeas and Theodorou (1996)							
Conyon 1998									
								Conyon and Murphy2000	
			Conyon, Peck and Sadler 2001					Conyon, Peck and Sadler 2001	

2.5 Literature Review: Compensation Policy and Performance

A large number of performance measures have been used in studies in this area, a summary of which is included in Table 2.2 above. This serves as a brief introduction and orientation to a more extensive review of the literature. This is conducted in approximately historic order by type of performance measures used in the literature.

2.5.1 Accounting Measures

Early academic studies of executive compensation, and the relationship with performance measures, can be traced to Taussiq and Barker[74]. They sought to identify the financial accounting measures that may be related to the compensation of executives. The compensation variable was total income of the CEO and a number of performance variables were used including capital, profit and dividend. This formed the basis of much early and contemporary work by seeking to identify the type of relationship between compensation and performance variables. Most of this economics based research presumes that executive performance is contingent and depending on the reward given for the achievement of specific performance objectives.

Marris[112] and Baumol[113] focused attention on the nature of corporate goals and ambiguous executive objectives. The nature of these objectives would be reflected in company strategy and in the pursuit of some goal, as measured by some objective criteria. This was generally identified and related to one, or a number of, financial measures derived from the company's annual report and accounts or the financial capital markets. All of the following financial performance data was publicly available: e.g. sales revenue, profits, share price or changes in these variables. This made it popular and enabled authors to conduct research work using this data. These measures were deemed to be important and appropriate proxies of corporate performance, expressed in financial terms.

McGuire, Chui and Elbing[114] looked at the relationship between executive compensation and the financial accounting measures of sales and profits. They found that sales had a larger explanatory effect than profits on executive compensation. The debate on the strength of the relationship of these variables, and the issue of which particular corporate financial performance measures provide the most explanatory power, has preoccupied interest during this time. Marris[112] and Baumol[113] formulated the sales maximisation hypothesis; this advanced the view that managers seek to maximise sales revenue. This work supported the sales revenue-executive compensation relationship hypothesis. If valid, it would follow that an increase in sales revenue would be reflected in some reward in the form of executive compensation. Later studies by Lewellen and Huntsman[115] found accounting profits to have a stronger effect on compensation than sales. More recent studies of Ciscel and Carrol[116] and Leonard[117] found strong evidence that a relationship existed between both sales revenue and accounting profits with executive compensation. The dilemma posed by such studies is that one group of studies may find that one variable, e.g. sales revenue, has a greater explanatory power than another variable, e.g. profit, whereas other studies can find the reverse. What seems to be evident from this work is that these variables provide different levels of explanatory power over different time periods.

Other financial accounting variables may be influential in the determination of executive compensation. Rosen[118] identified that performance and scale were important in determining executive compensation. Scale and size may be defined in terms of sales revenue and profits, but also in other financial accounting measures like equity capital, capital employed and fixed assets, etc. These financial measures may be significant, particularly in some industries and sectors. This would seem to imply that a company's financial profile in absolute and relative terms, as revealed by its financial measures, has an impact on the level of executive compensation. However, again, the nature and effect are not entirely clear.

This leads us to the conclusion that there is a compensation-size relationship that is causal and reflects a matching of executive/CEO compensation in companies. This would lead us to the suggestion that CEO compensation is related to company size, even if those measures increase at the expense of some other measures, e.g. reduced market value. This poses a dilemma so to what financial measures are to be used in executive compensation determination. This raises the issue of what measures are most appropriate for the purpose. Jensen and Ruback[119] observe that large conglomerates that have grown through merger and acquisition, with the motive of increased growth opportunities, economies of scale and value creation, have been largely inefficient and have under-performed. The executives' compensation in these companies did increase to reflect their 'management' over a larger economic entity, but this may not have created value for shareholders.

2.5.2 Accounting Ratios

Accounting ratios have been used as proxies of performance in a number of studies and a number of these have used the following accounting ratios:

1. Return on sales (ROS) by Deckop[103]
2. Return on assets (ROA) by Antle and Smith[108]
3. Return on capital employed (ROCE) by Antle and Smith[108]

In some cases the change in ratios between the years was used and an example of this was the change in ROE used by Lambert and Larcker[102]. Their approach was followed by Clinch[120] who used accounting rate of return. Abowd[109] used both ROE and ROA.

Sloan[111] in his doctoral thesis demonstrated a preference for using accounting measures and ratios as a basis for executive compensation. He found it shielded executive compensation from the uncertainty and variability of stock returns and this popularity with accounting based measures may be reflected in executive compensation contracts. The clarity and understanding of these measures by executives and managers may explain their continued popularity. This is reflected in their correlation/regression coefficients with executive compensation, as demonstrated in Baynes and Tilley[121].

2.5.3 Stock Market Measures

The use of stock market measures reflects the value of a company's equity in the capital market. Lewellen and Huntsman[115] used the market value of equity in their study. Clinch and Magliolio[103] used the relative change approach in their study reflecting the incremental change in shareholder wealth between two time periods. These two studies indicate how different uses of such measures can be employed, reflecting the author's individual preference for a measure that best meets the objective of their study.

2.5.4 Stock Market Returns

Many executive compensation studies have used stock returns from the financial capital/ stock market as its financial measure. This would seem to reflect the view that the stock market values best indicates the 'true economic value of the corporate entity'. A landmark event, and a watershed in the empirical tradition of research on executive compensation, took place in 1984 when a specialist conference was convened at the University of Rochester (USA) titled "Management Compensation and the Managerial Labour Market". This conference attracted many worthy papers and encouraged further work in the area. Jensen and Zimmerman[122], in summarising the conclusions of the conference, were of the view that the papers from the conference identified a series of new research directions. This conference was the starting point of many research enquiries into the dimensions of executive compensation.

At the conference, Murphy[107] gave a paper on compensation and performance. The importance of the Murphy study is that it looks at a wider range of forms of executive compensation other than the 'traditional' orientation of looking at just salary and bonus. It also uses stock market measures of corporate performance, rather than the prevailing 'tradition' of financial accounting measures. Murphy observes that previous studies have been based on diverse assumptions. They reflect models with different sets of theoretical and empirical assumptions. However, central to all theories is the assumption that compensation is tied to improved productivity, which is manifest in performance measures. Previous econometric studies indicated that executive compensation was primarily related to size, e.g. sales and assets, with other performance measures playing a minor role, e.g. return on sales, profits, equity and capital employed.

Murphy used the executive compensation concept variables of salary, bonus, deferred compensation, ex-ante value of options and total compensation. This recognises the range of executive compensation available to executives. It identifies the link between the income and wealth dimension of an executive's opportunities in their roles with the company. Executives derive compensation by salary and have the opportunity to earn additional performance-related compensation by improved performance. In addition, the holding of shares and options provides additional wealth increasing opportunities. This wealth dimension had not been examined by previous studies. It is an important incentive for executives to improve corporate performance. The income in the form of dividend ownership income and capital gain through share/option appreciation, which reflects the executive's role as shareholder, but are considered part of their executive income, thereby aligning the mutual interest of an executive as a company office holder and shareholder.

The Murphy study examines the relationship between executive compensation and corporate financial performance, using 500 individually paid executives in 73 large US manufacturing firms from 1964 and 1981. Board executives were identified and divided into the roles of chair, chief executive, president (non-CEO) and vice president. This work takes an econometric methodology in undertaking this empirical work with a number of compensation and performance variables. The empirical analysis focused on the five compensation variables, but not all were included in the total compensation concept variable. Salary and bonus have been used extensively in previous studies. However, in many companies they are disclosed together as a total and not as separate items. This is not ideal for research purposes. The use of deferred compensation in various forms is an innovative addition to the range of compensation variables. Stock options provide a wealth enhancement opportunity that had not been included in previous studies. Murphy recognises that this is a source of executive wealth enhancement, through the executive's shareholder role. Although the executive derives benefit as an individual, the sources of such wealth effects need to be identified and are important in considering the executive's compensation strategy in their different roles. The valuation of such options does represent the challenge of establishing an appropriate methodology. In this study Murphy used the current value of the options as if the options were exercised in the current year.

Murphy sees shareholder returns as being a base for executive compensation rather than accounting measures like profits. Using a stock market performance measure signals a significant and new dimension in studying executive compensation. This was expressed in two forms: a realised rate of return (ROR), i.e. a raw stock market return, and the second form takes the ROR and converts it into a real rate of return by deflating the stock index by the Consumer Price Index. This was called the Stock Index (SI). This attempts to present a consistent real rate, rather than a time dependent raw return. These measures of return were taken to be a valid measure of shareholder return. Such measures are seen as an appropriate proxy for executive effort in exercising their duties. Holmstrom[123] points out that other measures may reflect these efforts. Other works[113,119] point to different measures like firm size and growth as being important. Murphy used sales revenue and percentage change in sales as appropriate proxies for these and he pointed out that other financial measures provide no distinguishable results of explanatory power, so they were not included. No evidence was presented to validate or support this view.

The Murphy study used an econometric methodology, employing a regression analysis, to examine the relationship between shareholder return as a proxy for corporate performance and the range of components of executive compensation. Murphy used the logarithm of some variables, e.g. compensation and sales, because he argues that this facilitates the comparison with previous studies. It yielded interpretable regression coefficients and reduced the skewness of the size distribution of sample companies. A fuller description of Murphy's work is given below.

He used two panels of data in his study. First, the time series relationship (called panel A). The relationship between executive compensation and performance measures was examined using stock return and sales. Secondly, the cross sectional dimension (called panel B) was analysed in the same dataset.

A number of research dimensions can be identified as empirical objectives in this numerical analysis. The four areas of the relationship investigated were:

- Compensation results by stock return and grouped by executive position.
- Consideration of shareholder return and the types of compensation using regression analysis.
- Company sales as an additional measure of performance for size and growth dimensions.
- Compensation was compared to measures of industry relative and abnormal returns.

Panel A: Executive Compensation and Financial Performance Measures

Murphy found a continuous stable relationship between performance, in the form of percentage changes in stockholder (shareholder) returns, and compensation in the panel A dataset (time series). In the range of +30% to -30% in stockholder returns, executives receive a constant corporate financial return. For example, a company that had a stock return at -30% would have its CEO compensation decreased by 1.2%, and where it exceeded +30%, it increased by 8.7%. These extremities represent the two outer class boundaries of this relationship. This held fairly stable across the entire dataset of executives and the sub-classifications of chair, chief executive, president and vice president. It was clear that the hierarchical progression from vice president, president, chief executive to chair provided a hierarchy of compensation. The chair's role and performance-compensation relationship was more weakly related. Murphy felt that the point made by Benston[124] about the extent of shareholding by the chair's group, as an example of personal equity/option leverage, may be an important explanatory phenomenon and may explain why this relationship was weaker for them than others. The relationship between return to shareholders and total compensation was significant and positive for all executive groups of the board.

As executives rise through the executive board position hierarchy, there was evidence of increasing gain in stock returns. What is interesting is that promotion from one level to the next higher level would result in a substantial increase in returns. If a vice president is promoted to CEO, where the dummy coefficients are 0.3668 and 0.5903 respectively, indicating a difference of 0.2235, the promoted executive could reasonably expect an increased return, i.e. a 22.35 % increase. A change in the logarithmic performance variable of shareholder rate of return compared to total compensation of the board gives a stock index co-efficient of 0.2125. This implies that a 10% return increase gives executives a 2.1% increase in compensation. This is statistically significant given the t statistic of 18.6. It is also positive for sales growth, salary plus bonus and total compensation. In addition, it was also true of salaries for all executives, with the exception of CEO, where this executive compensation relationship was weak, negative and near to zero. It was further observed that the sensitivities of the individual components of compensation are all positively and significantly affected by performance. In years of poor performance there was higher occurrence of granting options and in good years this was less likely.

Panel B: Cross Sectional Analysis

In panel B, regression results found there was no evidence of a relationship of any significance, or being able to provide any explanatory power. This suggests some mis-specification problems. The panel B data was re-estimated with the addition of sales to represent the dimension of size and growth. The co-efficient of stock index, and change in sales, show that the individual components of compensation were positively and highly correlated. A company with a 10% increase in return would get an additional 1.6% in compensation. The t-statistic of 13.2 indicates it is significantly different from zero. The individual impact of a 10% return would be an increase on salaries by 0.4%, bonus by 12%, the sum of salary and bonus by 1.1% and deferred compensation by 4.8%. If stock market performance were held constant, the individual impact of a 10% increase in sales growth return would be an increase on total compensation by 2.1%, salaries by 1.2%, bonus by 9.5% and the sum of salary and bonus by 2.5%. Stock options were found not to be positively correlated to stock market performance. Murphy observes that the executive compensation literature identifies a cross sectional elasticity of compensation to sales of 0.3, which remains robust and intact when comparing executive compensation with individual executives over time.

The use of a relative compensation type approach was explored by using the Industrial Relative Performance (IRP) index. This index was obtained by using the Compustat database that provided an industry-relative rate of return based on their two digit industrial classification. This is in contrast to the previous measure of shareholder rate of return that was a raw rate of return, independent of industry and market factors. The industry relative seeks to allow for this. Another measure, the Abnormal Performance Index (API), reflects the stock market performance, measured relative to other firms in the same group. These two measures, and the original 'raw' stock return, are all highly correlated. However, their relationships with the compensation variables are not high or powerful in explanatory terms. The bonus was positively related to relative returns and negatively to raw returns. This may suggest that companies with formal performance bonus plans tie them to measures of relative performance. In summary, the raw stock returns have more explanatory power than IRP and API.

Murphy argued that shareholder return may be an imperfect proxy on which to base executive reward for their efforts, so other measures were examined. From the experience of previous studies, sales revenue was found to be an important variable. It was found that a company that grew by 10% in sales revenue would compensate executives in the range of 2-3% more in salary and bonus. In this study, Murphy used a logarithm scale to adjust for the effect of scale. Changes in the current year's shares and options compared to executive compensation were positively related to the current year's stock price, identified as a proxy for a change in shareholder wealth. The relationships between these changes were statistically significant, but low. In contrast, the variances in the changes were unexplained. Consideration of industry, market factors and managerial productivity were offered as possible explanations.

The Murphy study is a significant study incorporating many of the features of previous research on executive compensation and performance measures. It extended the area's scope by using a wider range of compensation variables, introducing an income and wealth perspective, while linking executive income to gains in the stock market. The use of salary, bonus, deferred compensation, and particularly the use of shares and options, signalled the need to consider the full range of executive sources of income and wealth opportunities. This study enriches our understanding of the executive compensation-performance relationship. The use of stock return as the primary performance measure (although sales revenue was used) raises the issue of whether to base executive compensation on this criteria, to the exclusion of other measures. The inclusion of other financial performance measures, like profits, fixed assets or capital employed, may have been helpful in identifying other variables with explanatory power. The use of stock return is highly focused and precise but excludes other measures that may have some explanatory power, e.g. scale and size dimensions. Murphy demonstrated that raw stock market returns are the best predictor of salary, bonus and total compensation, but bonus and deferred compensation are strongly affected by industry relative rates of return.

Murphy's main conclusion is that firm performance, as measured by shareholder return, is strongly and positively correlated to executive compensation. He also finds that the growth of company sales is strongly correlated to compensation. He does recognise the bias, and the potential misleading impact of cross sectional estimates, but this should not detract from the main conclusion of the study. He further suggests that the compensation-performance relationship should be seen in terms of the individual components of compensation, rather than in total. He highlights that there are probably more detailed and sensitive relationships at work. This is the very issue that Rabin[6] develops in looking at the whole range of executive compensation sources.

Lambert and Larcker[102] draw our attention to the limitations of previous studies in their relative neglect of the cross sectional dimension and its level of analysis of compensation contracts. They are concerned about the problems connected with the 'associated variable' or 'omitted variable' problem. Such variables may be derived from the manager, company and environment variables that may not be implicitly included in the regression model. Using a sample dataset of 370 firms from the Forbes 500 listing, the cash compensation for ten years, along with three years of share information was obtained from disclosed sources to conduct their study.

They adopted an agency approach to consider both single and multiple period models and see the relative weight placed on performance measures in compensation contracts as an increasing function of the signal to noise ratio in relation to the agent's action. Using these assumptions, they examined the sensitivity of compensation to performance measures. Corporate ratio performance measures were return on equity (ROE) and rate of stock market return (ROR/RSMR). Because many of the input variables are highly positively skewed, they applied a logarithmic transformation to each of the variables. This enabled the use of an additive model of these variables in preference to a multiplicative model. In their analysis of variables, each observed variable or proxy was assumed to be composed of the true score for its underlying concept construct and 'measurement error'. They found that firms who put more weight on market performance (and less weight on accounting performance) are those whose variances of accounting returns (ROS, ROCE) are high, relative to the variance of stock market performance. This is where firms are growing in terms of assets/sales and where the value of executive personal wealth holdings in the firm is low.

Baker, Jensen and Murphy[125] draw attention to the compensation to sales elasticity, estimated by the Conference Board surveys. This study finds that compensation rises with firm size, and at an increasing rate, and this relationship was constant across time and all industries. This confirms Murphy's 1984 findings. Baker, Jensen and Murphy find that there is an elasticity of demand with respect to sales of 0·3. This means that a firm that was 10% larger would compensate its executives an average of 3% more. When firms grow this relationship continues to hold true. This implies there was some process by which those who set compensation may use a measure, such as sales, to determine the appropriate level of compensation. They observe that the elasticities estimated by the conference board have remained remarkably consistent and stable over the five years of the study. The study examined five industrial groups of companies over 5 years and found a mean of 0.31 and median elasticity with a 66% spread/deviation between 0.275 and 0.35. The correlation between size and compensation in sector groups was very high:

Manufacturing	.60
Retail trade	.53
Utilities	.67
Banking	.68
Insurance	.69

The use of these findings and correlation/regression studies has been criticised by some commentators. Risher[126] puts forward the view of the practical value of such regression studies. He points to the need to review the attitude of the academic community to the utility and validity of the data provision and statistical measures in corporate practice.

In later work, Jensen and Murphy[127] consider the potential conflict of interest between the shareholders of corporations and their executives as the 'classic' agent-principal problem[50]. Executives have the opportunity to derive benefit from the exercise of their board management role or their shareholder role. The shareholder (principal) would specify the executive manager's (agent) incentive goal objectives in the executive compensation contract to the agent. Many boards seek to align the executives' interests with shareholders by the granting of equity and options. The role and impact of such incentive compensation in contracts, and how they are reflected in economic theory, were considered in the Jensen and Murphy paper.

Jensen and Murphy analysed the executive management performance compensation incentives and their stockholding for some 1,295 CEOs over five decades. They estimated the compensation performance sensitivity by using the coefficient of ordinary least squares regression measure. They used a change model with the change variables being salary, bonus and deferred future incentive compensation with current and lagged shareholder wealth. The future incentive compensation included an element of share and option reward. The financial performance measure used was shareholder return, following the tradition of previous studies. They identified that many incentive schemes are linked to this compensation. They argued that actual executive compensation contracts may look very different to those predicted by economic theory. Executive behaviour in pursuit of corporate goals would be expected to play a significant role in these proceedings.

They identify that the level of executive ownership has actually fallen over this period. The 'power' of the executive as a shareholder was not significant, as they typically were found to represent only 'trivial fractions' of the total equity base. They found that the compensation-performance relationship had declined since 1930 and this has implications for the agency-principal relationship between executive and shareholder. They, like many others, suggest that shareholders want executives to take particular actions and activities that create value. It would be appropriate, therefore, to base compensation on value-increasing incentives that explain the policy of granting executives equity and option incentives. They found that an increase in shareholder value of $1,000 would initiate an increase in executive role-related compensation due to salary revision, performance and options upward reappraisals of about $0.75. The level of share ownership by CEO was found to be a median of 0.25% of the company's common stock. By this mechanism, their wealth would increase by $2.5 per $1,000 rise in the company's value. Thus, the real underlying incentive would appear to be through the alignment of executives through their personal shareholder wealth position, rather than through incentive reward for the performance of executive duties. They found that for every $1,000 increase in shareholder wealth, CEO wealth would change by $3.25. From this evidence the greater proportion of executive/CEO value increase is due to their shareholder role, rather than through executive management role.

Jensen and Murphy found that absolute firm value changes are a better predictor of changes in salary and bonus, than relative value changes, relative to industry and the market. The potential for incentive through cash income compensation is trivial when compared with the opportunity for increased wealth through the incentive of stock/share and option ownership. These are directly related to absolute and not relative returns.

These works do provide evidence of relationships between executive compensation and financial performance measures of stock returns. However, they do not provide clarity in the determination of executive compensation policy and practice. It may serve to explain the unsubstantiated view that there has been an increased use of equity and options plans after 1990. Jensen and Murphy, observe that traditional economic theory finds difficulty in explaining many common features in compensations systems. Such economic analysis may need to defer to the influence of other concepts, e.g. politics, fairness, social responsibility, trust and culture. Jensen and Ruback[119] suggest that this may explain the significant increase in 'growth by acquisition' strategy employed by many corporate management teams. Such corporate growth, measured in financial measures, be it sales, asset, capital or some other performance measures, has been reflected in higher levels of corporate compensation. This may present a dilemma in the agency-principal model where the question may be posed: "in whose best interest are executives working?"

Baker, Jensen and Murphy[125] support the use of commercial dataset and regression results provided by the compensation surveys of the Conference Board. They suggest that such data sources should be considered legitimate and useful by academic researchers. There was a view that commercial database companies should be recognised as appropriate sources of secondary data and are valid sources of research data. This was in contrast to capturing the data from a primary source, which means resorting to the extraction from the individual corporate reports and accounts and stock market sources. Some academic critics have bemoaned the use of such surveys, preferring to access the data directly. In the US the surveys of compensation are numerous and they regularly use mean averages and regression techniques to identify norms of compensation and levels of compensation. Risher[126], who is a practising compensation consultant, confirms the use of regressions to determine compensation decisions about executives. He defends their use and supports their value to the corporate community.

Gibbons and Murphy[128] used a simple model of relative performance evaluation (RPE), where all employees (workers, management and executives) have the opportunity for reward by their collective and individual efforts. Economic theory provides a rationale for relative performance evaluation based on risk sharing. They consider that, in rewarding executives, these performance measures are suitable benchmarks and provide an incentive for them to take action to increase shareholder wealth. They suggest that relative performance evaluation provides an incentive to perform well, while insulating their compensation from adverse effects that may affect the performance of other workers in the same company, industry or the market. Their findings strongly support the view that RPE is used in compensation and retention decisions affecting CEO compensation and profitability. They adopt a simple least squares regression analysis to consider CEO data from Forbes 1974-1986 for 1,295 corporations. They measure the change in RPE in executive compensation contracts as measured by the change in the logarithm of shareholder wealth return, defined as rate of return (ROR). RPE theory predicts that compensation will depend on relative performance.

The measures from this model find that CEO salaries and bonuses are positively and significantly related to firm performance as measured by the rate of return on common stock. The return coefficient of 0.1562 implies a change in CEO compensation of 1.562% for each 10% return on common stock. The range of regression coefficients did vary over each cross-sectional industrial group. The coefficient for the industry rate of return was negative and statistically significant. This suggests that compensation committees and boards make adjustments for industry trends when determining executive compensation. They found that when corporate (ROR) and industrial returns are nil the average compensation increased by 5.5%. When ROR was 20% and industry is nil, the rise was 9.1%. This result would seem to be consistent with the hypothesis that uncertainties, shared with other firms, are partially filtered out in the executive contract. The outcome of this study was that there is a strong element of RPE in the relationship between executive compensation and performance measures. Although the theory of relative performance evaluation predicts that optimal contracts will protect CEOs' income from industry and market shocks, their wealth was not protected from industry and market movements in stock prices. Indeed, if executive compensation is tied to the stock market, then the same uncertainty and risk exists. This is a key point, and it was the conclusion of the Sloan[111] doctoral dissertation. Sloan's view was that stock market performance was too volatile a measure on which to base executive compensation, which may explain the potential popularity of the use of accounting based measures.

Janakiraman, Lambert and Larcker[129] noted that RPE benefits the relative performance of the agent (in an agency theory environment), which is considered to be a better evaluation of the agent's actions. Their tests do not imply the absence of RPE in the CEO's total compensation package, implying some weak evidence of its presence. But they see no clear relationship or pattern between the relative performance of the executive in relation to other aspects of their income and wealth holding positions in the company. They see RPE as a relative performance based contract, which should enable a better evaluation of the agent's actions, but they have some difficulty in confirming this.

From their results, they found that there is some presence of RPE in the CEO's total compensation package. They observed that in such relative performance environments 'part of a top executive's job' is to anticipate market conditions and adapt his company's operations accordingly. This may also be reflected in the executive's positioning on the risk-return continuum through the forms of executive compensation, which would be received through the exercise of the role and the resultant performance. This raises the issue of the executive acting in a management role or that of a shareholder. The executive is able to act so as to maximise their personal gain by compensation arbitrage action in the forms of compensation they may choose to receive, and this may give rise to a conflict in such roles. They do identify that the principal-agent framework has become a widely used paradigm in accounting and finance for analysing issues in performance evaluation, management control and the control of incentive systems.

The compensation of executives (in particular that of chief executives) and the link to the stock market has been well established. The focus of the Jensen and Murphy[127] 1990 article was to focus on the effect of company performance on the compensation of executives over time. They found that promotion within the board hierarchy generated increased returns to that executive. The main conclusion of this work is that shareholder's return (as a proxy for company performance) is strongly positively correlated with executive compensation. The study finds strong regression coefficients that verify these relationships. In addition, the relationship of compensation-performance based on salary and bonuses omit important performance sensitive components of compensation. Raw stock returns were found to be the best predictor of changes in aggregate measures of performance, but bonuses and deferred compensations are more strongly affected by industry-relative rates of return.

Baker, Jensen and Murphy[125] recognised that while stock market returns may be the 'correct' measure of performance from the shareholder stakeholder perspective, they may not be the best indicator of managerial action and behaviour. They cite Lippert and Moore[130] in reporting that Jensen and Murphy's study found the linkages between compensation and equity values of US firms to be typically weak, expressed as follows:

> "Existing models of contracting do not offer any predictions of compensation alignment, but current theory helps identify firm, industry attributes and CEO characteristics that might be associated with CEO-shareholder alignment".
>
> Lippert and Moore (1994)

The role of stock and options can constitute a large portion of the executive's wealth. It may provide income many times greater than the salary, performance-related or other compensation. Benston's[131] work supports the view that, in the absence of a direct link between performance and compensation, the executive's personal wealth is tied to his firm's stock market performance. This would focus his actions to enhance this value. The establishment of an empirical relationship between performance measures and this form of compensation would strengthen our understanding. A significant issue is the motive underpinning the granting of equity and options to executives. This relates to the question of whether the granting of such financial instruments is for the purpose of incentive rewards for executive performance or to align executives' interests with equity shareholders. The argument here suggests that these motives are distinctly different. They reflect the multiple roles that the executive may adopt as both executive manager and shareholder. The motive of the compensation committee in providing option opportunities into the future is not entirely clear. It may make a material difference to the executive as to how and by what mechanism they are compensated or awarded options. Alternatively it may be seen as opportunities for executives to take equity holding in the company and align their interests with their shareholding colleagues.

2.5.5 Specialist Mixed Measures

The use of measures from different approaches represents a particular rationale in seeing such measures as capturing a specific dimension of performance. Authors who have used these measures include Barro[132], who used EPS/price, and Sloan[111], who used operating income divided by market value of firm as stock measures for their corporate financial measure. Both Barro and Sloan's work use absolute stock market value as part of a ratio with the other values being financial accounting value measures. The combination of such measures enables a wide range of possible relationships to be explored.

2.5.6 Strategic Value Measures

The adoption of these approaches may reflect a more strategic level focus on executives' compensation for corporate value creation. Amongst the approaches that reflect this orientation are the Stern Stewart's Economic Value Added (EVA® is a registered trade name of the Stern Stewart Consulting Group[133]), Shareholder Value (SV) by Rappaport[134] and Strategic Value Analysis (SVA) by Mills[135]. Such measures tend not to be widely available in the public domain and are not easily replicated for large datasets. An exception to this was the publication in the Sunday Times (UK) (10/1/96) of EVA corporate value gainers over 1994-5, but this is not a regular event. Other approaches, e.g. SV and SVA are often of an intra-company nature, not in the public domain and remain not conducive to wide scale replication. They provide more individual specialist financial measures that are based on corporate management assumptions and therefore are not available to wide public scrutiny, disclosure or publication. It is only from anecdotal evidence from consulting experience that research may confirm that many companies are using such strategic value approaches in connection with executive compensation.

Corporate value building is an important objective, which is often supported by a reward system that encourages growth. Jensen[21] points out that some industries may be better placed to achieve this and he sees free cash flow as a key signal in the value building process. Jensen and Ruback[119] advanced the use of 'free cash flow' as a management decision rule/argument to support and favour managerial objectives. Free cash flow is a key concept in the Shareholder Value approach of Rappaport[134], developed into Strategic Value Analysis in the UK by Mills[135]

Other authors, such as Wenner and LeBer[136] and Day and Fahey[137], saw executives as potential value creators and increasing shareholders' value. This motive often provides an executive with motivation to undertake and promote value creating financial strategies by rewarding the executive concerned with incentive compensation. This serves to align the interest of the executives, the shareholders and stakeholders in such value reward in the form of equity. There may be specific goals that individual executives may be given and, on achievement of these objective goals, the rewards are paid in this equity form. This incentive is commonly referred to, and received as, performance related compensation.

2.6. Issues in Performance Measures Selection

2.6.1 The Compensation-Performance Relationship

Holstrom[138] argued that an important characteristic of a performance measure is whether it provides an information signal to a manager's actions. The suggestion is that designing compensation packages linked to a specified performance measure would have a high signal to noise ratio, in that it would capture the interest of management effort and to the exclusion of any random factors. Unfortunately, the stock market is not without some element of randomness. Sloan[111] formed the view that executives prefer compensation to be based on accounting measures, rather than those of the stock market, because they shield compensation from of the volatility of stock-measured-based compensation. This shows the behaviour of executives is often very risk-averse, reflected in their risk positioning. Marsh[139] looked at the impact on the time preference in the pursuit of short-termism of performance that can relate to compensation. The outcome was that no clear evidence of such short-termism was detected. Rabin[6] develops the idea of a compensation strategy adopted by executives by specifying their contracts to reflect their perception in meeting performance-related compensation performance targets.

Holmstrom[138] suggests that contracting theory cannot work if it is based on factors beyond the control of the executive, therefore executive compensation should be based on performance relative to the performance of all companies or those in the same industry. This would make it desirable to base compensation on relative performance rather than absolute performance. This point is a key point in the conference paper by Ewers[121] that considers these issues in the water industry; not dissimilar to the approach adopted by Veliyath[140] in his examination of compensation-performance issues in a single industry.

Another key issue is the specification of performance targets in the executive compensation contract. This relates to the nature of the compensation available in an executive's total income, e.g. salary, bonus, PRP, equity, options, deferred warrants, etc. From the earlier attempts to determine executive compensation relative to a single measure, be it sales or profit, there now is a plethora of available performance criteria that compensation committees may use to set executive objectives indicative of the type of performance that is desired. However, the research evidence does little to assist the development of a model by which to understand current or future practice.

To conclude the section on performance measures, it can be observed that a wide range has been used in the executive compensation studies over time. The original debate focused on the explanatory power of compensation and capital, started by Taussig and Barker in 1925 examining a selected manager's dataset in the US, to Veliyath's 1999 most recent study of the pharmaceutical industry. The research has seen different compensation and performance variables incorporated into a number of models over different time periods for a range of executive groups. The dilemma, however, is that this stock of research has given a wealth of conflicting evidence on which to base some clear themes that have emerged from the research. The review of the literature by performance measures reflects the wide range of variables used in the compensation-performance relationship research, a rich picture, but with a perplexing array of different shades of clarity.

2.6.2 Opinions on the State of Compensation Research

Finkelstein and Hambrick[51] identified that the study of executive compensation has largely been the province of economists. Much of this work has been undertaken by assessing the company's financial performance attributes, relative to executive compensation, from an agency viewpoint. They observe that there is no model of executive reward or CEO compensation. They sought to develop a model that examines the properties, determinants' motivation and consequences of compensation schemes. They expressed the view that interest in this area is :

> "Surprisingly absent ... has been the consideration of executive motivation and reward".
>
> Finkelstein and Hambrick (1988)

A more extreme view expressed by Loomis[141] referred to the current position as 'madness'.

Despite this work, no clear framework or models have been established that consolidates and integrates this work. Finkelstein and Hambrick[51] sought to form a view on the state of the art/ science in this area and they suggested that a research agenda for future work may be formulated by asking the following questions:

1. How motivational is compensation to executives?

2. Do companies that compensate more attract better executives?
3. Is there more executive turnover in lower paid companies?
4. Does the same compensation-performance relationship hold good over an executive's career?

Finkelstein and Hambrick[51] observe that much empirical work needs to be undertaken to examine the relationship between CEO compensation and how it affects corporate performance. At present how such factors impact on managerial behaviour in compensation motivated performance, as measured by corporate financial performance indicators, is in no way clear.

Rosen[118], in reviewing the issue of executive contracts and the market for executives, noted that:

> "It has taken many years ... for the economics profession to put these matters into perspective".
>
> Rosen (1990)

Finkelstein and Hambrick[51] observed that much of the literature has been confined to assessing the relative weights of company size and performance in the determination of chief executive compensation. This literature provides evidence of cross-references of findings of these relationships. Finkelstein and Hambrick[51] identified that this has established important trends but has not yielded much explanation in how compensation relates to other managerial action and behaviour. They concluded that there was much work to be undertaken in understanding the relationship between executive compensation and corporate financial performance measures.

Rosen[118] concluded that:

> "Of the many theoretical issues on the agenda a few stand out".
>
> Rosen (1990)

She identifies three main future research agenda items that warranted attention:

1. Alternative mechanisms for affecting managerial incentives.
2. A broader view, rather than shareholders being the only principals in the model.

3. The issue of corporate succession.

Baker, Jensen and Murphy[125] bring to our attention the idea that economists have grown more interested in some areas of study, e.g. the theory of the company, whilst in other areas there has been little interest, e.g. in compensation systems. Economic models of compensation generally assume that higher performance requires greater effort. In order to provide the incentives there is a need to confirm or establish the existence of the reward-compensation relationship to induce desirable behaviour. They also indicate some areas where this is not the case. Baker, Jensen and Murphy[125] observed that economists have grown 'increasingly interested' in the theory of the firm, with economic models of compensation generally assuming that higher performance requires greater reward. Baker, Jensen and Murphy stated that our economic understanding of the internal incentive structure is far from complete. They reported that the overwhelming use of incentive systems were based on a variety of conditions and were largely dependent on resultant performance. They identified that the present array of incentives of equity rewards, superior/subordinate related compensation performance, tenure, up/down promotion survey, seniority compensation systems, profit sharing, holiday bonus, etc. were systematically linked to performance. They pointed out that:

> "in the corporate environment these are at best crudely related and largely misunderstood".
>
> Baker, Jensen and Murphy (1990)

They further observed that economists recognise that it is their challenge to provide viable explanations of these practices in an economic model. They stated their objectives as being able to motivate future theoretical and empirical research that will change the way in which economists, behaviourists and practitioners think about incentives, the management of human resources and compensation.

Murphy[107] identified that there are theories of managerial compensation which are based on diverse assumptions regarding the state and nature of capital markets and managerial characteristics. He concludes that it is not surprising that competing models offer different sets of theoretical and empirical implications. He observed that, common to all theories, compensation must be linked to observed productivity. He noted that financial periodicals continually report the apparent lack of correlation between managerial earnings and various measurements of corporate performance. He cited the view of Augustine[142]:

> "There are many highly successful organisations in the United States. There are also many highly paid executives. The policy is not to intermingle the two".
>
> Augustine (1980)

Veliyath[140] undertakes a very focused study on the US pharmaceuticals industry, which avoids the cross sectional studies issue. This single sector analysis addresses issues represented within an industry. This is in contrast to studies that take an economy wide or largest size of company type study. The key contribution here is the use of the differences within and between the data subjects before a traditional regression analysis of the dataset.

Many researchers have sought to advance our understanding of the executive compensation setting process and this review of selected works, by compensation and then performance variables, is presented as representative of the work undertaken in the area. The selected literature considered above provides a heritage of approaches to the study of executive compensation and performance measures, providing a basic framework for our understanding of the US experience.

2.7. Literature Review: Compensation and Performance - The UK Experience

The majority of academic literature on executive compensation studies are based on datasets drawn from the US environment. The commencement of interest in this area in the UK can be found in Cosh[83]. It signals the start of real academic interest in the relationship between performance measures and executive compensation policies and practice in the UK. After Cosh's study, little work with the notable exception of Meeks and Whittington[143], took place until the 1990's when a number of authors generated renewed interest. This work was undertaken by Main[144], Gregg, Machin and Szymanski[145] and Conyon and Gregg[146]. In more recent times the work of McKnight[9] Vefeas and Theodorou[76], Conyon[147] and Conyon and Murphy[148] has further developed our understanding of the UK experience.

The main purpose of Cosh's[83] work was the examination of the structure of remuneration of chief executives (CEOs) in the United Kingdom. As an outcome of the 1967

Companies Act, UK companies were required to disclose information about directors' remuneration and shareholdings. The disclosure of the highest paid director compensation was assumed to be that of the CEO. The dataset used was based on 1,600 UK registered companies from 1969-1971. The size of the sample was more extensive than had been undertaken previously and allowed the comparison of large quoted and "small" unquoted companies. The dataset represented some two thirds of the UK companies net assets (in 1971). The Cosh study uses the compensation measure of salary after tax, which includes the estimated value of benefits in kind. The performance measures used were rate of return on assets % [ROA] (profitability) and net assets (size). The use of assets reflected the employment of an accounting measure of size and scale. The use of return on net assets reflected the accounting ratio of profitability. This is not a simple model but a bivariate model with two variables, i.e. a simple multivariate model with executive compensation seeking to be determined by two performance variables. This represented a new methodological approach to study executive compensation policy and practice in the UK.

The study considered a number of theoretical perspectives including the neo-classical Simon's and managerial theories of executive compensation as approaches to examining the area. Cosh used a multivariate regression equation to incorporate the variable of chief executive compensation R, the rate of return on net assets (π), net assets (A) and an error term ($\in$), as identified below:

$$\log R = x_o + x_1 \pi + x_2 \log A + \in$$

This form of the model was favoured because it gave lower errors when fitted to the model. The model would also be less likely to suffer from heteroscedasticity. The use of the logarithms in the equation for CEO compensation and net assets descales the variables and provides the ability to explore non-linear relations. The regression coefficients (R-squared) for quoted companies, was 0.5118 and unquoted companies, was 0.1944, indicating a stronger relationship in the quoted company subset.

Cosh considered the cross sectional issues by dividing the data into some 17 industrial/commercial groupings. In cross sectional terms he found theories of executive remuneration can be adapted to explain differences in the relationship between the model components across the 17 industry groups. Cosh suggested that theories of executive compensation could be adjusted to industry relative environments. These differences may be explained by technological and sociological factors. Although he found significant structural differences amongst the different industrial groups, the degree of explanation was found to be quite high in all industrial groups. For example, some 54% of the variance of the natural logarithm of the chief executive remuneration, can be explained by size and of profitability. The regression coefficients are all significant at the 1% level.

The study showed there were significant differences in chief executive compensation with size and profitability as between quoted and non-quoted companies. This may be partially accounted for by the presence of non UK companies. This raises the issue of international comparison of compensation. The representation of non UK companies on the UK stock exchange reflects the London Stock Exchange's status as a major 'world' stock exchange. In addition, many UK companies operate as world entities, rather than wholly or partially in the UK. The work of Beatty, McCune, and Beatty[149] identified that Japanese executives earned about one-third less than their US counterparts, who were paid more than UK equivalent post-holders. The international dimension makes visible an interesting issue of executive compensation in national boundaries that arise in organisational change through merger.

The results of the Cosh study can be used to predict the compensation of a CEO at given benchmarks in five cases:

- profitability 15% and net assets of £1 million
- profitability 15% and net assets of £10 million
- profitability 15% and net assets of £100 million
- profitability 0% and net assets £10 million
- profitability 30% and net assets £10 million.

In examining the CEO compensation increases, they can be seen to be related to company size and profitability. From this it was clear that size is a clear determinant of compensation. Both dataset groups were divided into 5 groups and similar analysis conducted on each. The simple regression coefficient between the variables of size and profitability was explained by an average of 39% of the variance of the natural logarithm of CEO compensation. Size alone accounts for 26% with profitability being more important to unquoted than quoted companies.

Although the main outcome of the Cosh study found that company size was a major determinant of executive compensation, differences were also found between quoted and non-quoted companies in relation to inter-industry differences. The Cosh work incorporated a number of elements that reflected other studies in the area. The executive compensation variables, of after tax salary and benefits in kind, do not overtly include any compensation for incentive bonus, performance related pay (PRP), equity or options. Cosh formed the view that the inclusion of stock options and pensions would not have altered the conclusions made. He uses the work of Lewellen[150] to support this view. In the Lewellen study no difference in outcomes were observed whether equity and options were included or excluded from the analysis.

After Cosh's work in 1975, the 1980s saw no significant study undertaken in the area. However, there has been a revival in interest in the area in the 1990s. Much discussion took place during the '1980s and 1990s' regarding whether compensation paid was justified in terms of the economic performance of the companies concerned. Gregg, Machin and Szymanski's[145] study surveyed 500 Stock Exchange companies over the period of 1983-91 from the Datastream financial database. They used a compensation measure that included the change in directors' compensation and the performance measure of shareholder return, sales and sales growth. Logarithm transformations were made to a number of the variables. This empirical model was specified in the form:

$$\Delta 1n\, D_{it} = \psi\,(\Delta\, \mathrm{Perf}_{i,t-1},\ 1n\mathrm{SIZE}_{i,t-1},\ \Delta 1n\mathrm{SIZE}_{i,t-1},\ \mathrm{TIME}_t)$$

$\Delta 1n\, D_{it}$ represented the logarithm of directors compensation for company in year t, $\Delta\, \mathrm{Perf}_{i,t-1}$ was the previous period performance (in shareholder returns). In $1n\mathrm{SIZE}_{i,t-1}$ was represented by sales, $\Delta 1n\mathrm{SIZE}_{i,t-1}$ was a size growth change variable measured by the log of sales growth. TIME was a set of time dummies included to control for common macroeconomic shifts.

The general pattern of the results over the period of the study, after controlling for size, growth and macroeconomics factors, was that the growth in executive directors' compensation was insignificant compared with the stock market performance measure. This may be explained by other measures, most notably accounting measures, but these were not the performance measures selected. This study clearly indicated that no significant relationship was present between executive compensation and the stock market performance of their companies.

The study also found that salary and bonus of top executives rose on average 20% during this period. There were strong indictors that compensation was strongly correlated with corporate growth. A 50% increase in sales would lead to a 10% increase in compensation. But the relationship between executive compensation and stock market performance was very weak during this period. A positive relationship that did exist in the 1980s did not continue after 1988. The failure to identify any relationship in the later period of 1989-91 is particularly marked.

From these findings, Gregg, Machin and Szymanski[145] remark that this should be a concern for shareholder and public policy makers of executive compensation contract strategy, in terms of addressing the issue of the alignment of mutual interests through reward strategies. They conclude with the thought that an independent method of settling the compensation awards of executives would be important. This may be preferable to the current 'partisan' approach by compensation committees, which may adopt continuance of the going rate approach, which may continue with inefficient executive compensation policies. Such policies reflect a concern about the irrationality and inequality of executive compensation policy in the context of the performance of other worker and professional groups.

Conyon and Gregg[146] looked at whether the increases in executive compensation were justified in terms of increased corporate financial performance between 1985 and 1990. Their dataset was 260 companies' chief executives. Using a principal-agent perspective, they adopted an econometric approach to examine the executive compensation variable of CEO data and a number of corporate financial performance measures. These financial performance variables included the change in profits, the logarithm of sales, the log of industry sales and industry shareholder returns and included time dummies. The model was formulated as follows:

$$\text{CEO compensation} = g\,(\text{corporate performance}_{it}, \text{SIGNALS}_{it}, \Delta\ \text{time}_{it}) + e_{it}$$

Cross sectional issues were addressed by considering groups according to their standard industrial codes (SIC). The results would seem to indicate that the CEOs' compensation averaged over 10% p.a. over the period. Over this period, in real terms, executive compensation rose by 77%. This was in contrast to average real earnings of employees of 2.6% p.a. and 17% over the period. These results reflect other UK work in finding sales to be a powerful explanatory variable with shareholder return being significantly less so. The relationship is weak and in the post 1987 period there is no evidence of the relationship continuing. This reflected and confirmed other UK and US evidence of such phenomena. In the study they explored the impact to compensation policy of other 'shocks' of acquisition, debt, subsidiary de-recognition and acquisition events. This empirical analysis indicates that all types of signal 'shocks' are important in shaping compensation policy.

The study of Gregg, Machin and Szymanski[145] looked at the period between 1983 and 1991. In this study, of around 300 large quoted companies, they use a reduced form approach to estimate simple regressions in the following form:

$$\Delta \quad \log(\text{Compensation}_{it}) = \alpha + \beta \quad \text{Performance}_{it} + u_{it}$$

The authors were unable to detect any substantial positive relationship between directors' compensation and their company's performance. What little relationship was present was significantly weaker in this later period, i.e. 1989-1991. Such findings are of significance to those stakeholders who are interested in the executive compensation policy and practice. The implication of this conclusion does raise the issue of the efficacy of a rational, logical and sound base for the determination of compensation for executives in the pursuit of their duties. It also provides an unsound base on which to assume that incentive reward will motivate management to seek and create corporate value. Some further work does need to consider the appropriate base for executive compensation.

The above work does raise some interesting issues for the determination of executive compensation and the appropriate base that can be used as a rationale or framework to determine the nature and level of compensation package for executive boards and their members. They concluded by suggesting that:

"At the very least the results reported above strongly suggest that the mechanisms by which top directors receive their compensation awards need to be reappraised".

Gregg, Machin and Szymanski (1993)

Conyon, Gregg and Machin[151] considered the academic literature on executive compensation in the UK. They summarised a range of issues and information that relates to the debate on executive compensation determination and performance measures. The main outcome of this work was that there was a very weak relationship between executive compensation and company performance. The relationship between base salary plus bonus and stock market performance is very small in the UK, which mirrors the US experience. This suggests that the incentive motive is not strong. It can only signal concern in identifying the nature of the relationship between these variables. Overall evidence indicates that corporate performance explains little of the very large compensation growth over this period.

McKnight [9] examined the UK environment in the 1991-1993 period using salary, bonus and longer-term incentive remuneration. Here he found a lagged effect in the regression relationship of many of the performance variables. A particular feature in his work is the valuation of options, a contentious area of the research as indicated earlier in this work. He found that the valuation of options using Black-Scholes can substantially over value their current worth. In addition, he found size to be a main determinant of salary, with bonus being subject to a variety of influences. Vafeas and Theodorou[76] provide a more up-to-date exploration of familiar data variables and relationship in a more recent time period, confirming existing relationships.

In more recent times 1998, Conyon[152] examined the relationship between directors pay (CEO) and turnover (sales revenue) that director pay was more a function of financial size than of performance. Conyon together with Peck and Sadler[153] used a 'tournament' framework to examine salary, bonus and long-term incentive of the top 100 companies in 1997-8. They used shareholder return and return on assets to plot the relationship. They arrived at the 'ambiguous finding' that there was a gap between different types of directors in their companies. Their general conclusions confirm the current prevailing nature of remuneration-performance relationships.

To locate the UK experience in an international context, Conyon and Murphy[148] undertook a comparison of UK and US compensation/remuneration experience. The key point being that US executives are paid substantially more than their UK counterparts, with incentives being a larger part of their total pay and ownership being higher in the US than the UK. The pay, a collective term for compensation/remuneration, was still very dependent on the financial size, but incentive pay being more dependent on performance, with the relationship to shareholder return being more evident in the US than in the UK. Also the ownership of equity by CEOs is more widespread due to the granting of stock/share options and in higher in proportion in the US than in the UK. The study provides some linkages and comparison in the UK/US pay experience, but clear differences in pay and ownership structure are very apparent. These have an impact on the different range and diversity of pay practice between the two countries. The Department of Trade and Industry March 2001 announcement indicated that it would legislate to 'strengthen' the link between boardroom pay and performance. Conyon[154] in drawing together the content and intent of these proposals highlighted the importance of these issues to UK corporate management and the economy of the increasing move to a more US style of pay practice and disclosure. Director pay, as an issue of corporate governance, figures at the very heart of industrial and economic policy, a matter of interest to government, companies, the media, employees and a range of stakeholders.

The comparison of the UK/US pay data can be undertaken by its disclosure in published financial statements. The disclosure of this data and its format, was a crucial perquisite for such studies. But international comparison to other companies in countries, who do not disclose this information, is mere speculation, other than to benchmark their experience to an UK or US environment. This opportunity for study was started by the presentation of a conference paper (December 2001) by Ewers[155] and provided support of the work of Cheffins[156], who indicated the need to use 'more robust' data sources than those provided by 'commercial' organisations in the 'globalisation' of executive pay.

2.8. Literature Review: Theoretical Approaches in Remuneration Studies and Corporate Governance

Corporate governance is concerned with the remuneration policy and practice of boards of directors. It has been the subject of much interest from a number of subject areas. Turnbull[157] saw the corporate governance area as the intersection of a number of disciplines. Such disciplines include microeconomics, organisational theory, information theory law, accounting, finance, management, psychology, sociology and politics. Turnbull [157] identified that researchers from these disciplines view the area in different ways, using a variety of theories, frameworks and models to view business activity in its broadest terms. He described corporate governance as:

> "all the influences affecting the institutional processes including those for appointing the controllers and/or regulators involved in the production of goods and services".
>
> Turnbull (1997)

Hung[52], in examining the roles of boards, identified six different schools of thought in the area of corporate governance. Using a typological approach, he classified the theories and their inter-relationships. These schools and their theories did not have clear boundaries but there are clear areas of common ground sharing a notable number of similar assumptions. The six schools are identified as follows:

1. Resource dependency theory
2. Stakeholder theory
3. Agency theory
4. Stewardship theory
5. Institutional theory
6. Management hegemony

A different perspective was taken by Hawley and Williams[158] who undertook a literature review of corporate governance and identified four models of corporate control:

1. The simple finance model
2. The stewardship model

3. The stakeholder model
4. The political model

The simple finance model of corporate governance is concerned with rules and incentives that implicitly or explicitly align the behaviour of managers (agents) and their owners (principals). This could be seen as a different representation of the agency model problem where agents pursue their own self-interests against those of the principal, as outlined by Jensen and Meckling[50]. The stewardship model sees managers as good stewards of the corporation, who diligently work to attain high levels of corporate profit and shareholder returns. They also identified the qualitative features of social and professional image benefits of being managers. Donaldson and Davis[159] saw managers being motivated by these achievements and responsibility needs.

Turnbull[68] saw the finance model as a sub-set of the political model. This is where stakeholder theory focuses on the need to address the wider requirements of stakeholders than simply serving the directors' fiduciary duty to shareholders. It is the board, with its collective responsibility, that seeks to meet the range of stakeholders' demands. Boards are collectives of directors and all directors share these stakeholder pressures. In the case of remuneration policy, the board and its remuneration sub-committee are accountable to stakeholder challenges. It is this feature that makes stakeholder theory an appropriate approach from which to view these board-stakeholder relationships since it is concerned with how groups relate to each other. Muth and Donaldson[48] saw stakeholder theory as an alternative to agency theory because its focus is on group relationships. Although agency theory can be applied to groups as well as individuals, it is more common, and perhaps appropriate in the context of remuneration policy, to consider agency theory at an individual director level but not without acknowledging its value for groups.

Directors as individuals have contracts with the company and here agency theory provides a more appropriate and representative framework within which to consider this contractual relationship. Agency theory seeks to consider the issues that confront the agent (director) and the principal (remuneration committee on behalf of the shareholders).

Historically, corporate governance has been seen as a question of trusting individuals to act in the 'best interests' of their fellows. In UK companies these individuals are directors of the board. Tricker[160] puts this point very succinctly:

> "classical corporate governance, derived from the mid-eighteenth century corporation is rooted in the philosophy that men could be trusted; that directors can be relied on to act in the best interests of the company .... Agency theory on the other hand takes a less optimistic view of man, arguing essentially that a man is self-interested rather than altruistic"
>
> Tricker (1994)

Tricker saw agency theory as an appropriate manner to view the actions of the directors in their management role. Bloom and Milkovic[161] considered that agency theory has emerged as the principal theory guiding the research on the remuneration-performance relationship, and is expressed as follows:

> "Agency theory is an appropriate theoretical framework that reflects the contracting relationship of executives in their corporate environment".
>
> Bloom and Milkovic (1998)

Agency theory is associated with the managerial view of the firm, or theory of the firm. This managerial view may be expressed as follows:

> "The modern theory of the firm suggests that competition and economic selection ensures an efficient utilization of resources"[37].
>
> Bloom and Milkovic (1998)

This is concerned with the problems arising from the separation of ownership and control in large public corporations, first brought to our attention by Berle and Means[49] and alluded to earlier by Adam Smith[162] and Marshall[163]. This managerial view suggested that shareholders have become divorced from management of the firm. Typically, they have delegated this role to contracted directors and senior managers to pursue their shareholder interests and goals. These goals may not be the same for the directors and the managers of the company because there may be no natural alignment of mutual interests. Crystal[164] expressed the view that the board was ineffective in ensuring directors pursue shareholder goals, rather than there own, because of the influence of the CEO.

Agency theory provides a theoretical framework that reflects the nature of the relationship between a principal (shareholder) and agent (director). Jensen and Meckling[50] define an agency relationship as:

> "a contract under which one or more individuals (the principal) engages another individual (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent".
>
> Jensen and Meckling (1974)

Agency theory maintains that managers will act in an opportunistic way to increase their income and wealth at the expense of the shareholders. This loss of income is due to shareholders being unable to exert direct control. This can be addressed by the design of directors' contracts and specifying performance criteria on which the level and terms of salary, bonus, incentive and ownership income will be determined.

In classic definitions of agency theory an optimal compensation is contingent on the need to balance an agent's effort and risk aversion (Eisenhardt[165], Fama and Jensen[37], Jensen and Meckling[50]). The theory is based on the assumption that people prefer to avoid work and risk. Thus a principal (shareholder) that frames policies (remuneration) to promote activities that induce agents (directors) to achieve desired outcomes (performance standards), which direct and confirm the expectations of stakeholders (shareholders). An example of this agency theory approach was undertaken by Garen[166], who specified a basic principal agent model of CEO executive compensation. Garen pointed out that the theoretical development of principal-agent has continued. However, the empirical study of the area has not kept pace. Remuneration data is able to provide such an empirical basis on which to model, represent and form a view of the nature of these relationships. In some sense this reflects the spirit of this thesis. It uses remuneration data to represent and model the outcome of the contractual relationship between director and committee by the amount of remuneration received. This provides a quantitative expression of the outcome of these principal-agent relations.

Access to directors' contracts is limited to a few chosen company staff and is not public data. This non-availability of remuneration data has been a significant factor in limiting the extent of empirical development of director remuneration studies. It is only since the Greenbury Report[7] has such data/information been publicly available. This has influenced the nature, range and direction of research in the field of director remuneration. This is a key point noted by Main[10].

Pavlov, Scott and Tiesse[167], in their comprehensive review of US literature, identified a number of potential theoretical approaches to studying compensation performance relationships. These include:

1. Tournament
2. Agency Theory
3. Human Capital
4. Managerial
5. Relative performance
6. Social theories

In reviewing the literature on directors' remuneration and its links to performance the overwhelming predominant theoretical approach represented in the literature was agency theory.

2.9. Literature Review of the Research Approaches Employed in Compensation-Performance Studies

The research philosophy adopted in the area of remuneration studies to investigate the level of association between a dependent compensation variable against independent performance variables is the empirical, positivist approach. It uses econometric methods in the form of regression/ correlation models. Much of the attention in academic studies on executive compensation has been concerned with the nature and level of the relationship with performance measures. The selection of the measures on which executive compensation is awarded has varied depending on researcher's disposition, choice and preference. The executive derives income from a number of potential sources in the executive's total income. In the other chapters this is referred to as the Director's Remuneration Income Portfolio (DRIP) to reflect more accurately the scope of this study's research. These compensation components have been used as data variables in different studies. The ranges of performance measures used are not represented in one single study, only in aggregate when the literature (the collection of studies) is considered as a whole. This reflects the nature of research in the area as characterised by a range of dataset populations, differing time periods, different compensation components and performance measures represented in the range of studies. Two other issues need some consideration, before closing this review of literature these being the research method and form of data/model relationships.

The studies of directors' remuneration that have examined individual director's remuneration have typically focused on CEOs and the mean average of a data population. Some studies have used other forms of measure, e.g. mode and medium providing a wider view and overcoming the influence of outlier cases. It should be observed that many studies have excluded other important measures of the dataset and the distribution of values, such as skewness, kurtosis and the properties of the normal distribution. This research, in focusing on the mean average, often neglects to capture the richness of the composition and distribution of the data subjects being examined. The variables may be viewed in absolute terms (year on year), in relative terms (change in different year terms) or a selection of either, which reflects the objective of the research design. The different researchers have adopted their own selection of variables in their models to reflect the nature of their research. Typically, a linear relationship is assumed but other relationships particularly the logarithmic have provided some explanatory power.

The numerous studies concerned with remuneration and performance relationship have normally utilised linear correlation and regression models. Typically, this has involved formulating a model with a limited number of dependent remuneration variables regressed against a limited number of independent performance variables. Most studies have employed a regression model to provide a more extensive model of their relationship between remuneration/performance. The outcome of these formulations is a range of levels of explanatory power when different dependent compensation variables are regressed against independent performance variables. The results of these studies contribute to the complexity and confusion in understanding in the area. This state does provide richness, but not consistency in furthering our understanding in the area, so at present only general trends can be identified to aid compensation policy determination.

2.10 Literature Review: The Data Relationships in Compensation-Performance Models

Many studies have assumed a linear relationship between the variables in regression/ correlation models. Some studies[145], have explored other forms of relationship in seeking to identify a higher level of association. The logarithmic relationship has been utilised in a number of studies that have found a higher level of explanatory power than other models, i.e. the linear model. However, in exploring these relationships, some questions regarding potential sub-sets representing separate populations may need to be examined. Such sub-sets may be considered as a separate group, or an outlier group, rather than a single outlier case, reflecting particular characteristics that these cases represent in their sub-group display. By exploring different types of relationship, and in particular the logarithmic relationship in formulated models, they provide new and a potentially higher levels of explanatory power. However, it does provide some limitation in their application due to the nature of the logarithmic scale.

2.11. Concluding Comments on the Literature Review and the Direction of Future Research

Academic researchers in the area of executive compensation have used a variety of approaches to conceptualise and develop theories to explain a rationale for executive compensation determination. However, there is no clear model that has emerged that clearly explains and consolidates the many works in this area. Rather, a heritage and tradition of approaches is identifiable. Our understanding has been advanced through empirical work of identified authors, particularly since the start of interest in the area by Taussig and Barker in 1925 in the US and Cosh in 1975 in the UK. At present, the area may be summarised as a morass of conflicting evidence. However, despite this dilemma there is some evidence of the explanatory power of some performance measures and to forms of executive compensation.

The research for this thesis continues this tradition, building on the literature reviewed above and moving it forward by developing some new features and approaches to the area. In the following chapter on research methodology the approach adopted to undertake this task is outlined and more fully developed.

Chapter Three: Research Design and Methodology

3.1 Introduction and Overview of the Chapter

In the previous chapter we reviewed and examined the academic literature on corporate governance that relates to director remuneration and its links to performance. In this chapter we will examine the role of methodology in addressing research questions and consider the range of methods available. A number of research approaches are available so a consideration of the underlying philosophies is necessary to set the scene and, ultimately lead to a selection of the most appropriate to undertake this study. The different approaches make assumptions about the environment in which the research is conducted, which helps to contextualise each method, thus helping with the task of selecting the most appropriate methodologies for this study.

When commencing this research some preliminary research enquiries were undertaken that considered the potential utility of different research methods. Again, this practical experience provided the basis on which to assess the potential of different methods to achieve the research objectives.

A rationale for the selection of method is given, supported by an assessment of its appropriateness in addressing the objectives of this research. On establishing the efficacy of the research approach, an outline of its main features, assumptions and theoretical perspectives is presented.

The research objectives are stated in terms of the two research questions outlined in Chapter One, together with the hypotheses which operationalises these questions. A review of the main research methods that have been used in the past to address the two research questions has been undertaken in order to understand how previous research has been developed.

The result of the statistical analysis will provide answers to the research questions posed, and their hypotheses, by utilising the empirical dataset that was formulated for this purpose. Finally, the chapter concludes with how this research develops and makes a contribution to knowledge in the area.

3.2 Introduction to Research Methodology

Hughes[168] considers that a discussion of philosophy is essential before embarking on a research project. The starting point for all research activities should focus on the need to contribute some meaning to the body of accumulated knowledge or on addressing some unanswered question or dilemma. The three research questions identified in Remenyi, Williams, Money and Swartz[169] of why, what and how are considered here. In Chapter One the case for 'why' was advanced. In reviewing the literature the 'what' question is identified and finally the 'how' question is addressed and outlined in Chapter Three. There is a need to provide some rationale and logical explanation of the process of remuneration determination to aid stakeholders in their understanding of the area. The literature review summarises and highlights the corporate governance issues of director remuneration and its linkages to performance. This provides the current 'state of research' in the area, which provides a good starting point for this study.

The literature reveals that director remuneration and its links to performance has been the focus of attention of many different disciplines[167], employing a wide range theories and concepts in adopting different research approaches[167]. The drawing together of these to advance the area is a challenging and rewarding task but, in reality, authors have often adopted methodologies from their own disciplines in progressing the area. Developing a conceptual framework that integrates ideas from the two selected areas of governance and performance provides a means to view the activities of directors. This research, by examining the forms of remuneration received by directors as a metric, reflects the role for which directors are paid. This outcome of remuneration policy is often based on some performance criteria. Measures drawn from the financial environment seem a suitable framework on which performance may be evaluated. These measures would seem to address the need for ethical and public accountability, while addressing the issue of a need for a metric of performance. The need to meet such criteria is well known to those in the accounting, finance and economic disciplines. The purpose of this activity is often to provide a basis for accountability for actions and provide explanations for activities in a commercial and business environment.

Banaga, Ray and Tomkins[170] express this challenge with particular clarity:

"Our objective is to contribute to this debate on 'balance' by developing ideas on both conformance and performance aspects of corporate governance into a view of effective management, which encompasses not only the economic outcomes, but also actions in line with ethical standards and value systems".

Banaga, Ray and Tomkins (1995)

Research is seen by Easterby-Smith, Thrope and Lowe[171] as a way of accelerating the process of understanding management. This process involves describing, coding and counting events and is sometimes at the expense of understanding why things are happening. This is reflected in the predominance in quantitative research methods. In contrast, qualitative methods may focus more on the process, nature and content of such events. All research that is conducted in the business environment has philosophical and political issues that are present and need to be addressed.

In contrast, Pascale[172] suggests:

"that this (management) area has a lack of adequate models to explain many of its fields and areas of study".

Pascale (1990)

In the historical development of management research Whitley[173] points to a wide variety of approaches of varying quality. Management may have been thought of as a mix of an art and an emerging inexact science trying to explain realities of human economic activities. Undertaking research and making contributions to the area of study expands and enlarges our understanding. The words of Wiggenstein[174] seem particularly appropriate here:

"Philosophy is like trying to open a safe with a combination lock; every little adjustment of the dial seems to achieve nothing, only when everything is in place does the door open".

Wiggenstein (1968)

This is an appropriate time to consider the philosophies of the range of potential theoretical approaches and models available to undertake management research.

3.3 Consideration of Potential of Research Methods

There are a considerable number of potential research methods and approaches that the researcher can employ to undertake research in their chosen area. Before a method is selected there needs to be a thorough consideration of the potential of a particular method to deliver a successful outcome. There is intense debate about the validity of the various approaches and the utility of findings.

A number of different philosophical approaches to research need to be considered and explored before the selection of a method is made and it's now that our attention is drawn to this selection. Research approaches may be classified under different taxonomies. The clearest division of research approaches is into theoretical and empirical research. Theoretical thought is defined as:

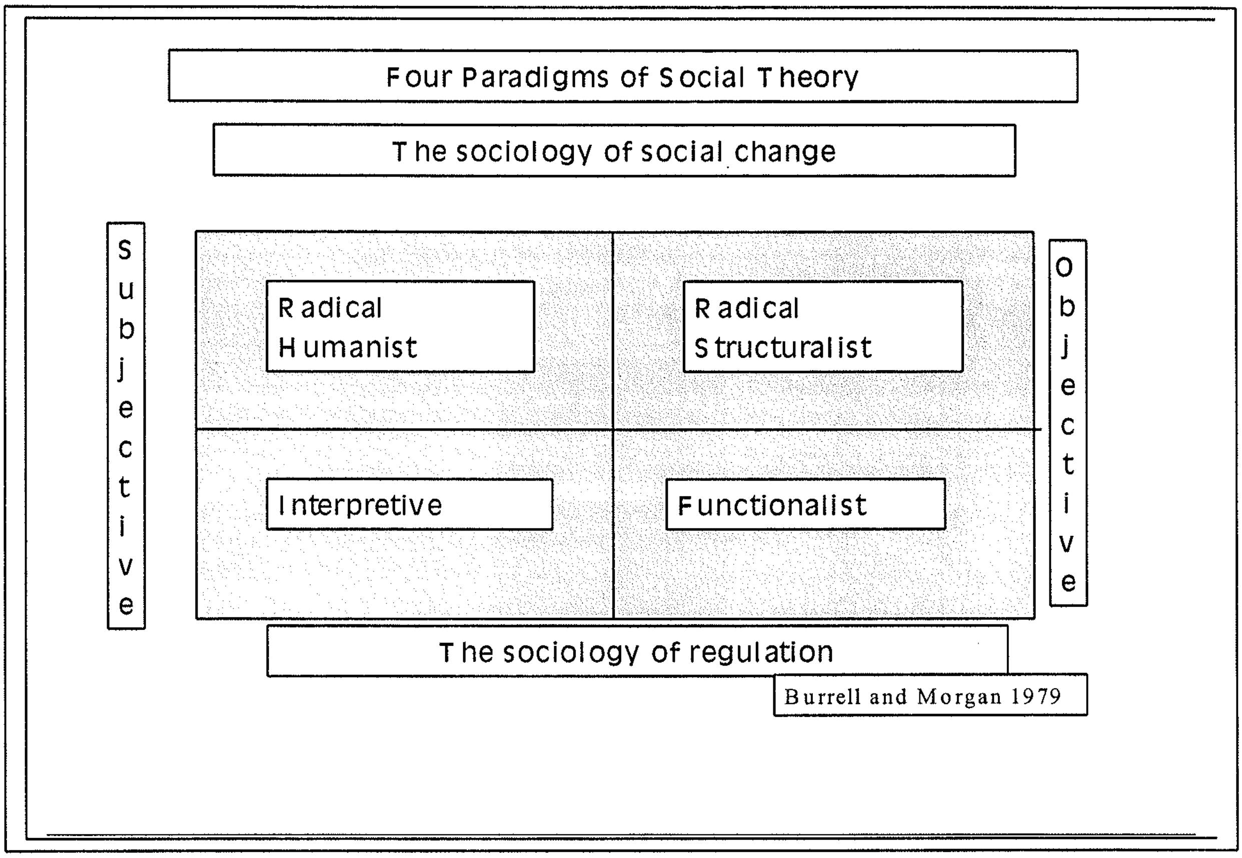
> "Contemplative, of the mind or intellectual faculties"
>
> Shorter Oxford Dictionary (1999) [175]

and

> "Empirical thought is defined as based on, or guided by, the results of observation or experiment only".
>
> Shorter Oxford Dictionary (1999)[175]

To explain past, current and the change in 'real world' phenomena requires a suitable framework. The use of Kuhn's[176] model of social history provides a general framework for explaining changes in social theory. It claims that research is validated not only by objective scientific evidence, but also by the consensus judgements of a community of orientated practitioners. This work has proved popular and a good platform to value research. The shortcoming of this work is that it does not make explicit or define the paradigm concept in the work. This has led to researchers looking for other paradigm definitions about 'the nature of society'. Burrell and Morgan[177] define paradigms in social and organisational terms. Their model is shown below in figure 3.1:

Figure 3.1: Four Paradigms of Social Theory – Burrell and Morgan (1979)



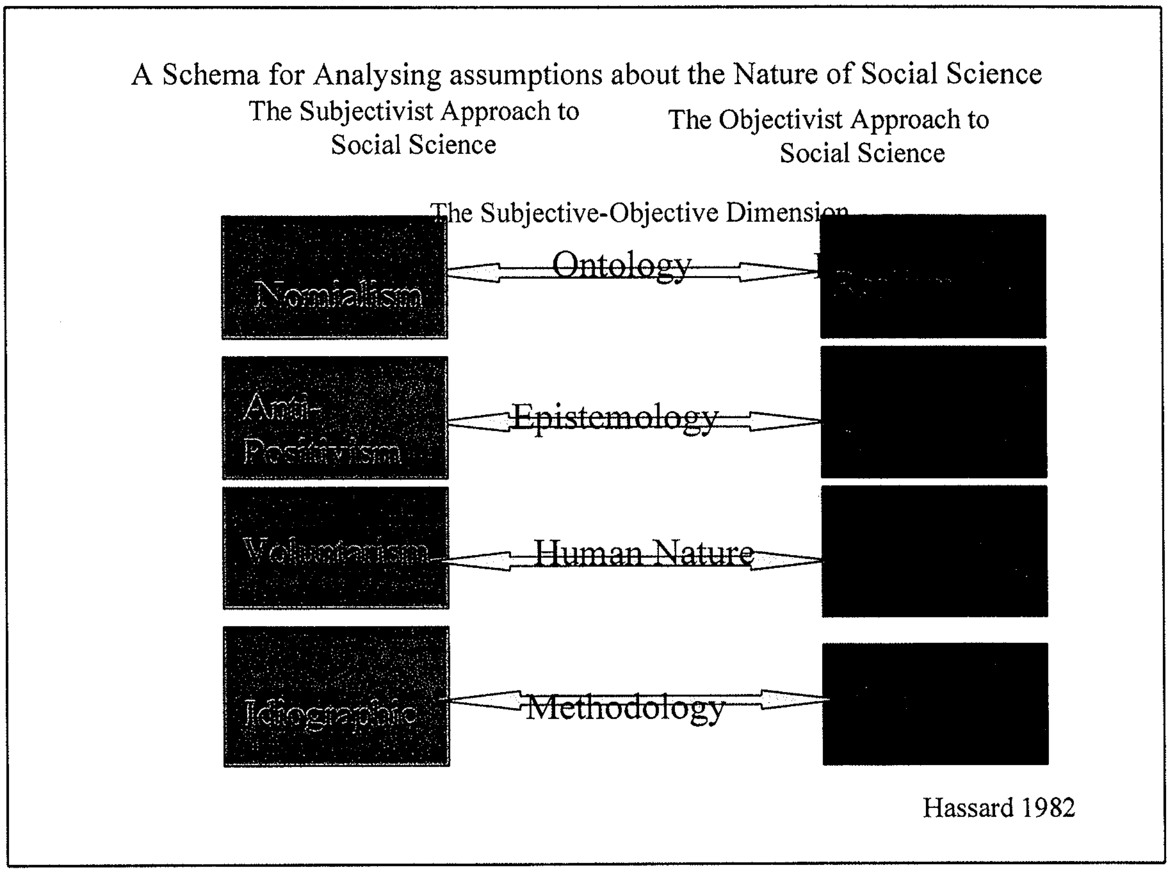
Here, the four-paradigm model provides a vehicle by which the disciplines of economics, philosophy, politics, psychology and sociology's research may be positioned into an organisational and societal context.

Burrell and Morgan[177] further suggest that to analyse the 'nature of science' it is useful to conceptualise these into four sets of assumptions related to ontology, epistemology, human nature and methodology. They suggest:

> "All social scientists, implicitly or explicitly, approach their disciplines via assumptions about the nature of the social world and how it should be researched, assumptions being made about the 'very essence' of the phenomena under study (ontology), the grounds of the knowledge (epistemology), the relationships between human beings (human nature) and the way in which one attempts to investigate and obtain 'knowledge' about the real world (methodology)"
>
> Burrell and Morgan (1979)

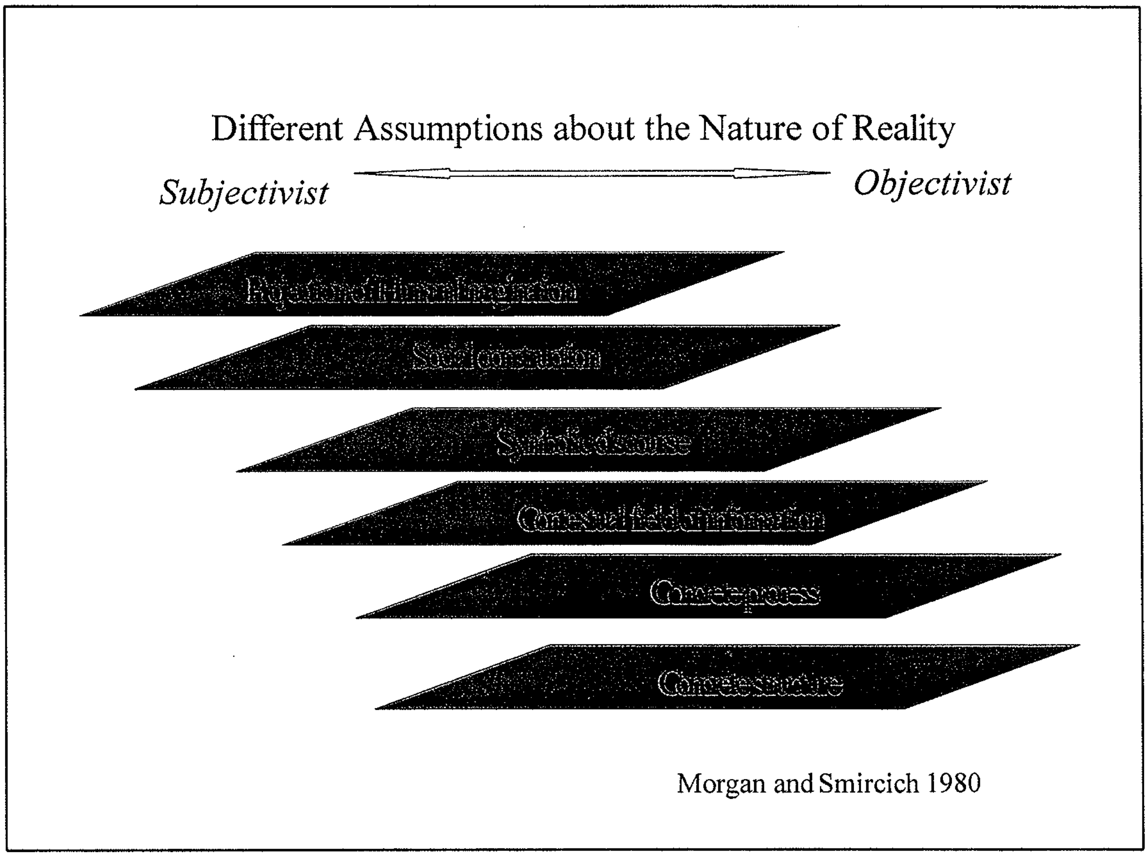
Hassard[178] provides a schema that contrasts these research issues in a subjective–objective dimension.

Figure 3.2: A Schema for Analysing Assumptions about the Nature of Social Science- Hassard (1982)



Research approaches often make assumptions about the nature of reality, which may be characterised by a bi-polar continuum, as in figure 3.3:

Figure 3.3: Different Assumptions about the Nature of Reality:
Morgan and Smircich (1980)



An alternative view of this dimension is provided by the phenomenological paradigm at one pole, and the positivist paradigm at the other extreme. Their key features are characterised in the table below:

Figure 3.4: The Key Features of Positivist and Phenomenological Paradigms - Easterby-Smith, Thorpe and Lowe (1994)

Area	**Positivist Paradigm**	**Phenomenological Paradigm**
Basic Beliefs	The world is external and objective Observer is independent Science is value free	The world is a socially constructed and subjective Observer is part of what is observed Science is driven by human interests
Researcher should	Focus on facts Look for causality and fundamental laws Reduce phenomena to simplest elements Formulate hypotheses and then test them	Focus on meanings Try to understand what is happening Look at the totality of each situation Develop ideas through induction from data
Preferred methods Include	Operationalise concepts so that they can be measured Taking large samples	Using multiple methods to establish different levels of phenomena Small samples investigated in depth or over time

Easterby-Smith, Thorpe and Lowe (1994)

All of the research approaches available to management share a common problem of seeking to provide a problem-solving process that serves as a systematic check on the structure of research activity. The seven-step model of Sharp and Howard[179] is one of a number of systematic 'step' approaches that are featured in the literature, which are common to all levels of research projects. This sequence of activities appears in various forms throughout the literature on research methodology.

The seven steps of the Sharp and Howard[179] model is represented below:

1. Identify Broad Area
2. Select Topic
3. Decide Approach
4. Formulate Plan
5. Collect Information
6. Analyse Data
7. Present Findings

Sharp and Howard (1990)

This is not unlike the circular representation of the research process outlined by McGrath and Runkel[181]:

Figure 3.5: The Research Process - McGrath and Runkel (1972)

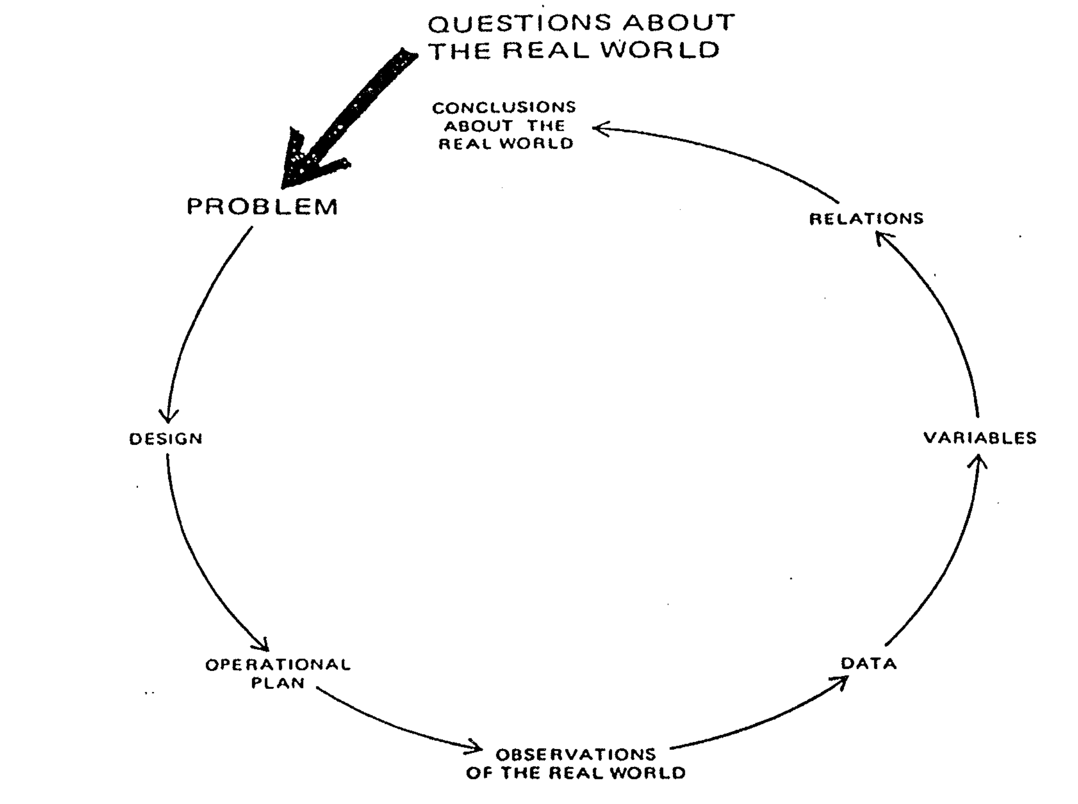


Figure 3.1 The Cycle of Empirical Research
SOURCE: Runkel and McGrath, 1972.

The formation and use of theory is a fundamental to good research. The use of theory and the development of a theoretical model provide a framework with which to understand the activities of a chosen area of study. Gill and Johnson [180] define theory as:

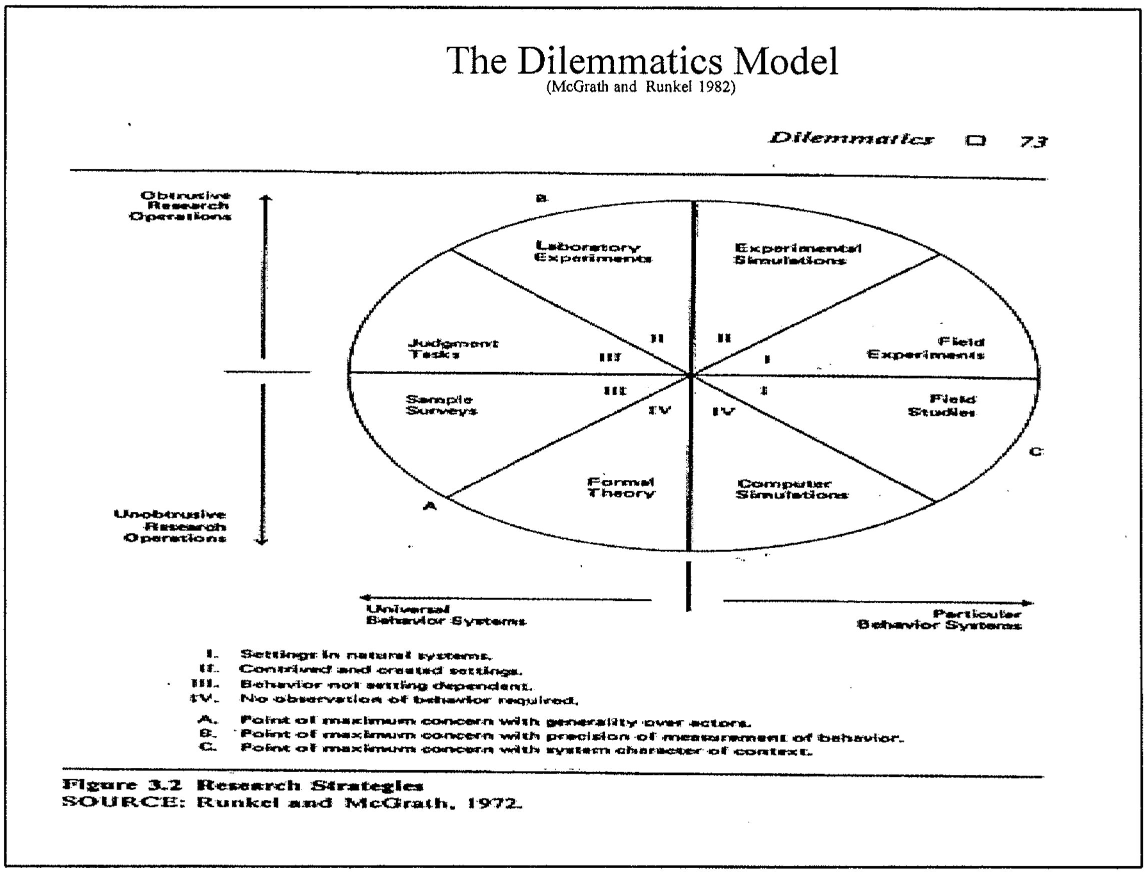
"A formulation regarding the cause and effect relationship between variables, which may or may not be tested".

Gill and Johnson (1991)

The selected research methodology is the means by which data is obtained and formulated into a theoretical framework or model to provide meaning and understanding for the interested community. Gill and Johnson[180] see the choice of research methodology as a compromise between various options and choices, which are determined by availability of resources. The challenge for the researcher is to be clear about the philosophical issues, while adopting an approach that addresses the proposed question using an appropriate methodology.

McGrath and Runkel[181] use a diagrammatical model to describe the nature, study and selection of research choices. Their 'Dilemmatics' model provides a context where a number of different research strategies can be considered and be employed to address research questions. To support these strategies, a number of broad approaches are outlined in the McGrath and Runkel model, shown below:

Figure 3.6: The Dilemmatics Model - McGrath and Runkel (1972)



In the McGrath and Runkel model, the nature of sectors I, II and III reflect the different manner in which the researcher has contact or a relationship with the subject under study. This contact is an important consideration in the capture of data, be it quantitative or qualitative, because of the potential for 'researcher bias'. The capture of data provides an empirical basis by which to develop a theory or model to address the research questions posed. The involvement with the individual data subjects, who make up the data population, potentially introduces an element of bias and influence by the researcher. By adopting a non-intervention approach this 'influence effect' could be negated, which would position such an approach in sector IV. This would have some appeal and provides a good potential research outcome, providing data were available from a source other than by direct contact with the dataset population.

Jensen[182] brings a more contemporary view of the paradigms of theory building in business and management studies by suggesting there are three types of theory. A type T1 theory is where there is a logical process of linkages, where 'if A then B follows' type of relationship based theory. The disciplines of art, architecture and book-keeping are good examples of type T1 theories. Type T2 theories are formulated through deduction from general principles or inferences that result in a view or conclusion being expressed. This is typically found in the sciences. Finally, there are T3 theories, which utilise and rely on the other two types of theory, but there is a need to relax the assumptions of these theories to gain utility from their use. This degree of flexibility provides a workable framework through which a satisfactory level of explanatory power can be achieved. Jensen observes that the T3 theories are 'very diverse kinds' of theories and are typically found in management and business fields. The T3 models, while they are workable, are not as functional as type T1 and T2 theories and may be better described as 'loose-fitting' theories. Jensen goes on to expand at greater length the contrast and differences of T3 theories, when compared with other research traditions. The clear message in this work is that management and business theories do not position themselves easily in the contemporary research paradigm.

3.4 Preliminary and Initial Research Activities

Initial research into the area of director remuneration concerns the use of phenomenological methods that were employed to 'obtain a feel' for the area. Much of the research in corporate governance has been of a qualitative nature, so this seemed a good starting point. With this background, some preliminary investigations were undertaken. The intention of this fieldwork was to gain access to the data population of directors and to interview them. Of particular interest were the members of the board's remuneration committee. This approach would be positioned in quadrants B and C of the McGrath and Runkel model, the qualitative dimension.

It must be remembered that these directors have no particular need, wish or desire to talk to a researcher regarding issues of a personal and professional nature with high public visibility. Director time is at a premium. As a resource it is concerned with decisions at the highest level in the organisation. The subject of remuneration is sensitive and the subject of ongoing media and public debate, which makes directors a little reserved in their comments. Many do not wish to talk about the generalities of remuneration and certainly do not wish to discuss their own or their colleagues' details. Comment, even on an 'off-the record', non-attributed, unquotable Mr X or Ms Y interview basis, was very limited and there was little inducement for directors to talk. These factors severely limited the pursuit of this research method. For those who did grant interviews, these proved very helpful in forming the resultant research questions. The disclosure of director remuneration in a public document – the company's annual report and accounts – was felt by some directors as being subject to the highest level of public scrutiny. No other group in society has this level of disclosure of their income, a point often made in informal conversation. At one extreme, it was suggested that their basic human rights of privacy were not being respected. Many saw the need for transparency, but many felt that this has now 'gone too far'. The view that they were publicly accountable and open to public scrutiny was acknowledged, but again met with the same type of response. The pursuit of this research method, which is very dependent upon access, did not offer good prospects of producing a meaningful research outcome. This qualitative research method offers potentially rich research outcomes but needs to be undertaken by those researchers who are well placed for access to directors.

Unfortunately, without large-scale access to directors, and therefore no source of data, this research method was discounted for this study, because it would provide no meaningful research outcome. The phenomenological tools of enquiry, such as narrative analysis, epistemological enquiry, direct observation, interview, questionnaire and other relevant approaches were considered, but were not able to provide the data required. The qualitative approach has figured significantly in corporate governance research, but not into the realm of remuneration, due to the limited access to both directors and their data - the same data collection problem that was encountered here.

Corporate governance has utilised commercial surveys of 'executive pay', typically using basis statistics, e.g. mean averages. This makes for interesting reading and very popular as a commercial activity. However, it is less robust from an academic perspective and it is often contingent on the response from the survey's participant company or from publicly available data. Academic researchers have utilised similar sources of data but they would be critical of the methodology, the data and the measures used in commercial surveys. Much of the academic literature has been generated by those from an economic or financial background who have drawn on data that has been available on a computer-based commercial or public database. However, the range, detail of remuneration and performance measures have not always been ideal for research, so researchers have utilised what is available rather than their 'ideal' form of data provision. But this data does provide an avenue to access data and a basis on which to address the research questions on remuneration policy and practice. The pursuit of this research was particularly well suited to an empirical approach characterised by the philosophical tradition of positivism, which is where our attention is now directed.

3.5 The Rationale for Adopting an Empirical Positivist Approach

Gill and Johnson[180] defined positivism as:

> "an approach that emphasises the use of methods presumed to be used in the natural science in the social sciences".
>
> Gill and Johnson (1991)

In research methodology terms, being a positivist means that the perspective, stance or philosophy selected as a basis for investigation of a subject of study is in objective terms, and then outcomes are interpreted in some form of social reality. The underlying assumption being that the researcher is independent of and not a part of the environment of study.

Remenyi[169] identifies empirical research as being the dominant paradigm in business and management research, with theoretical research playing a minor role. He goes on to say that empirical research is associated with a positivist view and often described as a:

> "Tough minded approach to facts and figures, derived from the physical and natural sciences".
>
> Remenyi (1998)

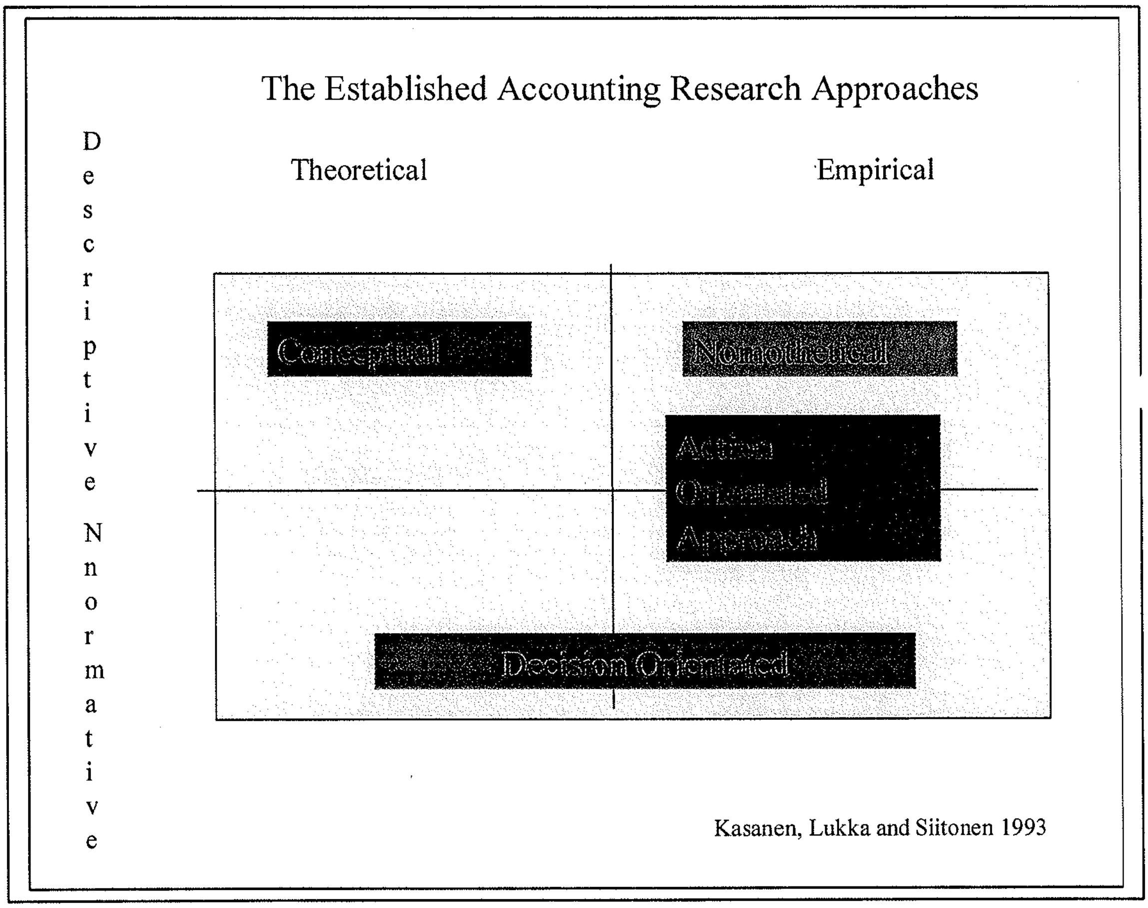
Easterby-Smith[171] observes that different management subjects like accounting, finance, marketing and operational sciences have different levels of use of the research methods available. If research is considered on a bipolar continuum with positivism at one pole and phenomenological at the other, there is a scale to position the distribution of research within each area and discipline. Easterby-Smith indicates that many of these subjects are clustered at the positivist pole of this continuum. The nature of these disciplines draws the researcher to this type of approach. As Burrell and Smircich[183] observe:

> "the appropriateness of a research approach derives from the nature of the social phenomena to be explored".
>
> Burrell and Smircich (1980)

3.6 Remuneration Research: a Study of Human Economic Activity-Some Methodological Considerations

Remuneration is an outcome of human economic activity, which has stimulated an interest from members of the accounting, finance and economics community. Much of the research tradition of these disciplines is of a positivist nature. The framework provided by Kasanen, Lukka and Siitonen[184], shown here in Figure 3.5, describes the main approaches of study in the area of accounting. The majority of remuneration studies are located in the bottom right hand corner of this model:

Figure 3.7 The Established Accounting Research Approaches – Kasanen, Lukka and Siitonen (1993)



Definitions of economics, as formulated by John Stuart Mill[185], Marshall[163] and Robbins[186], view economics as a science of choice. In particular, Robbins defines economics as:

> "Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses"
>
> Robbins (1935)

Such an approach is not without criticism. Rosenberg[187] has questioned the 'cognitive status' and nature of economics as a science, because of its inexactness. He asserts that any science should show a long-term pattern of improved predictive, explanatory power and technological success. On this basis, Rosenberg[187] doubts that economics is an empirical science at all. He concludes that there are genuine doubts and concerns about such works. However, researchers must confront such problems recognising the potential conflicts in methodology, philosophy and specification of the problems addressed. These issues need to be recognised by the researcher. In doing so, research needs to be mindful of these criticisms and specify their approach, contingent on the given assumptions. This is a typical feature of a type T3 theory in terms of Jensen's[182] typology.

Any research method needs to be robust and open to such criticism, and able to defend its methodological integrity and utility. Hoover[188] identifies why methodology is important for economic studies, particularly in answering its critics. Blaug[189] defines methodology as:

> "a study of the relationship between the theoretical concepts and warranted conclusions about the real world; in particular methodology is that branch of economics where we examine the ways in which economists justify their theories and the reasons they offer for preferring one theory over another; methodology is both a descriptive discipline – this is what most economics do and a prescriptive one – this is what economists should do to advance economics"
>
> Blaug (1980)

An economic model is a set of assumptions that approximately describe the behaviour of phenomena (company, industry, sector, and economy). A model is a representation of the real world economics process, formulated on a quantitative basis using mathematical relationships in a simplified form. The study of economics by mathematical modelling is the subject of econometrics, which is defined by Maddala[190] as:

> "The application of statistical and mathematical methods to the analysis of economic data, with purpose of giving empirical content to economic theories and verifying them or refuting them".
>
> Maddala (1992)

An econometric model consists of the following:

1. a set of behavioural equations derived from the model.
2. a statement of whether there are errors of observation in the observed variables a specification of the probability of the disturbances and errors of judgements.

Maddala (1992)

These models aim to answer appropriately specified hypothesis, derive inferences from this work and provide a basis for prediction and policy determination. Popper[191] and Friedman[192] support the development of a simple model to represent the world's phenomena. They argue that simple models are easier to understand, communicate and test empirically with data. They make the point that the use of simple models does not mean they are unsophisticated; these models explain complex phenomena and have a significance value to the researcher and the communities they serve.

In considering the state of accounting and finance research, Tomkins and Groves[193] observe that the academic accounting community has been pre-occupied with a range of quantitative styles. They cite the majority of 'existing' rigorous accounting research, which seems to fit into a fairly well determined set of criteria. They point to the 'almost universal trend' to strive to undertake 'scientific' investigations in a specified mode of enquiry. It is characterised by the formulation of a theory in terms of relationships between categories, often based on ideas derived from previous theory. It is then transformed into hypothesis and then into dependent and independent variables representing the categories involved. Data is then collected, subjected to mathematical or statistical techniques, leading to almost exclusively quantitative validation of the hypotheses tested. They confirmed that this scientific paradigm has dominated most areas of social science during the last two decades. They remark that the academic research community has not considered alternative research paradigms apart from 'isolated' instances of interest, e.g. Tricker[194] and Abdel-Khalik and Ajinka[195]. In their accounting education series paper, Abdel-Khalik and Ajinka[195] note that many academics are no better equipped to read and evaluate published research than practitioners. They see this schism, division or gap with regards to the utility of research as characterised by:

> "the heavy use of mathematical notation, reliance on complex statistical methodologies and attention to intellectually tractable problems at the expense of direct realism and all characterised in the bulk of published papers in the identified journals".
>
> Abdel-Khalik and Ajinka (1979)

They cite The Accounting Review (TAR) and Journal of Accounting Research (JAR) as being representative of this, but also true of the Journal of Financial Economics (JFE), Journal of Accounting and Economics (JAE) and Journal of Financial and Quantitative Analysis (JFQA).

What can be ascertained from this is that the overwhelming weight of research work conducted in the accounting, economics and finance area is of the scientific empirical positivist tradition.

The evidence of a 'successful' economic theory is identified by Maddala[190] in the quote:

> "it is customary to report that the signs of the estimated coefficients in an econometric model are correct".
>
> Maddala (1992)

This approach is given the term of 'confirming' economic theories. Blaug[189] expresses this view as follows:

> "In many areas of economics, different econometric studies reach conflicting conclusions and given the available data, there are frequently no effective methods for deciding which conclusion is correct. In consequence, the contradictory hypothesis continue to co-exist, sometimes for decades or more"
>
> Blaug (1980)

Maddala[190] is of the view that a more valid test of an economic theory is that it can give predictions that are better than those of existing theories, thereby providing a higher level of explanatory power.

In exploring the data and developing the model, we need to consider the statistical challenges or problematic issues of empirical studies. Maddala[190] identifies these challenges as 'hazards' and in what he labels the 'empirical 'zoo'. These hazards are addressed later in this chapter but are identified below:

1. heteroscedasticity
2. multi-collinearity
3. autocorrelation

Kenkel[196] suggests that in deriving results from a model, there are a number of steps for checking the adequacy of a proposed model. These are:

1. Examination of the signs of the coefficients to ascertain whether these signs agree with the theoretical expectations.
2. Large standard deviations may indicate a lack of precision in estimation of specification of model.
3. T statistics and probability values are used to test the null hypothesis that the population coefficient is 0.
4. R squared and adjusted R is examined to ascertain how well the variables explain the variation in the dependent variable. Standard errors near to 0 indicate a small proportion in the dependent variable.
5. Estimated standard error of the regression gives an idea of the size of the residual (at the 5% or 1% level).
6. Residual analysis examines the residuals to identify whether any of the basic assumptions have been violated.

Undertaking these procedures provides a sounder basis for the defence of the thesis outcomes and its utility to an interested stakeholder community.

This thesis will utilise the scientific empirical positivist approach to study director remuneration and performance. Many previous researchers have adopted this methodology enabling them to undertake research that has formed the basis of our current understanding and knowledge in the area. This study follows this tradition because it has provided a proven mechanism to produce valid and valuable research and it has contributed to the development of the area, evidenced by the heritage of previous studies in this area. The scientific empirical positivist approach represents the overwhelming research method in this area. This provides both a suitable and compelling argument for continuing this approach in this research.

3.7 The Distinctive Features of this Thesis' Research

This thesis is concerned with director remuneration and performance. The formulation of the concept of DRIP, which represents the annual total cash income of directors, which is the sum of four remuneration components, provides a conceptual framework by which to view director remuneration. The literature review identified where the four components have been used in other studies, but none has considered them in the form of a portfolio and modelled in this framework. The selection of a positivist approach in this research requires this data to form the research's empirical base. Data needs to be collected that represented these sources, which was a significant and time-consuming challenge, but was achieved. Using this data the research undertakes a range of statistical analyses, which provide an examination of these remuneration components in a DRIP framework. A consideration of some basic statistics in the form of mean averages is made to provide a reference point with 'commercial remuneration surveys' that provide a popular base to view remuneration issues. The analysis then focuses on the distribution of each DRIP component while considering other statistical issues that impact on the mean measure, an issue often overlooked in commercial studies. The nature of the DRIP components distribution are examined, both within and between the four director groups, to identify whether the DRIP profile is the same for all director groups. The availability of the data for the four components of DRIP allows this analysis to be undertaken, which is an important feature in this research. No research work has been identified that has considered these dimensions of the research, i.e. all four director groups of the board and for these four DRIP components.

The use of the ANOVA techniques (the analysis of variance) provides a new methodological development in the area, where only very recently has this technique been used in studies of director remuneration, which is a key part of this research's analysis. This recent research by Veliyah[140] covered a single industry (pharmaceuticals) and in the US, not for a representative dataset of UK companies. Therefore, in the corporate governance area of director's remuneration, this present research provides a new range of remuneration data and a wider range of research subject, i.e. the four director groups and the application of ANOVA analysis, which represents a methodological innovation.

Past corporate governance studies on director remuneration have focused on the input and process dimensions using the Dulewicz, MacMillan and Herbert[38] model of corporate governance, with a few studies, notably Main[10] being directly concerned with director remuneration issues within the board. Examining the data of the remuneration components of each director group provides a basis with which to establish the nature of importance relationships. This seeks to establish just how important each form of remuneration is to each director group in both relative percentage and absolute monetary terms. The distribution of remuneration within and between each director group represents a new dimension in considering the nature of director remuneration, examined by the use of an ANOVA analysis. It provides a platform to explore other relationships within the board and its directors. This section of the research has not enjoyed much academic work or interest, in contrast to the attention of commercial entities who provide 'pay surveys' to guide practice.

In contrast, the literature review of remuneration and performance has enjoyed the attention of many studies. These have typically taken a positivist research philosophy in the form of empirical studies that have utilised a range of econometric approaches in exploring this relationship. This study follows that tradition. The intention is to develop and extend this research tradition by the consideration of a wider set of remuneration and performance measures as data variables than have figured in previous studies in the US and UK environment. Using the remuneration data of the DRIP components, this research is able to examine the linkages to performance measures that have been represented in studies in the UK and US. By linking these two elements, remuneration and performance, an examination of the level of relationships between these DRIP components and performance measures can be undertaken. This analysis has the advantage of using this rich dataset and a range of methodological innovations that distinguish it from other studies. The purpose of this is to enhance the understanding of these relationships. In the literature review chapter, it was noted that the availability and form of data of both remuneration and performance measures have significantly influenced the direction of research. This research adopts four remuneration variables (DRIP components) and a wider range of performance measures than represented in other studies. In so doing, this can determine both the rank and level of explanatory power of each variable in a stepwise multivariate regression model.

This work is seen as being useful in developing a rational framework for determining the compensation policy and practice of directors in the UK and thus making a further contribution to the literature. It is now appropriate to make a clear specification of the main research objectives of this thesis, in the form of its two main research questions.

3.8 The Objective of this Research

3.8.1.Overview

As stated in Chapter One the research for this thesis has two main themes:

1. Director Remuneration Policy Relationships: The nature of the four remuneration components of a director 's remuneration income portfolio (DRIP) in monetary terms (absolute number and logarithmic basis) and percentage for the four director groups.

2. Remuneration and Performance Relationships: The linkages between remuneration (REM) and performance (PER) measures of size, results, returns and income by type of director group (REMPER).

In this study, statistical analysis of each director group subset is undertaken for both themes. From the results of this statistical analysis, suggestions, interpretations and conclusions are made in order to addresses the following research questions.

<u>For DRIP</u>

Research Question 1*: In the top UK PLC companies' boards in 1996, 1997 and 1998 were the DRIP profiles of the four director groups the same?*

<u>Hypothesis to be tested</u>

The dissertation tests the following generic hypotheses:

H^0 In the top UK PLC companies' boards in 1996, 1997 and 1998, the DRIP components (salary, short-term bonus and long term incentive and ownership income), were the same in absolute and relative terms for each of the four groups of directors (chair, CEO, executive director and non-executive directors)?

H_1: In the top UK PLC companies' boards in 1996, 1997 and 1998 the DRIP components (salary, short-term bonus, long term incentive and ownership income), were not the same in relative and absolute terms for each of the four groups of directors (chair, CEO, executive director and non-executive directors)?

For individual DRIP components, in this case salary, the hypothesis will be stated as follows:

$H^{0\ SAL(Absolute\ £)}$ Salary £ in the chairs group, CEO group, executive director group and non-executive was the same in 1996, 1997 and 1998.

$H^{1\ SAL(Absolute\ £)}$ Salary £ in the Chairs group, CEO group, executive director group and non-executive was not the same in 1996, 1997 and 1998.

This was also undertaken on a logarithmic scale basis for the absolute monetary numerical base.

and then in relative terms:

$H^{0\ SAL(Relative\ \%)}$ Salary % in the Chairs group, CEO group, executive director group and non-executive was the same in 1996, 1997 and 1998.

$H^{1\ SAL(Relative\ \%)}$ Salary % in the Chairs group, CEO group, executive Director group and non-executive was not the same in 1996, 1997 and 1998.

The same specification will be formulated for STB, LTI and OI for the years 1996, 1997 and 1998.

This will be assessed by comparing the means of each group and subjected to an ANOVA analysis that will provide the basis for accepting or rejecting the H^0 or H^1 hypothesis. Thus the resulting analysis will address some 16 hypotheses for each numerical base, for three numerical bases (natural absolute, logarithmic and relative percentage) and for three years, making a total of 144 hypotheses.

Remuneration-Performance (REMPER)

Research Question 2: *In the top UK PLC's boards in 1996, 1997 and 1998 were the DRIP components linked to performance measures in the four director groups?*

Hypothesis to be tested

The dissertation tests the following generic hypotheses:

H^0 The remuneration of UK Directors DRIP (Director's Remuneration Income Portfolio) are linked to performance measures for the four director groups of the top UK PLC company's boards in 1996, 1997 and 1998.

H^1 The remuneration of UK Directors DRIP (Director's Remuneration Income Portfolio) are not linked to performance for the four director groups of the top UK PLC company's boards in 1996, 1997 and 1998.

Here the dependent remuneration variables are regressed with the independent performance variables in a number of model specifications indicated below. To make all the variables available for inclusion to the final model the full model would be formulated as follows:

Remumeration (REM) = financial size variables + financial results variables +financial results variables +financial income variables (PER)

So each Remuneration-Performance model would include variables from all four DRIP components (REM) and from all four performance (PER) metric groups.

Each financial performance (PER) group would have its own metric variables.

Financial size: Sales revenue (SR), Total Asset (TA), Capital Employed (CE), Market Capitalisation (MC)

Financial results: EBIT (EBIT), Free Cash Flow (FCF), Cash Flow (CF)

Financial returns (% p.a.): ROE (return on equity), ROCE (return on capital employed) and TIR (total investor returns)

Financial income indicators: earnings (TEARN) and dividends (TDIV) and TIR (total investor returns).

At this full model stage each remuneration DRIP component model would have all twelve independent variable included. However, this model would have high multi-collinearity, necessitating its reduction to a smaller restricted four variable model with a variables from each performance group represented in the final restricted model. When this restricted model is formulated a stepwise regression model will be employed to determine the best model with the highest explanatory power (adjusted R2). So for the 1998 chair salary model would be defined in the following generic manner:

Model Specification: Remuneration = Performance

$$y = a+\beta\ x_1+\beta\ x_2+\beta\ x_3+\beta\ x_4+\dot{e}$$

This would be conducted for the four director groups (4), four DRIP components (4), for three years of the study on an absolute natural number and logarithmic basis (2), a total of 96 models.

3.8.2 Proposed DRIP Analysis

For monetary and percentage DRIP, an exploration of the four types of director DRIP distribution are undertaken by using descriptive statistics. By using the percentage DRIP concept, the relative importance of each component of the DRIP may be ascertained. Using the monetary DRIP, the absolute importance of each component may be ascertained on a natural number and logarithmic basis, which is shown and displayed below.

For the monetary DRIP the profile would be expressed as follows:

DRIP £ = SAL£, STB£, LTI£ and OI£

£500 = £250 + £100 + £125 + £50

and on a percentage basis:

DRIP % = SAL%, STB%, LTI% and OI%

100% = 50% + 20% + 25% + 5%

The use of descriptive statistics will be employed to explore the nature and shape of the distribution in each director group subset. The shape of this distribution may be significantly influenced by extreme values or in statistical terms, outliers. By exploring the director subsets, these outliers can be the identified. The impact of outlier directors within a director group provides a challenge in considering whether these outlier directors and their DRIP profile are part of the same director subset. They may be a separate sub-population of the director group. It would certainly be the case that an outlier DRIP profile would be very different compared to an average of the director group. These outliers are defined as having values that are outside of the 75^{th} and 25^{th} quartiles (the interquartile range) and at increments of this range away from these quartiles. Thus a normal 'outlier' is 1.5 times the inter-quartile range away from either the upper or lower quartile, with an 'extreme' outliers being 3 times.

The exclusion of outliers must be considered on meaningful and appropriate criteria. One criteria may be size, or the director being defined as holding one type of directorship, but in reality their role and its remuneration is clearly different. This is considered in the literature as a classical and mixed/hybrid director role type. This is clearly revealed and differentiated by the their DRIP profile and, although they may be defined as one type of director, their role and remuneration is more indicative of another director type. After their exclusion, the director group distribution may better reflect a normal distribution and meet the normality criteria. The objective of this adjustment is to enable the four director groups' DRIP's remuneration components to be normally distributed and meeting all the assumptions of the normality condition and then benefit from an ANOVA analysis. On the exclusion of outliers, justified on identifiable criteria, further analysis would be undertaken to identify the impact and change in the nature of the distribution reflected in relevant statistical measures. The objective of this is to see whether the distribution is more normally distributed. The nature of the relationship may not be linear so this requires some consideration.

The descriptive statistics are used to explore the data and to ascertain the normality of the distribution in each director subset. To enable an ANOVA analysis to be undertaken, the criteria of normality needs to be met. The use of the Levene's test of normality is made to ascertain whether this is attained. The analysis of variance (ANOVA) technique allows the comparison of the differences within and between the four director groups and their DRIP profiles. Some of the director subsets may challenge the assumptions of normality by their outliers, which could potentially restrict and invalidate the conduct of ANOVA analysis. However, ANOVA analysis is seen as 'a robust technique'[197] with the ability to withstand and overcome the strictness of the normality assumption, while at the same time yielding worthwhile statistical results. ANOVA analysis provides informative properties about the dataset and as such is a valuable innovative part of this analysis. It allows the consideration of whether the DRIP profiles of each director groups are different or the same, which addresses the first research question. This analysis will be repeated for the three years (1996, 1997, 1998) for each DRIP component and by each director group.

3.8.3 Proposed Remuneration Performance (REMPER) Analysis

The nature of the relationship and level of association between DRIP components and performance measures (REMPER) for each director group, are ascertained by using correlation and regression techniques on an absolute and logarithmic basis, reflecting approaches adopted in other studies[146]. A generic multivariate regression model was formulated to ascertain the level of association of the selected variables and their order of explanatory power, using different formulations of the model. Independent performance variables are regressed against dependent remuneration variables, with the stepwise providing a selective mechanism that identifies the most explanatory performance variables. The independent performance variables are selected by their presence in previous research literature, supported by the theoretical argument for their inclusion. The dependent variables are selected by their membership of the DRIP.

On conducting this analysis, a number of potential data dilemmas may arise with the potential to significantly impact on the validity of the findings and these are considered more fully in Chapter Four.

3.8.4 Different Specifications of Model

The following specifications of stepwise multivariate regression (SMR) models are utilised:

Absolute model: using an absolute measure of remuneration and performance variables specified in a stepwise multivariate regression (SMR) model.

Logarithmic model: using a logarithmic measure of remuneration and performance variables in a stepwise multivariate regression (SMR) model: e.g. Chair, salary, by sales revenue, EBIT, ROCE and earnings in a logarithmic model 1998.

A selection of the above models will be examined for lagged effects. This selection will be based where the literature indicates the potential to improve the explanatory power of the model[96]. To undertake this analysis a dataset was required to necessitate this activity and this is where our attention is now directed.

3.9 Formulation of the Dataset: the Design and Collection of the Dataset

The top 100 UK industrial companies that were present in the Times 1000 for the years 1996 1997 and 1998 were included in the study. These companies represented the mainstream industrial and commercial heartland of UK industry.

The research study dataset has five components:

1.	types of companies	(dataset membership selection)
2.	board structure	(distribution of director groups within the board)
3.	the director/executives	(different types of director)
4.	sources of remuneration	(types of remuneration)
5.	performance measures	(financial measures)

The first four components of the study were contained in the company's annual report and accounts. The fifth component was obtained from a commercial financial database.

Types of companies

The dataset of the top 100 companies was compiled using the Times TOP 1000 UK companies which is listed in order of size (capital employed). The top 100 companies represented in the three years of the publication in the years 1998, 1997 and 1996 were included in the dataset, using a weighted average by rank over the period. The top 250 companies in the three years were input by rank into an excel worksheet, and the top 100 were selected on this basis. Companies in the banking, insurance, property and investments trusts were excluded from the dataset because of their particular sector characteristics. Those who were not UK headquartered or those who undertook major restructuring, which made data unavailable for the period, were unable to be included in the dataset. This is consistent with other studies in the area. The final 100 companies in the dataset were drawn from the top 250 of available companies.

Board Structure: the distribution of director groups within the board

The composition of the board, the number of directors, the balance of executive and non-executives directors, are all issues of corporate governance. Within boards, the structure, number and type of director can vary widely. This reflects individual company's policy of board composition and how the company distributes responsibilities within the board.

Individual director types

In a UK board there are normally four types of directors; the Chairperson (CH), the Chief Executive Officer (CEO), the executive directors (ED) and the non-executive directors (ND). The Greenbury committee[7] required the disclosure of all directors' remuneration. This requirement made it possible to investigate all the directors of the board by director group in this study.

Sources of remuneration

The dataset companies' annual report and accounts (CAR's) were accessed from a variety of sources. Many of these were obtained from the Henley Management College library and others were obtained by post. The City Business library (London) and the Internet provided some further assistance in obtaining the basic remuneration data. All data collected was photocopied and input to an excel spreadsheet with a pre-designed format. This was the primary data collection vehicle of this study. All companies had up to 50 cells to include the data of all directors. This was repeated for the three remuneration years 1996, 1997 and 1998. The Greenbury format was effective from 31.12.95, which was defined in this study as the starting point of remuneration year 1996. Therefore, each year effectively is from 31.12.00 to 30.12.01, in that year. For example, in dataset year 1996, there are some 364 days in 1996 and one day in 1995. These were collected in the data collection table as shown in figure table 3.8.

Figure 3.8 Extracts from Data Collection Table:

Extract from Director Remuneration Dataset

COMPANY NAME	Z	ROLE	EXECUTIVE NAME	SALARY	BENEFIT	BONUS	OTHER	PENSI	LTIP
ALLIED DOMECQ	Z	C	HOGG	260	1	0	0	0	0
ALLIED DOMECQ	Z	CEO	HALES	460	13	165	0	0	0
ALLIED DOMECQ	Z	E1	ALEXANDER	276	14	67	0	0	0
ALLIED DOMECQ	Z	E2	McFARLANE	123	9	20	0	0	0
ALLIED DOMECQ	Z	E3	McCARTHY	292	24	94	0	0	0
ALLIED DOMECQ	Z	E4	MORA-FIGUEROA	75	1	0	0	0	0
ALLIED DOMECQ	Z	E5	SCOTLAND	262	19	91	0	0	0
ALLIED DOMECQ	Z	E6	TRIGG	291	13	104	0	0	0
ALLIED DOMECQ	Z	N1	BRYDON	28	0	0	0	0	0
ALLIED DOMECQ	Z	N2	BUCKLAND S	15	0	0	0	0	0
ALLIED DOMECQ	Z	N3	JACOBS	15	0	0	0	0	0
ALLIED DOMECQ	Z	N4	MALPAS	31	0	0	0	0	0
ALLIED DOMECQ	Z	N5	MASON	14	0	0	0	0	0
ALLIED DOMECQ	Z	N6	RIVETT-CARNAC	11	0	0	0	0	0
ALLIED DOMECQ	Z	N7	ROBB	15	0	0	0	0	0
ALLIED DOMECQ	Z	N8	STAPLETON	31	0	0	0	0	0
ALLIED DOMECQ	Z	TE	TOTAL EXECS	1319	80	376	0	0	0
ALLIED DOMECQ	Z	TN	TOTAL NON EXECS	160	0	0	0	0	0
ALLIED DOMECQ	Z	TX	TOTAL ALL EXECS	2199	94	541	0	0	0

With a continuation of the datatable:

Extract from Director Remuneration Dataset

NUM EX	£MKT PR	£OPTEX	DIV PS S	NUM OF	OPTGAIN	£TOTOPT	£TOTDIV	£TOTRE	EXECUTIVE NAME	COMPANY NAME
0	0	0	32	13067	0	0	4.18144	265.1814	HOGG	ALLIED DOMECQ
2798	5.555	4.19	32	102089	1.365	3.81927	32.66848	674.4878	HALES	ALLIED DOMECQ
2906	5.4	4.7188	32	10046	0.6812	1.979567	3.21472	362.1943	ALEXANDER	ALLIED DOMECQ
0	0	0	32	0	0	0	0	152	McFARLANE	ALLIED DOMECQ
0	0	0	32	12000	0	0	3.84	413.84	McCARTHY	ALLIED DOMECQ
0	0	0	32	169085	0	0	54.1072	130.1072	MORA-FIGUEROA	ALLIED DOMECQ
0	0	0	32	10613	0	0	3.39616	375.3962	SCOTLAND	ALLIED DOMECQ
3291	5.555	4.19	32	36652	1.365	4.492215	11.72864	424.2209	TRIGG	ALLIED DOMECQ
0	0	0	32	1500	0	0	0.48	28.48	BRYDON	ALLIED DOMECQ
0	0	0	32	1000	0	0	0.32	15.32	BUCKLAND S	ALLIED DOMECQ
0	0	0	32	1000	0	0	0.32	15.32	JACOBS	ALLIED DOMECQ
0	0	0	32	2084	0	0	0.66688	31.66688	MALPAS	ALLIED DOMECQ
0	0	0	32	0	0	0	0	14	MASON	ALLIED DOMECQ
0	0	0	32	0	0	0	0	11	RIVETT-CARNAC	ALLIED DOMECQ
0	0	0	32	0	0	0	0	15	ROBB	ALLIED DOMECQ
0	0	0	32	0	0	0	0	31	STAPLETON	ALLIED DOMECQ
6197	10.955	8.9088	672	238396	2.0462	6.471782	76.28672	1857.759	0	ALLIED DOMECQ
0	0	0	736	5584	0	0	1.78688	161.7869	0	ALLIED DOMECQ
8995	16.51	13.0988	1472	359136	3.4112	10.29105	114.9235	2959.215	0	ALLIED DOMECQ

The remuneration details for the study were found distributed within the company's CAR; in the accompanying notes to the accounts, the schedule of directors' interests and the report of the remuneration sub-committee report. From this CAR's data, the remuneration details were extracted. There was a need to undertake some calculations in this work, e.g. multiplying the number of share options exercised and the difference between the grant and exercise price to provide the required data total of cash option gain.

Performance measurement data

The performance data was extracted from the Bureau van Dijk's Disclosure database called Global Research Worldscope. There was a need to specify the required datafields from the database and the nature of the format through a significant amount of enhancement by adjusting years, currency and other data items. Missing and 'unusual' (e.g. negative equity values) were checked or input from other data sources to complete the dataset. In this database the user must specify the format, variables and relevant time period of the data period. On selecting the company dataset and its variables, it enables the user to download and extract the data into an Excel spreadsheet's work page. The data needed some extensive combing through, so the relevant years were aligned for this study's dataset remuneration years. Certain fields did need to be brought to the right level of aggregation, i.e. cash flow per share to total cash flow by multiplying through by the number of shares. Verification and validation procedures were undertaken to ensure the integrity of the data. Both data subsets were exported into excel for data cleaning (validation and verification) to ensure data quality and authenticity. It was the view that excel provided better data manipulation properties in which to both collect, formulate and integrate the data to form a unified dataset for the study.

Compilation of the Dataset

In compiling the data, a number of worksheets were formulated to manage the data management process.

The remuneration data was held in three files labelled by the year of data held:

98Dataset(date) .... .xls

97Dataset(date) .... .xls

96Dataset(date) .... .xls

Each annual Excel workbook file REM98DS (date) contained five 'all director' worksheets that performed different procedures (dataselect, datasource, dataset, datasort and datahighlow). From this 'all director' dataset, it was divided into four subsets representing each director group. An example of the directors' DRIP portfolios for an individual company can be seen in figure 3.8. Thereafter four separate worksheets were kept for each director group.

Figure 3.8 The DRIP Portfolios for all the Directors in a Sample Company: (Allied Domecq PLC 1998)

DRIP Profile from Director Remuneration Dataset

COMPANY NAME	Z	ROLE	EXECUTI	SALARY	STB	LTI	OI	TR
ALLIED DOMECQ	Z	C	HOGG	260	0	0	4.18144	264.1814
ALLIED DOMECQ	Z	CEO	HALES	460	165	3.81927	32.66848	661.4878
ALLIED DOMECQ	Z	E1	ALEXAND	276	67	1.979567	3.21472	348.1943
ALLIED DOMECQ	Z	E2	McFARLA	123	20	0	0	143
ALLIED DOMECQ	Z	E3	McCARTH	292	94	0	3.84	389.84
ALLIED DOMECQ	Z	E4	MORA-FI	75	0	0	54.1072	129.1072
ALLIED DOMECQ	Z	E5	SCOTLAN	262	91	0	3.39616	356.3962
ALLIED DOMECQ	Z	E6	TRIGG	291	104	4.492215	11.72864	411.2209
ALLIED DOMECQ	Z	N1	BRYDON	28	0	0	0.48	28.48
ALLIED DOMECQ	Z	N2	BUCKLAN	15	0	0	0.32	15.32
ALLIED DOMECQ	Z	N3	JACOBS	15	0	0	0.32	15.32
ALLIED DOMECQ	Z	N4	MALPAS	31	0	0	0.66688	31.66688
ALLIED DOMECQ	Z	N5	MASON	14	0	0	0	14
ALLIED DOMECQ	Z	N6	RIVETT-C	11	0	0	0	11
ALLIED DOMECQ	Z	N7	ROBB	15	0	0	0	15
ALLIED DOMECQ	Z	N8	STAPLET	31	0	0	0	31
ALLIED DOMECQ	Z	TE	TOTAL E	1319	376	6.471782	76.28672	1777.759
ALLIED DOMECQ	Z	TN	TOTAL N	160	0	0	1.78688	161.7869
ALLIED DOMECQ	Z	TX	TOTAL AL	2199	541	10.29105	114.9235	2865.215

The process of selecting the top 100 companies was conducted in the dataselect worksheet. The collection of the remuneration data from the CAR's was undertaken and managed in the datasource file. The input of this data was inserted into the dataset worksheet, where the remuneration data was then input into the specially formulated standard template, designed to capture the relevant remuneration datafields. The dataset worksheet is the main dataset collection table into which the remuneration data was manually input. In this worksheet four identifiable sections are present. They are located in the following areas of the worksheet, the industry details in vertical fields A-Z, company director details in vertical fields AA-AZ, the five main remuneration variables in their DRIP in vertical fields BA-BZ and finally in percentage terms in vertical fields CA-CZ. The remuneration data from locations on BA-BZ was cut and special pasted (values only) into datasort worksheet. From datasort, the refined worksheet was copied and special pasted (values only) into a high and low worksheet. From the datasort worksheet the remuneration data was joined to findata worksheet with the performance data to create the REMPER worksheet, ensuring the company's director remuneration data and its performance measures were correctly aligned with the final file: 98REMPER(date).xls. This worksheet was then transformed into both absolute natural numbers and logarithmic bases to facilitate future further analysis. Then both worksheets were copied into separate files in excel format version 4 ready for analysis in SPSS version 9.

3.10 Rationale for the Proposed Analysis

Much previous director remuneration literature has been limited by data disclosure and its availability. It has focused on CEO remuneration of salary and bonus. The dataset in this study provides the opportunity to extend the scope of remuneration studies beyond the CEO salary and bonus orientation. Such approaches have figured in commercial studies of remuneration, expressing their findings in terms of averages and quartile measures of the distribution. By adopting a wider set of statistical measures this study provides a richer picture of the distribution of remuneration values and this is merged with the director datasets, providing a greater insight into the data distribution. The nature of this distribution is very important in expressing the average, its skewness, kurtosis and whether these are within the bounds of normality. If so, it may provide the opportunity to conduct further more sophisticated analysis, i.e. ANOVA. From this analysis the study is able to drawn the attention of interested stakeholders to the nature of the distribution, its features and the influence of outlier cases.

The majority of remuneration and performance studies have utilised a regression/ correlation model in determining the level of relationship between the selected remuneration and performance variables in each study. Single variable regression models have often been the norm. This study has selected a wider range of both remuneration and performance variables to be formulated into a stepwise multivariate regression model in order to identify the level of relationship of each selected variable. The research is able to provide a hierarchy of the variable's explanatory power, i.e. the ranked level of explanatory power between variables. Regression studies are not without potential problems characterised by the 'empirical zoo' referred to by Maddala[190]. This zoo is populated by the potential statistical hazards of heteroscedascity, auto-correlation and multi-collinearity. The degree of these hazards can be ascertained by measures of residuals, leverage and influence, which alert the researcher to the influence of these hazards.

From regression analysis, the most explanatory performance variables for each component of DRIP can be identified for each type of director group and a consideration of the appropriateness of each model's base assumptions can be undertaken. The impact of the outliers can have a significant impact on the linear regression co-efficient and the distribution. Their exclusion may be considered on the basis that they are part of a different population. Alternatively, the nature of the relationship may be non-linear, with a need to consider other types of relationship. The inclusion of outliers, and the assumption that they are part of the same population, requires the examination of other potential relationships. In so doing, the logarithmic relationship has been found to provide explanatory power in some studies[8,127]. In exploring the logarithmic relationship, the most powerful explanatory variables may be different than in the absolute model. This is a consideration when linking DRIP components and performance in practice. A variable's explanatory power and order may change in the remuneration-performance relationship, dependent on which model is used. This raises the issue of both dataset definition and what this represents. Or it may be that the nature of the relationship establishes the level of relationship. In conclusion, the best level of explanatory power in a model may depend on the definition of the dataset's membership and its outliers. This results from a consideration of which type of relationship best explains the linkage of remuneration and performance variables, which may in turn vary between different director groups.

Many performance measures have been employed in remuneration studies but, by bringing together the main explanatory variables used in previous studies, the intention is to provide a more informed view on the performance drivers of each component of remuneration in directors' DRIPs. By using stepwise regression, it enables a model to be formulated that allows performance variables to be regressed against remuneration variables. This enables the identification of the rank order of the explanatory variables to be determined. Each director group's remuneration variables may have different performance drivers under different types of relationship.

This research study has the following features:

1. Examines the board remuneration practice in the 1996, 1997 and 1998 period.
2. Examines the composition of director total cash income (DRIP), i.e. four components of remuneration: salary, short-term bonus, long-term incentive and ownership income.
3. Utilises a wider range of research dataset subjects than other studies i.e. all four types of directors in a UK board.
4. Utilises a wider range of performance measures (reflecting those used in other studies).
5. Use of more powerful statistical methods, ANOVA, to investigate the differences within and between the type of director groups, in order to establish the nature of these relationships within UK board.
6. Use of more powerful statistical methods, stepwise multivariate regression models, to identify the performance variables that provide the most powerful level of association with remuneration variables. This enables the selection of performance variables used in earlier studies and, by stepwise, determines the most powerful explanatory performance variables.
7. Examines the degree of fit in the model using a linear relationship assumption.
8. Examines the degree of fit in the model using a logarithmic relationship assumption.
9. Examines the degree of fit in the models using a number of lagged effect relationships.

3.11 Why this Research is Different and Develops Understanding of the Area

This study utilises many of the approaches and techniques used in past research, but consolidates many of these features in this work. It develops the idea of a portfolio of income, with the DRIP components providing a framework to practice. The formulation of REMPER models with explanatory variables that explain remuneration practice, develops the concept of a performance drivers, applicable to each director groups and its linkage to performance. Specifically the research has the following differentiated features:

1. Clear individual single measures of remuneration (salary, short-term bonus, long-term incentive and ownership income) rather than combined totals or two elements, e.g. salary and bonus.
2. It identifies four remuneration components.
3. It provides research on the four director groups of the board.
4. It uses ANOVA analysis to ascertain if there are significant differences within and between director groups' DRIPs.
5. The use of a stepwise multivariate regression (SMR) model, to determine which variables provide the most explanatory power and their level.
6. The SMR uses the same DRIP components as dependent remuneration variables as for features 1, 2 and 3, which provides integrity and consistently of concepts.
7. A wider set of independent performance measures drawn from previous studies in the area to determine the remuneration performance drivers.
8. For the above model specification a linear relationship is assumed, but other forms of non-linear relationships (logarithmic) are considered.
9. The potentials for lagged effects are explored in this research because in some studies this has indicated a stronger level of relationship.

Such features are innovative developments in the tradition of the area and address the two research questions posed. In question one the DRIP profile is introduced as a vehicle to explore the relative and absolute nature of the director groups' DRIP profiles. In question two, the relationship of remuneration and performance, which although has enjoyed significant attention in the literature, has often been limited by data variable availability. This study addresses these issues and develops the area by using a number of more representative variables, together with methodological innovations to enable the interested community to obtain a better understanding of remuneration policies and practices.

Chapter Four: Data and Statistical Issues in the Research Design and Strategy

4.1 Introduction to the Chapter

Before reporting the results of the statistical analysis there is a need to outline the issues that influenced the adoption of the research strategy employed in this study. This chapter is divided into two parts concerning the DRIP and REMPER analysis. In the DRIP analysis there are issues in the dataset of the four director groups that need some consideration and a rationale for how they were dealt with. For REMPER analysis, a number of statistical issues and treatments were undertaken which influenced the results. At the beginning of this study two research questions were formulated and Chapter Three outlined the theoretical issues of research methodology in relation to how best these questions were addressed. As a result, a quantitative approach, using statistical analysis, was selected as the most appropriate research method. Having discussed the overall approach to research methodology for the research in Chapter Three, this chapter focuses on the practical data and statistical issues in carrying out the research strategy. The nature and importance of the issues are of sufficient magnitude to warrant a separate chapter. Considering the issues here, enables clarity in reporting the results of the analysis in Chapter Five.

4.2 DRIP Analysis: An Overview

The analysis of the director dataset identified the presence of the four director groups by DRIP profile, i.e. the four director types of a UK board. Within the chair and non-executive director groups, two further sub-sets were found, i.e. the independent and incentivised directors. This necessitated the need to exclude incentivised chairs and non-executive directors from the full dataset of all directors, to form the reduced dataset. Three numerical bases are used to provide different perspectives to the analysis. The analysis examined the nature of the director DRIP distributions and the degree to which it follows the normal distribution (meets the conditions of normality) to allow ANOVA analysis to take place. These statistical techniques enabled the testing of the hypotheses of research question one:

"In the top UK PLC companies' boards in 1996, 1997 and 1998 were the DRIP profiles of the four director groups the same?"

4.3 Issues in DRIP Analysis: Robustness Procedures and Tests

4.3.1 Data Distribution Issues of the Director Dataset

In the literature review, some relevant issues about directors' roles were raised and what form they take. Each director group has typical or classic roles reflected and defined in the literature, referred to in this research as 'classic director types'. In these director groups there are members whose DRIP profiles indicate their roles and remuneration are not consistent with these classic types, or with the majority of other director members of their group, which impacts on the descriptive statistics of the director group. For the chair and non-executive director groups, there are two types of members who are differentiated by their role and this is reflected in their remuneration. Their differences are reflected in the responses to the following questions that might be posed - what sort of person should hold the chair's role, what background should they have, what role should be adopted in the company and, finally, what might be an appropriate level of remuneration for this role? Many chairs are part-time non-executive chairs that have no direct incentive interest in the company; these are labelled in this research as 'independent chairs'. In contrast, the remaining chairs may be described as 'incentivised' chairs, because they are in receipt of incentive-based remuneration that encourages entrepreneurialism.

The non-executive director group has the same director definition issues as the chair group in relation to their role and remuneration. The non-executive's role is to provide an external viewpoint on company policies and to represent interests from the wider external stakeholder environment. These might be characterised as guardians of good practice within the board and bring to the attention of full time management (the CEO and executive directors, i.e. the incentivised directors) the wider social and governance issues of company policies. The non-executive group is made up of independent non-executives (who typically have director roles in other UK companies) with no immediate incentivised interest in the company other than their directorship. The other non-executive directors can be described as incentivised non-executives, who often have some history or have some other type of relationship with the company. What marks them out from their non-executive director colleagues is the receipt of incentive remuneration (short-term bonus and long-term incentive). They (the incentivised directors) have a different role and motives, which are influenced by their history and reflected in their DRIP profile. Many of these 'incentivised' non-executives have been full-time executive directors, who may be 'serving out time' as consultants or representing their equity ownership interests as non-executive directors. The independent non-executive has no incentivised interest, i.e. not in receipt of short-term bonus or long-term incentive, with their DRIP profile limited to the salary and ownership income components. Making the distinction between the independent and incentivised chair and non-executive has an impact on the composition of the datasets.

For the DRIP and REMPER analysis two datasets are formulated, the full dataset (with all directors) and the reduced (all directors minus the incentivised chair and non-executive directors), to reflect the differences in director definitions.

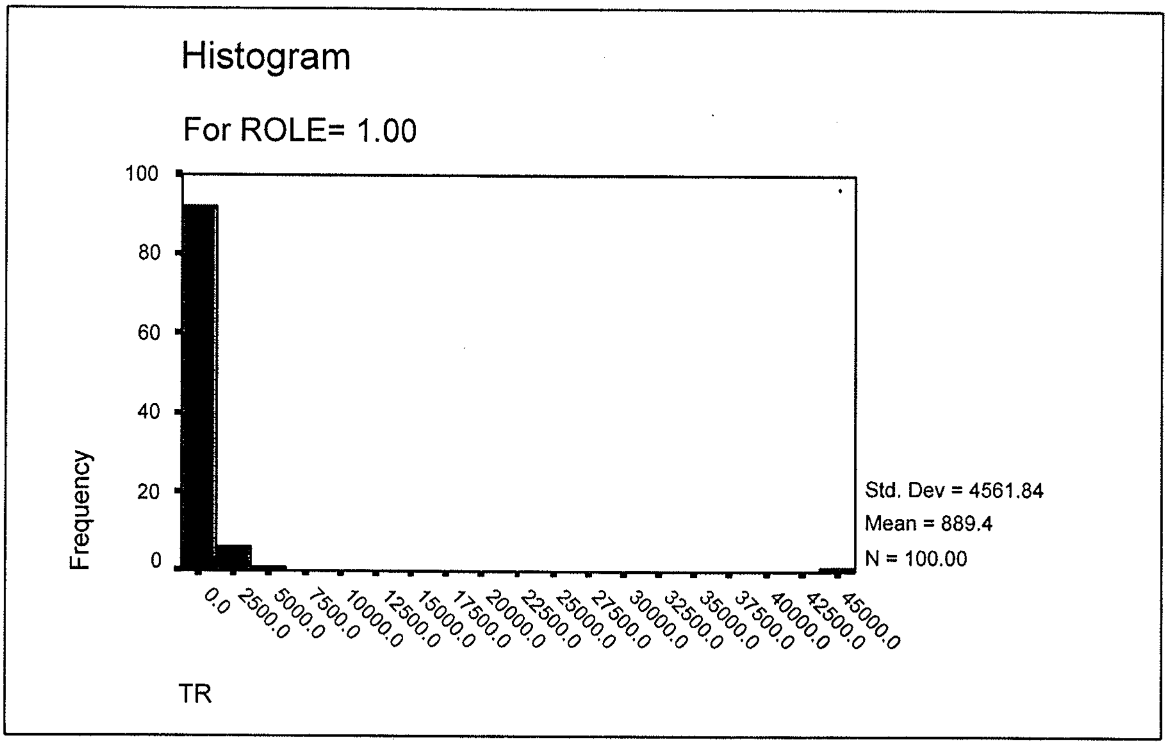
In the chair's group, there are some directors with DRIP components that have extreme values. These are called, in statistical terms, outliers and they are also present in other director distributions. Such outliers are often highlighted by their total DRIP, an example of which is shown in an extract of table 4.1:

Extract from table 4.1: Top Chairs by total DRIP (over one million)

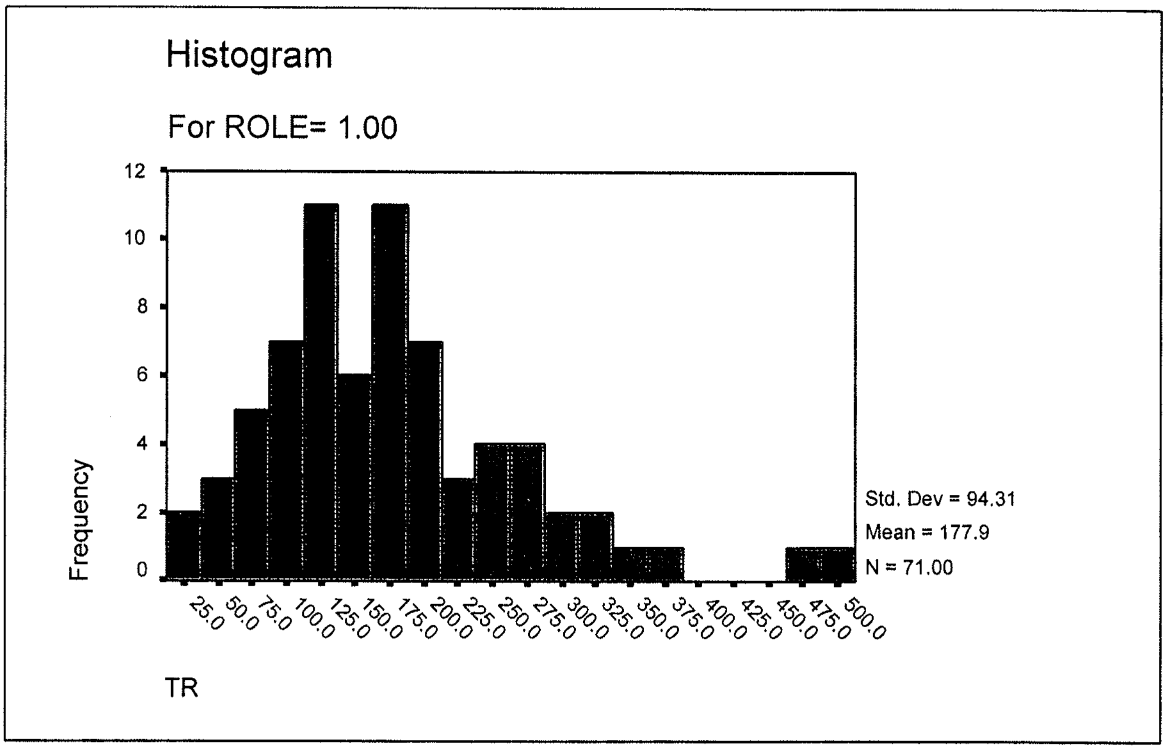
COMPANY	EXECUTIVE NAME	SALARY	STB	LTI	OI	TR
RTZ	WILSON	635.00	381.00	8.57	20.60	1045.18
MARKS AND SPENCER	SIR GREENBURY	803.00	0.00	242.00	7.73	1052.73
UNILEVER	FITZGERALD	600.00	240.00	224.92	2.37	1067.28
P&O	LORD STERLING	577.00	223.00	0.00	439.85	1239.85
UNITED NEWS AND MEDIA	LORD STEVENS	262.50	0.00	878.47	99.24	1240.21
BRITISH TELECOM	SIR VALLANCE	500.00	325.00	415.00	49.49	1289.49
SHELL	MOODY STUART	491.72	141.75	767.88	37.39	1438.74
GRANADA	ALLEN	750.00	773.00	0.00	5.57	1528.57
MORRISON	MORRISON	296.00	16.00	0.00	1405.04	1717.04
TOMKINS	HUTCHINGS	950.00	645.00	309.00	1010.27	2914.27
BRITISH AEROSPACE	KIRK	53.00	0.00	3263.20	0.06	3316.26
WILLIAM HOLDINGS	SIR RUDD	764.00	0.00	212.59	4061.89	5038.48
SAINSBURY	SAINSBURY	310.00	131.00	0.00	45072.80	45513.80

The two histograms below show the total DRIP for chairs in the full and reduced datasets, which contrast the difference between the two distributions:

Histogram of the Full Dataset of Chair 1998 Total DRIP

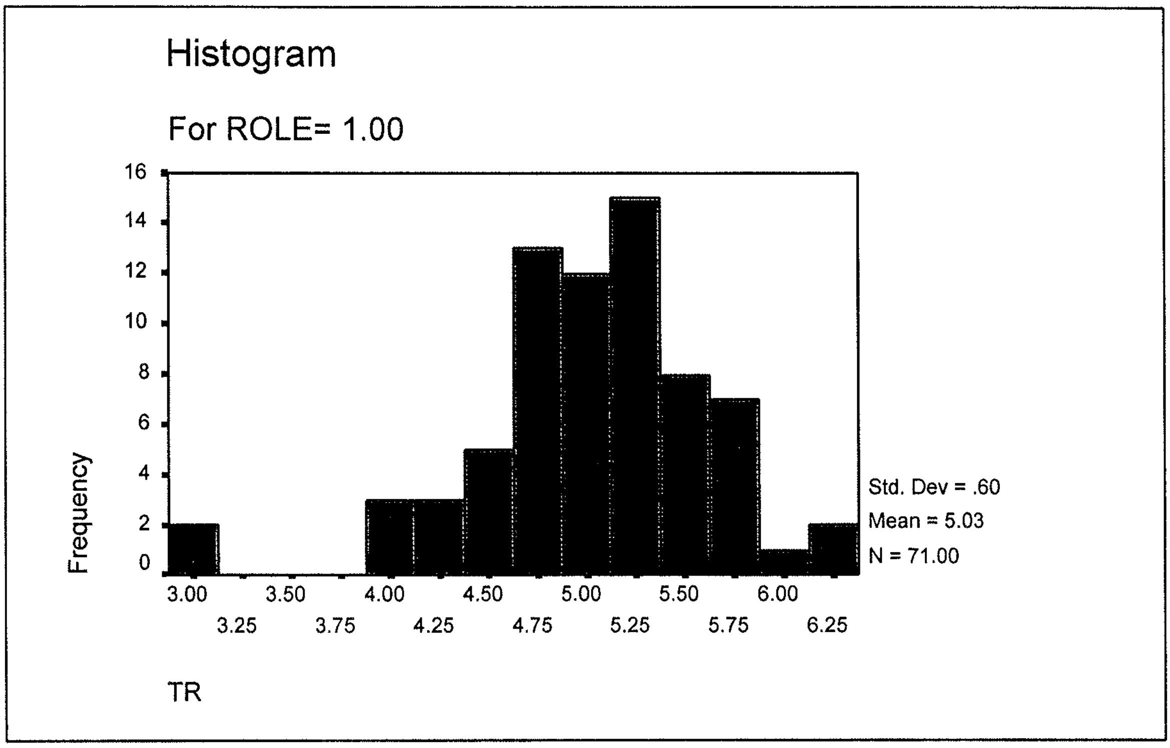


Histogram of the Reduced Dataset of Chair 1998 Total DRIP



The exclusion of the incentivised chairs reduces the range, scale and the shape of the distribution. The histogram for the reduced logarithmic dataset reveals a more normal distribution, shown below:

The Logarithmic Reduced Dataset Histogram

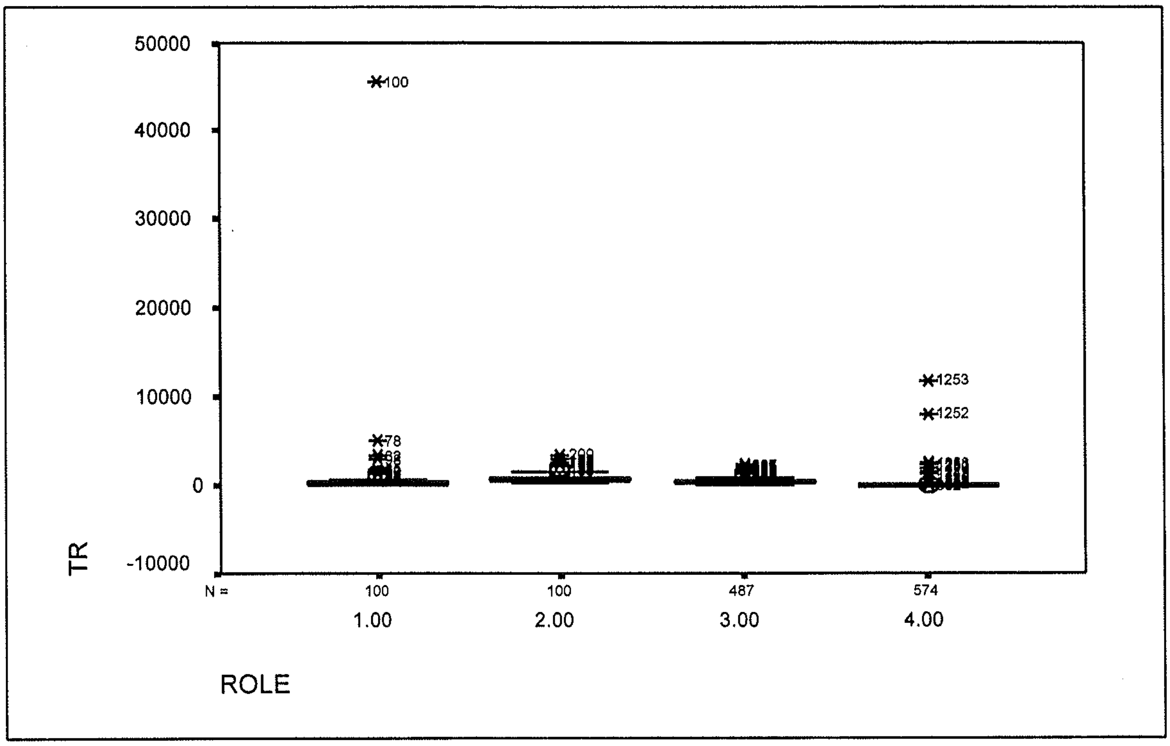


Often these extreme totals are explained by a single extreme component in either the salary (SAL), short-term bonus (STB), long-term incentive (LTI) or ownership income (OI). This is particularly true of members of the chair and non-executive director groups' dataset distributions, who possess some extreme DRIP component values, when compared to the other directors in their group. In all director groups there are individual directors who skew the data and this impacts on the kurtosis of their director group's distribution, but it is a question of degree. This raises the question of whether, and to what extent, these extremes are representative of their dataset and if not as outliers, how they might be treated. By the exclusion of these extremes, a distribution would often move closer to the shape of a symmetrical normal distribution, but this exclusion must be undertaken on clear and appropriate criteria. The majority of the CEO and executive director groups' DRIP component distributions are more approximate to the normal distribution than the chair and non-executive groups. This is indicated by the distribution descriptive statistics of skewness and kurtosis, which were influenced by the presence of outliers. This can be seen when comparing full, reduced and logarithmic reduced box-plots of the four director groups shown over the page.

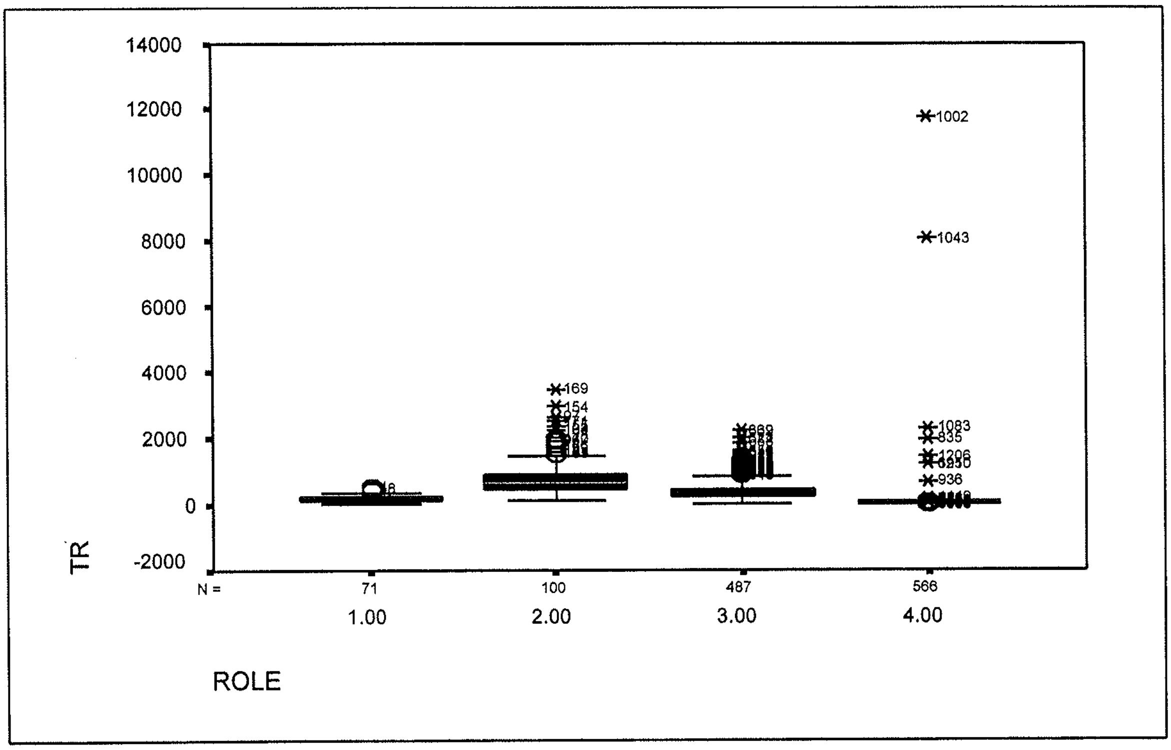
In examining the top DRIP total recipients of the chair and non-executive directors shown in table 4.1, 4.2 and 4.3 (chairs) and table 4.6 (non-executive directors) (see Appendix 1), there is clear evidence of entrepreneuralism. This is indicated by the presence of incentive income (in the form of short-term bonus and long-term incentive) of 'incentivised' chairs and non-executive directors in their groups' distribution. Tables 4.4 and 4.5 show the high ranked DRIP CEOs and executive directors at the highest level of remuneration of each director group.

From the exploration of this data it was identified that, within the chair and non-executive director groups, two subsets exist, an independent and incentivised type of director. Their DRIPs are very different with the incentivised directors often being identified as outliers in their director distribution. So there are three definitions of the director population dataset - the full all directors' dataset, the reduced uniform pure dataset (all directors without incentivised chairs and non-executives) and the selective incentivised director dataset.

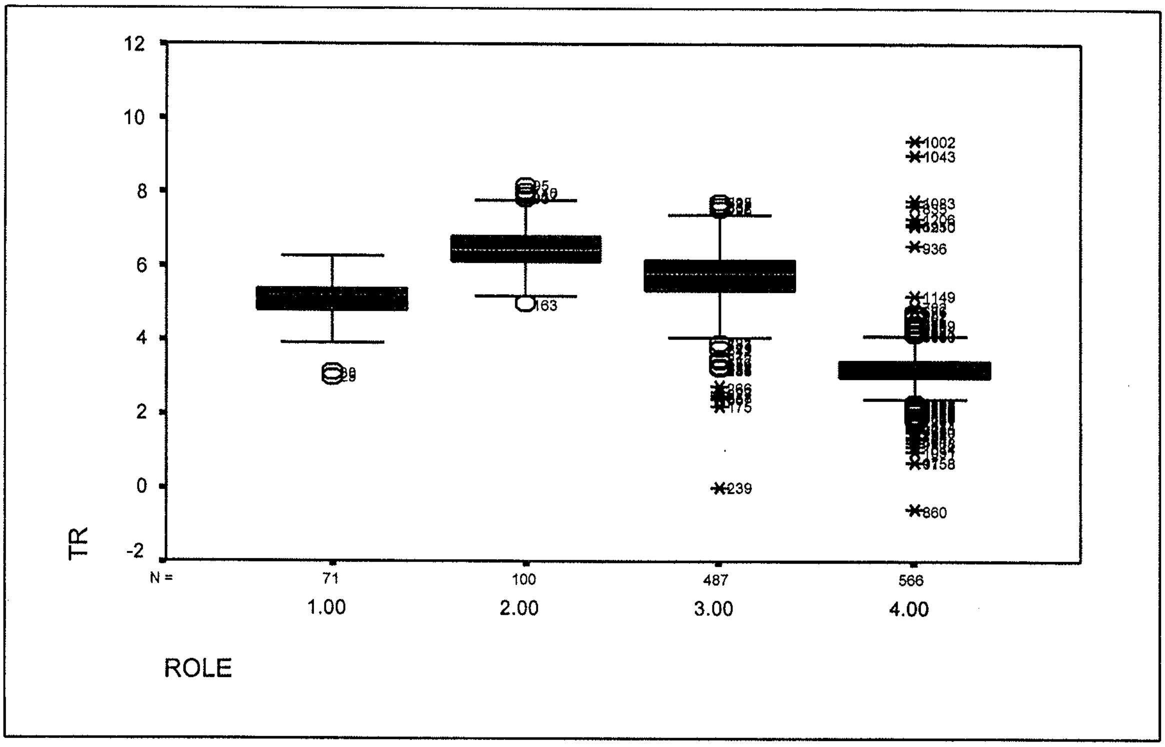
Boxplot of the Total DRIP of the Director Groups of the Full Absolute Dataset 1998



Boxplot of the Total DRIP of the Director Groups of the Reduced Absolute Dataset 1998



Boxplot of the Total DRIP of the Director Groups of the Reduced Logarithmic Dataset 1998



4.3.2 DRIP Analysis: Division of UK Board of Directors into Four Director Groups

The consideration of each year's dataset consisting of all the directors as one group would not be a useful exercise, as it violates the concept of using a clear, uniform and appropriate definition. The concept of a director, like that of executive, is that it can encompass a number of potential different data populations[6] (a shortcoming of many previous studies). This research identifies four different director groups (chair, CEO, executive directors and non-executive directors) within the board, with each group represented by their own DRIP profiles. Thus the approach adopted was to consider each director group as a separate population dataset for each of the three years (1996, 1997 and 1998).

Viewing these four director group distributions in graphical and statistical form enables identification of some features of the distribution in order to obtain an overview of the characteristics of each director group. Hair[198] describes this process as 'examining your data' and 'getting close to the data'. Each DRIP component is examined on three numerical bases: firstly, an absolute monetary basis, secondly, the absolute monetary base was transformed to a logarithmic basis and finally a percentage basis. This provides different views and perspectives of the data, which needs to be considered for each director subset. The visual representation of this data and its distribution is presented in graphical form in figures 4.1-4.7 (see Appendix 1), on an absolute monetary basis for 1998, as a prelude to the more detailed statistical analysis undertaken later in Chapter Five. In figure 4.1, the chair's group is listed in director total DRIP order. This data resulted in a multi-spiked diagram because each director's profile had different proportions of the four DRIP components in their portfolio, and these are listed in ascending order of total director DRIP. In figures 4.2-4.7, the four director groups of the 1998 dataset population DRIP were measured in monetary income, with each DRIP component displayed in ascending rank order by director's group, indicating the range of practice. Some distinctive characteristics are revealed in each of the four director groups. In some groups, chairs and non-executives, there were a few cases of extreme DRIP totals that were not representative of their director subsets and may be considered as dataset outliers. They are often part of a different director dataset distribution, i.e. an incentivised director in a predominately independent director group. In contrast, the other groups (CEOs and executive directors) reflect a more normal distribution. The shape of these distributions raises some key questions as to why the extremes are present.

In the chair's group in figure 4.2 there was a very significant high spike in the distribution present (all 100 chairs are included). This was represented by a number of extreme outlier DRIP profiles, located in the last few cases of the chair dataset. If these extremes are excluded, as in figure 4.3 (pure chairs only, with the incentivised chairs excluded), the dataset more closely approximates to a normal distribution. The exclusion of these 29 incentivised chairs (40 in 1997 and 42 in 1996) was conducted on the basis of them not being part of the same population due to the receipt of incentive remuneration. Specifically, they are in receipt of short-term bonus and long-term incentive and are, therefore, incentivised chairs. In figure 4.4, the CEO group reflected a more normal distribution in its range of DRIP profile and without the same degree of extreme outlier cases. In figure 4.5 the executive directors reveal a similar profile to that of the CEO group. In figure 4.6 and 4.7 the non-executive directors have their own extreme cases as in the chair director group. These extremes are excluded on the same basis as the chairs' group, i.e. the receipt of short-term bonus and long-term incentive, making them incentivised non-executives. In 1998 there were 8 incentivised non-executives in this group (16 in 1997 and 12 in 1996). A normal outlier is a case whose value is one and a half times the inter-quartile range (the distance in range from the upper or lower quartile position of a normal distribution). If it were three times this range, it would be defined as an extreme outlier. The reason for this position is often due to one component in their DRIP that marks them apart from their director group peers.

4.4 Proposed DRIP Analysis: by Director Group of the Full and Reduced Dataset

The use of the mean average for each component of DRIP provides a starting point for the analysis. It is one of a range of descriptive statistics that measure and provide an insight into the nature of the four director group distributions. Additional descriptive statistics include other averages (median and mode) as measures of central tendency, dispersion and distribution diagnostics of the normal distribution properties. These are displayed in chapter 5 in tables 5.1 to 5.6 (see Appendix 1). In table 5.1 these are displayed on an absolute monetary basis for the all director full dataset, in table 5.2 the absolute monetary reduced dataset, in table 5.3 logarithmic basis of the full dataset and in table 5.4 on a logarithmic basis of the pure uniform reduced dataset. In table 5.5 the percentage of DRIP for each remuneration component is identified in the full dataset and in 5.6 the same but for the reduced dataset.

These measures provide an insight into the components of the director DRIP distributions, the degree to which they meet the conditions of normality and, in turn, enables an ANOVA analysis to take place. Of particular interest are the skewness and kurtosis measures, which reflect the nature of the distribution and indicates the degree of conformity to the normal distribution. ANOVA analysis allows a comparison of the differences within and between the four director groups for each DRIP component. In so doing, it can determine whether the director groups of the board possess the same DRIP profile. The results of the ANOVA analysis are tabulated in Table 5.8.

To demonstrate the differences in the three definitions of the types of director dataset (full all directors, reduced and selective incentivised datasets) within the four director groups, an examination of table 5.7 shows the differences in the descriptive statistics between these groups particularly the mean averages. These distinctions are particularly important because of their impact on the chair and non-executive groups. Table 5.7 seeks to demonstrate the differences between the three definitions within these groups - all directors, independent directors (receiving no incentive remuneration) and incentivised directors (those receiving incentive remuneration). A comparison of the mean averages shows the differences between the three different director data subsets, highlighting the differences of director definition. By dividing the all director's dataset group into independent and incentivised subsets, the level of mean average and their distributions look quite different and more normal, indicated by the skewness and kurtosis measures. Under these improved conditions of normality, it is more conducive to undertake an ANOVA analysis.

4.5 REMPER Analysis: An Overview

The purpose of this section is to outline the issues to be addressed when formulating the regression models for each DRIP component; the objective being to find the highest level of explanatory power, subject to statistical robustness and validity. These challenges arise due to the presence of statistical issues of normality, multi-collinearity, heteroscedascity, use of R^2 or adjusted R^2, methodological development, selection of independent performance variables, stepwise method, scatter of distribution and residual outliers.

The aim of the REMPER analysis was to address research question two, which was concerned with the relationship of remuneration (REM-DRIP component) and performance (PER-financial metrics):

"In the top UK PLCs' boards in 1996, 1997 and 1998, were the DRIP components linked to performance measures in the four director groups"?

4.6 Issues in REMPER Analysis: Robustness Procedures and Tests

The results of the statistical analysis of both DRIP and REMPER models are based on certain assumptions, because the nature and characteristics of the distributions often challenge the validity of the results. In the DRIP analysis there were a number of distributions that challenge the normality assumptions and these were expressed in their skewness and kurtosis measures. These indicate that the degree of non-normality in the distribution, and its deviation from this, depend on the appropriateness of applying ANOVA analysis. The same assumptions are made in conducting REMPER analysis.

4.6.1 Model Formulation

In examining the literature concerned with the design of a research strategy and model formation there seems no clear way of building an ideal or best model, other than the use of good judgement supported by theory and literature. Wetherill[199] points to a large selection of literature on methods of choosing a regression model, but notes:

> "there is little guidance on what to do in a specific case".
>
> Wetherill (1986)

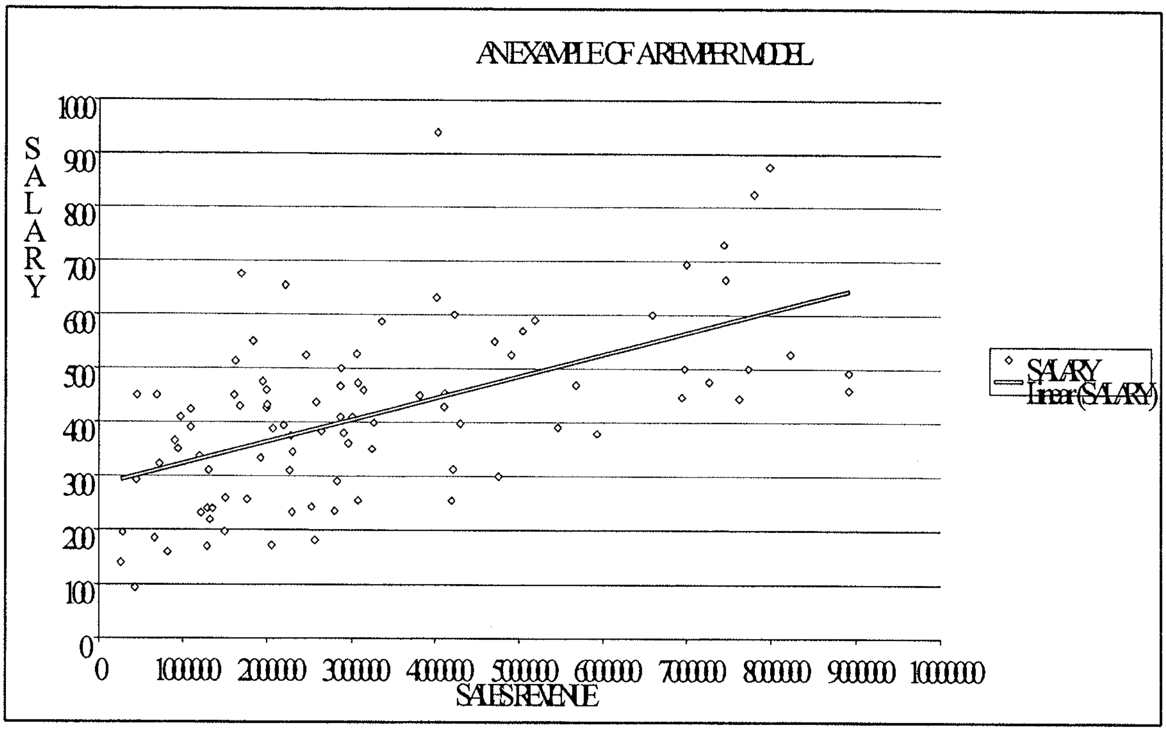
Henderson and Vellman[200] give examples of where automated methods may be used, but with the caveat that this should not be to the detriment of well thought out theory in the model application. This seems particularly appropriate here. A feature of past REMPER studies is the low explanatory power when using single variable models. The selection of multivariate models holds the potential power for seeking higher levels of explanatory power and may potentially better reflect practice. The variables in the multivariate models use the same literature as single variable models and are, therefore, supported by the same theoretical underpinnings. The use of multivariate models represents a clear methodological development of the statistical method, moving from a single variable model in a smooth transition to a newer methodological paradigm. This is in contrast to a sudden change of paradigm that has been characterised by other disciplines, e.g. in science, as with the change from Leonardian to Newtonian physics and then to Einsteinium physics. This has the advantage of being supported by the same theoretical base as the single models. However, multivariate models bring different challenges particularly multi-collinearity, multi-model selection and the model's constituent variables.

Wetherill points to the problem of 'under fitting' and 'over fitting' models with variables, also recognised by Hair[198] and Marajis in SPSS V9[197]. 'underfitting', a single or one variable is used to predict practice, being myopic in explanatory power and characterised by many studies. In 'overfitting', all variables that might be relevant are included. This often suffers from multi-collinearity, e.g. in a twelve variable stepwise current and in a lagged model specification where current and inter-year variables are highly inter-correlated, the adoption of rules and criteria for variable selection being particularly important for the formulation of a model.

Hair[198] suggests a number of stages in model formulation, which is reflected in the study's four stage procedures. The first stage is to bring together the range of independent performance variables from the literature and assemble them into a regression model that has good explanatory power, but high multi-collinearity. In stage two, using the correlation matrix, the twelve independent performance variables are compared using their co-efficient of correlation. The highest correlated variable from each of the four financial metric groups are included in the restricted four variable model and those that are highly inter-correlated are excluded. At stage three, these variables are included in the current year's restricted four variable model. The output statistical results, including adjusted R^2, provides a basis to select the most explanatory model from lagged restricted models at stage four.

This study uses adjusted R^2, rather than R^2, because of the upward bias of R^2, but many studies use the R^2 without making this underlying reservation. The voluminous statistical analytical output procedures and tests undertaken by SPSS (version 9) for the three years of the study (1996, 1997, 1998) has been edited into summary tables 5.9 – 5.11 (see Appendix 1). These results may be used to formulate models to view and comment on remuneration practice.

Using this analysis it provides a view on the utility of the model, its degree of explanatory power, and an example of such a model is included overleaf. The director cases (datapoints) may be plotted in a scatter-graph and a line of best fit to show the relationship between the remuneration and performance measures. This identifies the range of differences between the theory of the model, indicated by the datapoints in a scatter diagram, and the nature of this relationship in the form of a least squares line of best fit. These differences can be expressed in absolute value terms or by adopting standardised residual measures that indicate the range of deviation from the indicated values of the model.



A comparison between predicted values from the model and actual values, provides an opportunity to compare theory (from the model) and practice. Ideally, the theory of the model should provide utility to inform practice. However, the analysis revealed a substantial range of practice and the range of data point values from such practice highlights the range of case deviation from the distribution mean average and line of best fit. These residual outlier values in the model can be seen from the scatter-plot of the directors' actual remuneration values.

4.6.2 Normal Distribution Assumptions

The concerns that the distribution may not meet the normality conditions in this study are addressed by the transformation to a logarithmic base. In this base the skewness and kurtosis measures are well within the bounds of normality. Not withstanding this, in the absolute and percentage numerical base distributions, the skewness and kurtosis measures are reported in raw data values. If transformed to a standardised score the majority of these distributions show measures that would be within the limits suggested by Hair[198] (see page 73) at +/- 2.58 at the 1% level of significance. Only those with the most extreme values in the absolute and percentage base distributions would be outside of these parameters. The logarithmic basis accommodates the challenge of scale and provides the basis on which to conduct ANOVA, with the other bases being reported to provide a comparison. Outliers and residuals still represent some challenge and, again, this was accommodated in the logarithmic transformation, but they did not influence the results substantially. Although there is some inequality of variances, this does not undermine the underlying assumption of normality. The results of the reduced logarithmic DRIP analysis meet the most robust tests of these assumptions and its results provide the strongest evidence for addressing the research questions and their hypotheses.

In preliminary REMPER analysis of the datasets, it was identified that there were some presence of multi-collinearity, heteroscedascity, possible lagged effects and influential outlier cases present. In order to address these challenges to the analysis, a number of procedures were undertaken.

4.6.3 Multi-collinearity

Multi-collinearity is a problem when there are two or more independent variables that are highly inter-correlated. The SPSS outputs from the REMPER models include the correlation matrix. This reveals the range and degree to which independent performance variables are inter-correlated. Multi-collinearity is a challenge faced by many researchers who undertake studies in a wide range of disciplines, but particularly in accounting, finance and economics[190], who share an interest in director remuneration as part of their 'academic reach' as a subject. The problem is endemic and widespread in this kind of research, but it is recognised and, where possible, actions are undertaken to ameliorate this challenge to the validity of research outcomes. Kenkel[196] notes:

> "The multi-collinearity problem is especially troublesome when estimating macro-econometric economic models, because most aggregate economic variables tend to move relatively closely together".
>
> Kenkel (1998)

This concern cannot be eradicated but can be addressed by limiting its impact using an appropriate research design with sound statistical procedures (transformation) and the monitoring of the impact of results using diagnostic statistics.

In stage one of the model, the selection of the performance group variables was conducted by selecting the highest correlation co-efficient in each of the financial metric groups. The selection of each successive variable from the correlation matrix, encounters the problem of selecting inter-correlated variables. So, there is a need to set a level of multi-collinearity that is sufficient to exclude variables that are highly inter-correlated, but not to include all. Bryman and Cramer[204] suggest 0.8 as an appropriate level, however, this is a very high threshold and would be a very stiff test of inter-collinearity. In contrast, Siegel[201] suggests that inter-collinearity of 0.647 is not high enough to present a serious numerical problem, so some way between these two seems an appropriate level to provide an acceptable threshold. During informal doctoral conference discussions on this issue, Makradkis[205] (research professor at INSEAD) confirmed that 0.7 is an appropriate threshold for contemporary studies. This reflects current thinking and is a middle position between Bryman-Cramer and Siegel, and as a result a 0.7 rule for the exclusion of inter-correlated variables was adopted at stage two of the model building process.

At stage two, multi-collinearity procedures ensure that no variable in the restricted model experiences the same problem. In stage three, the four individual variables with the highest level of association were drawn from each of the four performance groups. These were combined into a stage three restricted four variable stepwise model. The output of this procedure is the model's summary regression statistics, the R^2 and adjusted R^2, which give expression to the level of explanatory power in the model. Throughout the regression analysis the stage three stepwise model provides a single best model from a range of lagged year models. Use of the Marquandt[202] VIF factor of ten in model output at stage three and four further ensures the maintenance of minimum level of multi-collinearity.

4.6.4 Heteroscedascity

Heteroscedascity is where the error terms of random variables in a distribution do not have the same variance, hence the expression 'inequality of variance', indicated by the 'spread' of data items in a REMPER model. Substantial deviation from this presents a particular challenge to the validity of the model. The transformation to the logarithmic model, as suggested in SPSS V9 (page 59 in SPSS User Guide-Advanced Statistics) states that this transformation does address and limit the impact of multi-collinearity and heteroscedascity. The remedy to these 'challenges' is to transform the data into a logarithmic base scale, a view supported by Hair[198] and Maddala[190] who label such challenges as 'problems of the empirical zoo'. Kenkel[196] recognises that heteroscedascity tends to be prevalent in the same circumstances, particularly at the extremes of distributions.

4.6.5 Future Methodological Development

Maddala[190] indicates that there are other methods to address the issues of heteroscedascity and multi-collinearity. For heteroscedascity, Maddala suggests two approaches: solutions about particular assumptions (weighted least squares and maximum likelihood) and general solutions (deflating the scale of variables by some size factor or transforming to logarithmic scale). Maddala[190] offers solutions for multi-collinearity by employing ridge regression, principal component analysis, ratio and first difference or the use of extraneous estimates. These solutions may be potential future areas for methodological development, but are not represented in the existing literature. The selection of a multivariate model provided the most appropriate method to meet the objective of high explanatory power and represents an extension to the present paradigm of single variable models.

4.6.6 Independent Performance Variables

Typically, other authors in the literature have sought to advance the case for the superiority of their own selected performance variables and the appropriateness for them to view remuneration practice. This study embraces the majority of performance measures represented in the literature and classifies them into their performance measure metric groups. The process filters the highest explanatory variable from each metric group and then includes them in the stage three and four stepwise procedure.

4.6.7 Stepwise Method and Explanatory Power - R^2 or Adjusted R^2

The stepwise model in various forms (forward and backwards) selects the most explanatory variables in a model to identify its explanatory power in the form of R^2 and adjusted R^2. If it is a stepwise forward, the model selects the most explanatory variable from the pool of independent variables, and the model expresses its explanatory power in the form of R^2 and adjusted R^2. It then adds the second most explanatory variable to give a combined explanatory power of the model. It then continues to add other variables with the objective of seeking higher explanatory power. If the backward method is used it includes all the selected variables and then excludes each of the independent variables incrementally, with the least powerful variable first. Here, the incremental change and the model's power can be ascertained.

The more variables that are included in the model usually results in a higher level of explanatory power, expressed in a R^2, but this is not always the case because on some occasions fewer variables provide the most explanatory power in the form of an adjusted R^2. This has occurred quite often when examining the SPSS analysis output from this study, allowing a clearer identification of the most influential performance drivers of the DRIP component for a director group. Often, by adding one more variable increases the R^2, but the adjusted R^2 can be greater for less, or even a single variable model can be superior to a multivariate model. This is because the adjusted R^2 is subject to the influence of a number of variables and items in the dataset (SPSS Version 9 Advanced Statistics, page 197) and this is why the adjusted R^2 is used in this study in preference to the 'raw' R^2, which has an upward bias[197].

One debate present in the literature has focused on the existence of a time lag between remuneration and the performance measured in years. The literature provides no clear view on what this might be, thus, an objective of the regression method was to find the model with the highest adjusted R^2 over the period.

4.6.8 The Dataset: Outliers and Residuals

Within the full and reduced datasets there are outliers and their treatment is important to the subsequent analysis. In the literature it is apparent that many researchers have used randomly selected datasets rather than a fixed defined dataset, as in this study. In this study, the director cases for all 100 companies are included and only in the last stage in the analysis are outlier cases considered for exclusion on clear criteria, e.g. financial size. This represents challenges for data analysis in outlier case values or residuals, reflected in terms of leverage and distance measures. In graphical analysis and statistical measures these cases are highlighted. These residuals and outliers represent part of the remuneration practice, and are not just representative of the data population, they are the dataset population, with no opportunity of selecting an alternative sample. In Checkland[203] terms they are part of the 'rich picture' of remuneration practice and an 'integral part of this dataset'. In the literature, outliers are noted as being influential but no guide is given as to their treatment implying neither their inclusion nor exclusion.

The broad range of models provides frameworks based on practice with explanatory power which have utility for policy makers. The models may not be as robust as models in other areas of study because they suffer from the dataset dilemmas outlined above. Additional analysis, not reported in this work, indicates the inclusion or exclusion of outliers in a model (a key issue, not alluded to in the literature) does not substantially influence the outcome.

Often it is the outliers that provide the source of inspiration for headlines in published media, while not commenting on the overwhelming number of other cases. These outliers provide examples of good and bad practice in remuneration policy, the good reflecting examples of good performance, the bad where the case may have difficulty in justifying their remuneration.

4.6.9 Scope of Proposed REMPER analysis

The analysis of the remuneration–performance (REMPER) models was conducted for the absolute and logarithmic reduced datasets. This is undertaken because the full dataset includes the mis-specification of a number of directors in the chair and non-executive director groups, necessitating the use of the more consistent and robust pure reduced dataset. The REMPER analysis is also informed by the DRIP analysis, in that not all of the matrix of the director group and DRIP components are relevant to such analysis. The short-term bonus and long-term incentive of some independent chairs and non-executives is nil or zero. The ownership income DRIP component for all director groups was found to be very clustered and in a narrow range of values. An initial analysis at stage one (which is not included in this research) revealed a very poor level of association with all selected performance variables and a regression analysis would be of limited value in terms of explanatory power.

So the REMPER regression analysis focuses on the relevant director groups, all directors for salary and only the CEO and executive directors for incentive remuneration. Data items were selected on a pair-wise basis for both the absolute and logarithmic datasets so that they were consistent over the two regression models. This is in preference to list-wise, which requires all data items to be present in all of the relevant data variables for the analysis to be undertaken, which substantially restricts the range of the analysis. For the most important dimensions of this research the analysis does not call for this requirement and hence it is an unnecessary constraint, particularly for the logarithmic dataset. The facility of accommodating and embracing a larger number of items in the dataset has the advantage of more statistical robustness. Undertaking the transformation from the absolute to the logarithmic scale provides a particular data difficulty, in that the logarithmic transformation has a problem with noughts and nil as a value. If a list-wise approach were to be adopted in the logarithmic reduced dataset, it would substantially reduce the size of the dataset.

The consideration of the absolute reduced model provides a starting point to the identification of the most explanatory independent variable for REMPER models for individual DRIP components in relevant director groups. The pursuit of good levels of association (correlation co–efficent) was undertaken before seeking a level of explanatory power through the R^2 and adjusted R^2 at stage three and four. The exploration of different forms of data relationships was undertaken and the logarithmic transformation was selected for two reasons. Firstly, the initial analysis of different forms of relationship indicates that logarithmic transformation provided the highest levels of association and this infers a higher explanatory power. Secondly, many previous researchers have used this transformation to seek higher levels of association and embrace the largest number of companies in their dataset.

The remuneration-performance relationship is considered for the salary for all four directors groups and for short-term bonus and long-term incentive for the CEO and executive directors, as shown in the REMPER reduced matrix below with their dataset populations for 1998. The ownership income is excluded from the analysis, along with short-term bonus and long-term incentive for chairs and non-executive directors as they do not receive these. The ownership income is excluded for two reasons. Firstly, it was not seen to be different between the DRIP profiles of the four director groups. Secondly, the initial analysis found that the levels of association and explanatory power were found to be low.

REMPER Reduced Matrix 1998:

IND = Independent Directors and INC = Incentivised Directors

REMPER 1998 (Reduced)	**CHAIR**	**CEO**	**ED**	**ND**
REMUNERATION				
SALARY	IND-71	INC-100	INC-487	IND-566
STB		INC-100	INC-487	
LTI		INC-100	INC-487	

The determination of the best model measured by its adjusted R^2 is the aim of the REMPER regression analysis, which provides a means to address research question two. This is expressed in terms of the level of explanatory power, the importance of each performance driver of the model and its validity in application to remuneration policy in theory and practice.

4.7 Proposed REMPER Method

4.7.1 REMPER Method: An Overview

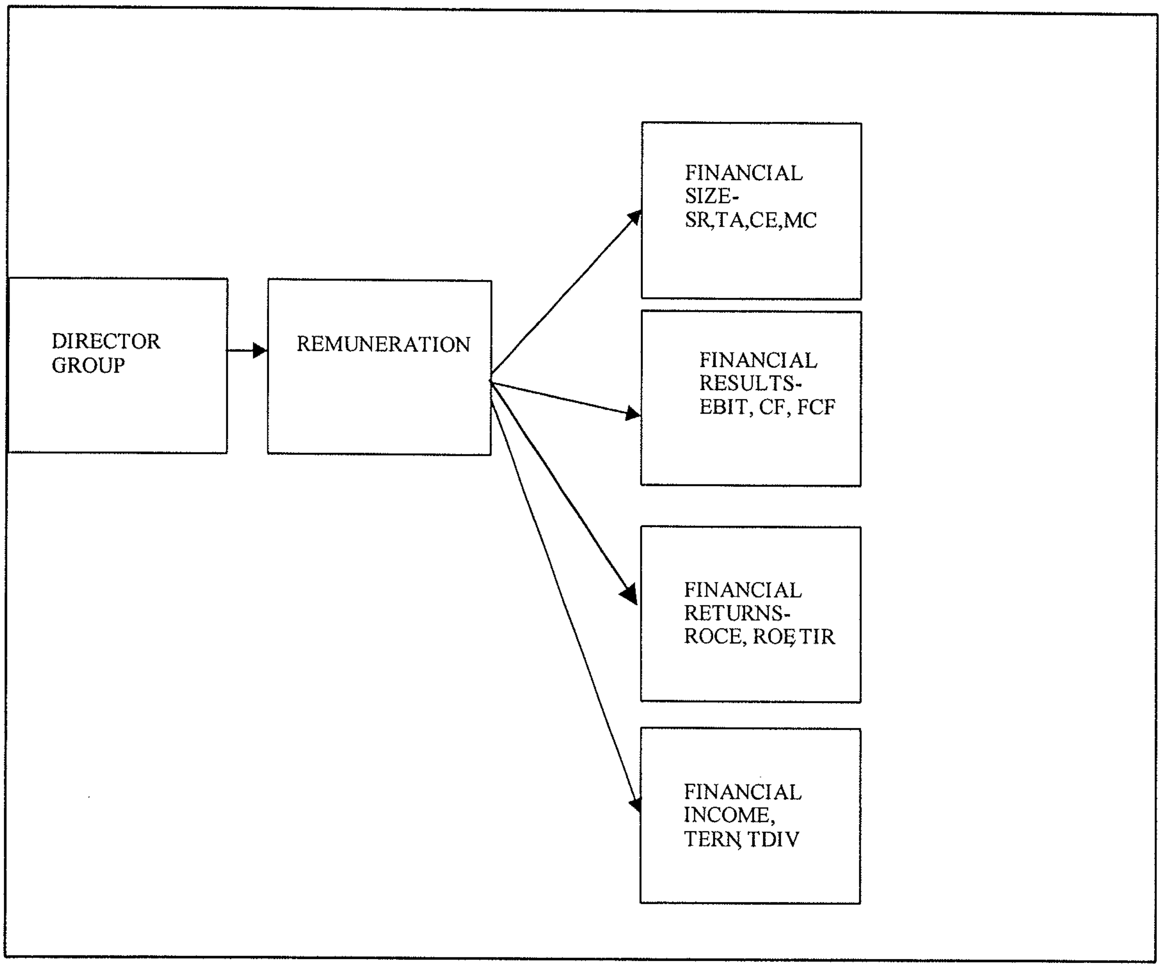
In chapter three, the research methodology identified the remuneration component (REM) variables of DRIP and the performance variables (PER) for the REMPER models. These concepts are tabulated and shown in table 4.9 below:

Table 4.9: REMPER Model Variables: Independent Remuneration (REM) and Performance (PER) Variables in Financial Metric Groups

REMUNERATION DRIP COMPONENT (REM)	**PERFORMANCE METRIC GROUP (PER GRP)**	**PERFORMANCE INDEPENDENT VARIABLES (PER)**
SALARY (SAL)	FINANCIAL SIZE	SALES REVENUE (SR)
		TOTAL ASSETS (TA)
		CAPITAL EMPLOYED (CE)
		MARKET CAPITALISATION (MC)
SHORT TERM BONUS (STB)	FINANCIAL RESULTS	EARNING BEFORE INTEREST AND TAX (EBIT)
		CASHFLOW (CF)
		FREE CASHFLOW (FCF)
LONG TERM INCENTIVE (STB)	FINANCIAL RETURNS	RETURN ON CAPITAL EMPLOYED (ROCE)
		RETURN ON EQUITY (ROE)
		TOTAL INVESTOR RETURNS (TIR)
OWNERSHIP INCOME (OI)	FINANCIAL INCOME	TOTAL DIVIDENDS (TDIV)
		TOTAL EARNINGS (TERN)

So for each director group's DRIP component a REMPER model is formulated and represented diagrammatically as follows:

Figure 4.9 Diagram of REMPER model



There are a large number of REMPER models formulated for the three years of this study (3), for director groups (4) and the absolute and logarithmic bases (2). This makes a total of 24 models. So, for salary there were 24 models, but for short-term bonus 12, and for long-term incentive 12, because only CEO and executive directors are relevant. This makes a total of 48 models that can be used to apply to director remuneration policy and practice.

4.7.2 The Four Stage Model Formulation Process

A four-stage approach was adopted to address the multi-collinearity and heteroscedascity problems that are endemic in the disciplines of accounting, finance and economics[190] that were eluded to earlier in a previous section. The aim was to formulate a model that provided a framework to help explain remuneration-performance policy, which was not directly concerned with prediction but is a natural application of the model. The objective was to ascertain the most explanatory model for each DRIP component (called 'the best model') for each group of directors in each year and the component independent variables or 'performance drivers' of remuneration in the REMPER models. The interaction of the variables within the formulated model provided an important insight into these REMPER relationships and this is elaborated in Figure 4.9.

The formulation of the REMPER models was undertaken in four stages. In stage one a full current year twelve independent variable regression model was formulated to find R^2, adjusted R^2 and other model output, including diagnostic statistics. This output included the correlation matrix that identified the co-efficient of correlation of the dependent variable (remuneration) with its independent variables (performance). The twelve independent performance variables were classified into four groups of financial metrics (financial size, financial results, financial returns and financial income). The objective at stage two was to identify the independent variable from each metric group that displayed the highest level of association with the selected DRIP component from the correlation matrix. The full, current year, twelve variable model was formulated and its explanatory power was expressed in terms of the R^2 and adjusted R^2. This model overlooked the problem of multi-collinearity between the independent variables, which is a data rather than a statistical problem, which is an important issue encountered by all studies in the area. The problem of multi-collinearity is an important one and was addressed by procedures employed in this research design. In short, the twelve-variable model has high explanatory power but suffers from high multi-collinearity, reflected in the variance inflation factors (VIF).

The issue of multi-collinearity in the full twelve variable model necessitated the reduction of the number of variables into the restricted model. This model selected the variable with the highest level of association with the dependent performance variable from each financial metric group. Each new variable would be selected and included in the model on the basis that an existing included variable was not inter-correlated with any other variable greater than 0.7. This was deemed to be the minimum tolerable threshold for inter-variable collinearity, based on the research work and suggestions by Bryman and Cramer[204], Siegel[201] and Makradakis[205]. If such a variable met this condition it would be included, but if it violated this condition the next metric group variable would be eligible on the same criteria until the model was complete.

In the restricted model formulation process, the variable with the highest correlation was not always included, due to the multi-collinearity exclusion rule of 0.7 with other variables in the model. In such cases the next highest variable would be included. This would be undertaken until the criteria were fulfilled for each metric group and the model. If no variable met the criteria, it would result in a reduced restricted model of less than four variables. As a further check on the presence of multi-collinearity in the final model output (see Table 5.11), the variance inflation factor (VIF) was employed to ensure that no variable exceeded a value of ten. Marguandt[202] suggests this as a further check for the presence of multi-collinearity, which is in contrast to Hair[198] and Marajis[197] who suggest levels of fifteen and even up to thirty.

Table 5.9 (see Appendix 1) summarises the results from the full twelve and restricted four variable model's results. The model's utility involved a trade-off between explanatory power and multi-collinearity. A compromise between these two concepts needs to be accommodated in model selection in order preserve the stability, robustness and validity of the selected model. The starting point in formulating a REMPER model was the adoption of a current year restricted model, where the remuneration for the current year can be compared to the performance variables from their financial metrics group of the current year. This current year restricted model would be free from substantial multi-collinearity and within VIF thresholds outlined in the previous paragraph. The model's independent variables and their contribution to explaining the DRIP component is assessed by the SPSS' regression facility, which provides the model summary's output in the form of the standardised co-efficient t and p statistics. This allows the analysis to consider the influence of the component variables labelled as 'performance drivers' in the selected model.

4.7.3 Types of REMPER model – current and lagged restricted models

A feature of other REMPER studies has been the consideration of time lag between remuneration and performance variables. Most models start with a current year orientation and then lag the performance variables by successive increments of one year. In so doing, an explanatory power is obtained for each successive lagged model. The same approach was adopted in this study, thus if the one-year lagged model found a higher explanatory power, the process continued until the explanatory power reduced. This means that over the range of lagged models, a best model exists within that year which yielded the most explanatory power.

A REMPER model may be formulated using an additive, cumulative or single year lagged basis. The additive model would use the same variables for the original current year model and then combined with the selected lagged year, e.g. 1998 REM with 1998 PER and then 1997 PER and then 1996, i.e. 1998-1998 and 1997 or 1998-1998 and 1996. The cumulative additive model would add each lagged year variables to the base current year, e.g. 1998 REM with 1998 PER and then 1997 PER and then 1996 PER, i.e. 1998-1998 or 1998-1998 and 1997 or 1998-1998 and 1997 and 1996. The problem with this type of model is that it suffers from multi-collinearity of independent variables. Alternatively, if only the lagged year variables of the selected current year variables could be added (1998 REM with 1997 PER or 1998 REM with 1996 PER) it may be described as a single year lagged model and does not suffer the same multi-collinearity problem.

The objective of the model selection process is to achieve a high explanatory power (R^2 and adjusted R^2), while meeting the multi-collinearity threshold criteria of the 0.7 rule and Marquandt VIF of 10 rule.

A substantial amount of exploratory analysis was undertaken using the approaches outlined above. The additive and cumulative additive models of using selected 1998 REM and PER variables only, and adding other lagged years, did, in some cases, yield higher adjusted R^2. But this was at the expense of higher than 10 VIF due to inter-collinearity of independent variables across the lagged years in both single additive and cumulative additive models. By adding a lagged year's variables to the current year variables in many cases triggered a degree of multi-collinearity that was beyond the threshold of either the 0.7 rule and the VIF of ten Marguandt rule. Such formulations of the model would be neither stable nor robust due to multi-collinearity of the variables. So this suggests that the use of single year stand-alone models of current and lagged years would provide most potential for model development. This provides a link with practice, in that policy makers may not consider lag effects but they may explain remuneration practice.

The procedure was to adopt a current year multivariate model restricted model and ascertain its adjusted R^2 to determine which model provided the highest explanatory power. Then a one year lagged model was formulated, its adjusted R^2 ascertained and compared with the previous model. If higher explanatory power resulted, then a further lagged model would be formulated. This would continue until a lesser explanatory power resulted. So only if the lagged year model yielded higher explanatory power than the previous year did the process of extending the length of annual lag in the model formulation process take place. When it declined the process finished and the best model had been found.

Within stand-alone models for some years there were individual independent variables that possessed higher levels of association, but they were components of models that as a whole did not have higher explanatory power. In this study, it is the complete lagged model that is being compared on an annual basis rather than considering composite models made up with variables from different lagged years. These were the subject of extensive investigation, but the results suggest that no consistent policies are evident in practice.

In the specification of the regression model a stepwise approach was adopted in stages three and four of the model. There are reservations in using the stepwise approach identified by McCleave, Benson and Sinich[206], who pointed out the different specifications of stepwise regression computer application packages. This indicates the nature of the stepwise procedure used in the regression model and its influence on model outcomes. Some stepwise models do, on exclusion of a variable, hold it for potential inclusion in future model, while other stepwise models do not. In SPSS version nine the stepwise procedure is based on the latter version, which on being excluded does not make it available for future inclusion, a potential drawback of this facility in SPSS. However, this procedure is only relevant for model selection in the last stages of the model building process where the quest is for explanatory power in the form of a higher adjusted R^2 in a limited range (four) of independent variables at stages three and four.

The adoption of a stepwise model at stages one and two of the twelve variable regression current and lagged model formulation would attract the full weight of this criticism of the procedure at this stage of the research process. But its use in a restricted model at stages three and four becomes more legitimate in its use with a more limited and pre-selected variables inclusion, and this limits the reservations and criticisms of the stepwise procedure.

4.7.4 Summary of the REMPER Four Stage Approach

So, in undertaking the quest for stable and robust models, a current and lagged year model approach was adopted using four stages, rules or decision criteria:

1. Formulation of a Full Current Year twelve variable model; to obtain the adjusted R^2 and correlation matrix.
2. Selection of Variables for inclusion to Restricted Model: from the correlation matrix in metric group selection order and with no inter-collinearity between dependent variables higher than 0.7.
3. In Restricted Current Model: Highest adjusted R^2 within the range of complete annual models and no VIF factor no higher than 10 (Marquardt).
4. The Use of Restricted Current Model: Progressive lagged models to be investigated on a increasing explanatory power basis and the selection of the most explanatory model using a stepwise approach.

This represents the rationale of the research strategy on which the analysis was based and the results reported.

Chapter Five: Results of the Statistical Analysis

5.1 Introduction and Overview of DRIP and REMPER Analysis Results

The results of the analysis of the director remuneration income portfolio (DRIP) and the relationship of remuneration to performance (REMPER) of the four director groups (chair, CEO, executive director and non-executive director) are reported in this chapter. As outlined in Chapter One, the first question posed in this study was concerned with the degree to which directors' DRIPs are the same:

"In the top UK PLC companies' boards in 1996, 1997 and 1998 were the DRIP profiles of the four director groups the same?"

To address this, descriptive statistics and ANOVA were used as this was found to be the most effective method to address the question. Initially, descriptive statistics were used to explore the nature of the datasets, their distributions and then ANOVA was used to address the individual hypothesis for each DRIP component of the four director groups.

In the three years of this study an annual director dataset was used as the basis for the analysis. In each year's dataset some director groups have a sub-set where there are two different types of director. A good example of this was in 1998, shown in figure 5.1, which shows that within the chair and non-executive groups there are two subsets, the independent directors and the incentivised directors.

Figure 5.1: Composition of Full All Directors Dataset 1998 Full Matrix
Key: Independent (IND) and Incentivised (INC) Directors

DRIP 1998 (Full)	CHAIR		CEO	ED	ND	
REMUNERATION						
SALARY	IND-71	INC-29	INC-100	INC-487	INC-8	IND-566
STB	IND-71	INC-29	INC-100	INC-487	INC-8	IND-566
LTI	IND-71	INC-29	INC-100	INC-487	INC-8	IND-566
OI	IND-71	INC-29	INC-100	INC-487	INC-8	IND-566

The analysis of the dataset for all three years was undertaken using two specifications of dataset: firstly the full, which includes all directors in each year, and secondly the reduced dataset, which excludes the incentivised directors of the chair and non-executive director group. The need for two datasets was necessitated by the identification of two different types of director in the chair and non-executive director groups. Within these two groups there are those who are in receipt of short-term bonus or long-term incentive, who are known as 'incentivised' directors, and those who are not, known as 'independent' directors. In the full all-director dataset for 1998, there were 100 chairs, 100 CEOs, 487 executive directors and 574 non-executive directors. The reduced dataset had 29 incentivised chairs (INC), 8 incentivised non-executives (INC) excluded, leaving 71 independent directors (IND) chairs, 566 independent non-executives (IND) remaining. The CEO and executive director groups, by their nature, are all incentivised directors.

Figure 5.2: Composition of Reduced Directors' Dataset 1998 Reduced Matrix:
Key: Independent (IND) and Incentivised (INC) Directors

DRIP 1998 (Reduced)	CHAIR		CEO	ED	ND	
REMUNERATION						
SALARY	IND-71		INC-100	INC-487		IND-566
STB	IND-71		INC-100	INC-487		IND-566
LTI	IND-71		INC-100	INC-487		IND-566
OI	IND-71		INC-100	INC-487		IND-566

5.2 DRIP Analysis Results

5.2.1 Salary (SAL) DRIP Analysis Results

Chair

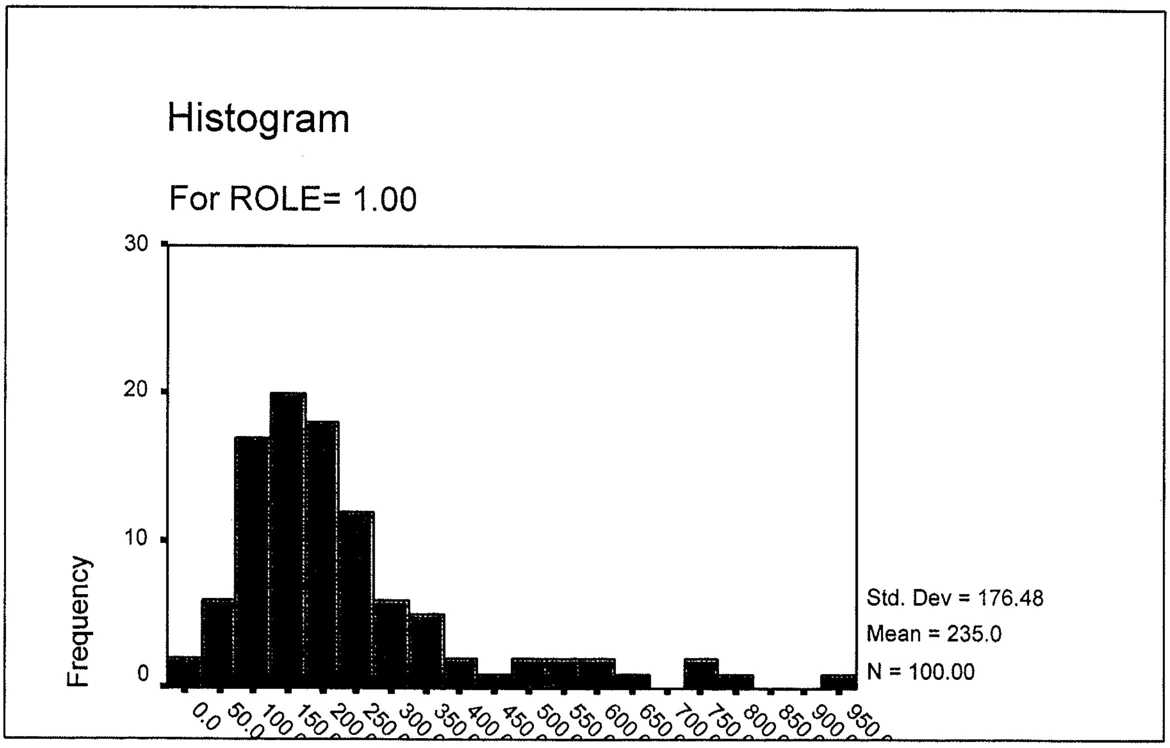
All directors receive salary and for the overwhelming majority of these directors it is the main source of remuneration in their DRIP. On looking at the chair group in table 5.7 for 1998, an extract of which is shown overleaf, a feature is the impact of extreme values on the distribution. In the all-chairs' group the average salary is £234k; this is in contrast to the independent chairs' group of £168k, and with the incentivised chair group's average of £396k. This illustrates the higher salary of incentivised chairs and their impact when included in the full dataset. A similar pattern was the case for 1997 and 1996:

Extract from Table 5.7

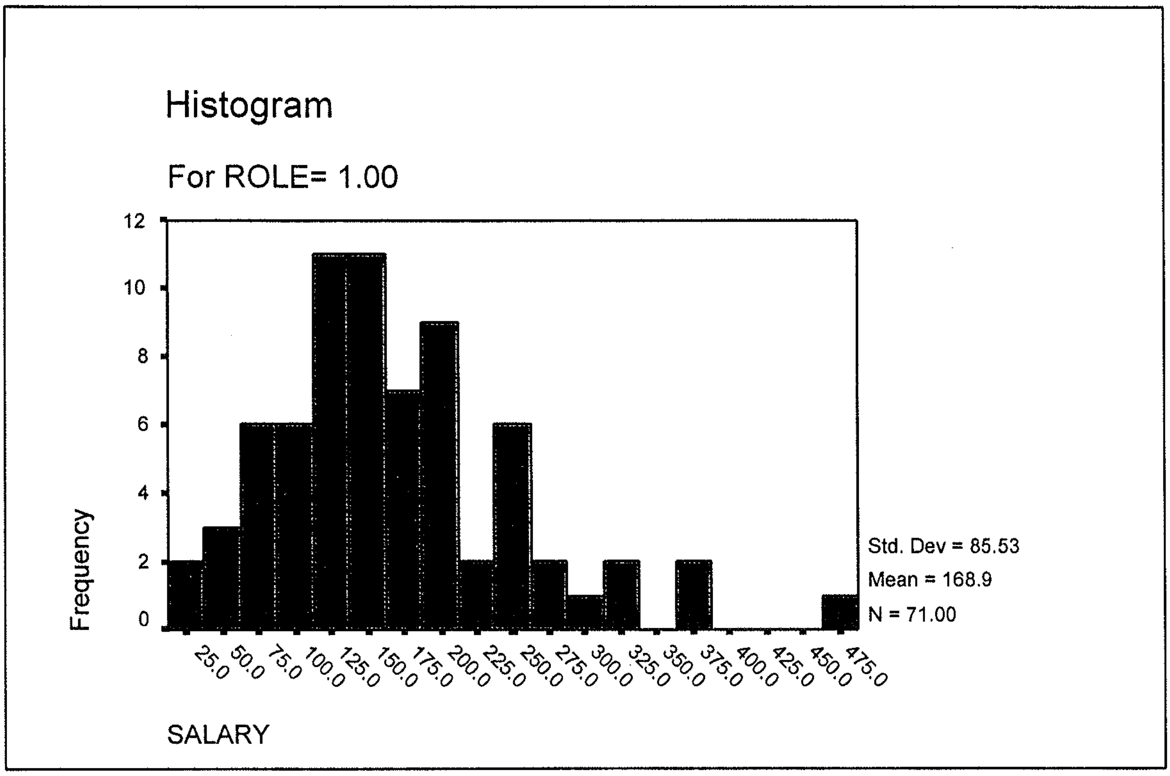
1998 DATASET	CHAIR	CHAIR	CHAIR
	FULL	INDEPENDENT	INCENTIVISED
MEAN SALARY £	235	169	396

This can be shown diagrammatically in figure 5.1 full dataset and 5.2 reduced dataset, which contrasts the difference between the two datasets.

Chairs Salary Full Dataset Distribution 1998



Chairs Salary Reduced Dataset Distribution 1998



The differences can be explained by the types of chair and their role within their companies. The mean of the incentivised chair was higher than the pure chairs, so by their inclusion in the full dataset this increases the mean average. Their exclusion in the reduced dataset leaves only the independent chairs present in the reduced dataset. The distribution of values in both the full and reduced dataset, indicated by the descriptive distribution statistics of skewness and kurtosis measures, are challenges to the chair group's approximation to the normal distribution.

When comparing the chair group's means over the three-year period (1996, 1997 and 1998) for the full dataset, these were £240k, £243k and £234k. This shows an increase and then a decline in the final year. In the reduced dataset, (shown in the summary table below), the averages were £182k, £178k and £169k, indicating a declining trend, which is surprising when the media almost continuously report the excesses in 'executive compensation and director remuneration'. The results for the absolute full and reduced dataset are included in Appendix 1, but an extract of these tables is shown below:

Summary of Absolute Reduced Dataset Tables: Chair

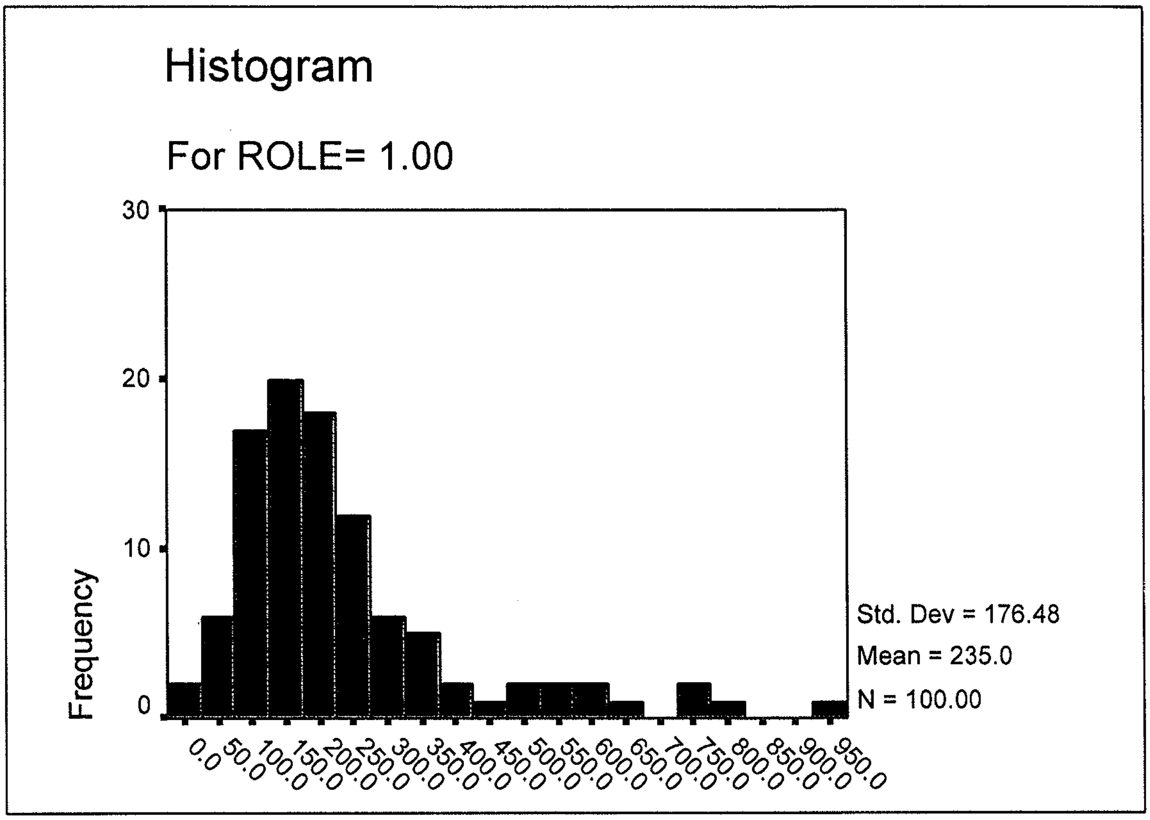
CHAIR : ABSOLUTE REDUCED	1996	1997	1998
SALARY MEAN	182	178	169
SKEWNESS	1.884	2.49	0.97
KURTOSIS	4.027	8.32	1.43

The focus on individual cases may explain this popular view, but for the top 100 companies in 1998-96 this picture is complex and warrants more investigation. Two explanations may account for these observations. Firstly, many independent chairs are becoming non-executive rather than full-time with a reduced level of salary. Secondly, the incentivised chairs have an increasing DRIP total due to rises in their incentive remuneration, but not in salary.

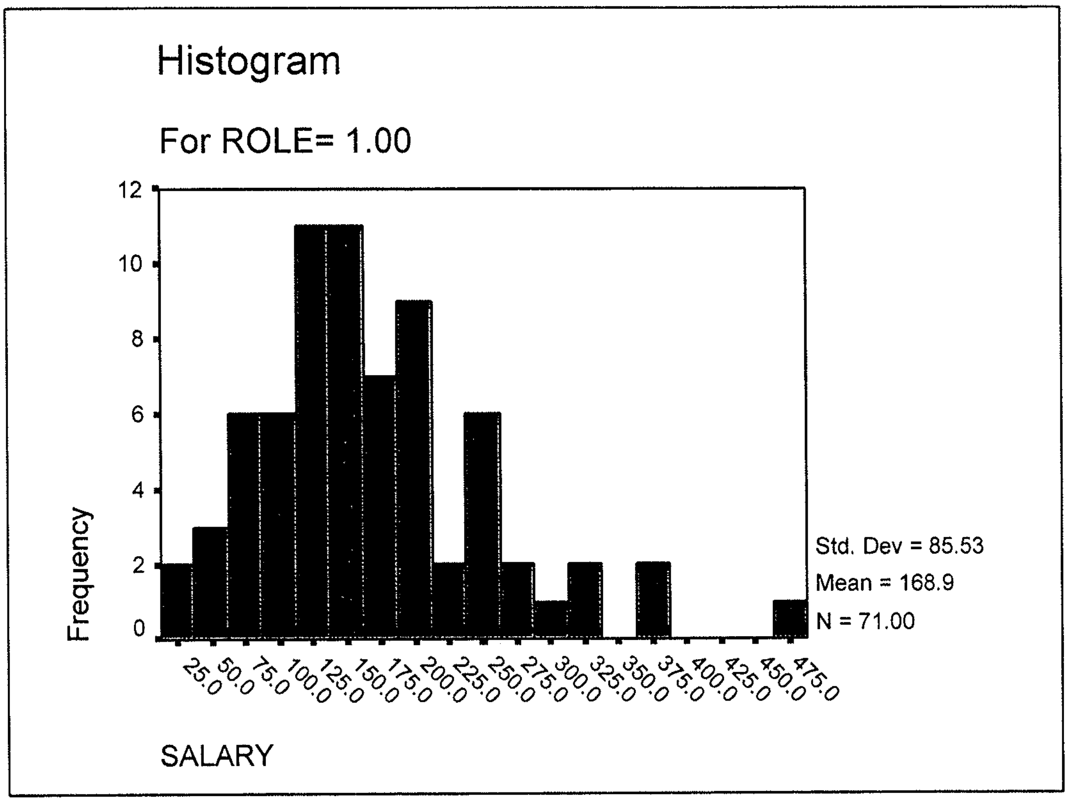
In the 1998 full dataset for chairs, the skewness and kurtosis are 1.80, 1.50, 1.89 and 3.54, 1.92, 3.810 (1.884, 2.49, 0.972 and (4.027, 8.32, 1.425), with the reduced dataset measures being in brackets. The reduced dataset summary statistics, with a more robust director definition, is reported as the standard level of analysis.

This shows that there is positive skewness in both distributions. The skew and kurtosis in the reduced dataset is lessened when the incentivised chairs are excluded. The change in these measures reflects a move to a more normal distribution, which allows an ANOVA analysis to take place, with SPSS[197] noting that ANOVA is a robust and flexible technique and applicable to non-normal distributions (see SPSS page 240-User Guide). Therefore, ANOVA was the most appropriate technique to use for this analysis. The skewness and kurtosis measures need to be within acceptable bounds of normality to enable an ANOVA analysis to take place and this is indicated by the level of significance set at the 1% level. The Q-Q plot shows expected normal and predicted value of director values in the full and reduced dataset of the chair group. There is some difference between the expected plots of the value, which is more tightly distributed in the reduced dataset plot, indicating a more normal distribution being present.

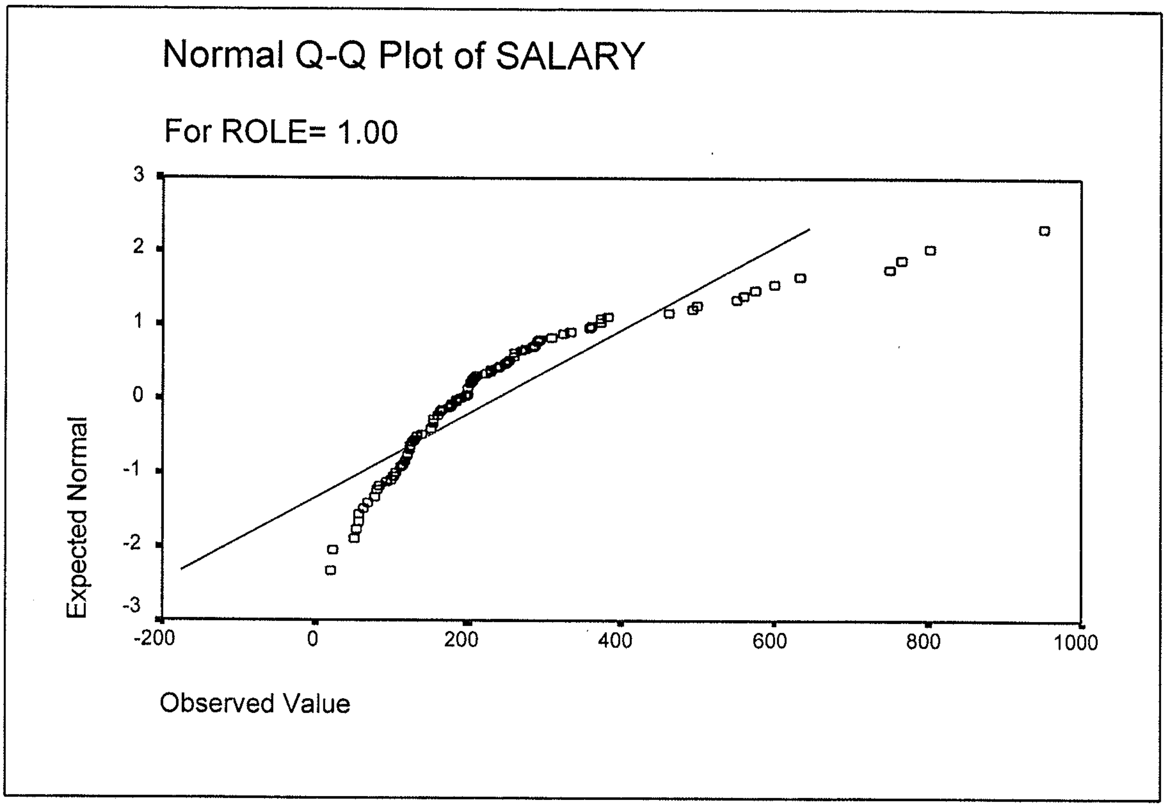
Histogram of the 1998 Chair Full Dataset.



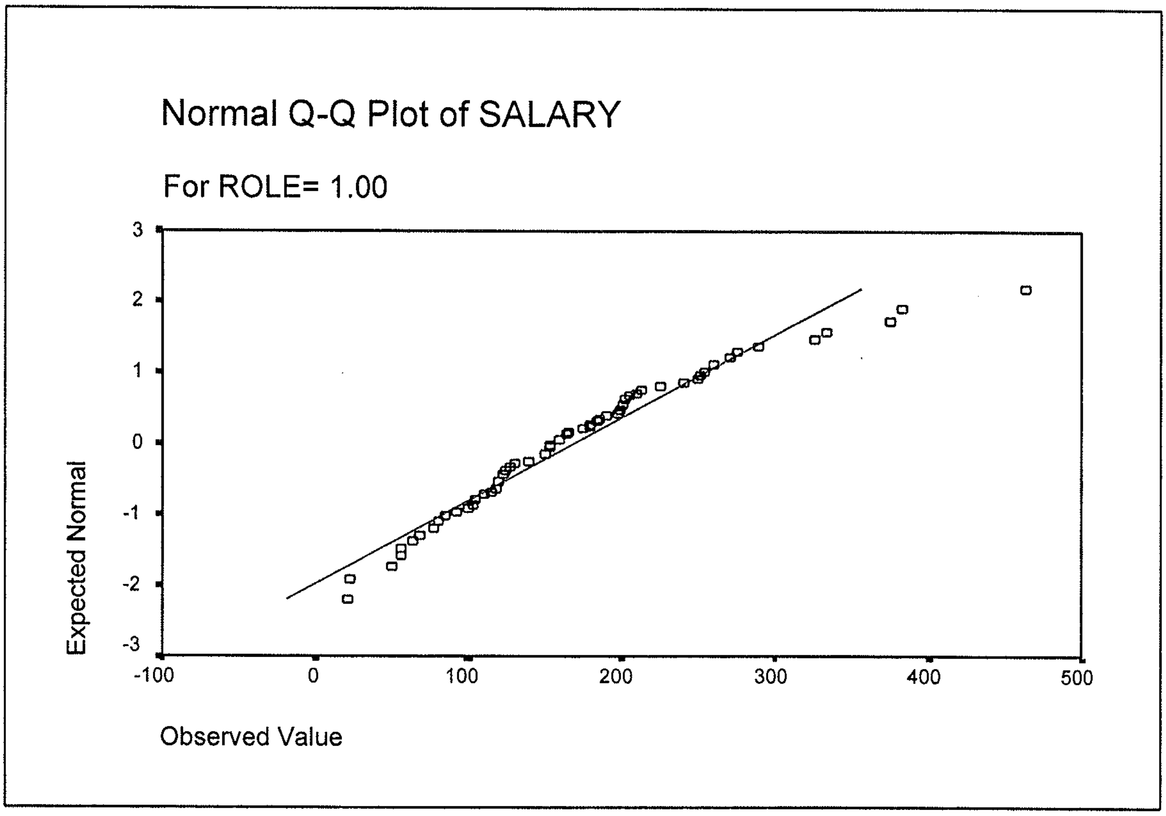
Histogram of the 1998 Chair Reduced Dataset



Full Dataset Chairs 1998 Q-Q Plot of Expected and Observed Values 1998



Reduced Dataset Chairs 1998 Q-Q Plot of Expected and Observed Values 1998



Logarithmic

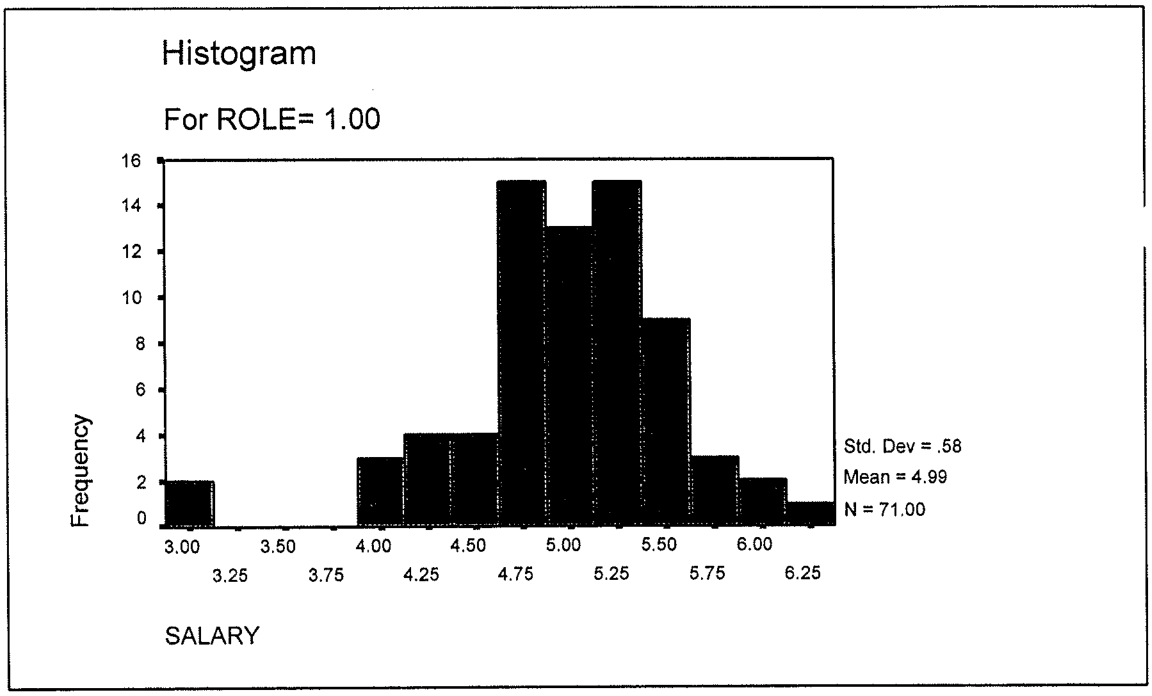
Often the robustness of the ANOVA analysis is tested by the high descriptive distribution measures (skewness and kurtosis), so a logarithmic transformation was undertaken to overcome the scale problem in the distribution. In the table below the summary statistics are given over the three-year period for the logarithmic reduced base datasets.

Summary of Logarithmic Reduced Dataset Tables: Chair

CHAIR : LOGARITHMIC REDUCED	1996	1997	1998
SALARY MEAN	4.9377	4.922	4.988
SKEWNESS	-0.3775	-1.108	-.1.018
KURTOSIS	0.8135	2.157	2.158

The mean averages reflect the same trend as the absolute, with the descriptive distribution measures being much reduced and more reasonably approximate to the properties of a normal distribution in the reduced dataset as can be seen in the histogram below.

Histogram of Logarithmic Reduced Dataset Chair 1998



Percentage Dataset

The individual remuneration components of DRIP are expressed as a percentage of total remuneration (total DRIP) for the full and reduced datasets in table 5.5 and 5.6.

Over the three-year period, the chair group's full dataset had averages of 79%, 79%, 83% and in the reduced dataset 93%, 95%, 96%. This indicates that salary is becoming more important in the DRIP for this group and this indication is reinforced when the incentivised chairs are excluded. The skewness and kurtosis measures indicate a negative skew with a high peak of kurtosis.

What is important in comparing the chairs' dataset distributions is the change in skewness and kurtosis measures between the full and reduced datasets. For 1998, chairs' skewness is -1.656 and kurtosis 1.745. In the reduced dataset it is –3.126, and kurtosis is 10.023, indicating a change in the distribution, due to the exclusion of the outliers, because of the reduced scale, both measures increase the cluster within this group.

The summary table below shows the reduced dataset trend over the period. This pattern is repeated in years 1997 and 1996 and is reported more fully in tables 5.5 and 5.6. The distribution's descriptive statistics were quite high and a challenge to conditions of normality, but provided a basis for conducting ANOVA analysis.

Summary of Percentage Reduced Dataset Tables: Chair

CHAIR : PERCENTAGE REDUCED	1996	1997	1998
SALARY MEAN	92	95	96
SKEWNESS	-3.16	-2.48	-3.13
KURTOSIS	10.39	6.38	10.02

CEO

In this director group, the full and reduced dataset are the same because all CEOs are incentivised directors. CEO salary in the reduced dataset over the three-year period was £357k, £380k and £420k, which shows an upward trend as shown in the table below. The CEO dataset distribution reveals that the CEO group is largely one homogenous group with no sub-set populations, but with some outlier values.

Summary of Absolute Reduced Dataset Tables: CEO

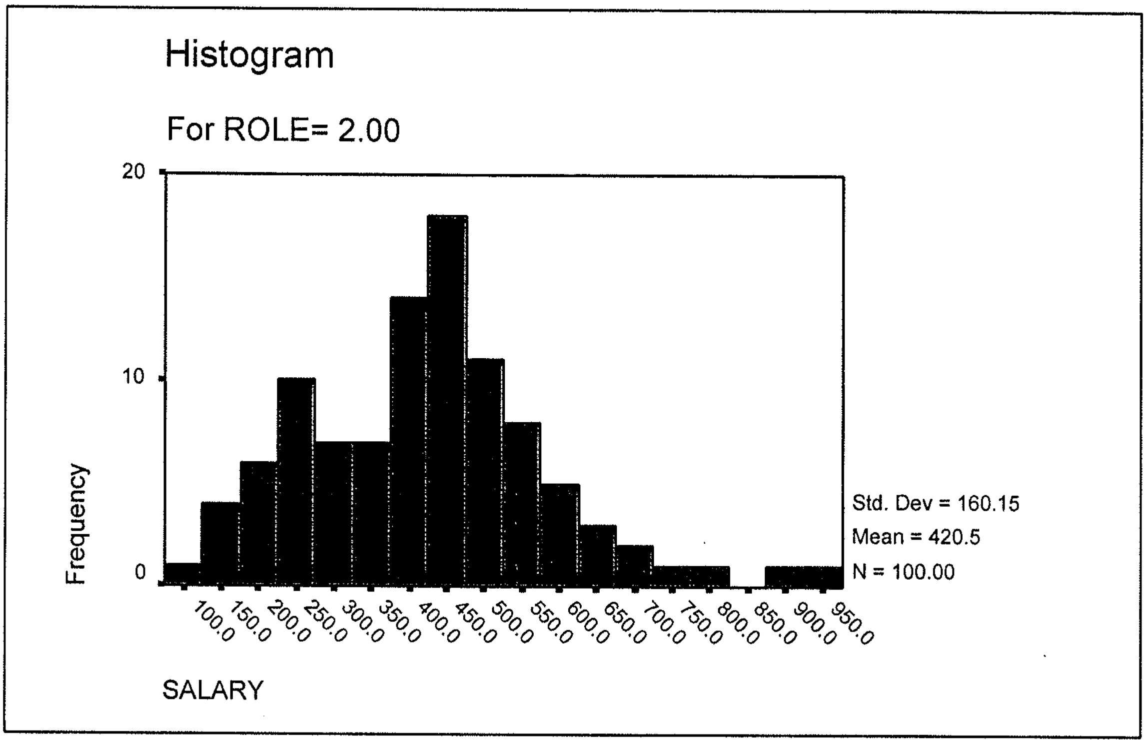
CEO : ABSOLUTE REDUCED	1996	1997	1998
SALARY MEAN	357	380	421
SKEWNESS	0.165	0.67	0.53
KURTOSIS	0.46	0.95	0.56

The CEO salary distributions are reasonably approximate to the normal distribution and therefore conducive to ANOVA analysis. The skewness and kurtosis measures lend support to the view that this distribution was near to normal. Over the three year period the dataset skewness was 0.17, 0.67 and 0.53 and kurtosis of 0.48, 0.95 and 0.73, which are well within acceptable boundaries, as indicated by Hair[198]. In the summary table above, the reduced statistics are more approximate to the normality and conducive to the ANOVA analysis. In contrast the logarithmic reduced dataset summary table below reveals measures more approximate to the normality conditions.

Summary of Logarithmic Reduced Dataset Tables: CEO

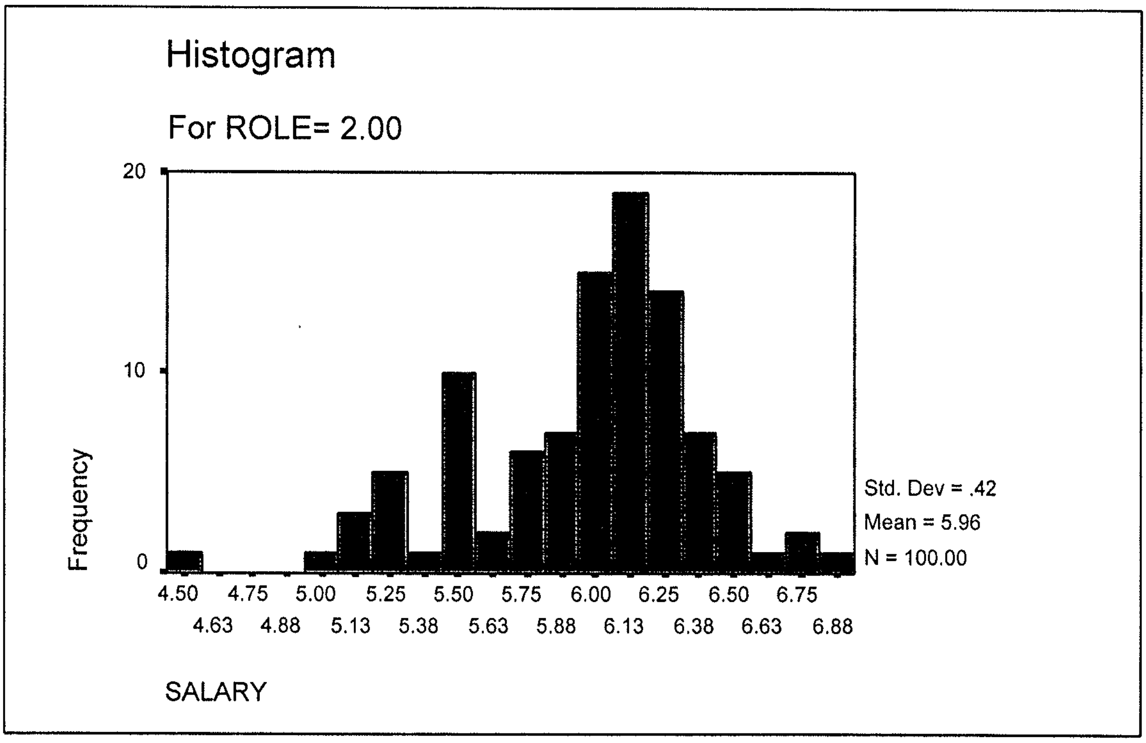
CEO : LOGARITHMIC REDUCED	1996	1997	1998
SALARY MEAN	5.75	5.86	5.96
SKEWNESS	-5.47	-0.619	-0.729
KURTOSIS	42.44	0.783	0.665

Histogram of CEO Salary Absolute Reduced 1998 Distribution



In the logarithmic dataset, the skew and kurtosis measures are at a lower level, which further substantiates the normality assumptions about nature of the distribution.

Histogram of CEO Salary Logarithmic Reduced 1998 Distribution



Percentage

In the percentage dataset, the CEO percentage of salary of DRIP was stable and then slightly reduced at the end of the period (68%, 68%, 66%,). The percentage analysis confirmed the continued importance of salary in their DRIP. Skewness and kurtosis measures are within acceptable bounds as shown in this table:

Summary of Percentage Reduced Dataset Tables: CEO

CEO : PERCENTAGE REDUCED	1996	1997	1998
SALARY MEAN	68	68	66
SKEWNESS	-0.73	-0.49	-0.47
KURTOSIS	-0.06	-0.83	-0.76

Executive Director

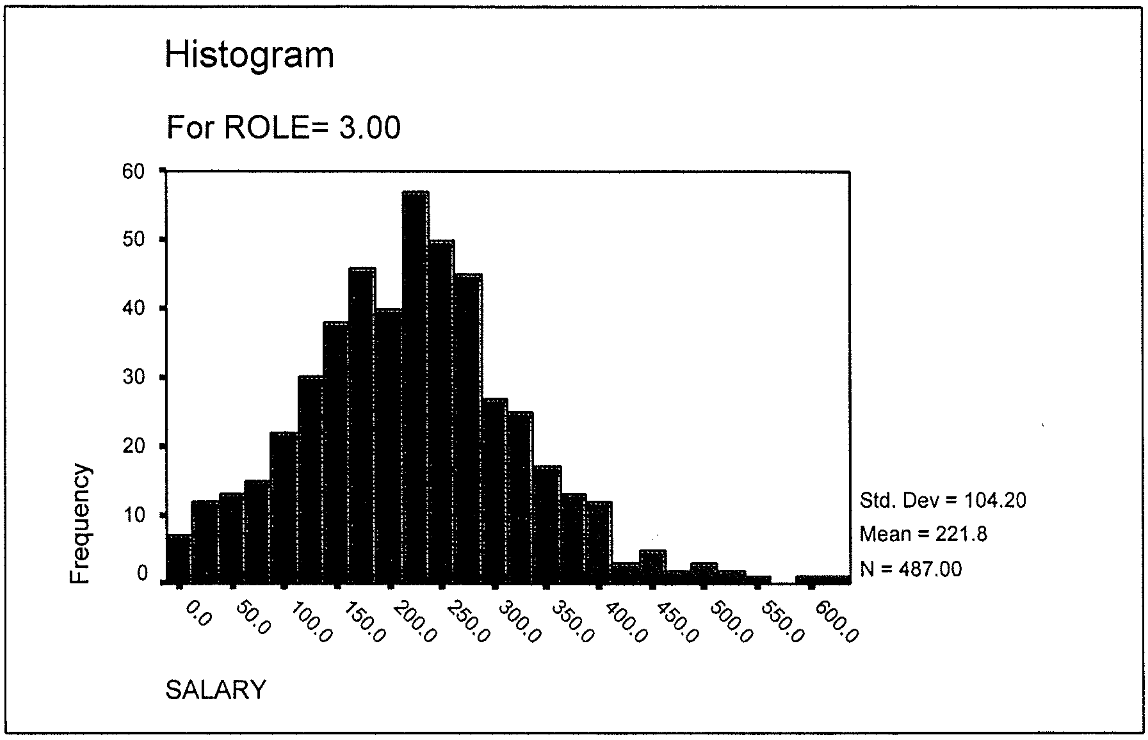
The executive directors' salary distribution was similar to that of the CEO group but at a lower absolute level, as shown in the table below. The executive director group's means over the period were £211k, £209k and £222k. This indicates that in the second year there was a slight decline, followed by an upward trend, which is shown in the summary table below:

Summary of Absolute Reduced Dataset Tables: Executive Director

ED : ABSOLUTE REDUCED	1996	1997	1998
SALARY MEAN	211	209	222
SKEWNESS	1.035	1.21	0.43
KURTOSIS	2.322	4.96	0.70

The skew and kurtosis measures were within acceptable bounds and conducive to ANOVA analysis. The distribution for 1998 is given below:

Histogram of the Executive Director Salary Absolute Distribution 1998

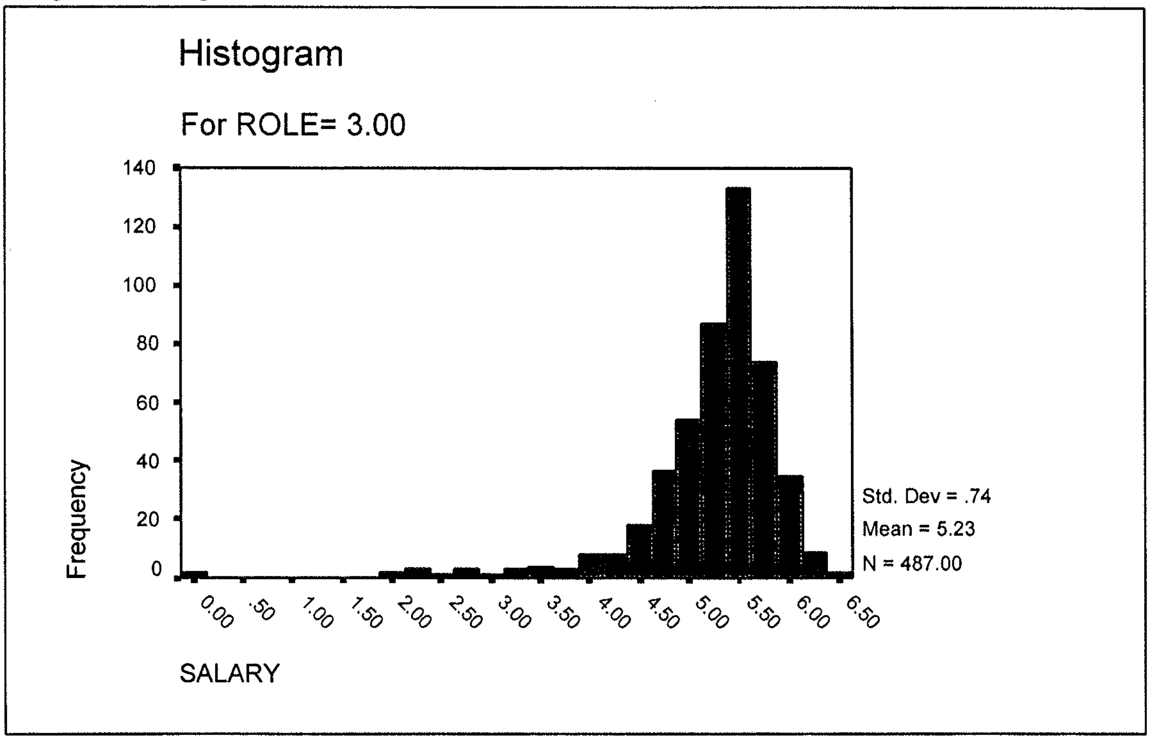


This was also true under the logarithmic dataset.

Summary of Logarithmic Reduced Dataset Tables: Executive Director

ED : LOGARITHMIC REDUCED	1996	1997	1998
SALARY MEAN	5.12	5.17	5.23
SKEWNESS	-2.36	-2.59	-2.04
KURTOSIS	13.04	12.84	6.01

Histogram of Logarithmic Executive Director Absolute Distribution 1998



Percentage

In percentage terms, the salary proportion of DRIP was slightly reduced over the period (72%, 72%, 70%,), as shown in the table below. Although this was reducing, it is still the main component of DRIP. The skew and kurtosis measures are very approximate to the normal distribution and are conducive to undertake ANOVA analysis:

Summary of Percentage Reduced Dataset Tables: Executive Director

ED : PERCENTAGE REDUCED	1996	1997	1998
SALARY MEAN	72	72	70
SKEWNESS	-0.68	-0.63	-5.80
KURTOSIS	-0.18	-0.83	36.77

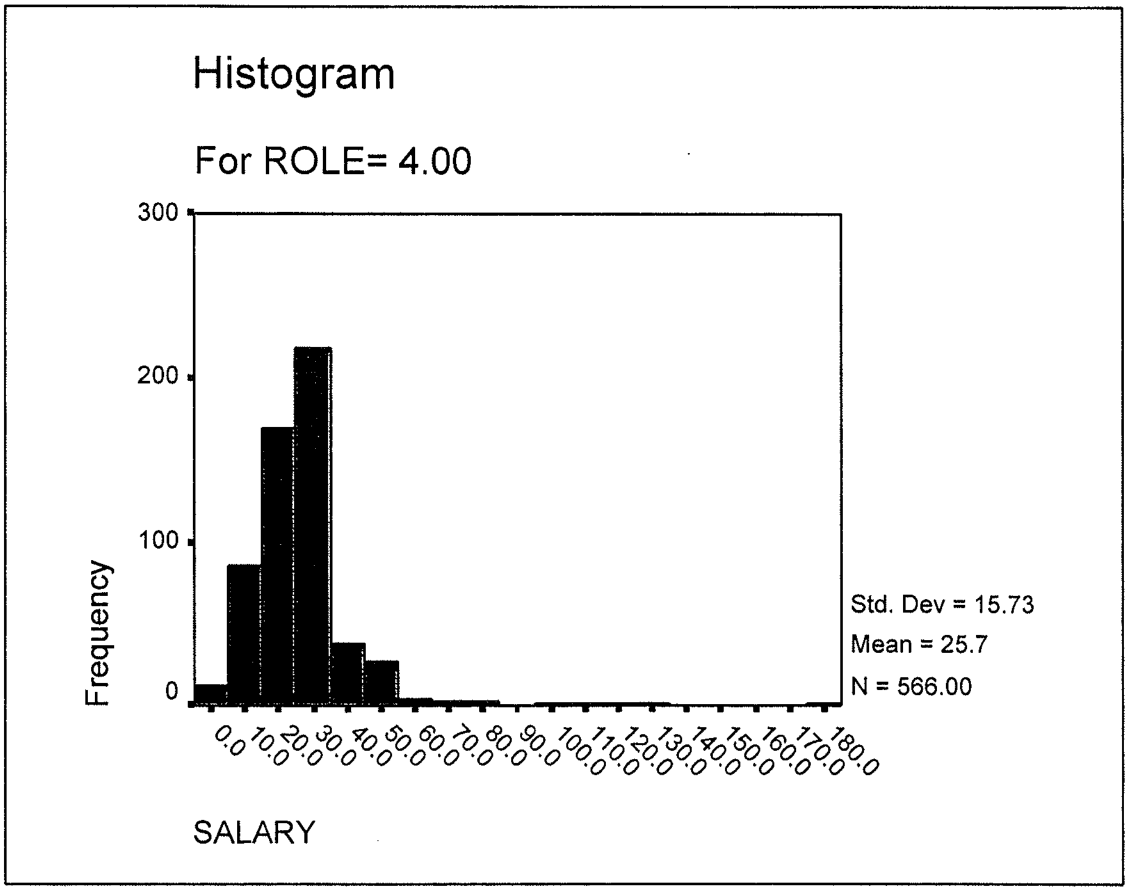
Non-executive Directors

The non-executive director's group exhibits some interesting characteristics. For 1998, the full dataset showed a mean of £26k and median of £25k with standard deviation of £16k, which indicates that this group is at a lower base than the other director groups with a narrower absolute spread. Over the three-year period, the full dataset means were £24k, £27k and £26k. In the reduced dataset these averages were lower, but not substantially, as summarised in this table:

Summary of Absolute Reduced Dataset Tables: Non-executive Director

NE : ABSOLUTE REDUCED	1996	1997	1998
SALARY MEAN	23.93	25.50	25.71
SKEWNESS	5.81	6.17	3.60
KURTOSIS	60	65.07	24.03

Histogram of Non-Executive Director Absolute Reduced Distribution 1998



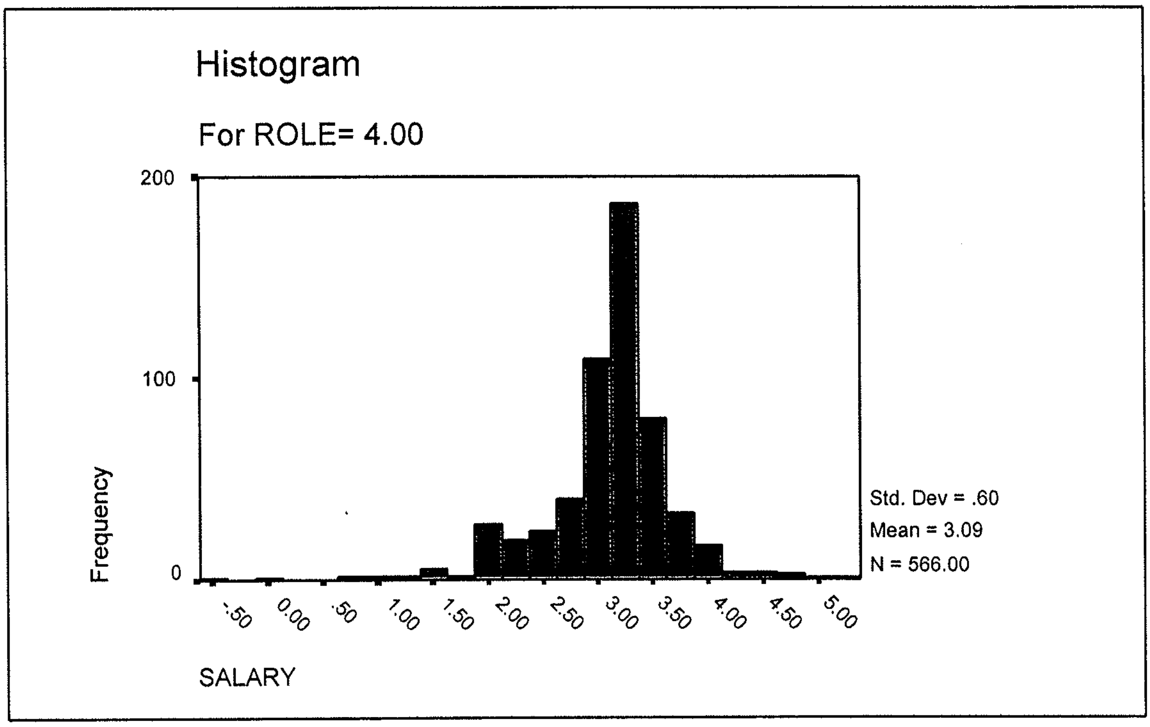
In relative terms, the skewness and kurtosis measures reveal more extreme values than the other groups. Over the period in the full dataset, the skew was 3.44, 14.04 and 5.65 and for kurtosis 21.16, 253.39 and 57.77. In the reduced dataset, lower level of statistics were present but broadly supported the same view. This indicated that the exclusion of incentivised non-executive directors does not have an important impact on the distribution.

In the logarithmic dataset, the skewness and kurtosis measures are less extreme than the absolute, but provide a slight challenge to normality conditions, displayed more fully in table 5.3 and 5.4 (see Appendix 1).

Summary of Logarithmic Reduced Dataset Tables: Non-executive Director

NE : ABSOLUTE REDUCED	1996	1997	1998
SALARY MEAN	2.98	3.07	3.09
SKEWNESS	-1.98	-1.51	-1.10
KURTOSIS	5.56	5.88	4.59

Histogram of Non-Executive Director Logarithmic Full Distribution 1998



Percentage

For the non-executive group, the exclusion of incentivised directors made some difference to the measures on a percentage basis. Over the period, the salary means for the full dataset were 92%, 93%, 95% and for the reduced dataset were 94%, 94%, 95%. The distribution descriptive statistics indicated some departure from normality (see table below).

Summary of Percentage Reduced Dataset Tables: Non-Executive Director

NE : PERCENTAGE REDUCED	1996	1997	1998
SALARY MEAN	94	94	95
SKEWNESS	-4.34	-4.82	-5.8
KURTOSIS	19.59	25.00	36.77

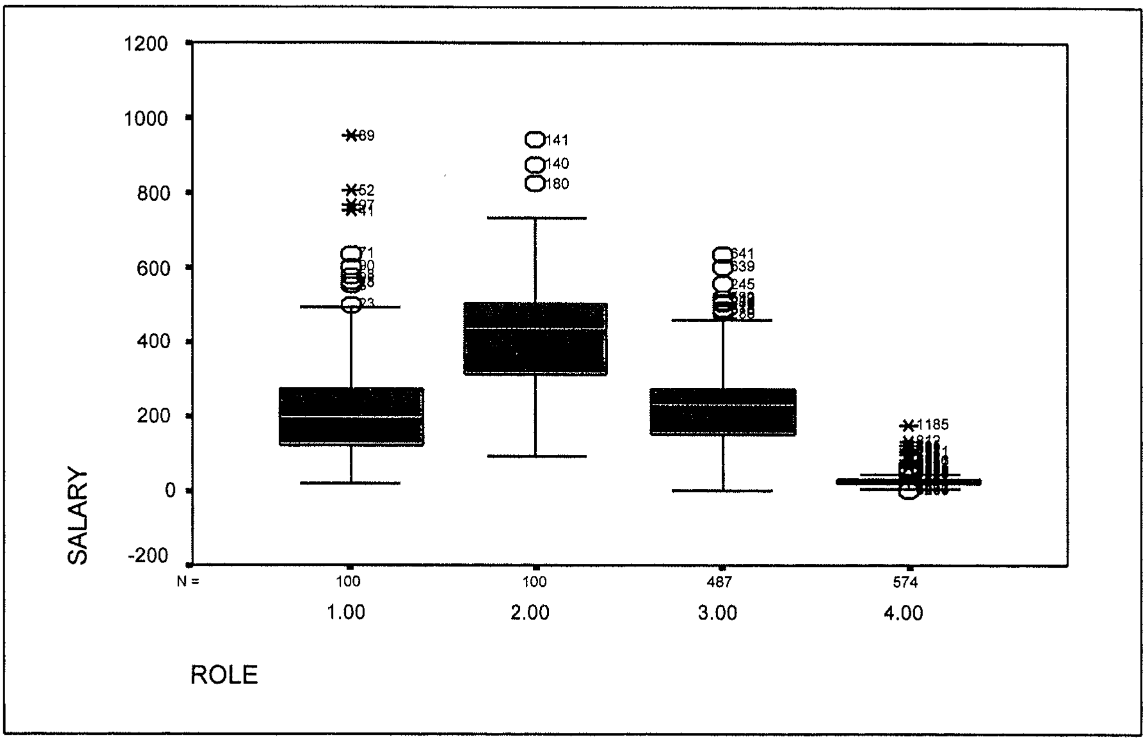
However, the reduced dataset shows some reduction in these extremes. Again, this analysis confirmed the increasing importance of salary in non-executive's DRIP.

Examining the salary for the four director groups using the boxplot facility in the diagrams below shows the overall nature of the distributions.

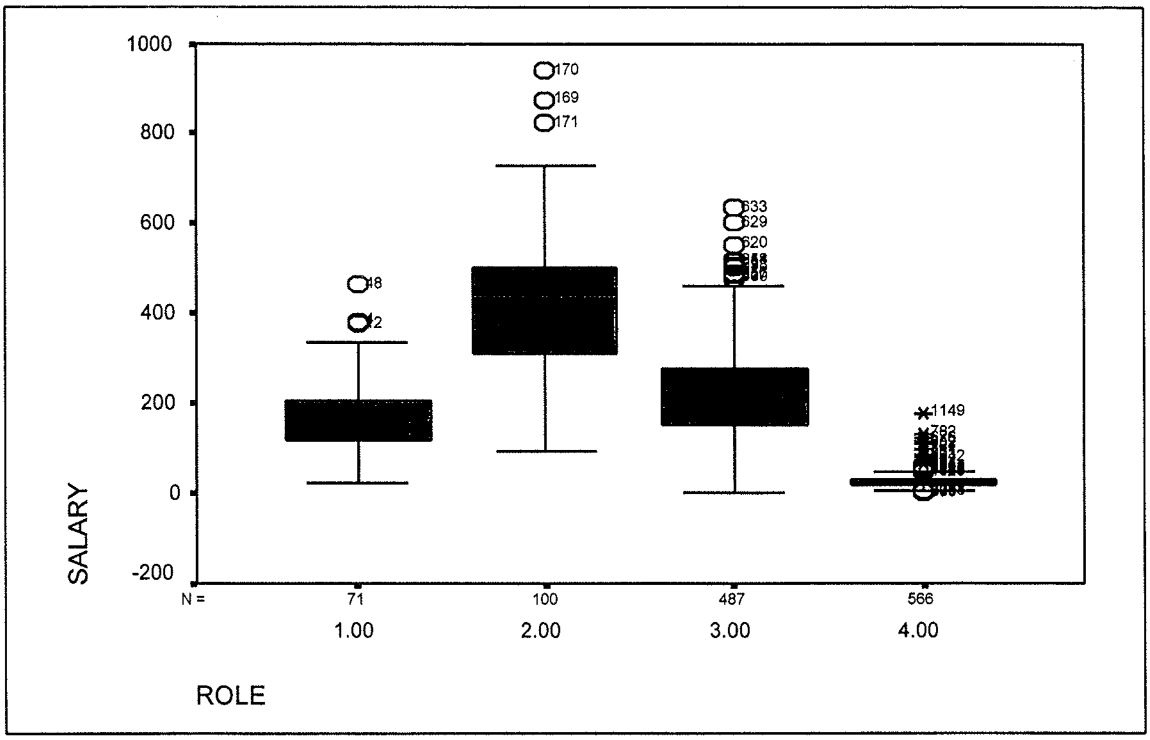
Boxplots of Salary Absolute Full, Absolute Reduced and Logarithmic 1998: Datasets

Key - (1 = Chair, 2 = CEO , 3 = ED, 4 = ND)]

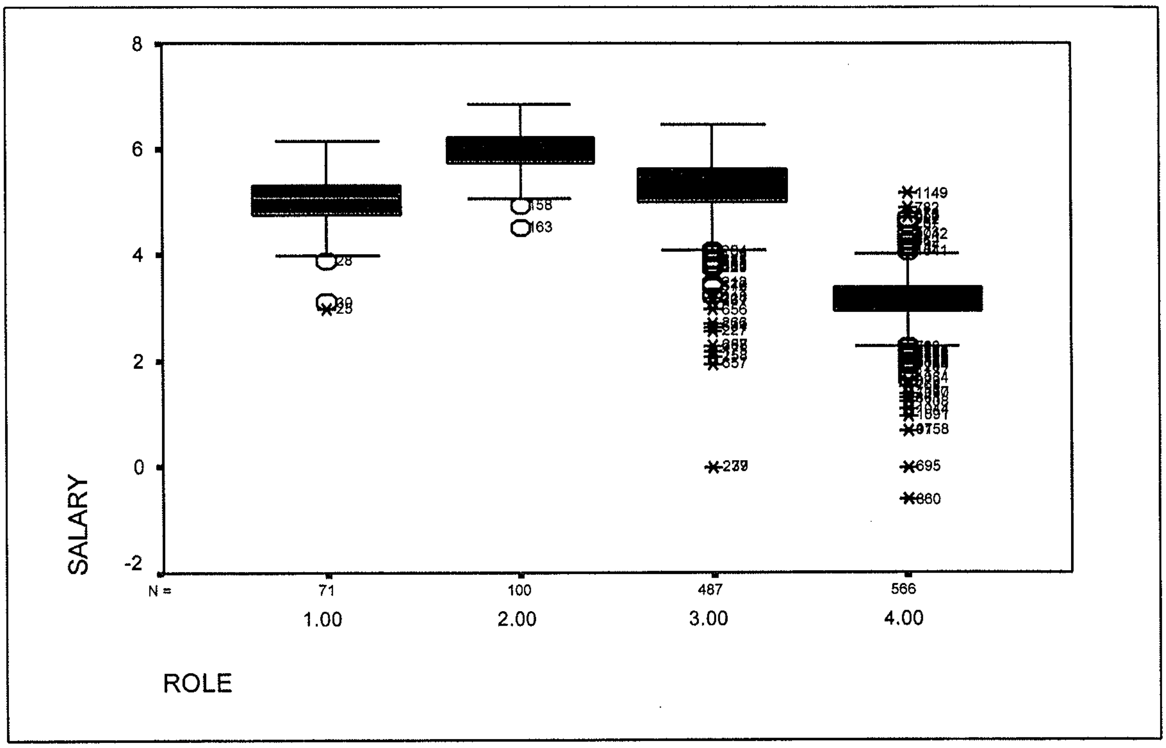
Boxplots of Absolute Full Dataset 1998: Four Director Groups'



Boxplots of Absolute Reduced Dataset 1998 Four Director Groups



Boxplots of Logarithmic Reduced Dataset 1998 Four Director Groups



Comparing the full and reduced absolute boxplots reveals that the range of the distribution is reduced on exclusion of the incentivised directors. In both bases there are outliers, indicated by the * and O, present in all groups. The non-executive group shows a low cluster of values in the standard scale of the common boxplots. The logarithmic reduced dataset, using its scale properties, shows some detail of the range of practice within the director groups. The chair, CEO and non-executive groups are more approximate to a normal distribution, with the non-executive groups continuing with a close cluster of values.

ANOVA Salary

The ANOVA technique compares the differences within and between each of the director groups to ascertain if the groups have the same mean. Using the F distribution at a 1% level of significance may test to see if any one of the four director groups meets this criteria. If the F statistic is found to be significant, then the null hypothesis is adopted and if not the alternative hypothesis is accepted, which confirms that the means are different.

The level of the F statistics for salary in each of the three years clearly indicated that the null hypothesis was rejected. Therefore, the alternative hypothesis was accepted, indicating that the salary of the four director groups were different.

ANOVA Analysis: F statistics for Absolute Reduced Datasets

SALARY: ABSOLUTE	1996	1997	1998
F STATISTIC	672	662	891
SIGNIFICANCE	0*	0*	0*
HYPOTHESIS H^0			
HYPOTHESIS H^1	✓	✓	✓

* Significant at 1%

In the logarithmic dataset, the level of the F statistics over the period clearly indicates a rejection of the null and acceptance of the alternative hypothesis.

ANOVA Analysis: F statistics for Logarithmic Reduced Datasets

SALARY: LOGARITHMIC	1996	1997	1998
F STATISTIC	1005	1119	1411
SIGNIFICANCE	0*	0*	0*
HYPOTHESIS H^0			
HYPOTHESIS H^1	✓	✓	✓

* Significant at 1%

The percentage ANOVA has a reduced level of F statistic, but still supports the rejection of the null and acceptance of the alternative hypothesis.

ANOVA Analysis: F statistics for Percentage Reduced Datasets

SALARY: PERCENTAGE	1996	1997	1998
F STATISTIC	118	146	178
SIGNIFICANCE	0*	0*	0*
HYPOTHESIS H^0			
HYPOTHESIS H^1	✓	✓	✓

* Significant at 1%

The ANOVA analysis for salary percentage of DRIP, indicated by the F statistics, clearly showed that the salary for the four director groups was very different.

5.2.2 Short Term Bonus (STB) DRIP Analysis

Short-term bonus (STB) is received by the incentivised directors in the CEO and executive director groups, and by a few incentivised chairs and non-executives. In 1998 some 79 of the 100 CEOs and 302 from 488 executive directors were recipients of these short-term bonus awards. In the same year, 29 chairs from a total of 100 and 8 non-executives out of 574 received incentive remuneration. These were clearly very much in the minority. In previous years (1997 and 1996) less directors had received short-term bonus remuneration. By 1998 more directors were receiving short-term bonus and in larger amounts. For some directors, their short-term bonus is very substantial in absolute monetary terms and an important component of their DRIP total. This is demonstrated in tables 4.4 and 4.5 (see Appendix 1), where the highest CEO and executive directors' DRIP totals are displayed. The following tables show the summary statistics for these groups.

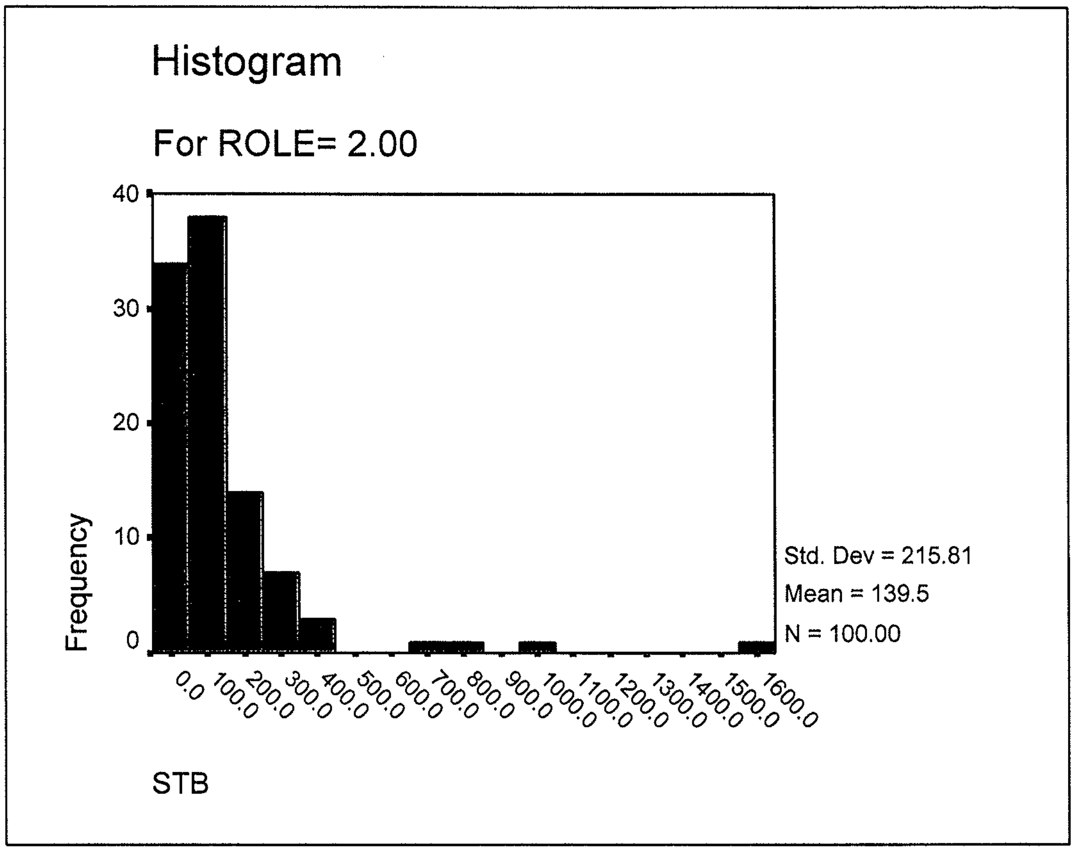
Summary of Absolute Reduced Dataset Tables: CEO

CEO: STB REDUCED	1996	1997	1998
STB MEAN	91	112	139
SKEWNESS	0.17	4.08	4.08
KURTOSIS	0.48	22.40	21.44

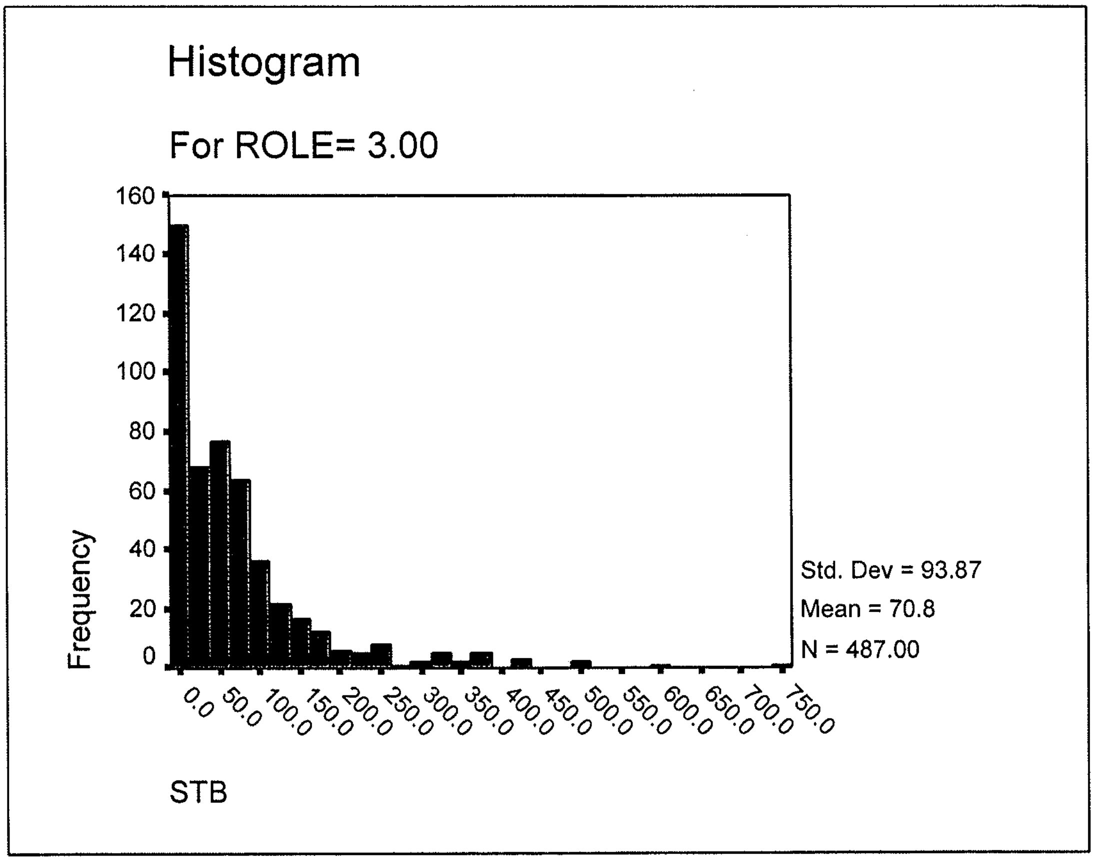
Summary of Absolute Reduced Dataset Tables: Executive Director

EXECUTIVE DIRECTOR : STB REDUCED	1996	1997	1998
STB MEAN	57	65.19	71
SKEWNESS	3.03	9.79	2.73
KURTOSIS	13.91	150.32	10.64

Histogram for Absolute STB CEO 1998



Histogram for Absolute STB Executive Director 1998



Over the three-year period, the mean averages within the reduced dataset for the CEOs' short-term bonus were £91k, £111k, £140k and for executive directors were £57k, £65k, £71k. This indicated an increasing importance for this form of remuneration in absolute terms. Not all the directors in the two director groups receive short-term bonus, but the majority does. Within these director groups there are substantial variations, but with some directors receiving considerably more, as displayed in tables 5.4 and 5.5 (see Appendix 1).

The logarithmic means follow the same pattern as for the absolute dataset, with a more compact distribution due to its logarithmic scale, and this is reflected in the descriptive distribution statistics of skewness and kurtosis.

Summary of Logarithmic Reduced Dataset Tables: CEO

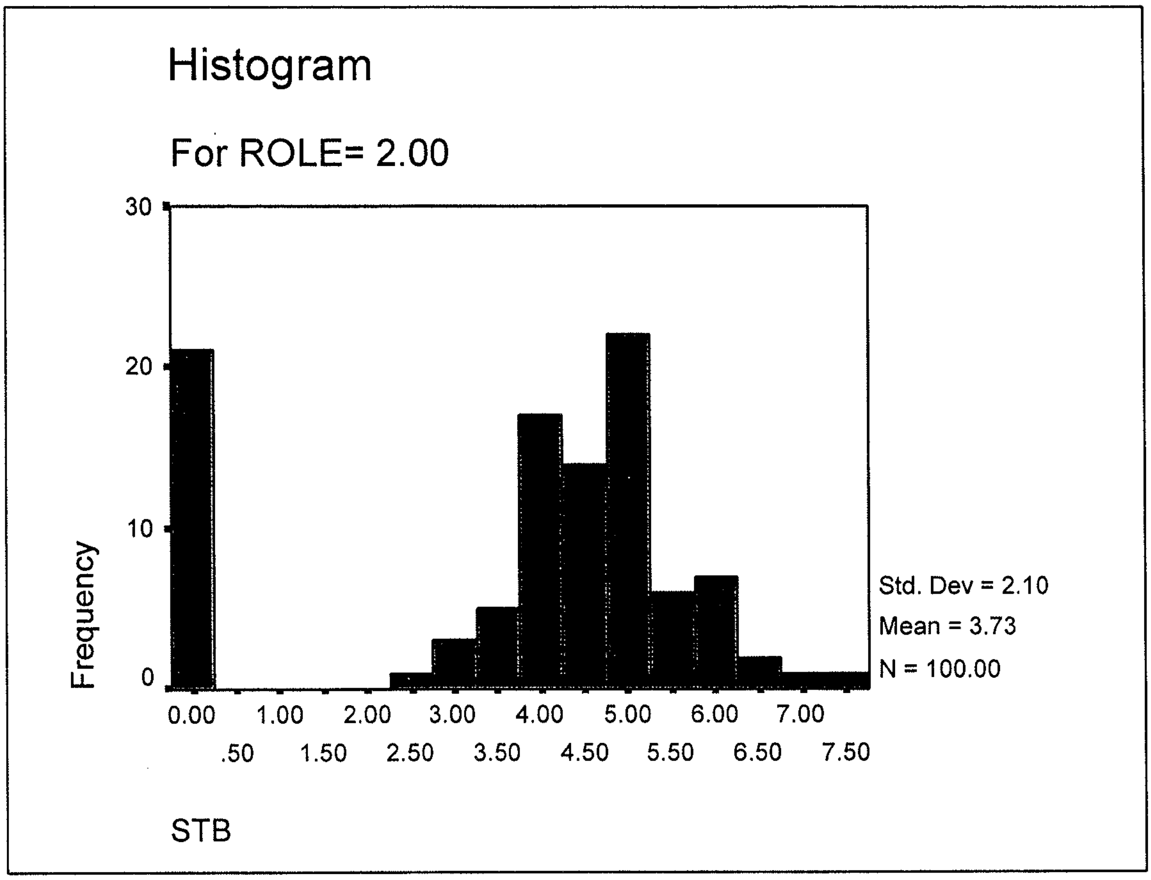
CEO: STB LOGARITHMIC REDUCED	1996	1997	1998
STB MEAN	3.30	3.59	3.73
SKEWNESS	-0.72	-0.82	-0.90
KURTOSIS	-1.01	-0.45	-0.411

Summary of Logarithmic Reduced Dataset Tables: Executive Director

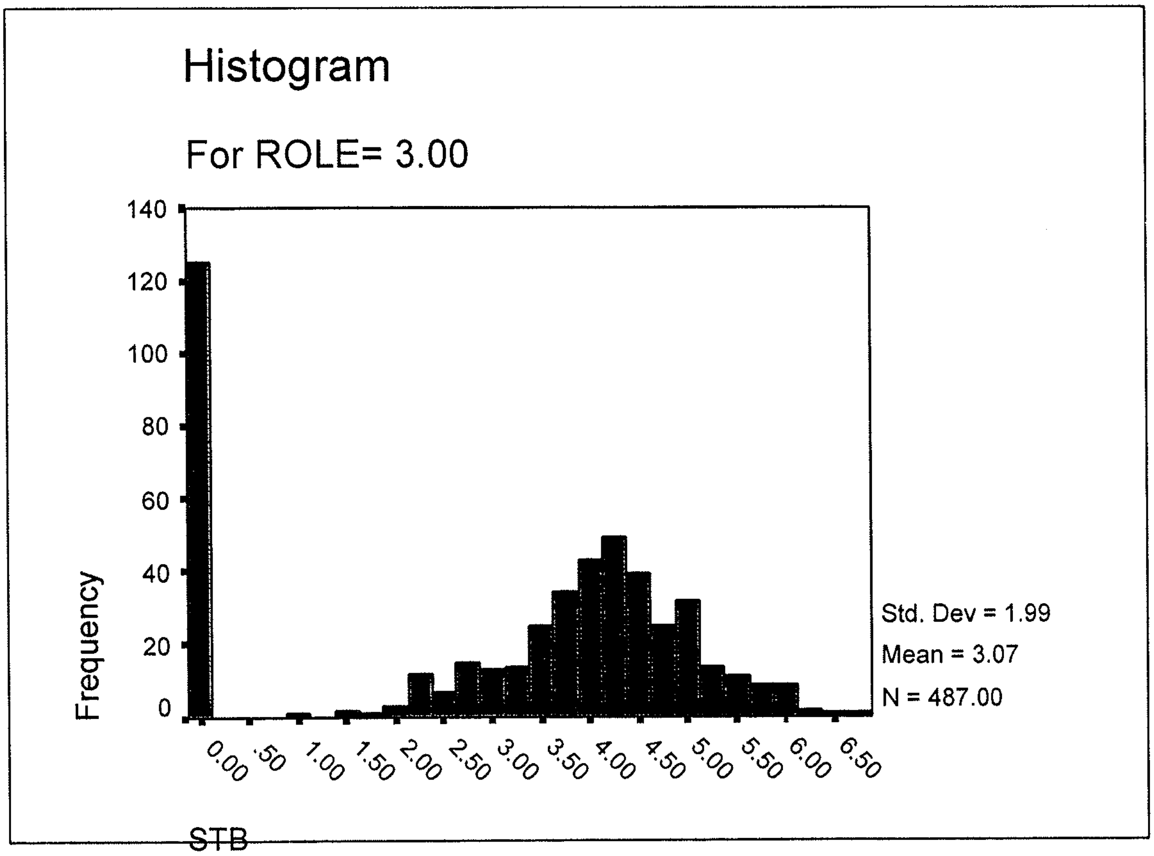
EXECUTIVE DIRECTOR : STB LOGARITHMIC REDUCED	1996	1997	1998
STB MEAN	2.90	3.01	3.07
SKEWNESS	-0.53	-0.53	-0.60
KURTOSIS	-1.14	-1.00	-1.07

The logarithmic dataset analysis distribution statistics reveal skewness and kurtosis measures that are more approximate to the normality conditions and as a result is more conducive to an ANOVA analysis.

Histogram of CEO Logarithmic STB 1998



Histogram of Executive Director Logarithmic STB 1998



Percentage analysis reveals that this form of remuneration is an important component of incentivised directors' DRIP, and its proportion continues to grow. Over the three year period, the CEOs' short-term bonus percentage of DRIP was 15%, 14%, 16% and the executive directors' was 16%, 15%, 16%. The descriptive statistics indicate that short-term bonus had reduced in the second year, but rising in the final year, which suggests that more attention needs to be directed to its study because of its growing importance in remuneration studies.

When considering the shape of distribution of short-term bonus in these groups, the skewness and the kurtosis in the 1998 dataset for chairs were 4.08 and 21.44, and for non-executives were 2.73 and 10.64. In the logarithmic dataset these statistics provide a better fit to allow ANOVA to take place. With skewness of –1.80 and kurtosis of 4.24 and –1.14 and kurtosis of 2.54, this indicates that more reasonable levels are present. In the percentage dataset, the CEO skewness of 0.65 and kurtosis of 0.57 and the executive directors skewness of 0.75 and kurtosis of 1.57 are very normal measures. Therefore, in both the logarithmic and percentage dataset the descriptive distribution measures become more normal:

Summary of Percentage Reduced Dataset Tables: CEO

CEO: STB REDUCED	1996	1997	1998
STB MEAN	14	15	16
SKEWNESS	0.97	1.19	0.65
KURTOSIS	0.91	2.24	0.57

Summary of Percentage Reduced Dataset Tables: ED

EXECUTIVE DIRECTOR : STB REDUCED	1996	1997	1998
STB MEAN	15	16	16
SKEWNESS	1.13	1.17	0.72
KURTOSIS	1.53	2.51	0.16

ANOVA Analysis STB

The absolute, logarithmic and percentage full datasets for short-term bonus continue to support the rejection of the null and acceptance of the alternative hypothesis. However, the lower descriptive distribution statistics for the two latter datasets provide more robust support for this conclusion. The logarithmic and percentage analysis did not experience the same distribution measure dilemmas as the absolute because of their scale and basis. Over the period the logarithmic full dataset had an F statistic of 455, 370, 464 and the reduced dataset had 451, 522, 542. So, in these datasets using the F statistic indicated a clear difference between the director groups and also in the absolute but to a lesser extent. The following extract from Table 5.8 summarises these conclusions:

ANOVA Absolute Analysis

STB: ABSOLUTE REDUCED	1996	1997	1998
F STATISTIC	109	72	113
SIGNIFICANCE	0*	0*	0*
HYPOTHESIS H^0			
HYPOTHESIS H^1	✓	✓	✓

*Significant at 1%

Logarithmic

STB: LOGARITHMIC REDUCED	1996	1997	1998
F STATISTIC	451	522	542
SIGNIFICANCE	0*	0*	0*
HYPOTHESIS H^0			
HYPOTHESIS H^1	✓	✓	✓

*Significant at 1%

Percentage

STB: PERCENTAGE REDUCED	1996	1997	1998
F STATISTIC	215	236	278
SIGNIFICANCE	0*	0*	0*
HYPOTHESIS H^0			
HYPOTHESIS H^1	✓	✓	✓

*Significant at 1%

5.2.3 Long Term Incentive (LTI) DRIP Analysis

Long-term incentive (LTI) is received by the incentivised director groups of CEO and executive directors, in addition to a small number of incentivised chairs and non-executive directors. Long-term incentive remuneration shares many of the same data and analysis issues as short-term bonus. A minority of chairs and non-executive directors receive short-term bonus or long-term incentive. The majority of incentivised CEOs' and executive directors' companies have long-term incentive schemes, but not all directors receive this long-term incentive remuneration because the company has not achieved the required performance measures that trigger the payment of long term incentive. Within these schemes, most are based on the granting of options on shares, which at a future date mature (normally in three years - the 'vesting period'), and may be realised in cash or converted to shares. Alternatively, a small number of companies have long-term incentive plans which remunerate on the achievement over a longer period than one year. In 1998, some 54 of the 100 CEOs and 210 out of 488 executive directors were recipients of these awards. Within the period of the study, there was an upward trend in the number of incentivised directors receiving long-term incentive. Not only were more directors receiving long-term incentive remuneration, but the absolute amount received was also increasing. For some directors their long-term incentive remuneration can be very significant in absolute terms and is an important component of their DRIP, as shown in tables 5.1 and 5.2 (see Appendix 1). The following is a summary of these tables:

Summary of Absolute Reduced Dataset Tables: CEO

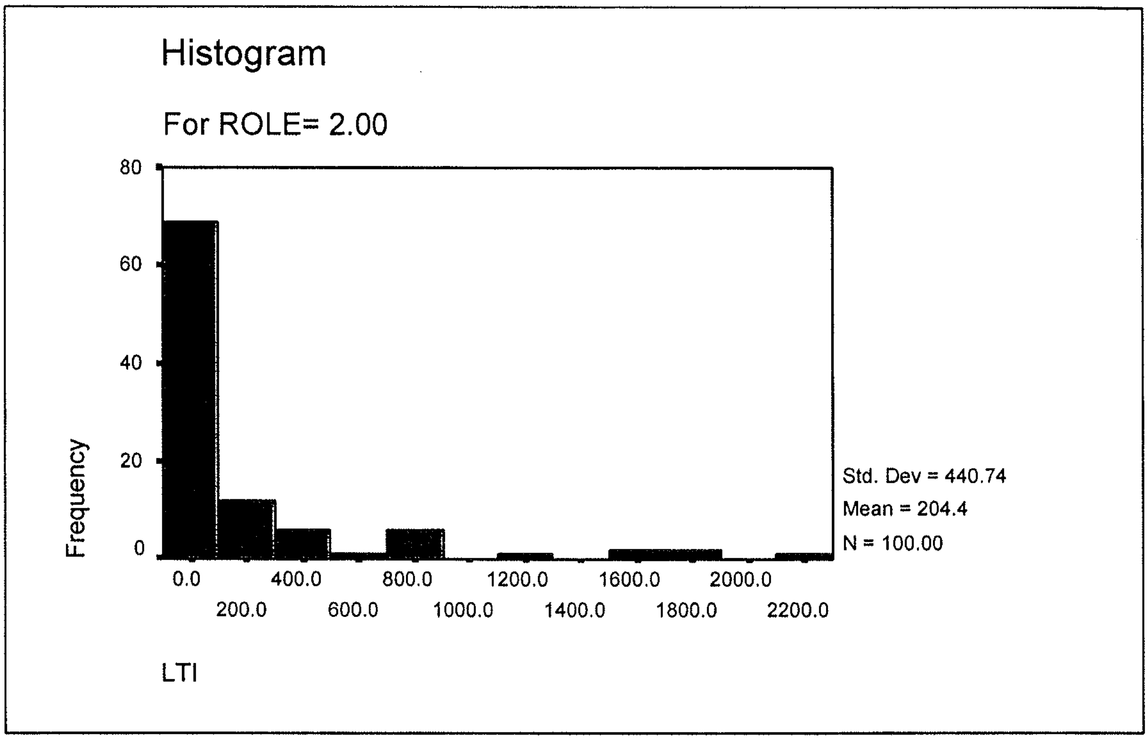
CEO LTI REDUCED	1996	1997	1998
LTI MEAN	164	161	161
SKEWNESS	4.60	2.18	2.81
KURTOSIS	27.54	22.40	4.07

Summary of Absolute Reduced Dataset Tables: Executive Director

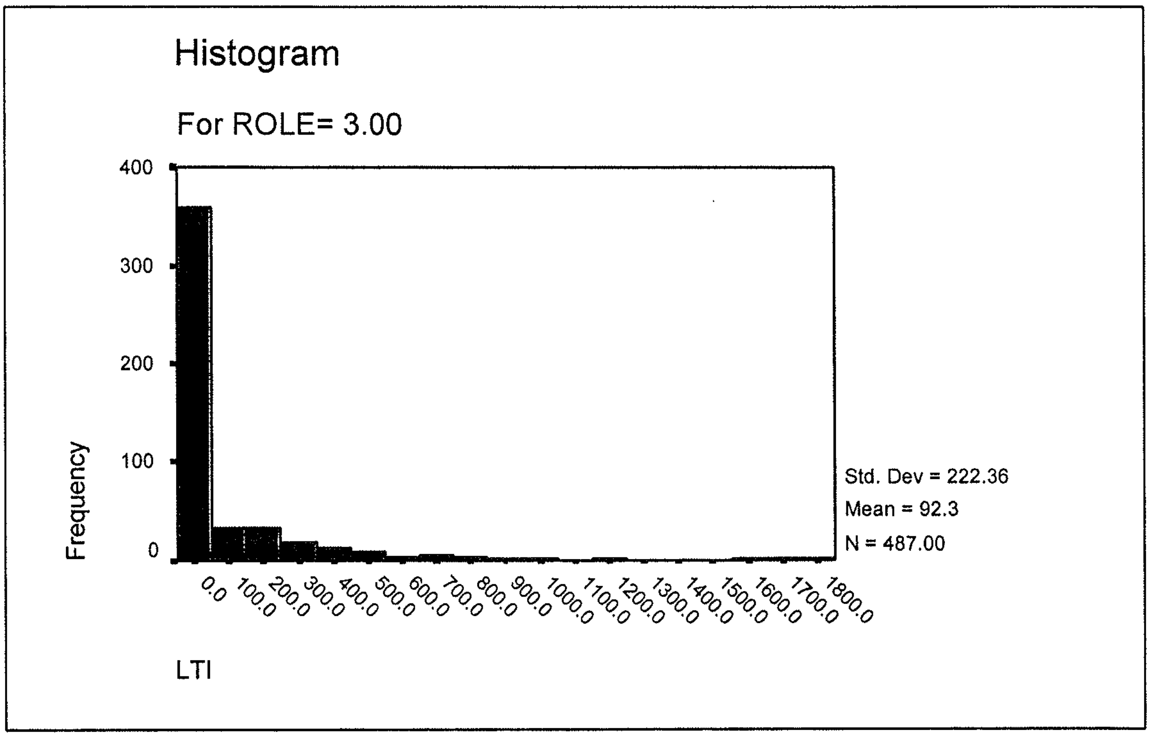
EXECUTIVE DIRECTOR: LTI REDUCED	1996	1997	1998
LTI MEAN	71	73	92
SKEWNESS	.241	10.43	10.43
KURTOSIS	0.478	153.14	153.14

The long-term incentive means for CEOs and executives over the period of the research study were £164k, £161k and £204k and for executive director were £71k, £73k and £92k. In both groups there was an overall upward trend. This mean indicates a reference point or norm to view other directors in these groups, some of whom achieve substantially more and are extreme outliers. The distribution characteristics of long-term incentive for CEOs were 4.60 2.18, 2.8 for skewness and 27.54, 10.43, 7.93 for kurtosis. For the executive directors there was skewness of 5.78, 10.43, 4.01 and kurtosis of 45.55, 153.14, 20.7. These measures are more of a challenge to conditions of the normal distribution than elsewhere in this study.

Histogram for Absolute LTI CEO 1998



Histogram for Absolute LTI Executive Director 1998



Logarithmic

For long-term incentive on the logarithmic base, the measures are more reasonable and are closer to what one would expect and would be reflected in a normal distribution. For CEOs in 1998, skewness of –0.783 and kurtosis of –0.276 and for executive directors skewness of – 1.24 and kurtosis of 0.915, represent the nature of long-term incentive distribution. The period is shown in the summary table below.

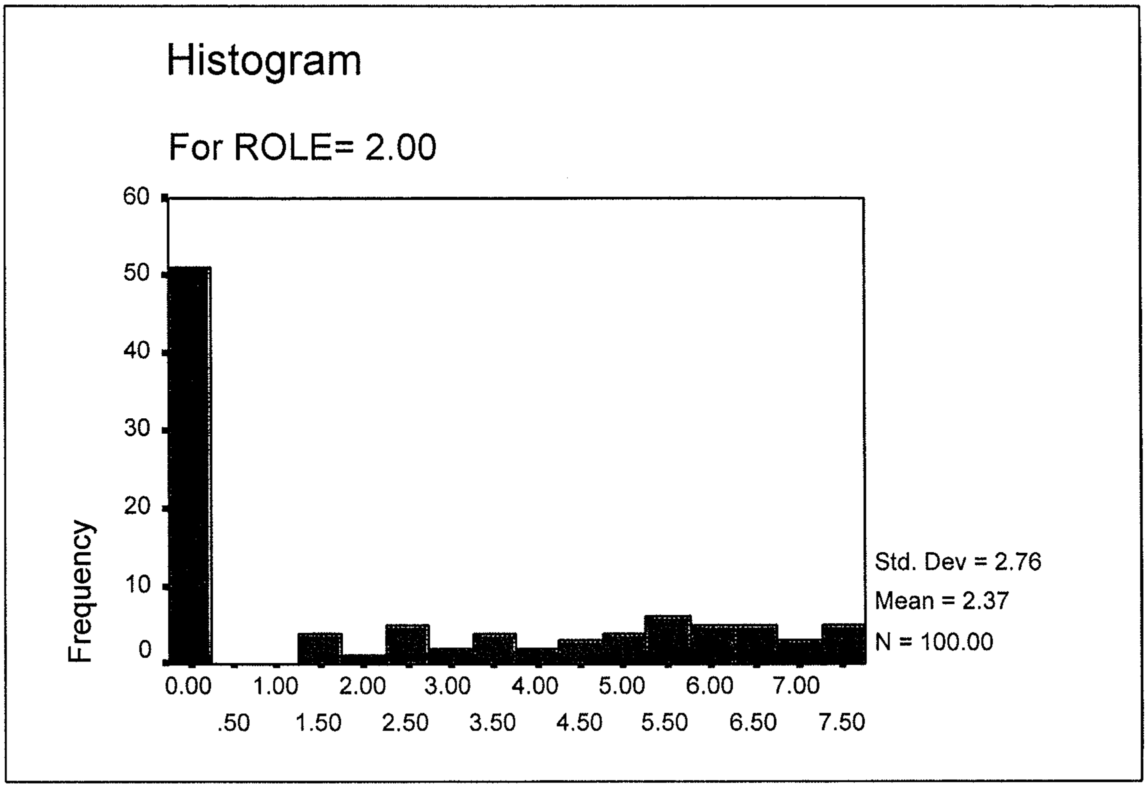
Summary of Logarithmic Reduced Dataset Tables: CEO

CEO: LTI LOGARITHMIC REDUCED	1996	1997	1998
MEAN	2.17	2.13	2.37
SKEWNESS	0.69	0.70	0.59
KURTOSIS	-1.14	-1.24	-1.29

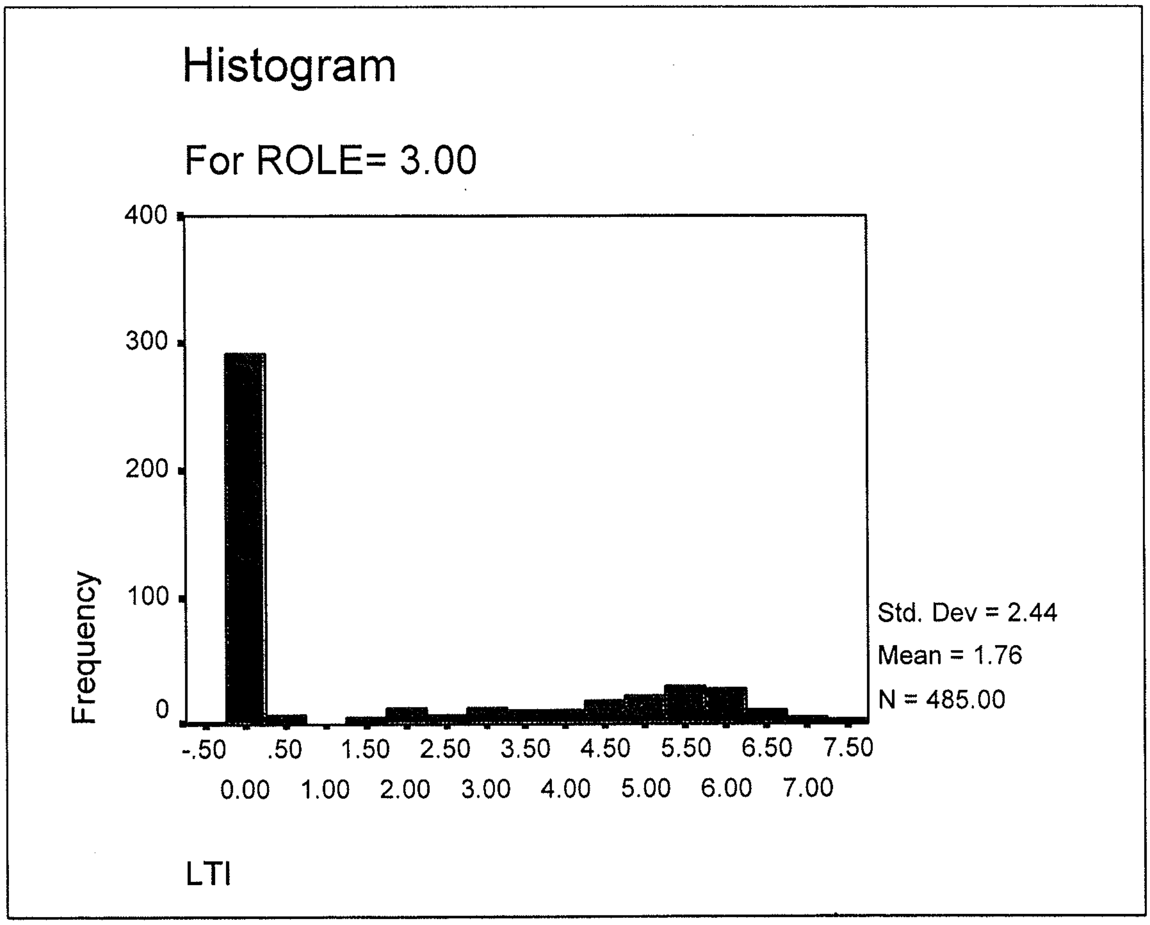
Summary of Logarithmic Reduced Dataset Tables: ED

EXECUTIVE DIRECTOR: LTI LOGARITHMIC REDUCED	1996	1997	1998
MEAN	1.40	1.45	1.77
SKEWNESS	1.11	0.97	0.87
KURTOSIS	-0.14	-0.13	-0.93

Histogram for Logarithmic CEO LTI 1998



Histogram for Logarithmic Executive Director LTI 1998



Percentage

Consideration of long-term incentive on a percentage of DRIP bases provides an opportunity to see the relative importance of long-term incentive in a director's DRIP. Over the period of the research study, the CEO means were 14%, 14%, 14% and executive director means were 12%, 10%, 10%. Although this was not substantial, for some directors long-term incentive can be substantial in percentage terms. The skewness and the kurtosis measures of the percentage long-term incentive are within the bounds of normality.

Summary of Percentage Reduced Dataset Tables: CEO Director

CEO: LTI PERCENTAGE REDUCED	1996	1997	1998
LTI MEAN	14	14	12
SKEWNESS	1.81	1.44	1.74
KURTOSIS	2.56	0.65	2.14

Summary of Percentage Reduced Dataset Tables: Executive Director

EXECUTIVE DIRECTOR : LTI PERCENTAGE REDUCED	1996	1997	1998
LTI MEAN	14	9.79	12.23
SKEWNESS	1.81	2.11	1.74
KURTOSIS	2.56	3.80	2.14

Concern for the distribution descriptive statistics (skewness and kurtosis) on an absolute scale necessitates the employment of the logarithmic transformation basis of analysis, with these measures becoming much more reasonable and within an acceptable range to enable ANOVA to be conducted. The percentage analysis further supports the conclusions of the logarithmic dataset. Both analyses confirmed more fully that the director group's long-term incentive profiles are very different, thereby rejecting the null and accepting the alternative hypothesis:

ANOVA Analysis LTI

Absolute

LTI : ABSOLUTE REDUCED	1996	1997	1998
F STATISTIC	29	24	45
SIGNIFICANCE	0*	0*	0*
HYPOTHESIS H^0			
HYPOTHESIS H^1	✓	✓	✓

*Significant at 1%

Logarithmic

LTI: LOGARITHMIC REDUCED	1996	1997	1998
F STATISTIC	88	90	122
SIGNIFICANCE	0*	0*	0*
HYPOTHESIS H^0			
HYPOTHESIS H^1	✓	✓	✓

*Significant at 1%

Percentage

LTI: PERCENTAGE REDUCED	1996	1997	1998
F STATISTIC	54	58	72
SIGNIFICANCE	0*	0*	0*
HYPOTHESIS H^0			
HYPOTHESIS H^1	✓	✓	✓

*Significant at 1%

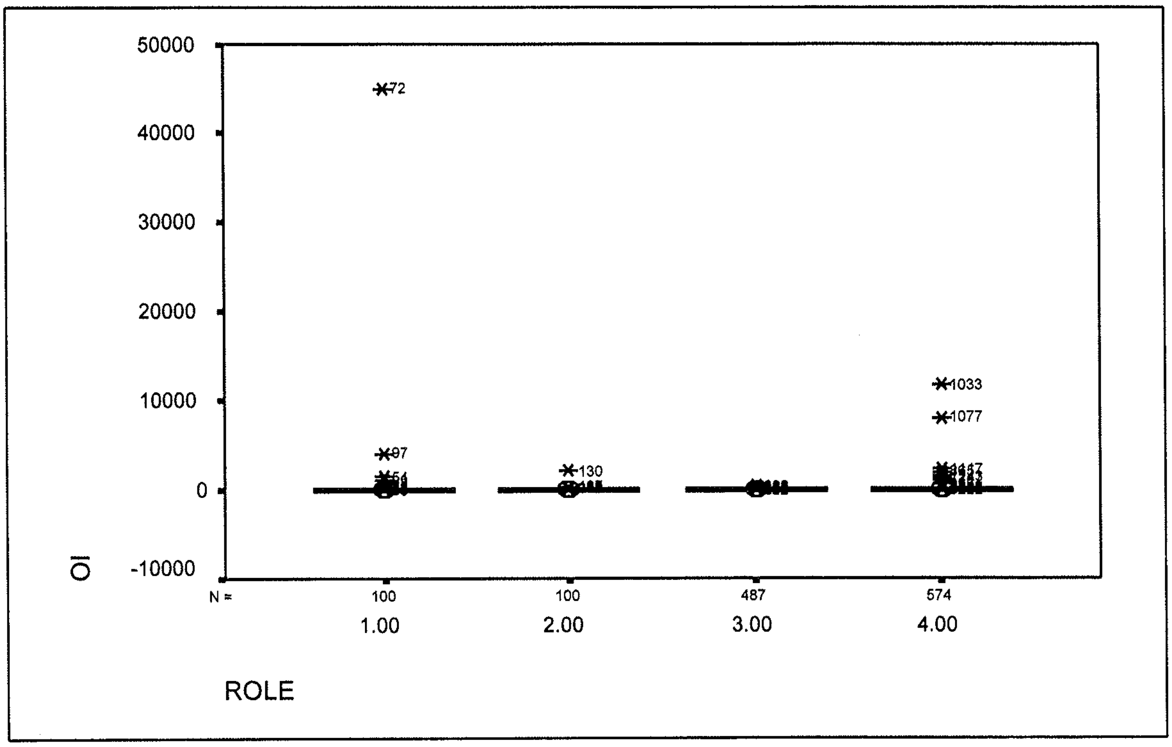
The alternative hypothesis is supported on all three bases over the period, indicating that long-term incentive is different across the director groups.

5.2.4 Ownership Interest (OI) DRIP Analysis

Chair

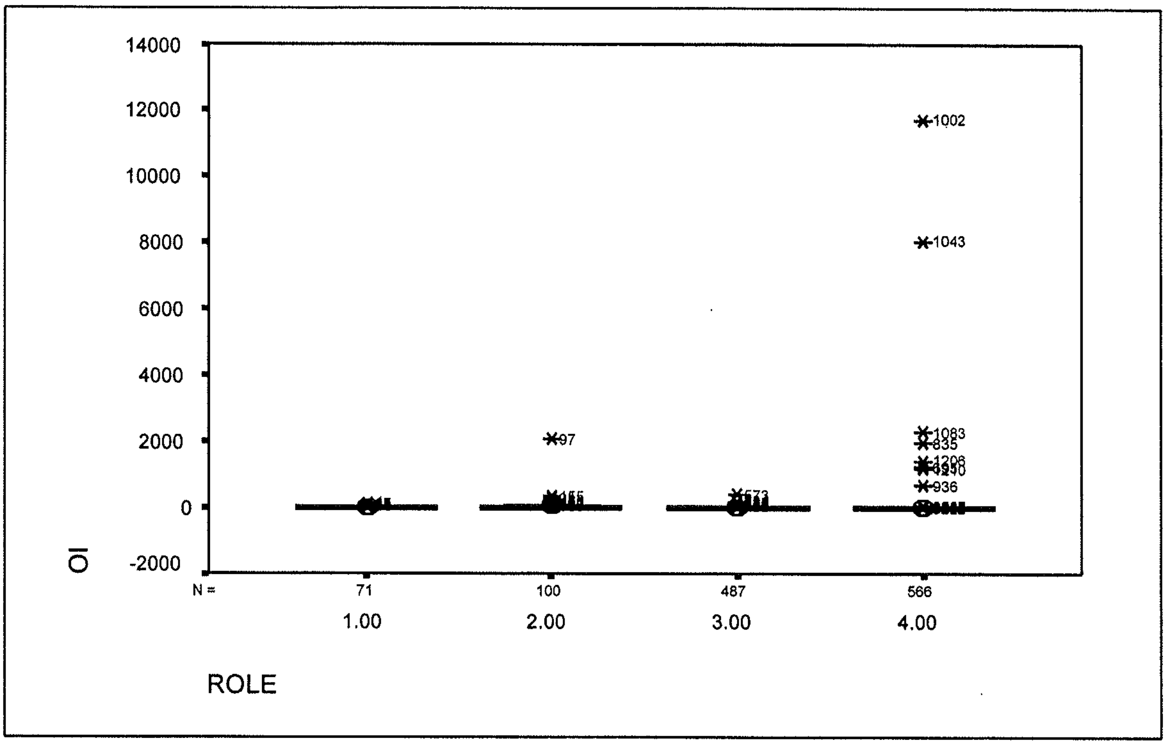
Ownership income as a component of DRIP is potentially the most interesting and offers much scope for research. The means of the four executive groups in 1998 in the absolute full dataset were £536k, £44k, £7k and £50k. In contrast, the means for the reduced datasets were £9k, £43.51k, £7.44k and £51.41k. These four means and their change between the two datasets, reflect particular issues that link directors to their motives of receiving ownership income through equity shareholding. As an overview, the boxplots of the reduced dataset are shown below:

Boxplot of Full Dataset Ownership Interest (OI) of Four Director Groups 1998



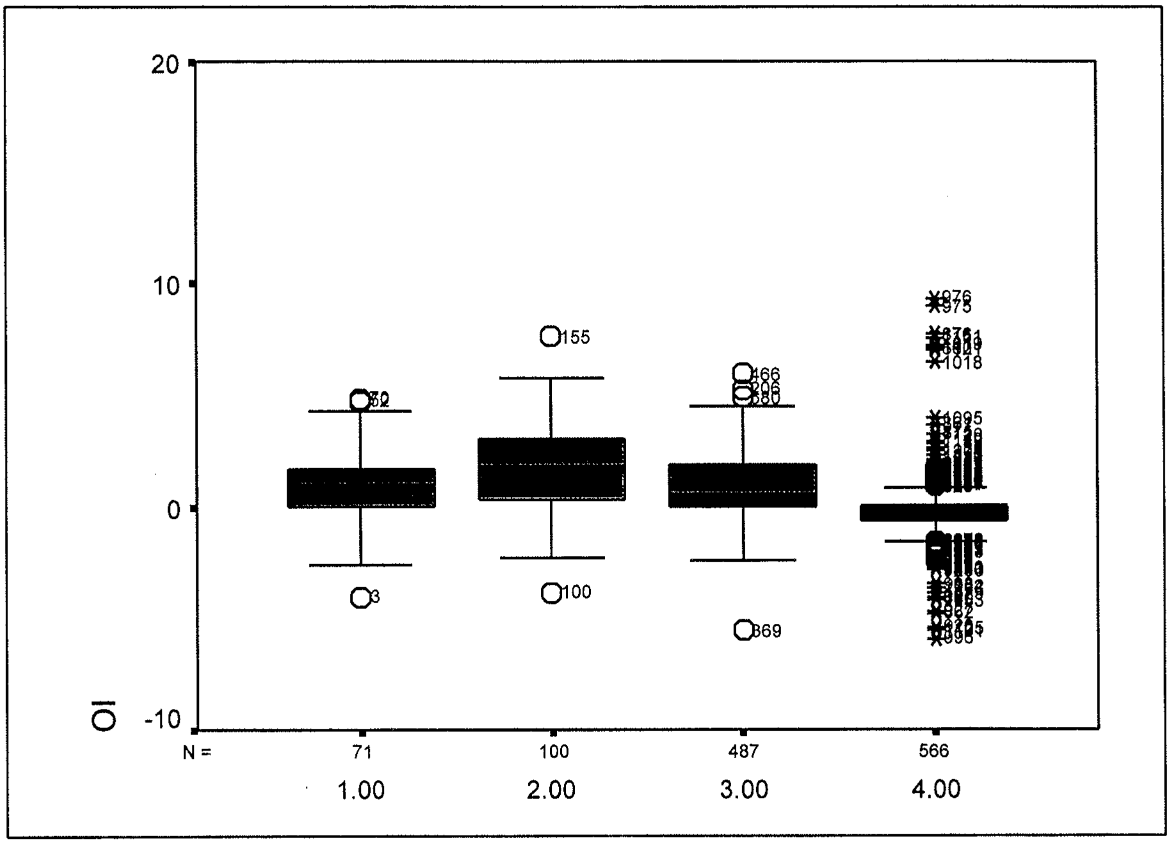
This boxplot shows the extremes and the intense clustering of the directors groups. In the first diagram, the scale on the left hand y axis shows extreme outliers in the region of £50 million, and is in contrast to the much reduced scale in the reduced dataset of £14 million. This is with the exclusion of the incentivised chair and non-executives, but is still highly clustered.

Boxplot of Reduced Dataset Ownership Interest (OI) of Four Director Groups 1998.



The clustering of the ownership income indicates that the majority of directors receive a modest ownership income, in contrast to a few who receive a substantial income from this source. The logarithmic boxplot below shows that the distribution was more normal under this numerical base.

Boxplot of Reduced Logarithmic Dataset Ownership Interest (OI) of Four Director Groups 1998



Extract from Table 5.7

1998 DATASET	CHAIR	CHAIR	CHAIR
	FULL	INDEPENDENT	INCENTIVISED
MEAN OI	536	9	1827

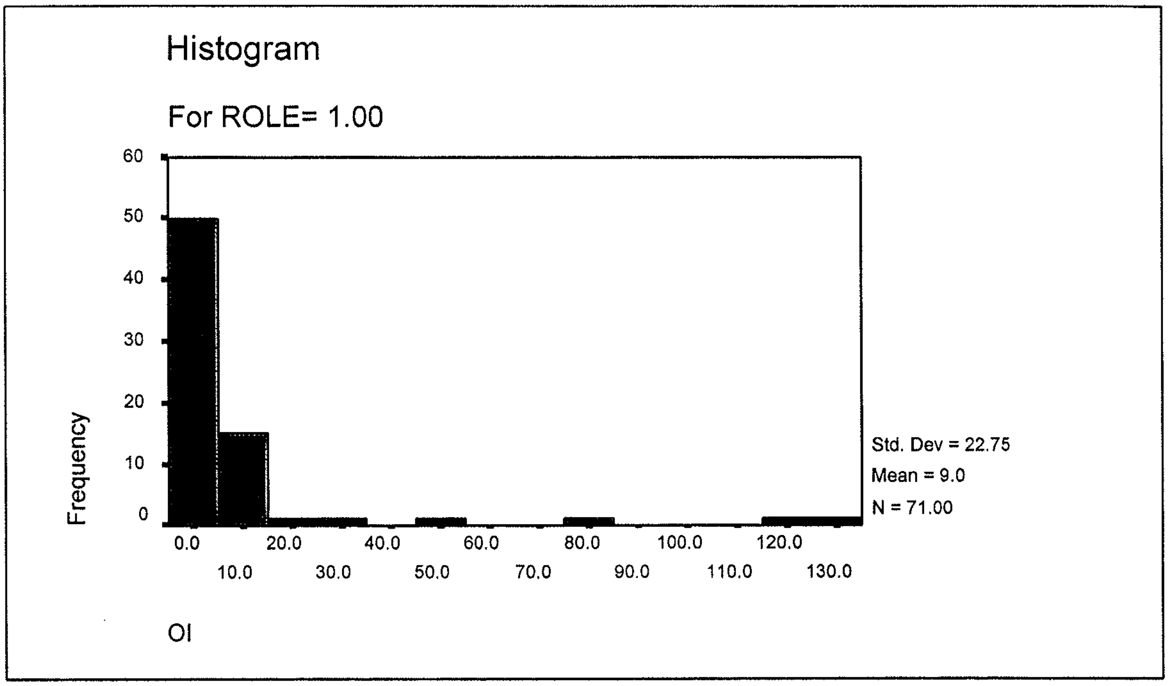
The extract from table 5.7 (see Appendix 1) shows the 1998 chair group in the full dataset where the mean was £536k. There are a few directors that hold some very substantial equity and receive a huge ownership income, compared with their peer directors in the group. Table 4.4 (see Appendix 1) shows that the top 8 chairs received substantially more than their peers. This is particularly evident when comparing the full and reduced dataset descriptive statistics. The mean of the reduced chair is £9k, indicating that the excluded incentivised chairs receive substantial ownership income and this skews the data average of £660k. Over the period of this study the means of the full dataset were £501k, £494k and £536k, in contrast to the reduced dataset means which were £30k, £15k and £9k. This is shown in the summary table below. This would indicate that ownership income for independent chairs is reducing while for incentivised chairs there is an overall general upward trend after a slight reduction in the second year.

Summary of Absolute Reduced Dataset Tables: Chair

CHAIR OI REDUCED	1996	1997	1998
OI MEAN	30	14.47	9
SKEWNESS	4.38	3.43	4.21
KURTOSIS	20.25	11.49	18.36

In the chair's full dataset, over the period, the full dataset skewness measures of 9.86, 9.78 and 9.76, and kurtosis of 98, 97 and 97, indicate a consistent type of distribution, but provide a challenge to the conditions of normality. For the reduced dataset skewness measures of 4.21, 3.43, 4.4 and kurtosis 18.4, 11.49, 20.25 reveal distributions nearer to that of a normal distribution, but they still offer some challenge to normality. This is a key feature of the ownership income DRIP element in that the two different specifications of director subsets make a distinctive contrast and this is crucial in understanding the underlying characteristics of director remuneration distribution.

Histogram of Absolute Chair Ownership Income (OI) Full Dataset 1998



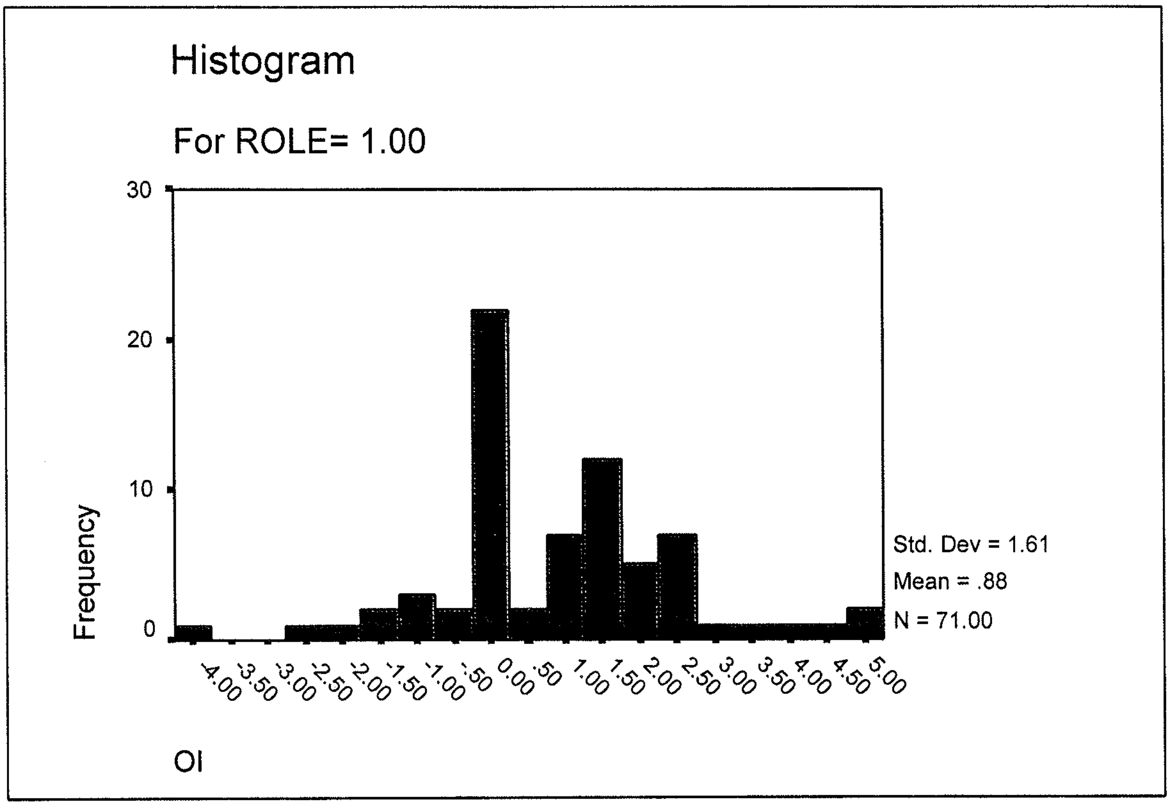
Logarithmic

The logarithmic dataset analysis indicates good approximation to a normal distribution:

Summary of Logarithmic Reduced Dataset Tables: Chair

CHAIR: OI LOGARITHMIC REDUCED	1996	1997	1998
MEAN	0.95	2.13	0.88
SKEWNESS	0.31	0.70	0.02
KURTOSIS	0.85	-1.24	0.95

Histogram of Logarithmic Chair Ownership Income (OI) Reduced Dataset1998



Percentage

The means of the ownership income DRIP percentage over the period were 8.9%, 8.7%, 7.6% in the full dataset. In contrast, the reduced dataset was 7.5%, 5.4% and 3.8%. This director group has the highest level of ownership income, but it is still quite small compared with other forms of DRIP. However, the overall trend is reducing in percentage terms, which is true for the other three director groups. There are substantial challenges to the normality conditions particularly in the case of the chair groups due to the outliers.

Summary of Percentage Reduced Dataset Tables: Chair

CHAIR: OI PERCENTAGE REDUCED	1996	1997	1998
0I MEAN	7.46	5.44	3.82
SKEWNESS	3.16	2.48	3.13
KURTOSIS	10.38	6.38	10

CEO

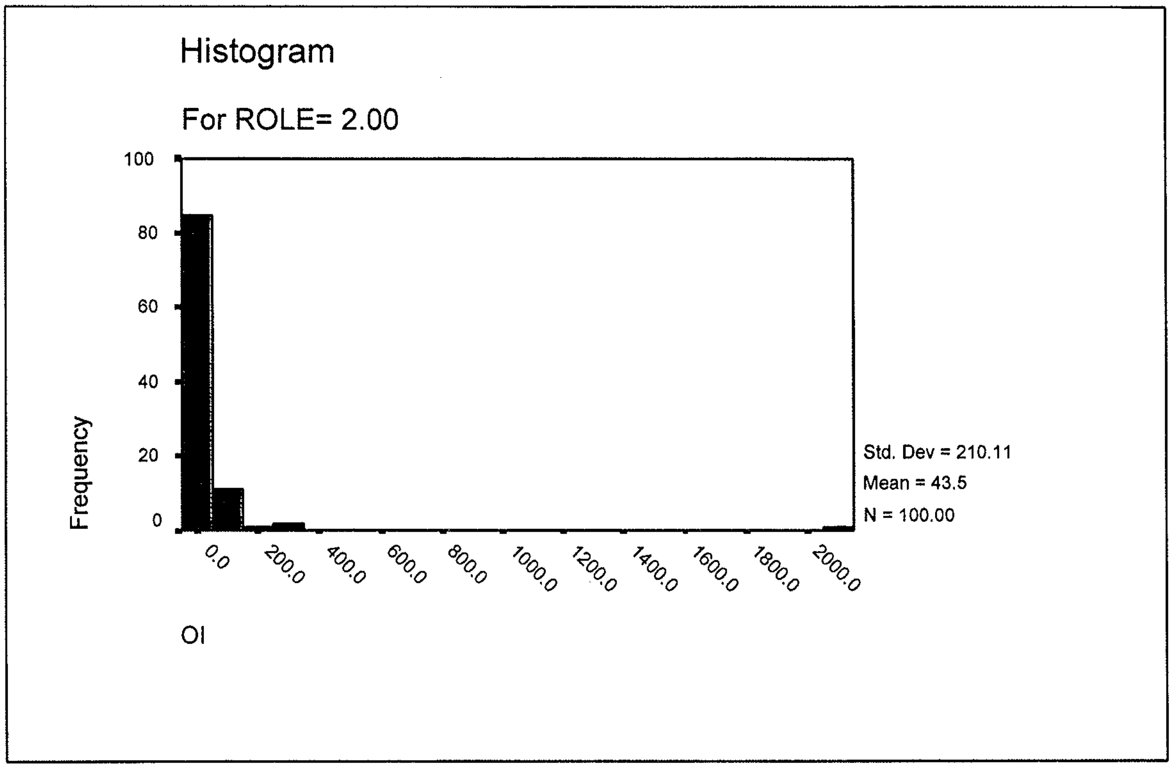
For CEOs over the period, the absolute means for salary were £297k, £42k, £44k. The average for CEOs in 1996 had a mean of £297k, but was substantially influenced by one CEO who received £27,203k in ownership income, clearly an extreme outlier. Without this outlier the mean would be £43.5k, and the ownership income distributions were highly condensed and clustered, but with some extreme outliers.

Summary of Absolute Reduced Dataset Tables: CEO

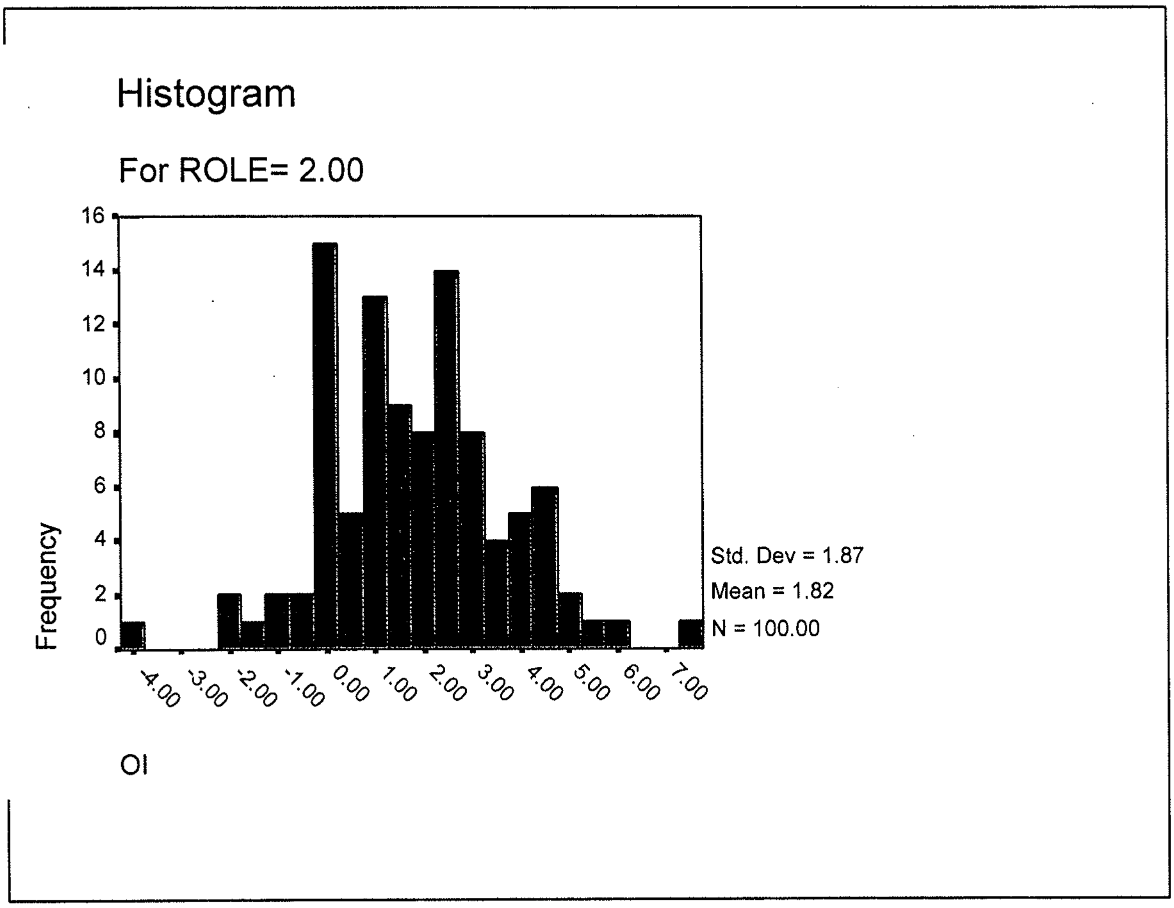
CEO: OI REDUCED	1996	1997	1998
OI MEAN	297.90	42.39	43.51
SKEWNESS	10.00	9.41	9.24
KURTOSIS	100	92	89.31

For CEOs over the period, skewness of 10, 9, 9 with kurtosis of 100, 92 and 89 revealed a reasonably consistent profile. This means that over the period, the distribution is substantially skewed, with extremely high kurtosis. This confirms the view that for CEOs' ownership income is received in a tight band, with no obvious difference between CEO ownership income, with a few outlier cases:

Histogram of Absolute CEO Ownership Income (OI) 1998



Histogram of Logarithmic CEO Ownership Income (OI) 1998



Summary of Logarithmic Reduced Dataset Tables: CEO

CEO OI LOGARITHMIC REDUCED	1996	1997	1998
OI MEAN	1.86	1.99	1.82
SKEWNESS	1.25	0.51	0.113
KURTOSIS	3.45	0.20	0.56

The table above shows the descriptive statistics reflected the normality conditions required for ANOVA to take place

Percentage

In percentage terms in the reduced dataset, the CEO group averages were 4.36%, 3.78%, 3.45%, indicating the decline in importance of this source of remuneration. The skewness and kurtosis are 5.60, 6.65, 6.8 and 36.3, 53.3, 55.2 respectively, indicating that there were some challenges to normality, but this may be accommodated under the 'robust and flexible ANOVA' facility, and is summarised below.

Summary of Percentage Reduced Dataset Tables: CEO Director

CEO: OI PERCENTAGE REDUCED	1996	1997	1998
0I MEAN	4.36	3.78	3.45
SKEWNESS	1.23	6.65	6.80
KURTOSIS	36	53	55

Executive Director

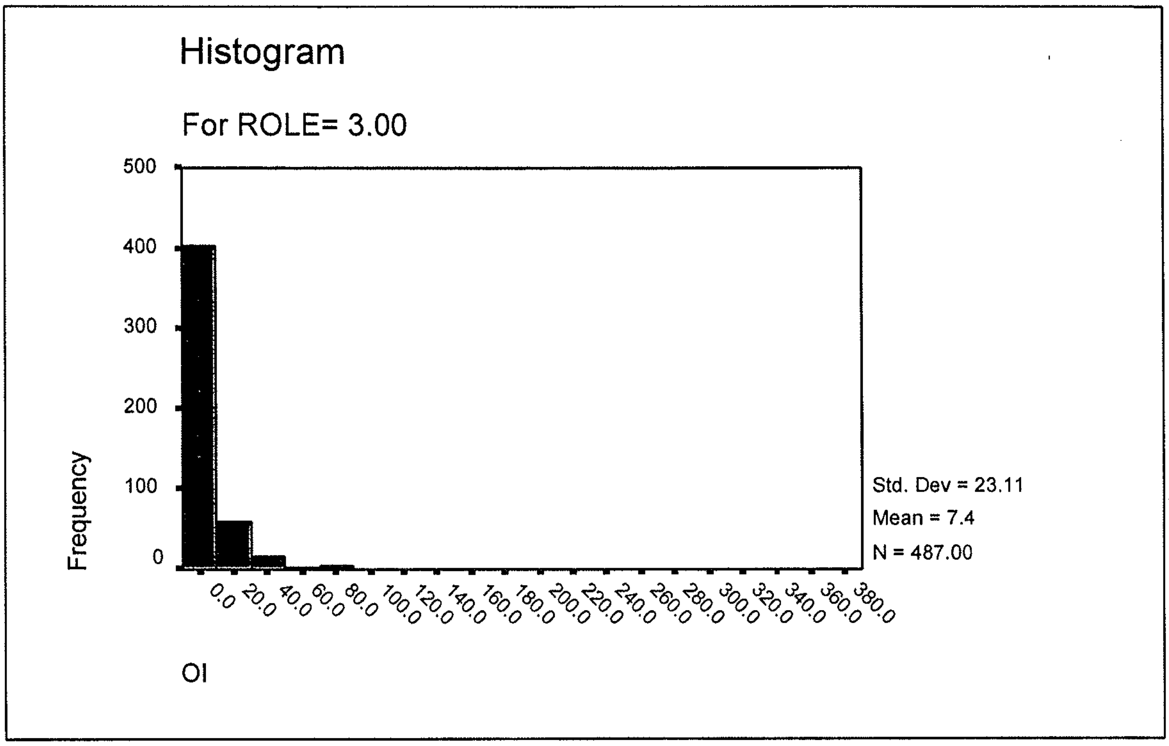
The executive director group is similar to that of the CEO group, but at a lower level, their absolute average over the period being £8.44k, £7.80k, £7.44k, indicating its decline.

Summary of Absolute Reduced Dataset Tables: Executive Director

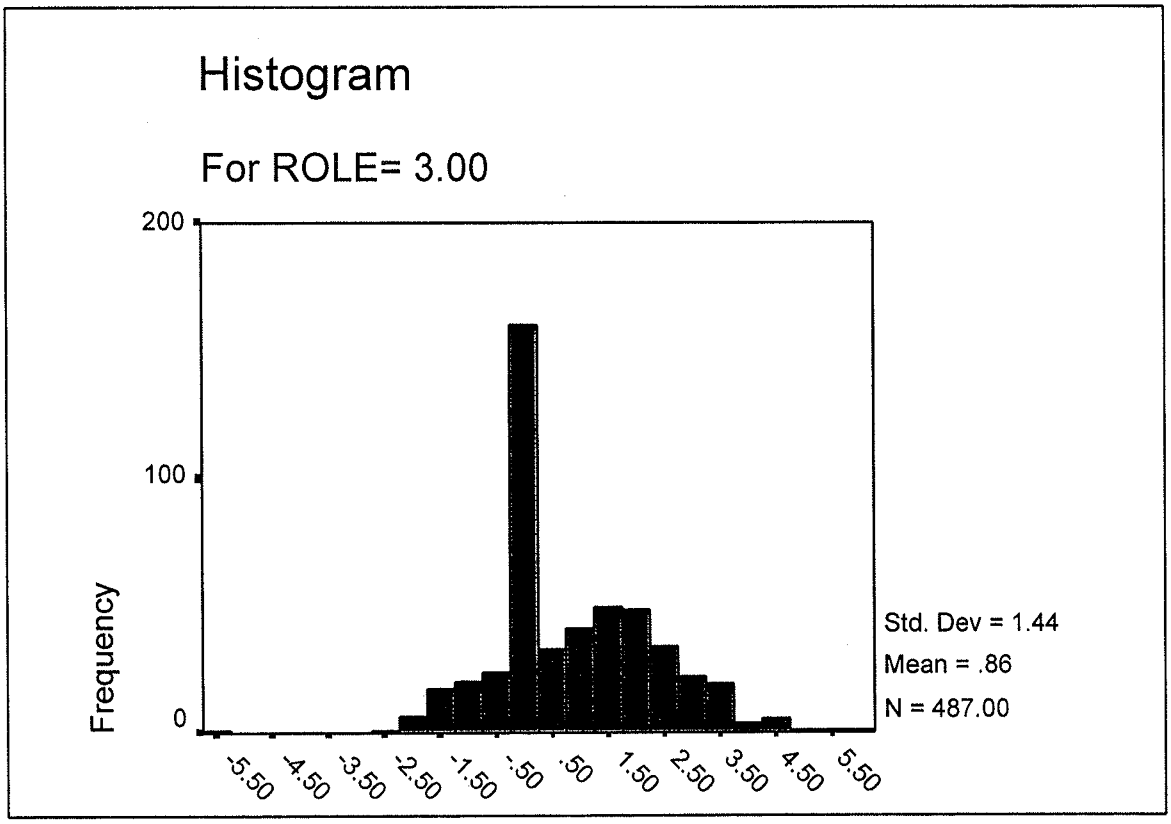
EXECUTIVE DIRECTOR: OI PERCENTAGE REDUCED	1996	1997	1998
OI MEAN	20	8.44	7.44
SKEWNESS	20	7.80	10.61
KURTOSIS	418	84.94	151

The skewness and kurtosis follow a similar pattern indicated below:

Histogram of the Absolute Executive Directors OI 1998



Histogram of the Logarithmic Executive Director OI 1998



The logarithmic dataset of skewness and kurtosis measures enable these to more readily conform to normality conditions:

Summary of Logarithmic Reduced Dataset Tables: Executive Director

EXECUTIVE DIRECTOR: OI LOGARITHMIC REDUCED	1996	1997	1998
OI MEAN	0.69	.88	0.86
SKEWNESS	0.20	0.41	.32
KURTOSIS	2.09	0.43	.58

Percentage

For the percentage analysis of executive director, the ownership income percentage over the period was 2.71%, 2.35% and 2.11%. This indicated a small percentage of executive director DRIP and its decline in importance. The skew and kurtosis measures are of the same level as in the CEO group and are shown in table 5.13 and 5.14 (See Appendix 1).

Summary of Percentage Reduced Dataset Tables: Executive Director

EXECUTIVE DIRECTOR: OI PERCENTAGE REDUCED	1996	1997	1998
OI MEAN	2.71	2.35	2.11
SKEWNESS	7.59	5.72	7.28
KURTOSIS	70	42	70

Non--Executive director

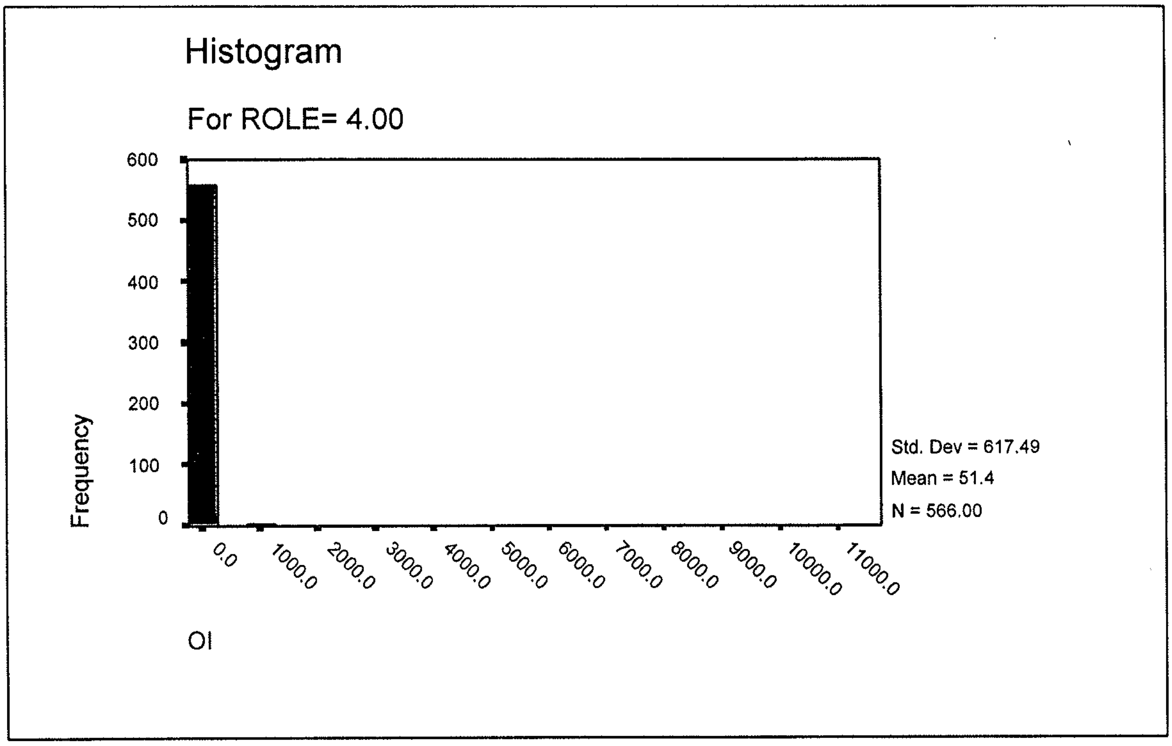
The non-executive directors' mean over the period for the full dataset was £47k, £52k £51k, and for the reduced dataset was £48k, £52k, £51k, which indicated that the exclusion of incentivised directors makes no particular difference to the descriptive statistics of this director group. The skewness over the period was 16, 16,16 and kurtosis 26, 265, 281, which indicated very extreme measures, implying a non-normal distribution. For the reduced dataset these measures were reduced, but not substantially, and were still far from meeting the criteria of a normal distribution. This would indicate that for this director group the ownership income is highly condensed and very similar in profile. The following table summarises the descriptive statistics of the reduced dataset:

Summary of Absolute Reduced Dataset Tables: Non Executive

NON EXECUTIVE OI REDUCED	1996	1997	1998
OI MEAN	20.23	51.84	51.41
SKEWNESS	20.00	15.48	16.08
KURTOSIS	418	257	277

Skewness of 19.97, 7.8, 10.61 and kurtosis 417.71, 85, 150.5 respectively, provide extreme challenges to the ANOVA assumptions of normality.

Histogram of the Absolute Non-Executive Director OI Reduced Dataset1998



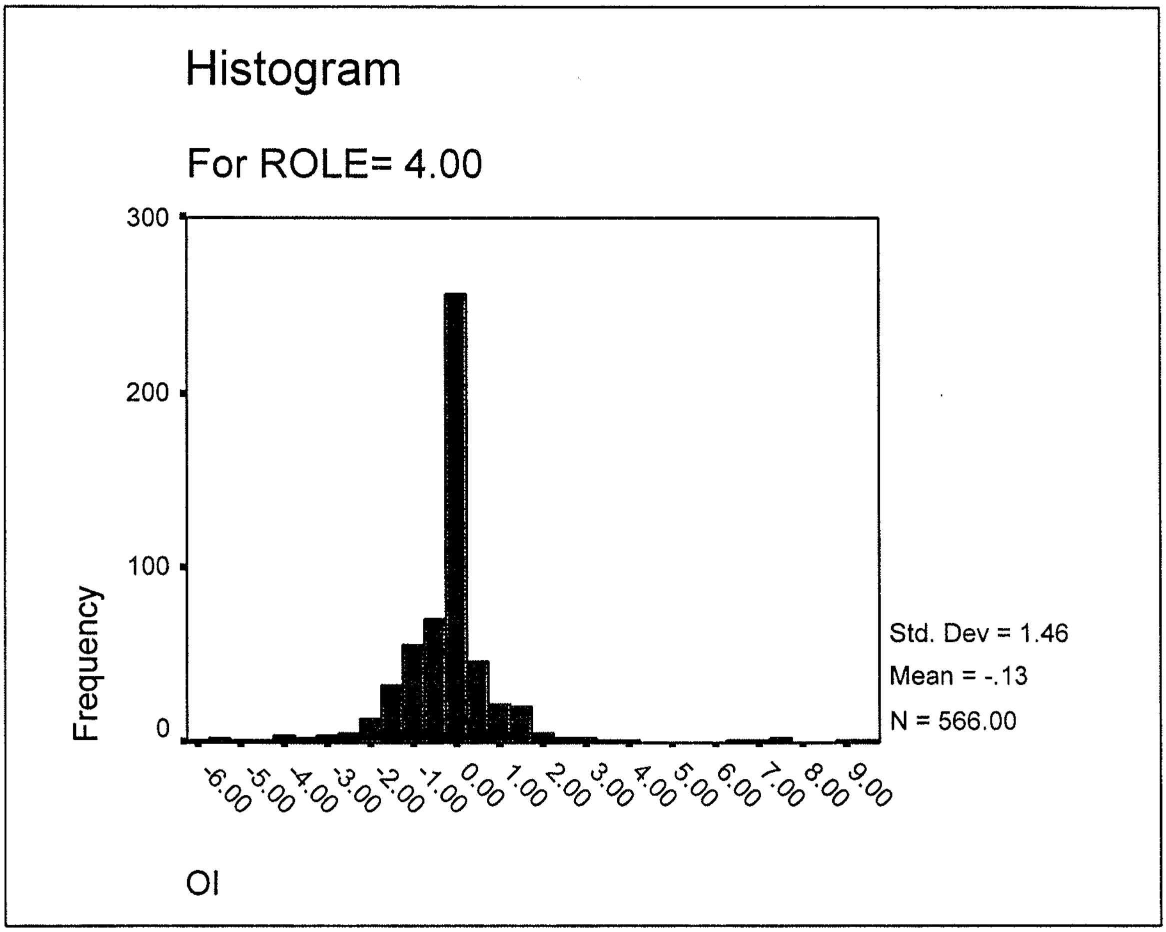
Logarithmic

The logarithmic statistics indicate that the skewness and kurtosis are more reduced in this dataset and more conducive to further analysis, but are still challenging.

Summary of Logarithmic Reduced Dataset Tables: ND

NON-EXECUTIVE DIRECTOR: OI LOGARITHMIC REDUCED	1996	1997	1998
OI MEAN	-0.159	.-0.16	-0.13
SKEWNESS	1.76	1.58	1.59
KURTOSIS	10.34	10	13

Histogram of the Logarithmic Non-Executive Director OI Reduced Dataset 1998



Percentage

The percentage of DRIP represented by this form of remuneration is small. Over the period in the full dataset the means of 6.4%, 5.7%, 7.6% indicated it was the least important source of DRIP. With the exclusion of the incentivised directors in the reduced dataset, the means change to 6.5%, 6.5%, 3.8%, which confirms this DRIP is small and of reducing importance.

Summary of Percentage Reduced Dataset Tables: Non-Executive Director

NON-EXECUTIVE DIRECTOR: OI PERCENTAGE REDUCED	1996	1997	1998
OI MEAN	6.39	5.72	4.67
SKEWNESS	4.37	4.82	5.80
KURTOSIS	20	25	37

ANOVA Analysis: Ownership Income

In this DRIP component there is some evidence in the absolute full and reduced dataset that ownership income is the same for all four groups of director. The summary tables of the reduced dataset show that 1998 and 1997 have an F statistic of 1.03 and 1.06 respectively, which indicates that it is highly significant at 0.38 and 0.36. This supports the acceptance of the null hypothesis that the ownership income of the four groups is the same. In 1996, an F statistic of 2.80, with a significance of 0.0040, would be rejected at the 1% level, but accepted at 5%. Clearly, in this DRIP component for the ownership income absolute dataset, there is more similarity within and between the director groups than found in other DRIP components.

In contrast, the logarithmic and percentage datasets uphold the rejection of the null and acceptance of the alternative, shown in the summary tables below. This confirms that ownership income in these datasets show that the director groups does have similar qualities:

Absolute

OI: ABSOLUTE REDUCED	1996	1997	1998
F STATISTIC	29	1.062	1.02
SIGNIFICANCE	0.040	0.36	0.38
HYPOTHESIS H^0	✓	✓	✓
HYPOTHESIS H^1			

*Significant at 1%

In contrast, in the logarithmic dataset, the F statistics inform us that the null is rejected and the alternative hypothesis is accepted. On the logarithmic base adopted, there were identifiable differences within and between the director groups:

Logarithmic

OI: LOGARITHMIC REDUCED	1996	1997	1998
F STATISTIC	52	74	71
SIGNIFICANCE	0*	0*	0*
HYPOTHESIS H^0			
HYPOTHESIS H^1	✓	✓	✓

*Significant at 1%

The percentage ownership income ANOVA analysis reveals that, although there is some evidence of similarity across the four groups, it is not at a sufficiently high level of significance to support the null hypothesis. As a result, the alternative hypothesis is accepted and the director group's ownership income is different in the percentage dataset. The reduced percentage ownership income summary table is shown below:

Percentage

OI: PERCENTAGE REDUCED	1996	1997	1998
F STATISTIC	7.32	8.19	5.65
SIGNIFICANCE	0.00000732*	0.00000213*	0.000764*
HYPOTHESIS H^0			
HYPOTHESIS H^1	✓	✓	✓

*Significant at 1%

5.3 ANOVA Analysis Results

The analysis of variance, referred to as ANOVA, compares the differences within and between the values in the four director groups. This is undertaken by using an F statistic, which at a stated level of significance, indicates the degree to which a null hypothesis can be supported. The ANOVA is used for the four components of DRIP. So the chair, CEO, executive and non-executive groups' members remuneration (e.g. salary) are examined within and between their director subsets. This is to establish whether there was a difference at a level of significance, which would confirm the null hypothesis. An F statistic would be established at a level of significance, typically 1%, and an F statistic above this would reject this null hypothesis and accept the alternative hypothesis. This would support the view that there are differences between the director groups and it answers research question one.

The ANOVA technique enables the first research question to be addressed and for it to be applied as a hypothesis to each DRIP component. This is applied in both the full and reduced datasets on an absolute, logarithmic and percentage numerical basis, i.e. six specifications of dataset. The F statistics and the level of significance for the range of analysis is shown in table 5.8 (see Appendix 1).

In both the full and reduced absolute dataset (see the extract from table 5.8 below) the ANOVA analysis concludes that the four director group DRIP profiles are different in all components, except ownership income. In 1996, long-term incentive had a low F statistic that revealed a very low and insignificant challenge to these main conclusions. But, for ownership income the position is a little more complex. In the full dataset the significance is below 5% in all three years and below 1% in 1996. For the reduced dataset in 1996 it is below 5% but is very significant in the latest two years, 1997 and 1998, which strongly shows that there is no difference between the director groups:

EXTRACT FROM TABLE 5.8 SUMMARY ANOVA TESTS						
ABSOLUTE FULL DATASET						
ANOVA	**1996**		**1997**		**1998**	
	F	Sig.	F	Sig.	F	Sig.
SALARY	557.4065	0.0000	567.9456	0.0000	734.3225	0.0000
STB	91.7784	0.0000	70.5090	0.0000	96.7780	0.0000
LTI	13.8036	0.0000	21.4539	0.0000	29.8285	0.0000
OI	4.0777	0.0068	4.6772	0.0030	4.4711	0.0039
ABSOLUTE REDUCED DATASET						
ANOVA	**1996**		**1997**		**1998**	
		Sig.	F	Sig.	F	Sig.
SALARY	672.1518	0.0000	661.9950	0.0000	891.0089	0.0000
STB	109.0794	0.0000	72.2381	0.0000	112.9410	0.0000
LTI	28.7265	0.0000	24.3790	0.0000	45.4174	0.0000
OI	2.7968	0.0391	1.0620	0.3642	1.0273	0.3795

In the logarithmic dataset all the F statistics are at a substantial level, which indicates the rejection of the null and acceptance of the alternative hypothesis, showing that all DRIP components of the four director group are different. An extract from table 5.15 showing the logarithmic datasets is shown below:

EXTRACT FROM TABLE 5.8 SUMMARY ANOVA TESTS						
LOGARITHMIC FULL DATASET						
ANOVA	**1996**		**1997**		**1998**	
	F	Sig.	F	**Sig.**	F	Sig.
SALARY	1026.3602	0.0000	1129.5679	0.0000	1390.5578	0.0000
BONUS	370.1701	0.0000	454.8904	0.0000	463.9318	0.0000
LTI	70.4981	0.0000	69.2158	0.0000	97.9553	0.0000
OI	60.0026	0.0000	83.7162	0.0000	75.1028	0.0000
LOGARITHMIC REDUCED DATASET						
ANOVA	**1996**		**1997**		**1998**	
	F	Sig.	F	**Sig.**	F	Sig.
SALARY	1004.7782	0.0000	1118.8909	0.0000	1230.6172	0.0000
BONUS	451.2946	0.0000	521.5576	0.0000	541.9621	0.0000
LTI	88.3038	0.0000	89.9039	0.0000	122.5310	0.0000
OI	51.6255	0.0000	74.2543	0.0000	70.5086	0.0000

For the percentage reduced datasets there were no challenges above the 1% level of significance in the table, so this confirms the rejection of the null and supports the alternative hypothesis:

EXTRACT FROM TABLE 5.8 SUMMARY ANOVA TESTS						
PERCENTAGE FULL DATASET						
ANOVA		**1996**		**1997**		**1998**
	F	Sig.	F	Sig.	F	**Sig.**
%SAL	91.2996	0.0000	107.9696	0.0000	155.8402	0.0000
%STB	165.1227	0.0000	234.4613	0.0000	258.5492	0.0000
%LTI	38.3446	0.0000	36.5574	0.0000	53.8260	0.0000
%OI	8.8295	0.0000	11.8011	0.0000	9.3983	0.0000
PERCENTAGE REDUCED DATASET						
ANOVA		**1996**		**1997**		**1998**
	F	Sig.	F	Sig.	F	**Sig.**
%SAL	118.3202	0.0000	146.0547	0.0000	177.5800	0.0000
%STB	214.7701	0.0000	235.4923	0.0000	277.9771	0.0000
%LTI	54.0510	0.0000	58.1703	0.0000	72.3762	0.0000
%OI	7.3181	0.0001	8.1900	0.0000	5.6483	0.0008

The ANOVA analysis supports the rejection of the null hypothesis for all four groups of director for salary, short-term bonus, long-term incentive and ownership income, except the absolute ownership income at the 1% level of significance. In the ownership income of the absolute full dataset, a higher level of significance is required and this is satisfied at the 5% level. However, in the reduced dataset, the F statistic indicates that the null hypothesis is acceptable and all directors received the same ownership income in this numerical base's distribution.

An ANOVA analysis is ideally undertaken with data that has a normal distribution. Many of the director groups' datasets meet these normal distribution conditions and allow an ANOVA analysis to take place. However, some director groups' distributions challenge these assumptions, and when applying ANOVA these 'strict conditions' need to be relaxed to enable this analysis to proceed.

As highlighted in chapter 4, the SPSS Advanced Statistics Guide (page 51) indicates that:

> " ANOVA is a robust and accommodating technique that allows flexibility in its application"

Building on this 'flexible' facility the application of ANOVA analysis enabled the hypotheses of research question one to be addressed with the results reported in table 5.8.

5.4 REMPER Analysis of Director Groups: Absolute and Logarithmic Reduced Models

5.4.1 Salary

Salary and Chair Director Group

The absolute reduced dataset was used to formulate the 1998 chair salary absolute model. The stage one procedure was to formulate a full current year twelve variable model and this obtained an R^2 of 0.249 and adjusted R^2 of 0.088. To identify the presence of multi-collinearity, the inter-collinearity between the twelve independent variables in the model are shown in the correlation matrix (as part of the SPSS's output in table 5.10 and in Appendix 1). From this matrix the procedure for stage two found that within the financial size group, sales revenue had the highest correlation co-efficient with salary and was, as a result, included in the stage three current restricted model. The same procedure was undertaken for the three remaining performance metric groups.

This stage two procedure selected free cash flow and TIR from their respective metric groups. In the fourth group an income variable did not provide a model entry, due to this metric group's variables being excluded because of their high inter-collinearity with existing variables in the model. This current year restricted chair salary year model, with three variables, yielded an adjusted R^2 of 0.083. The exploration of lagged year effects was undertaken in stage four and found a rising level of explanatory power in terms of the adjusted R^2, which occurred with each successive lagged year iteration. This procedure was undertaken until the adjusted R^2 in the next lagged year declined, where upon the best model with the highest adjusted R^2 was identified. In this case it was in year minus four, with an adjusted R^2 of 0.114, shown in table 5.10. The same procedure was undertaken for the 1997 current restricted chair absolute model and it found the best model with a lag of minus one year and an adjusted R^2 of 0.065. For 1996, the same specified model found there to be no lag, i.e. the current year model had the highest adjusted R^2 of 0.082. The same procedures were applied to the absolute and logarithmic reduced models and the results are recorded in table 5.9 (see Appendix 1). This provides a summary of the procedures of the four-stage process and its results, but a range of other issues need to be considered when interpreting these results.

In comparing the two numerical bases of model (the absolute and logarithmic), similar levels of explanatory power are present in both with no clear distinguishing pattern or feature of explanatory power. The main performance driver group for both chair salary models was financial size. For the absolute reduced model, capital employed for two years and sales revenue in the final year can be said to be the key main performance driver, and in the logarithmic reduced model, sales revenue in two of the three years, with total assets in the final year. In terms of lagged effects, there were a wide variety of lags present in these models. An extract from this table summarising the results of the four stage REMPER model formulation process is shown in table 5.9 (see Appendix 1).

The results were the culmination of the four stages of the research strategy and these are described in detail later in this chapter for the CEO salary logarithmic model. This example of REMPER analysis provides results of the four-stage process. Using the CEO director group as a reference point with the existing literature and a starting point to both report and consider the issues identified in the results.

Salary and the CEO Director Group

The CEO group has been selected to highlight the key issues in the REMPER model formulation process and its output. It is the group upon which most of the research attention has been focused, providing a link to the existing literature and a reference point to start this study's analysis. The logarithmic reduced model was selected because it has superior qualities over the absolute reduced model. Many authors from the literature have regarded it as the most representative and have adopted it as a standard format of analysis[148]. It experiences fewer challenges than the absolute reduced model with regard to concerns of heteroscedascity, inequality of variance, scale and type of relationship in model fit.

The following narrative describes the four-stage procedure of the model undertaken in this research design, but in more detail to give a fuller explanation of the approach adopted throughout this work. In addition, other dimensions of the statistical analysis need to be identified, considered and a rationale given for the treatment, using the CEO logarithmic reduced 1998 dataset:

Extract from Table 5.9 REMPER Regression Models: Chair and CEO (Absolute and Logarithmic Basis) Summary Statistics and Drivers of Chair and CEO Salary

TABLE 5.9 ABSOLUTE AND LOGARITHMIC REGRESSION MODELS: SUMMARY STATISTICS AND DRIVERS

MODEL SUMMARIES

REMUNERATIO	DIRECTOR	ABSOLUTE REDUCED MODELS	ABS	ABS	ABS	LOG	LOG	LOG
SAL	CHAIR		1996	1997	1998	1996	1997	1998
		ITEM	ADJUSTE	ADJUSTE	ADJUSTE	ADJUSTE	ADJUSTE	ADJUSTE
		CURRENT FULL 12 VARIABLE						
		R2	0.262	0.17	0.249	0.453	0.21	0.307
		ADJUSTED R2	0.082	-0.1	0.088	0.053	-0.581	-3.505
		CURRENT FOUR VARIABLE MODEL						
		R2						
		ADJUSTED R2	0.082	0.055	0.083	0.078	0.044	0.057
		MODEL VARIABLES						
			CE	CE	SR	SR	SR	TA
			CF	CF	CF	EBIT	CF	FCF
			ROCE	ROCE	TIR	TIR	ROE	TIR
		METRIC GROUP OF MAIN DRIVER I	SIZE	SIZE	SIZE	SIZE	SIZE	SIZE
		LAGGED MODELS						
		MINUS ONE	0.036	0.065	0.083	0.018	0.049	0.092
		MINUS TWO		0.026	0.085		0.064	0.102
		MINUS THREE			0.107		0.08	0.11
		MINUS FOUR			0.114		0.04	0.063
		MINUS FIVE			0.103			
		BEST MODEL	0	-1	-4	0	-3	-3
		BEST MODEL ADJ R2	0.082	0.065	0.114	0.018	0.08	0.11
		FINAL MODEL VARIABLES						
						SR	CF	TA
						EBIT		
						TIR		

TABLE 5.9 ABSOLUTE AND LOGARITHMIC REGRESSION MODELS: SUMMARY STATISTICS AND DRIVERS

REMUNERATIO	DIRECTOR	ABSOLUTE REDUCED MODELS	ABS	ABS	ABS	LOG	LOG	LOG
SAL	CEO	0	1996	1997	1998	1996	1997	1998
		ITEM	ADJUSTE	ADJUSTE	ADJUSTE	ADJUSTE	ADJUSTE	ADJUSTE
		CURRENT FULL 12 VARIABLE						
		R2	0.406	0.417	0.36	0.707	0.472	0.508
		ADJUSTED R2	0.322	0.342	0.267	0.606	0.249	0.123
		CURRENT FOUR VARIABLE MODE						
		R2						
		ADJUSTED R2	0.114	0.191	0.234	0.224	0.309	0.312
		MODEL COMPONENTS						
			MC	MC	MC	SR	SR	SR
			EBIT	CF	CF	TIR	CF	FCF
				ROCE	ROE		ROCE	ROE
		METRIC GROUP OF MAIN DRIVER I	SIZE	SIZE	SIZE	SIZE	SIZE	SIZE
		LAGGED MODELS						
		MINUS ONE	0.124	0.221	0.238	0.183	0.301	0.355
		MINUS TWO	0.114	0.149	0.265			0.315
		MINUS THREE			0.211			
		MINUS FOUR						
		MINUS FIVE						
		BEST MODEL	-1	-1	-2	0	0	-1
		MULTIPLE MODEL						
		BEST MODEL ADJ R2	0.124	0.221	0.265	0.224	0.309	0.355
		FINAL MODEL VARIABLES						
						SR	SR	SR
						TIR	ROCE	ROE

In the logarithmic reduced model for CEO salary in 1998, a current year full twelve variable regression model was formulated. This yielded an R^2 of 0.580 and an adjusted R^2 of 0.123. A correlation matrix provided an insight into the multi-collinearity patterns of this model from which the components of the restricted four variable model were to be selected. The model summary and the correlation matrix of the current model are shown in table 5.10 (see Appendix 1).

Starting with the financial size metric group, salary had the highest co-efficient of correlation of 0.527 and was included in the restricted model as the first variable entry. In the financial results group, cash flow had the highest co-efficient of correlation of 0.440, but it suffered inter-collinearity with sales revenue of 0.718, which is above the 0.7 rule and, therefore, is ruled out of the model. The next highest variable in the results groups is EBIT, but it also had a higher than 0.7 inter-collinearity and was also excluded. The remaining variable in the results group was free cash flow, which had inter-collinearity with sales revenue of 0.637 below the 0.7 threshold exclusion point and was, therefore, included in the model. The third metric group of returns had as its highest co-efficient of correlation variable with salary, return on equity (ROE), at 0.382 and had a less than 0.7 inter-collinearity with the two other variables already in the restricted model. Therefore, it satisfied the membership criteria of the model. Finally, the fourth group, financial income, had two variables, both of which are highly inter-correlated with existing variables in the restricted model, so these were both excluded. From this stage two procedure, a stage three restricted model with three variables was formulated to undertake a stepwise regression procedure to identify the model's explanatory power and the importance of the included variables.

In the stage three procedure for formulating a restricted model, a stepwise method was used to explore the various combinations of variables and the explanatory power of the resultant model. The key objective in model formulation and its output, was the level of explanatory power provided and expressed in the form of an adjusted R^2. In the extract from table 5.10, three formulated restricted current models with their R^2 and adjusted R^2, show the process at work. On examining the model summary shown below, it can be seen that model one, the current year 1998 four VAR model, has an R^2 of 0.349 and adjusted R^2 of 0.299. The investigation of lagged year effects at stage four started with model 2, the 1997 version of the current model, which was a one-year lagged model. It was found to have an R^2 of 0.387 and adjusted R^2 of 0.355. The 1996 version had an R^2 of 0.341 and adjusted of R^2 of 0.315. Therefore, it was the model two with adjusted R^2 of 0.355 that had the highest explanatory power and the most efficient best stage four model.

The best model for CEO salary (1998), using a logarithmic reduced basis, was the 1997 restricted model, which was a one year lagged model. This was made up of three components - a constant, independent variable sales revenue 1997 (SR 97) and independent variable return on equity 1997 (ROE 97). The t statistics for this model were 2.696, 3.666 and 2.541, with levels of significance 0.005, 0.001 and 0.019 respectively, which indicated the relative importance and significance of these components. In SPSS version 9[197] (Advanced Statistics Guide page 209), it suggests that variables with t statistics of below –2 and above +2 have higher levels of importance in the model. This indicates the importance of sales revenue in the above model. Using these measures, it was found that the primary and most important performance driver was the sales revenue variable. This was confirmed by two methods: the stepwise method to reduce to a single variable model and/or to formulate a simple univariate regression model of SR and 1998 salary. By both methods the model's adjusted R^2 of 0.271 was a stand alone variable, which explains this proportion 0.271/0.351, i.e. some 77% of the model, with the remaining being explained by the second variable in the model ROE, but clearly sales revenue is the main performance driver. The eigen values provide a similar view on the importance of each component in the model summary. The challenge to validity of the conclusions of the model's regression statistics was examined by considering the residual diagnostics. This focused on cases with standardised residuals of values with +/- 3 being examined and the Mahalanobis measures that were greater than 3 times the average, as informed by the guidelines in SSPS V9[197] (page 57). Although some cases were found, they had a marginal difference to the reported results.

The 1998 CEO Salary Logarithmic Best Model Determination Procedure (N=100)

TABLE 5.10 BEST REMPER MODELS FOR THE DIRECTOR DRIP MATRIX

CURRENT YEAR(1998) FULL 12 VARIABLE REGRESSION MODEL

Model Summary

	R	R Square	Adjusted R Sq	Std. Error o	Change Statistics					Durbin-Watson Statistic	
Model	ROLE = 2.00 (Selected)				R Square C	F Change	df1	df2	Sig. F Chan	ROLE = 2.	ROLE ~= 2.00 (Unselected)
1.000	0.762	0.580	0.123	0.394	0.580	1.268	12.000	11.000	0.350	0.984	0.118

a Predictors: (Constant), 98DIVIDENDS, TIR 98, ROE 98, SR98, CE98, 98FREECASHFLOW, MC98, 98TEARNINGS, EBIT98, ROCE 98, TA98, 98CASHFLOW

b Unless noted otherwise, statistics are based only on cases for which ROLE = 2.00.

c Dependent Variable: SALARY

Correlations

		SALARY	SR98	TA98	CE98	MC98	EBIT98	98CASHFL	98FREECA	ROE 98	ROCE 98	TIR 98	98TEARNI	98DIVIDE
Pearson Correlation	SALARY	1.000	0.527	0.269	0.117	0.426	0.396	0.440	0.372	0.362	0.300	0.231	0.305	0.427
	SR98	0.527	1.000	0.733	0.582	0.745	0.725	0.718	0.637	0.205	0.224	0.219	0.580	0.706
	TA98	0.269	0.733	1.000	0.929	0.791	0.802	0.800	0.689	0.174	0.170	0.249	0.741	0.825
	CE98	0.117	0.582	0.929	1.000	0.696	0.711	0.712	0.559	0.058	0.061	0.235	0.695	0.747
	MC98	0.426	0.745	0.791	0.696	1.000	0.921	0.950	0.718	0.424	0.453	0.294	0.851	0.905
	EBIT98	0.396	0.725	0.802	0.711	0.921	1.000	0.874	0.735	0.516	0.537	0.291	0.907	0.885
	98CASHFL	0.440	0.718	0.800	0.712	0.950	0.874	1.000	0.759	0.357	0.363	0.298	0.887	0.937
	98FREECA	0.372	0.637	0.689	0.559	0.718	0.735	0.759	1.000	0.438	0.472	0.302	0.744	0.736
	ROE 98	0.362	0.205	0.174	0.058	0.424	0.516	0.357	0.438	1.000	0.946	0.098	0.556	0.344
	ROCE 98	0.300	0.224	0.170	0.061	0.453	0.537	0.363	0.472	0.946	1.000	0.012	0.573	0.360
	TIR 98	0.231	0.219	0.249	0.235	0.294	0.291	0.298	0.302	0.098	0.012	1.000	0.288	0.194
	98TEARNI	0.305	0.580	0.741	0.695	0.851	0.907	0.887	0.744	0.556	0.573	0.288	1.000	0.883
	98DIVIDE	0.427	0.706	0.825	0.747	0.905	0.885	0.937	0.736	0.344	0.360	0.194	0.883	1.000

TABLE 5.10 BEST REMPER MODELS FOR THE DIRECTOR DRIP MATRIX

1998 4 VAR RESTRICTED MODEL

Model Summary

Model	R	R Square	Adjusted R Sq	Std. Error o	Change Statistics: R Square C	F Change	df1	df2	Sig. F Change	Durbin-Watson
1.000	0.591	0.349	0.299	0.353	0.349	6.964	3.000	39.000	0.001	
2.000	0.587	0.345	0.312	0.349	-0.004	0.247	1.000	41.000	0.622	1.801

a Predictors: (Constant), ROE 98, SR98, 98FREECASHFLOW

b Predictors: (Constant), ROE 98, SR98

c Dependent Variable: SALARY

1997 4 VAR RESTRICTED MODEL

Model Summary

Model	R	R Square	Adjusted R Sq	Std. Error o	Change Statistics: R Square C	F Change	df1	df2	Sig. F Chan	Durbin-Watson
	ROLE = 2.00 (Selected)									ROLE =
1.000	0.627	0.393	0.344	0.341	0.393	7.982	3.000	37.000	0.000	
2.000	0.622	0.387	0.355	0.338	-0.006	0.371	1.000	39.000	0.546	1.782

a Predictors: (Constant), ROE 97, 97FREECASHFLOW, SR97

b Predictors: (Constant), ROE 97, SR97

c Unless noted otherwise, statistics are based only on cases for which ROLE = 2.00.

d Dependent Variable: SALARY

1996 4 VAR RESTRICTED MODEL

Model Summary

Model	R	R Square	Adjusted R Sq	Std. Error o	Change Statistics: R Square C	F Change	df1	df2	Sig. F Change	Durbin-Watson
1.000	0.589	0.346	0.307	0.350	0.346	8.836	3.000	50.000	0.000	
2.000	0.584	0.341	0.315	0.348	-0.006	0.437	1.000	52.000	0.512	1.341

a Predictors: (Constant), ROE 96, SR96, 96FREECASHFLOW

b Predictors: (Constant), SR96, 96FREECASHFLOW

c Dependent Variable: SALARY

TABLE 5.10 BEST REMPER MODELS FOR THE DIRECTOR DRIP MATRIX

Collinearity Diagnostics

Model	Dimension	Eigenvalue	Condition Inde	Variance Proportions: (Constant)	SR97	97FREECA	ROE 97
1.000	1.000	3.904	1.000	0.000	0.000	0.001	0.007
	2.000	0.086	6.751	0.003	0.002	0.013	0.953
	3.000	0.009	20.903	0.151	0.015	0.720	0.018
	4.000	0.002	49.895	0.845	0.983	0.267	0.022
2.000	1.000	2.923	1.000	0.000	0.000		0.012
	2.000	0.075	6.244	0.009	0.008		0.975
	3.000	0.002	38.122	0.990	0.992		0.012

a Dependent Variable: SALARY

b Selecting only cases for which ROLE = 2.00

Residuals Statistics

	ROLE = 2.00 (Selected): Minimum	Maximum	Mean	Std. Deviati	N
Predicted Value	5.339	6.594	5.976	0.263	85.000
Std. Predicted Value	-2.379	2.415	0.053	1.003	85.000
Standard Error of Predicte	0.034	0.183	0.075	0.035	85.000
Adjusted Predicted Value	5.236	6.740	5.975	0.280	85.000
Residual	-1.194	0.785	-0.009	0.326	85.000
Std. Residual	-3.529	2.320	-0.027	0.964	85.000
Stud. Residual	-3.897	2.626	-0.026	1.014	85.000
Mahal. Distance	0.010	11.318	1.990	2.377	85.000

a Dependent Variable: SALARY

b Pooled Cases

TABLE 5.10 BEST REMPER MODELS FOR THE DIRECTOR DRIP MATRIX

SINGLE VARIABLE MODEL

1997 SR SALARY MODEL

Model Summary

Model	R: ROLE = 2.	ROLE ~= 2.00 (Unselected)	R Square	Adjusted R	Std. Error o	Change Statistics: R Square C	F Change	df1	df2	Sig. F Chan	Durbin-Watson Statistic: ROLE = 2.	ROLE ~= 2
1.000	0.538		0.289	0.271	0.359	0.289	15.859	1.000	39.000	0.000		
2.000	0.622	0.144	0.387	0.355	0.338	0.098	6.057	1.000	38.000	0.019	1.782	0.134

a Predictors: (Constant), SR97

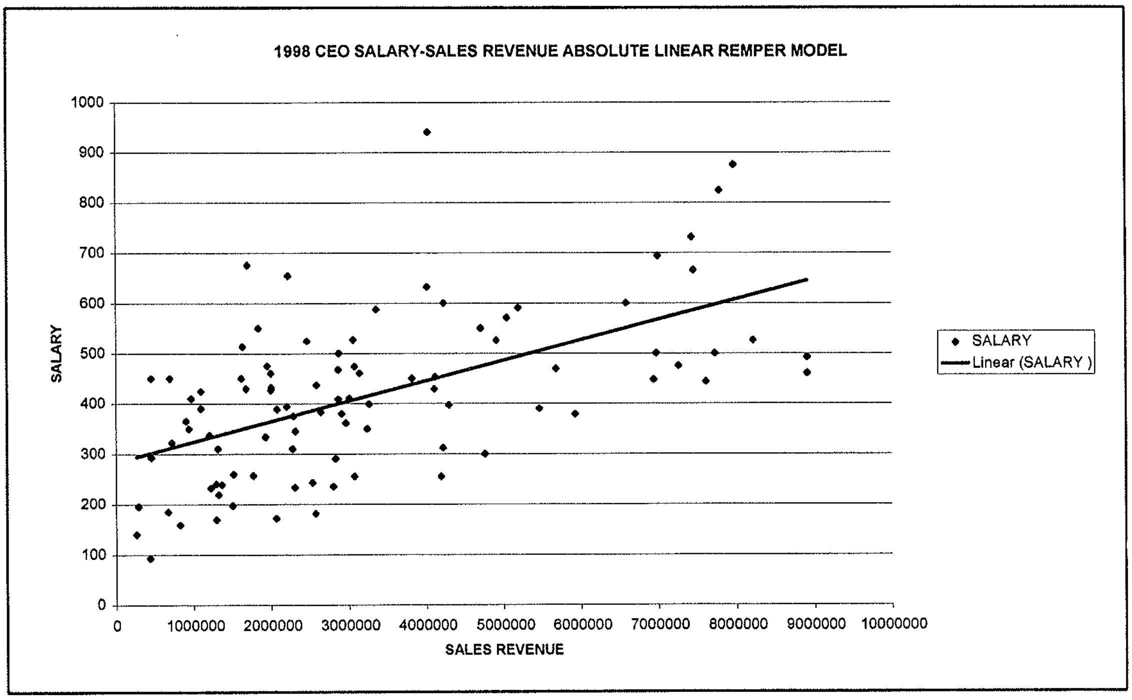
b Predictors: (Constant), SR97, ROE 97

c Unless noted otherwise, statistics are based only on cases for which ROLE = 2.00.

d Dependent Variable: SALARY

A multivariate REMPER model is difficult to show in a graphical display. At best each individual dependent and independent variable can be plotted in a univariate manner. This can show the range of the data extremes of outliers and the range within the distributions. The importance of these residual outliers can be seen in the graphical plots in a univariate environment, however, graphical output in a multivariate environment is much more difficult to illustrate. Despite these extremes, they had minor impact on the resultant reported models. In essence, they did not substantially change the main conclusion or statistics of the original formulated models. This emulates the treatment undertaken in other studies[146]. An example of the CEO salary/sales revenue model in logarithmic terms can be examined:

Figure 5.1 CEO Salary-Sales Revenue Linear Absolute Model 1998



Logarithmic Model: Replace natural absolute scale with logarithmic scale

Figure 5.2: CEO Salary-Sales Revenue Logarithmic Model 1998

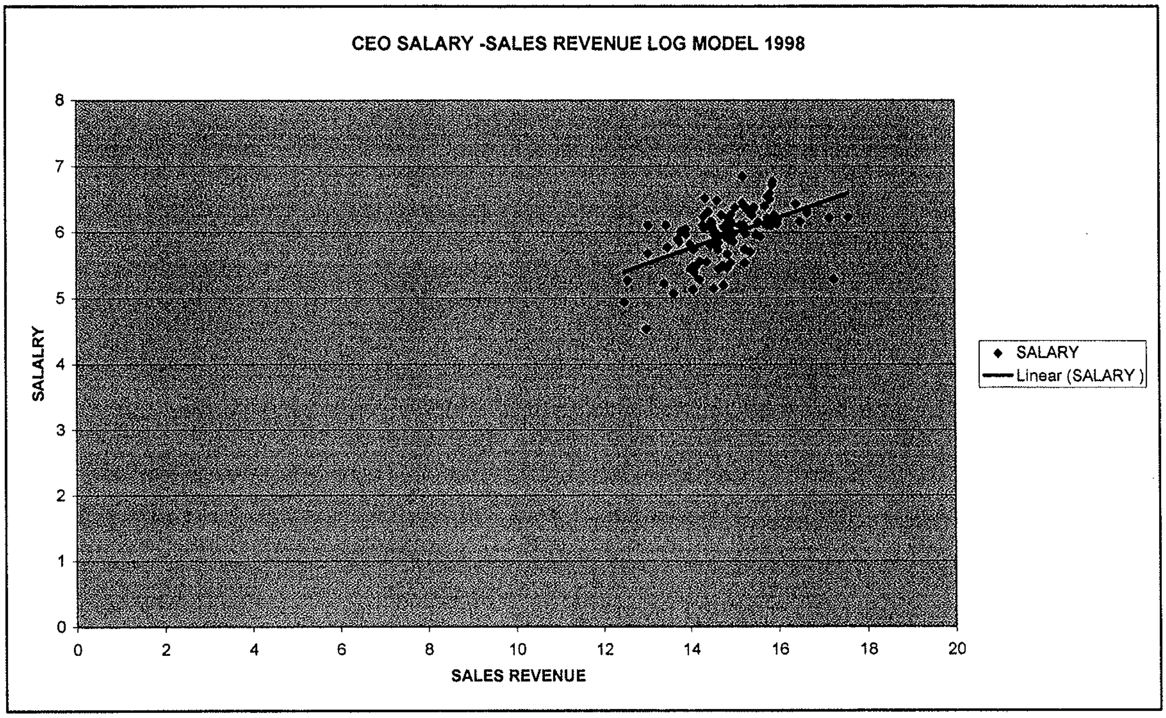


Table 5.11 (see Appendix 1) identifies the best model summaries in the REMPER matrix, which were tabulated and displayed, reflecting the same process as conducted above. This provided an insight into the dynamics of these models, and the identification of the most influential variables. Further analysis, not shown here, enabled the deduction to the power of a single variable in the model, which showed the main performance driver highlighted in the table. In the collinearity diagnostics, the dynamics of the model using the t and p (sig) are shown to support this observation:

TABLE 5.11 BEST MODELS OF LOG REGRESSION MODELS : MODEL SUMMARIES AND CO-EFFICIENTS													
LOGARITHMIC MODELS													
98 SALARY CHAIR (SALCH) BEST MODEL: 97 THREE YEAR LAG MODEL													
Model Summary													
	R	R Square	Adjusted	Std. Error	Change Statistics					Durbin-Watson			
Model	ROLE = 1.00 (Selected)				R Square	F Change	df1	df2	Sig. F Change				
1	0.371204	0.137792	0.098601	0.55019	0.137792	3.515891	2	44	0.038323				
2	0.360038	0.129627	0.110286	0.546612	-0.008165	0.416669	1	46	0.521956	1.657875			
a	Predictors: (Constant), 95FREECASHFLOW, TA95												
b	Predictors: (Constant), TA95												
c	Unless noted otherwise, statistics are based only on cases for which ROLE = 1.00.												
Coefficients													
		Unstandardized Coeffi		Standardiz	t	Sig.	95% Confidence Inter		Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta			Lower Bou	Upper Bou	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	0.835799	1.568847		0.532748	0.596889	-2.326003	3.997602					
	TA95	0.31508	0.129163	0.428561	2.439401	0.018813	0.054769	0.57539	0.360038	0.345154	0.341478	0.634894	1.575066
	95FREEC	-0.048946	0.075827	-0.113403	-0.645499	0.521956	-0.201765	0.103873	0.14555	-0.096855	-0.09036	0.634894	1.575066
2	(Constant)	1.037009	1.52757		0.678862	0.500702	-2.039675	4.113693					
	TA95	0.264701	0.102248	0.360038	2.58882	0.012925	0.058764	0.470639	0.360038	0.360038	0.360038	1	1
a	Dependent Variable: SALARY												
b	Selecting only cases for which ROLE = 1.00												
98 CEO:													
Model Summary													
	R		R Square	Adjusted	Std. Error	Change Statistics					Durbin-Watson Statistic		
Model	ROLE = 2	ROLE ~= 2.00 (Unselected)				R Square	F Change	df1	df2	Sig. F Cha	ROLE = 2	ROLE ~= 2.00 (Unsel	
1	0.626826		0.392911	0.343688	0.34105	0.392911	7.982194	3	37	0.000315			
2	0.62195	0.143516	0.386822	0.354549	0.338216	-0.006089	0.371105	1	39	0.546125	1.781813	0.134407	
a	Predictors: (Constant), ROE 97, 97FREECASHFLOW, SR97												
b	Predictors: (Constant), ROE 97, SR97												
c	Unless noted otherwise, statistics are based only on cases for which ROLE = 2.00.												
d	Dependent Variable: SALARY												
Coefficients													
		Unstandardized Coeffi		Standardiz	t	Sig.	95% Confidence Inter		Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta			Lower Bou	Upper Bou	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.395844	0.850172		2.818069	0.007711	0.673231	4.118456					
	SR97	0.236389	0.072643	0.536029	3.254107	0.002433	0.0892	0.383579	0.537672	0.471713	0.416828	0.604697	1.653721
	97FREEC	-0.027224	0.044689	-0.098534	-0.609184	0.546125	-0.117771	0.063324	0.244093	-0.099651	-0.078032	0.627154	1.594504
	ROE 97	0.137106	0.057561	0.312261	2.381915	0.022477	0.020476	0.253735	0.412331	0.364626	0.305107	0.954703	1.047446
2	(Constant)	2.47432	0.833373		2.969044	0.00515	0.787245	4.161395					
	SR97	0.209437	0.057137	0.474913	3.6655	0.000751	0.093769	0.325106	0.537672	0.511093	0.465623	0.96126	1.040301
	ROE 97	0.140002	0.056888	0.318857	2.461015	0.01851	0.024838	0.255165	0.412331	0.370774	0.312619	0.96126	1.040301
a	Dependent Variable: SALARY												
b	Selecting only cases for which ROLE = 2.00												
98ED MODEL													
Model Summary													
	R		R Square	Adjusted	Std. Error	Change Statistics					Durbin-Watson Statistic		
Model	ROLE = 3	ROLE ~= 3.00 (Unselected)				R Square	F Change	df1	df2	Sig. F Cha	ROLE = 3	ROLE ~= 3.00 (Unsel	
1	0.380387		0.144694	0.13126	0.694128	0.144694	10.77063	3	191	1.43E-06			
2	0.378703	0.051591	0.143416	0.134493	0.692835	-0.001278	0.285349	1	193	0.593837	1.57267	0.134859	
a	Predictors: (Constant), ROE 97, 97FREECASHFLOW, SR97												
b	Predictors: (Constant), ROE 97, SR97												
c	Unless noted otherwise, statistics are based only on cases for which ROLE = 3.00.												
d	Dependent Variable: SALARY												
Coefficients													
		Unstandardized Coeffi		Standardiz	t	Sig.	95% Confidence Inter		Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta			Lower Bou	Upper Bou	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.490421	0.803505		1.854901	0.065152	-0.094461	3.075304					
	SR97	0.20299	0.070875	0.259047	2.864066	0.00465	0.063192	0.342789	0.332498	0.202925	0.191658	0.547389	1.826855
	97FREEC	0.023383	0.043773	0.047254	0.534181	0.593837	-0.062958	0.109724	0.232772	0.038623	0.035746	0.572242	1.747513
	ROE 97	0.160789	0.058627	0.18898	2.742576	0.006676	0.04515	0.276429	0.251676	0.19465	0.183528	0.943133	1.060296
2	(Constant)	1.400181	0.784082		1.785758	0.075717	-0.14634	2.946702					
	SR97	0.22762	0.053727	0.290478	4.236572	3.52E-05	0.121648	0.333592	0.332498	0.292387	0.282976	0.94901	1.05373
	ROE 97	0.158325	0.058336	0.186084	2.713995	0.007253	0.043262	0.273388	0.251676	0.192213	0.181277	0.94901	1.05373
a	Dependent Variable: SALARY												
b	Selecting only cases for which ROLE = 3.00												
98ND													
Model Summary													

TABLE 5.11 BEST MODELS OF LOG REGRESSION MODELS : MODEL SUMMARIES AND CO-EFFICIENTS													
98STBCEO													
Model Summary													
	R		R Square	Adjusted	Std. Error	Change Statistics					Durbin-Watson Statistic		
Model	ROLE = 2	ROLE ~= 2.00 (Unselected)				R Square	F Change	df1	df2	Sig. F Cha	ROLE = 2	ROLE ~= 2.00 (Unsel	
1	0.527405	0.548553	0.278156	0.238053	0.806161	0.278156	6.93613	2	36	0.002831	0.63642	0.321009	
a	Predictors: (Constant), TIR 98, 98CASHFLOW												
b	Unless noted otherwise, statistics are based only on cases for which ROLE = 2.00.												
c	Dependent Variable: STB												
Coefficients													
		Unstandardized Coeff		Standardiz	t	Sig.	95% Confidence Inter		Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta			Lower Bou	Upper Bou	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	0.388241	1.480222		0.262286	0.794596	-2.613787	3.39027					
	98CASHF	0.290849	0.120155	0.359057	2.420608	0.020666	0.047163	0.534536	0.446585	0.374135	0.342764	0.911306	1.097327
	TIR 98	0.207213	0.104581	0.293902	1.981366	0.055227	-0.004887	0.419314	0.400835	0.313572	0.280566	0.911306	1.097327
a	Dependent Variable: STB												
b	Selecting only cases for which ROLE = 2.00												
98STBED													
Model Summary													
	R		R Square	Adjusted	Std. Error	Change Statistics					Durbin-Watson Statistic		
Model	ROLE = 3	ROLE ~= 3.00 (Unselected)				R Square	F Change	df1	df2	Sig. F Cha	ROLE = 3	ROLE ~= 3.00 (Unsel	
1	0.473381	0.458742	0.224089	0.219498	0.862317	0.224089	48.80856	2	338	0	0.391035	0.342907	
a	Predictors: (Constant), ROE 98, 98CASHFLOW												
b	Unless noted otherwise, statistics are based only on cases for which ROLE = 3.00.												
c	Dependent Variable: STB												
Coefficients													
		Unstandardized Coeff		Standardiz	t	Sig.	95% Confidence Inter		Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta			Lower Bou	Upper Bou	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-0.837403	0.556337		-1.505208	0.133204	-1.931721	0.256916					
	98CASHF	0.347096	0.046449	0.387665	7.472662	6.75E-13	0.255731	0.438462	0.449412	0.376543	0.358033	0.852969	1.172376
	ROE 98	0.180683	0.058209	0.161031	3.104054	0.00207	0.066186	0.295181	0.30968	0.166482	0.148723	0.852969	1.172376
a	Dependent Variable: STB												
b	Selecting only cases for which ROLE = 3.00												
98LTICEO													
Model Summary													
	R	R Square	Adjusted	Std. Error	Change Statistics								
Model	ROLE = 2.00 (Selected)				R Square	F Change	df1	df2	Sig. F Change				
1	0.369204	0.136311	0.040346	1.834473	0.136311	1.420423	2	18	0.267433				
2	0.366288	0.134167	0.088597	1.787761	-0.002144	0.044692	1	20	0.834947				
3	1.05E-08	1.11E-16	0	1.872639	-0.134167	2.944186	1	21	0.102449				
a	Predictors: (Constant), ROCE 98, 98FREECASHFLOW												
b	Predictors: (Constant), 98FREECASHFLOW												
c	Predictor: (constant)												
Coefficients													
		Unstandardized Coeff		Standardiz	t	Sig.	95% Confidence Inter		Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta			Lower Bou	Upper Bou	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-0.721937	3.331063		-0.216729	0.830857	-7.720241	6.276367					
	98FREEC	0.472247	0.343716	0.341467	1.373944	0.186328	-0.249874	1.194369	0.366288	0.308089	0.300962	0.776827	1.287289
	ROCE 98	0.154912	0.732777	0.05254	0.211404	0.834947	-1.384595	1.694418	0.213854	0.049767	0.046308	0.776827	1.287289
2	(Constant)	-0.719727	3.246225		-0.221712	0.826904	-7.514155	6.074701					
	98FREEC	0.506574	0.29523	0.366288	1.715863	0.102449	-0.111349	1.124497	0.366288	0.366288	0.366288	1	1
3	(Constant)	4.832726	0.270292		17.87964	9.07E-14	4.268906	5.396545					
a	Dependent Variable: LTI												
b	Selecting only cases for which ROLE = 2.00												
98LTIED													
Model Summary													
	R		R Square	Adjusted	Std. Error	Change Statistics					Durbin-Watson Statistic		
Model	ROLE = 3	ROLE ~= 3.00 (Unselected)				R Square	F Change	df1	df2	Sig. F Cha	ROLE = 3	ROLE ~= 3.00 (Unsel	
1	0.302263		0.091363	0.081748	1.726218	0.091363	9.501935	2	189	0.000117			
2	0.302008	0.251093	0.091209	0.086426	1.721815	-0.000154	0.03208	1	191	0.858044	1.626647	1.93295	
a	Predictors: (Constant), EBIT98, ROCE 98												
b	Predictors: (Constant), EBIT98												
c	Unless noted otherwise, statistics are based only on cases for which ROLE = 3.00.												
d	Dependent Variable: LTI												

5.4.1.1 Results of Salary REMPER

The main features of the analysis of the four director groups' REMPER models are provided in a summary of selected regression results that are given in table 5.9. This provided a starting point for analysis. For salary, in the CEO director group, there was a higher adjusted R^2 in the logarithmic reduced model in both the full current twelve variable and the restricted four variable models. This seemed to indicate a higher level of explanatory power in the logarithmic reduced model than in the absolute reduced model. In terms of lag, it appeared there was a greater degree of lag in the absolute reduced model than the logarithmic reduced model, but overall most models indicated a one-year lag (three out of six models, i.e. 50%). For this group, in the absolute and logarithmic reduced model, it was found that market capitalisation and sales revenue respectively were the main explanatory variable in all three years. Both of these variables were from the financial size metric group, which suggests that this is the main performance driver for this group. The logarithmic model was adopted because it is more robust to statistical challenge than the absolute, for the reasons outlined earlier in this chapter. However, it does provide a higher explanatory power than the absolute and this relationship grew stronger over the period of the study. For this reason, it provided the standard basis for the main reported results and application to practice.

The salary of the executive directors in the absolute reduced models had a higher adjusted R^2 than in the logarithmic models. In terms of lagged period, although a one year lagged model was present in two of the three logarithmic years, there was no pattern in the absolute reduced model. In three of the six models a one-year lag was present, i.e. in 50% of the cases. For the absolute reduced model and logarithmic reduced models, the size metric group was the main performance driver group. Market capitalisation was the main explanatory variable for all three years in the absolute reduced model. In the logarithmic reduced model, sales revenue was the main driver in two out of the three years, with market capitalisation being present in the remaining year. This is a contrast between the absolute reduced model with a clear consistent main driver, i.e. market capitalisation, whereas with the logarithmic reduced model the pattern is not so clear. However, on investigation of the correlation matrix, the market capitalisation was only just higher than sales revenue and, over the period, the average was also higher. Consequently, this is a further consideration in reporting these results and the application of the models.

For the salary of the non-executive directors in the logarithmic reduced model, there was a higher adjusted R^2 over the absolute reduced model in the most recent two years for the full model. In the logarithmic model there was no improvement in the adjusted R^2 in lagged models over the current restricted model, indicating no lagged effect. By contrast, the absolute reduced model exhibits no clear pattern. Both models show that the financial size metric group was the dominant explanatory variable group in all six years. In the absolute reduced model, market capitalisation is the driver in all three years, as well as in the last two years of the logarithmic reduced model, with sales revenue narrowly replacing market capitalisation in stage two and three in model formulation. So, it can be seen that, on this basis, market capitalisation is the driver of this type of remuneration in both models.

5.4.2 Short-term Bonus

In the CEO short-term bonus model a consistently higher adjusted R^2 was found in the logarithmic reduced model than in the absolute reduced model. On examination, the lagged year models all indicated a current year orientation, i.e. no lag present. From the performance metric group the main explanatory variables originated from the results group. In the absolute model the main drivers were 1996–1998 EBIT, EBIT and free cash flow and in the logarithmic FCF, FCF and cashflow. Although this indicated that there was some inconsistency over the period, there is high inter-collinearity within these main variables. This implied a similar level of explanatory power, but different performance driver. As a practical way forward, the most recent period driver is adopted for application to practice. This may also indicate the changing nature of remuneration determination in short-term performance.

The executive director short-term bonus models' main performance drivers in all models came from the results metric group. In the absolute model, EBIT was the driver in the first two years and then this was superseded by cashflow, with an improved explanatory power. The logarithmic model had cash flow in the most recent two years with good levels of explanatory power. This is a feature where both director groups share the same main driver in application to practice, i.e. cashflow being the main driver. The inconsistent identification of the same driver in the models may reflect the changing nature of company short-term objectives and business imperatives. The results reflect their changing nature and the level of explanatory power of the short-term performance driver in these years.

5.4.3 Long-term Incentive

The CEO long-term incentive logarithmic reduced models provided higher explanatory power in the form of adjusted R^2, over the absolute reduced model in all three years. In five of the six years, and consistently in the logarithmic reduced model, there was no lagged effect present. Exploratory research was conducted for three and four years lags for long-term incentive to identify if there was some relationship allied to the normal vesting period of an option. However, no relationship was found, either in single year or cumulative models. Capital employed (ROCE) was the most explanatory variable in both models over the study period.

The stability and robustness of the analysis, together with validity of the formulated models, depend on a number of factors. In the long-term incentive models, as with the other REMPER models, the main driver provides the majority of explanatory power, with the other variables contributing to remaining power of the model. The model's component variables' influence and impact on the absolute and logarithmic reduced models are best interpreted by the output statistics of these best models. In particular, the t and p statistics of the explanatory variables, with the residual statistics, are important in analysing its components. For example, the 1998 CEO salary model has a high adjusted R^2 in the logarithmic reduced model, the same lag model in two of the three years, and the same main performance driver of sales revenue in all three years. The size metric group provided the key drivers of this remuneration.

This is in contrast to the executive director short-term bonus models with its poor levels of explanatory power in both the absolute and logarithmic reduced models, with inconsistent representation of all explanatory variables from more than one metric group.

5.5 The Application of REMPER Models to Practice

In examining the dynamics of these models, the CEO salary model is used as an example to illustrate relevant issues because previous studies have been very myopic in their subject selection of the CEO as the dataset, so it provides a reference point. Using the 1998 salary of CEOs' logarithmic reduced dataset, a model can be used tentatively in an exploratory way to relate changes in the independent variables (performance) to changes in dependent variables (remuneration). This has been the standard expression used by other researchers[127] to relate the relationship between performance and remuneration.

This is expressed in the following formula:

Remuneration = constant +

+ (performance variable one x regression co-efficient)

+ (performance variable two x regression co-efficient)....

OR

R = Constant + (x1 * β1) + (x2 * β2).............

In applying this generic formula to the selected case example: CEO, salary, logarithmic reduced 1998 model, we find the constant and the regression co-efficient from the co-efficient table (see Appendix 1, table 5.10) and insert them into the model, displayed in Table 5.12, shown diagrammatically in figure 5.2. The example adopted is that of a company with a sales revenue of £1 billion and its return on equity near to nil, say 0.10% (use of a nominal proxy value for nought because the logarithmic scale has difficulty with the nought value). Using the 1997 one-year lagged restricted model for this 1998 remuneration data, we would formulate the following equation:

Case Example One: The 1998 CEO Salary Logarithmic Model

CEO Salary Model

Scenario one: CEO salary = 2.474 + (1 billion * 0.209) + (0.1% * 0.140)

= £155.31k

Scenario two: CEO salary = 2.474 + (2 billion * 0.209) + (0.1% * 0.140)

= £179.58k

Difference = £24.27 k

Table 5.12 CEO Salary Logarithmic Model 1998 Conversion Table

TABLE 5.12 REMPER MODELS REMUNERATION PERFORMANCE LOG CONVERSION MODEL											
1998 CEO SALARY RESTRICTED MODEL											
SINGLE MODEL											
S1			**CONSTANT**	**PERFORMANCE VARIABLES AND CO-EFFICIENTS**							
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	β4
	£ BASE 10	LOG		1BILLION	**SR**	.10%	**ROE**	**NIL**	**FCF**	**NIL**	**NIL**
£	£			1000000		0.1	0	0	0	0	0
LOG			2.47432002	13.815511	0.209437	-2.302585	0.140002	#NUM!	0.140002	#NUM!	0.140002
LOG		5.045436	2.47432002		2.893481		-0.322366		#NUM!		#NUM!
£	**155.31**										
S2			CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE 10	LOG		2 BILLION	SR	.10%	ROE	FCF	**FCF**	NIL	**NIL**
£	£			2000000		0.1	0	0	0	0	0
LOG			2.47432002	14.508658	0.209437	-2.302585	0.140002	#NUM!	0.140002	#NUM!	0.140002
LOG		5.190606	2.47432002		3.038652		-0.322366		#NUM!		#NUM!
£	**179.58**										
DIFFERE	**24.27**										
S3	HIGH		CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE 10	LOG		50 BILLION	SR	.10%	ROE	.10%	**FCF**	.10%	**NIL**
£	£			50000000		0.1	0	0	0	0	0
LOG			2.47432002	17.727534	0.209437	-2.302585	0.140002	#NUM!	0.140002	#NUM!	0.140002
LOG		5.864759	2.47432002		3.712804		-0.322366		#NUM!		#NUM!
£	352.40										
DIFFERE	**197.09**										
S4	LOW		CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE 10	LOG		0.250 BILLI	SR	.10%	ROE	.10%	FCF	.10%	**NIL**
£	£			250000		0.1	0	0	0	0	0
LOG			2.47432002	12.429216	0.209437	-2.302585	0.140002	#NUM!	0.140002	#NUM!	0.140002
LOG		4.755094	2.47432002		2.60314		-0.322366		#NUM!		#NUM!
£	116.17										
DIFFERE	-39.14										
MULTIVARIATE TWO VARIABLE MODEL			PERFORMANCE VARIABLES AND CO-EFFICIENTS								
S5			CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE 10	LOG		ONE BILLI	SR	0.1%	ROE	.10%	FCF	.10%	ROE
£	£			1000000		0.1	0	0	0	0	0
LOG			2.47432002	13.815511	0.209437	-2.302585	0.140002	#NUM!	0.140002	#NUM!	0.140002
LOG		5.045436	2.47432002		2.893481		-0.322366		#NUM!		#NUM!
£	**155.31**										
S6			CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE 10	LOG		ONE BILLI	SR	10%	ROE	.10%	FCF	.10%	ROE
£	£			1000000		10	0	0	0	0	0
LOG			2.47432002	13.815511	0.209437	2.302585	0.140002	#NUM!	0.140002	#NUM!	0.140002
LOG		5.690167	2.47432002		2.893481		0.322366		#NUM!		#NUM!
£	**295.94**										
DIFFERE	**140.63**										

In scenario one of the formulated model, a CEO of a company with sales revenue of £1 billion, and a 0.10% return on equity, would receive £155.58k salary. In scenario two, if that company were to have sales revenue of £2 billion and a return of equity of 0.10%, the CEO's salary would be £179.58k. If a company moved from scenario one to scenario two, the implied change in salary would be an incremental or absolute change in remuneration of £24.27k for this improvement in performance. A larger company with £50 billion, or a smaller company with £250 million sales revenue, would follow a logarithmic relationship and this is shown in figure 5.2, illustrating this relationship over the range of director salary and company size.

The introduction of a secondary explanatory variable, in this case return on equity, provides not only a higher explanatory power in the model's adjusted R^2, but also the importance of company's ROE on the level of salary. So, if a company had stable sales revenue, but it increased its ROE, then the salary would increase by £140k as shown in table 6.1. It shows that it is not just sales revenue that determines salary but also ROE. A CEO in a company with no growth in sales revenue would result in a nil salary increase, but an improvement in ROE would result in an increase in salary. The suggestion is that more than one variable (in this case ROE) has an influence on salary and the level of remuneration generally. Perhaps, being in a company with a level of performance driver (in this case ROE), is more of an influence than being in a particular sector, type of business portfolio, international spread or other feature. It raises a potential new dimension for remuneration studies made possible due to the use of multivariate models. It could also be advanced that ROE as a returns measure (or other variables) does influence salary and the relationship of performance variables to remuneration.

Jensen and Murphy used a common metric that expressed a $1000 increase in shareholder wealth (market capitalisation) that resulted in an increase of £ $3.25 in income - $2.50 (wealth gain in equity) and $0.75 (salary). This reflects in percentage terms a 0.00075% increase in salary to that of a sales revenue increase. For this study, a £1000 change would result in an increase of £0.02427 per £1000 or a 0.00002427% salary change per £ sales increase. The above example indicates the scope and relative proportionate power of reward for an increase in salary for sales performance increases. This is a common expression of the impact of changes in remuneration as a result of performance measure changes, which is an indicator used in other studies[127,8,153].

In extending this approach to the CEO short-term incentive model in case two, which develops this sector of the REMPER matrix.

Case Example Two: The 1998 CEO Short-Term Bonus Logarithmic Model
Using the CEO short-term bonus logarithmic model, if a company had a free cashflow of £100 million and its TIR was nil - 0.10% , the short-term bonus would be £26.04 and at £200 million the short term bonus would be £31.86k:

Scenario one outcome: £26.04k
Scenario two outcome: £31.86k
Difference of £5.82k

In scenario one of the formulated model, a CEO of a company with cashflow of £100 million, and a nil - 0.10% return on equity, would receive £26.04k short-term bonus. In scenario two, if that company were to have sales revenue of £200 million and a return on equity of 0.10%, short-term bonus would be £31.86k. If a company moved from scenario one to scenario two, the implied change in short-term bonus would be an incremental or absolute change in remuneration of £5.82k for this improvement in performance. A larger company with £5 billion, or a smaller company with £250 million cashflow revenue, would follow a logarithmic relationship and this is shown in table 5.13, illustrating this relationship over the range of director short-term bonus and company size of cashflow.

The introduction of a secondary explanatory variable, in this case total investor (shareholder return) TIR, provides not only a better explanatory power, but also demonstrates the importance of a company's TIR on the level of salary for a director. So, if a company had stable free cashflow, but it increased its TIR, the short-term bonus would increase by £41.58k, as shown in table 5.13. This shows that it is not only cashflow that determines short-term bonus but also TIR. A CEO company with no growth in cashflow would result in a nil short-term bonus increase, but an improvement in TIR would result in an increase in short term bonus. This suggests that more than one variable (in this case TIR) influences short-term bonus and the level of remuneration generally. Again, perhaps, being in a company with level of performance driver (in this case TIR) is more of an influence than other features like industry, sector, economic cycle or lagged effect.

Table 5.13 CEO Short-Term Bonus Logarithmic Model 1998 Conversion Table

TABLE 5.13 REMPER MODELS REMUNERATION PERFORMANCE LOG CONVERSION MODEL											
1998 CEO SHORT TERM BONUS LOGARITHMIC RESTRICTED MODEL											
SINGLE MODEL											
S1			**CONSTANT**	**PERFORMANCE VARIABLES AND CO-EFFICIENTS**							
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	β4
	£ BASE 1	LOG		100 MILLION	**CF**	0.1%	**TIR**	NIL	NIL	NIL	NIL
£	£			100000		0.1		0	0	0	0
LOG			0.3882415	11.51292546	0.290849	-2.30259	0.207213	#NUM!	0.140002	#NUM!	0.140002
LOG		3.25964	0.3882415		3.348525		-0.47713		#NUM!		#NUM!
£	**26.04**										
S2			CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE 1	LOG		200 MILLION	**CF**	0.1%	**TIR**	NIL	NIL	NIL	NIL
£	£			200000		0.1	0	0	0	0	0
LOG			0.3882415	12.20607265	0.290849	-2.30259	0.207213	#NUM!	0.140002	#NUM!	0.140002
LOG		3.461241	0.3882415		3.550126		-0.47713		#NUM!		#NUM!
£	**31.86**										
DIFFERE	**5.82**										
S3	HIGH		CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE 1	LOG		5 BILLION	**CF**	0.1%	**TIR**	NIL	NIL	NIL	NIL
£	£			50000000		0.1	0	0	0	0	0
LOG			0.3882415	17.72753356	0.290849	-2.30259	0.207213	#NUM!	0.140002	#NUM!	0.140002
LOG		5.067153	0.3882415		5.156039		-0.47713		#NUM!		#NUM!
£	**158.72**										
DIFFERE	**132.68**										
S4	LOW		CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE 1	LOG		250 MILLION	**CF**	0.1%	**TIR**	NIL	NIL	NIL	NIL
£	£			250000		0.1	0	0	0	0	0
LOG			0.3882415	12.4292162	0.290849	-2.30259	0.207213	#NUM!	0.140002	#NUM!	0.140002
LOG		3.526142	0.3882415		3.615027		-0.47713		#NUM!		#NUM!
£	**33.99**										
DIFFERE	**7.95**										
MULTIVARIATE TWO VARIABL			PERFORMANCE VARIABLES AND CO-EFFICIENTS								
S5			CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE 1	LOG		100 MILLION	**CF**	0.1%	**TIR**	NIL	NIL	NIL	NIL
£	£			100000		0.1	0	0	0	0	0
LOG			0.3882415	11.51292546	0.290849	-2.30259	0.207213	#NUM!	0.140002	#NUM!	0.140002
LOG		3.25964	0.3882415		3.348525		-0.47713		#NUM!		#NUM!
£	**26.04**										
S6			CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE 1	LOG		100 MILLION	**CF**	10%	**TIR**	NIL	NIL	NIL	NIL
£	£			100000		10	0	0	0	0	0
LOG			0.3882415	11.51292546	0.290849	2.302585	0.207213	#NUM!	0.140002	#NUM!	0.140002
LOG		4.213893	0.3882415		3.348525		0.477127		#NUM!		#NUM!
£	**67.62**										
DIFFERE	**41.58**										

Use of a common metric, adopted by Jensen and Murphy[127], cannot be easily extended to short-term bonus since their study combined short-term bonus with salary, so making benchmarking difficult to apply. But this is a common expression of the impact of changes in remuneration as a result of performance measure changes, which is an indicator used in other studies[127].

The increase in short-term bonus as a result of increase in the cashflow performance metrics illustrates the potential for entrepreneurialism in the CEO director group. The difference between companies with a cash flow of £100m and £200m is £5.82k, which indicates that each £1000 increase in cash flow would result in an additional £0.0582. The individual director would form a view on the effort required to achieve performance driver levels that would generate the different forms of remuneration. The application of this approach may be extended to all models in the REMPER matrix, but providing varying levels of robustness and validity.

A multivariate model has the advantage over the univariate model in embracing more variables in the process of remuneration determination. This provides more utility in application of such models in practice, in terms of the explanatory power and the relevant performance variables with resultant remuneration. This analysis can be extended over the range of restricted best models for each director group and for each form of remuneration. The data being obtained from the SPSS output and condensed into the regression summary statistics in table 5.9. The resultant best models are shown in table 5.11 and a more detailed example of the selected CEO group is shown in table 5.10. These models identify the relevant performance variables and main drivers in each sector of the REMPER matrix. From this, directors and policy makers can identify the performance drivers that have an impact on the different forms of remuneration.

5.6 Summary of Results

There are varying levels of robustness in the range of reported models. The CEO salary logarithmic models provides clear linkages with the existing literature in confirming the main performance driver of sales revenue with free cashflow and return on equity providing additional explanatory power, resulting in an adjusted R^2 of 0.355 in the most recent year. This is a robust and valid model, which may be used to explain and predict practice. In contrast, the chair logarithmic model has inconsistent performance drivers, varying lagged periods and poor explanatory power, which is more limited in its scope of application. So, the reported results provide a range of models to apply in practice, but with varying levels of robustness and utility in application.

The level of explanatory power is expressed by the adjusted R^2, and not the R^2. So when the adjusted R^2 is compared with the R^2 in other studies, the reported adjusted R^2 is lower. But, for the CEO model in particular, and the other models generally, at the very least a moderate and sometimes a good level of explanatory power has been identified. Some of the less robust models do provide a basis for future research and identify a potential starting point for future analysis. The most explanatory and robust models would be the salary models, excluding chair because of the changing nature of the chair group. The short-term bonus models provide a fair level of explanatory power for this new area of research, with the changing performance drivers reflecting the short-term business objectives of companies. The long-term incentive models showed that ROCE consistently gives the most explanatory performance, but with low explanatory power. This is surprising, as many commentators would see TIR, a stock market measure driver, being a better explanatory variable, reflecting the stock appreciation of options and their transfer into cash. Explanatory analysis was undertaken to test for the presence of a three and four year lag (the normal vesting period of an option), but none was found. It would appear that if the share price was above the option exercise price ('above water'/ 'in the money'), the gain is realised and that is best captured in the ROCE measure. At the very least this study confirms the main performance drivers in the CEO salary model, and it improves the level of explanatory power found by using a multivariate model. It has highlighted and identified that other performance drivers can provide explanatory power in the model and help inform practice. The remaining models provides a new insight into the level of explanatory power, the importance of the model's value drivers and the advantage of using multivariate models in developing new models. These may be used in a tentative and explanatory manner to explain remuneration practice for salary in new director groups (chair, executive and non-executive groups) and for new forms of remuneration (short-term and long-term incentive) to understand present practice and as a starting point for future research.

Chapter Six: Conclusions

6.1 Introduction and Overview of Chapter

6.1.1 Introduction

In this chapter, conclusions are drawn based on the reported results of Chapter Five, which are obtained from the application of a range of statistical tests and techniques on director datasets. The conclusions of the DRIP and REMPER analysis enables the study to answer both research questions using a range of measures, including descriptive statistics, ANOVA, regression co-efficient of explanatory power (adjusted R^2) and the identification of the most influential performance drivers in the range of models for each group.

In addition, opportunities to apply the DRIP framework and the REMPER models are discussed and illustrated, albeit tentatively, as an application of the results of the study.

Two main conclusions can be drawn from the findings of this study:

Firstly, the DRIP profiles of the directors of top UK companies' boards are very different, except for the ownership income component on an absolute basis.

Secondly, there are relationships and linkages between remuneration and performance measures, which are more complex than existing research suggests and with varying levels of explanatory power.

The objective of this study was to answer the two research questions and in so doing the results have allowed the author to achieve this. However, a richer picture is revealed in this study and the conclusions in this chapter seek to summarise them.

6.1.2 Overview

The study and its conclusions are in two parts, reflecting the DRIP and REMPER analysis. DRIP is a major concept in this study, a vehicle that enables the examination of income received in the portfolio of a director's remuneration. The analysis of the four groups of director reveals that their DRIP profiles are very different and this implies that their roles are different. An examination of the descriptive statistics does indicate this, but it is the

ANOVA analysis that provides a statistical test to confirm this. In the three numerical bases of both the full and reduced datasets for the four director groups all these DRIP profiles are found to be different, except in the absolute reduced dataset for ownership income. This saw the rejection of the null hypothesis and the confirmation that salary, short-term bonus, long-term incentive and ownership income profiles of the director groups are different and supports the alternative hypothesis.

Previous remuneration–performance (REMPER) studies have focused on a narrow concept of executive/director, employing a limited number of remuneration and performance measures. This study has sought to more clearly define the director data population and the range of remuneration-performance variables utilised. The data population has defined as the four director groups of the board, providing clarity of definition and strengthening the validity of the results. The range of remuneration and performance variables utilised in this research have been represented in other studies and in this study are drawn together in a stepwise multivariate regression (SMR) model to ascertain the most explanatory performance variables for the relevant remuneration components of DRIP director groups. The utility of the model is in its ability to consider individual director profiles in relation to fellow directors and director group norms. In so doing, this study extends the scope and coverage of research in this area. The remaining sections draw more detailed conclusions from the results of Chapter Five.

6.2 DRIP (Director Remuneration Income Portfolio) Analysis:

6.2.1 DRIP Absolute Analysis

The absolute base is examined first, because it is from this perspective that most people view remuneration practice. The use of the descriptive statistics provides a reference point to commercial and academic remuneration studies, which interested stakeholders and practitioners utilise to consider company remuneration policy. On this basis many director DRIP distributions have extreme case values or outliers which influence the statistics and the shape of the distribution in terms of skewness and kurtosis.

The impact of outliers and the refinement to a reduced dataset have a profound impact on the statistics of this base of analysis. Table 5.7 shows the differences between the three specifications of dataset: the full, reduced and selective incentivised. The exclusion of some cases has a substantial impact on the statistics and their distributions. Over the period of the study, salary, short-term bonus and long-term incentive are rising, but not as quickly as implied in the 'popular press', which tends to reflect outlier director case experience. Ownership income is stable in most groups, although in some, notably in the chair and non-executives, it is reducing.

There are interesting contrasts within each of the four directors' groups, depicted by a range of diagnosis statistics. In the CEO and executive directors' groups, the statistics reflect practice in these groups and they generally assumed the form of a normal distribution, for most DRIP components. However, the presence of outliers in the Chair and non-executive director groups, are reflected in their skewness and kurtosis measures.

A consideration of the residual values reveal that some directors' individual and portfolio values are at varying degrees of deviation from the predicted value, derived from the REMPER models. Each model provides a predicted value of remuneration that may be contrasted to the actual value. A consideration of the standardised residual values reveals those directors whose individual remuneration components may be an outlier in the distribution.

There are many challenges to the normality conditions in the absolute director datasets which make the application of ANOVA needing the 'flexible and robust facility'[197] to allow its use to answer the research question one and its hypotheses. As a result the statistical output is very useful and meaningful to those interested in remuneration practice, but the nature of its scale provides challenges in the interpretations of the analysis. This reflects the absolute nature of remuneration practice.

When 'incentivised' chairs and non-executive directors are excluded from their director population in the full dataset, the reduced dataset is formed. In so doing the measures of skewness and kurtosis are reduced and became more approximate to the normality conditions of a normal distribution, which enables an ANOVA analysis to take place. Although these conditions are not entirely met, ANOVA, as 'a robust and flexible' technique, was used again due to its ability to withstand deviations from the strict conditions of normality. The ANOVA analysis indicates that the four director groups' profiles are different.

6.2.2 DRIP Logarithmic Analysis

The absolute numerical analysis found the presence of large case values for remuneration, which reflects extremes of practice, but may also be explained by some directors in larger companies being paid proportionately more to reflect this. Certainly there are individual companies in the dataset group of companies that may be described as 'global companies' (e.g. BP, Shell, Unilever, Glaxo, Zenecca) and 'ex-national monopolies' (British Gas, British Telecom). Their size is much larger than the more 'national' companies who have their headquarters in the UK and are listed on the London Stock Exchange and, as such, may be considered as outliers.

Other studies would have encountered this same challenge, many have either excluded these values as outliers or accommodated them by a transformation. This is advocated and supported by a number of statistical texts[196,198,197], which indicate that this is an appropriate way forward to seek out other types of statistical relationships. The most commonly adopted transformation is to a logarithmic base, which provides a mechanism to overcome the scale issue of the absolute numerical base. This enables the skewness and kurtosis measures to be more bounded within more reasonable levels. With the normality conditions fulfilled, an ANOVA analysis can be conducted and confirms that a difference exists between director groups' profiles. This confirms that the roles of each director group are very different and this is reflected in their DRIP profile, but the strength of proof on a logarithmic basis is much stronger than on an absolute basis. However, in transforming to a logarithmic base, some values were difficult to transform, these are zero or nought. This limits the range of this analysis, but it was overcome by inserting a nominal value thus enabling the analysis to continue.

The logarithmic base of analysis reveals that this distribution better fits the normality criteria including the larger companies in its distribution than does the absolute numerical base. The logarithmic base reflects its scale, with its results showing that the range of values in the director datasets is not as wide or diverse as in the absolute base. The logarithmic ANOVA analysis finds that all DRIP profiles are different and supports the alternative hypothesis.

6.2.3 Relative Percentage Analysis

The percentage analysis represents a relative view of DRIP. Using the percentage of DRIP as a measure it reflects the relative importance of each DRIP component to each director, irrespective of the absolute size of a director's DRIP. This enables all directors to be considered on the same level and basis. Salary was found to be the most important component of all director groups' DRIP. For the CEO and executive groups, salary is less important, because of the potential of incentive remuneration in the form of short-term bonus and long term incentive in recognition for good performance. A number of directors receive a substantial proportion of their DRIP income from these incentive remuneration sources (short-term bonus and long-term incentive), but in number they are still comparably few. This illustrates the potential for increased remuneration for good performance. These cases tend to be located at the extremes of the distribution, few in number and are not the norm.

6.2.4 Summary of Key DRIP Conclusions

It is clear that salary in both the absolute and logarithmic models is the major component of a director's income in their DRIP. Indeed, this is reflected in the focus of previous research on both director remuneration and its relationship with performance. This study reveals the increasing importance of incentive-based remuneration, both in absolute and relative terms in the DRIP. This demonstrates the impact of incentive remuneration that is based on the performance of those directors (CEO and executive directors) whose roles encompass an incentivised element in their directorship. The role of ownership income is examined, which seeks to identify the degree to which directors as shareholders are aligned in their mutuality of interest in receiving income from equity ownership. Although the ownership income is well represented amongst directors, there is no clear pattern of ownership income. No single director group is different from its fellow peer directors; the ownership income is low, in both numerical bases and relative to their DRIP total.

The CEO and executive-director groups' DRIP profiles largely conform to a normal distribution, whereas in the chair and non executive groups there is a need to make a case for their separation into two datasets, the full and reduced. The impact of the outlier values provides some challenges to normality of the distribution, but the logarithmic transformation enables the ANOVA to be undertaken. These treatments reveal that the DRIP profiles of incentivised chairs and non-executives are very different to their peers. The presence of outlier values has a significant impact on the nature of the distribution and the resultant descriptive statistics. Excluding these incentivised directors from the dataset improves the conditions of normality, which enables an ANOVA analysis to take place. This is consistent with other studies that improve statistical validity and conformity to the normality criteria by undertaking a logarithmic transformation of the data. Finally DRIP analysis using the ANOVA technique had identified that the four director groups of the board have very different DRIP profiles on an absolute, logarithmic and percentage numerical basis. It is only in the absolute reduced dataset that for ownership income, this is not the case.

The results from the absolute models provide a good starting point to review remuneration practice. Directors' distributions show evidence of outliers that impact on the skewness and kurtosis measures. The resultant histogram and distributions have varying degrees of conformity to the normal distribution. The absolute base DRIP analysis have difficulty in its scale to accommodate the larger sized companies in the dataset, which distorts the distribution, the descriptive statistics and provides some challenge to the application of ANOVA.

The logarithmic base of analysis does not suffer to the same extent with these problems. Its scale better accommodates the larger companies within the dataset, the resultant descriptive statistics and distributions are more conducive to the application of ANOVA and are able to be reported on this more appropriate and robust basis. It is also better in addressing the challenges of heteroscedascity and inequality of variance issues. For these reasons the reduced logarithmic bases of analysis provides the most appropriate focus for this study's results.

In the logarithmic analysis, all four DRIP components of the four director groups are found to be approximate to a normal distribution, and enable ANOVA to take place. The output reveals that for all DRIP components, the four director groups have different profiles, thereby answering research question one.

The percentage basis of analysis provides a relative measure that reflects the importance of each component of DRIP, irrespective of the absolute level of income. Thus, it enables the comparison of director groups on a relative basis, despite their absolute remuneration differences. This analysis found that the DRIP profiles of all director groups are different, which answered research question one from this perspective.

6.3 REMPER Analysis (Remuneration-Performance Relationships)

6.3.1 Introduction and Overview of REMPER

The remuneration-performance (REMPER) models are formulated using two numerical bases: an absolute and logarithmic numerical base of the reduced director dataset. Past research indicates that the REMPER regression's co-efficiencies are improved by moving from an absolute number basis to a logarithmic basis. This transformation is undertaken because of the influence and impact on the large size and scale of companies as outlined in the DRIP section earlier. The absolute model experiences statistical challenges that were outlined in Chapter Four, whereas the logarithmic model suffered less so. Both models have a role in providing a framework for examining the dynamics of the remuneration environment and its performance drivers. Consideration of the lagged effects of this model are explored, with a view to identifying whether any significant time delay was present between performance and the receipt of remuneration. This highlights the need to consider the relationships for each sector of the REMPER Matrix, particularly when applying the models to real world practice, i.e. the formulation, explanation and evaluation of company remuneration policy and strategy.

6.3.2 REMPER Absolute Reduced Model

In the absolute salary models, market capitalisation provides the main performance driver in the restricted models, suggesting that this is an appropriate focus for these directors. However, directors have little influence on the market, which experiences high volatility. Sloan[111] found US executives prefer accounting-based remuneration because they are able to influence these measures by 'good management practice'. This is a key point and important issue for directors who, like managers, must feel and believe that they are able to influence the performance measures on which remuneration is based. With accounting measures this is the case, but is less so with market-based measures. For the CEO and executive directors, short-term bonus is driven by EBIT in the first two years. In the final year it is FCF (free cashflow) in the CEO group and CF (cashflow) in the executive director group. For the long-term bonus, return on capital employed is the most influential driver for both groups. These models' level of explanatory power varies from 0.265 (CEO SAL) to 0.013 (CEO LTI), indicating the degree to which the models explain practice. The drawbacks of the absolute model being the statistical challenges to its distribution, its scale, its absolute nature and hence its applicability in practice.

6.3.3 REMPER Reduced Logarithmic Models

Logarithmic models better address the challenges that confront the absolute model and provides a more meaningful basis of application of the models in practice. The aim of REMPER analysis is to identify the best model with the highest explanatory power for each sector of the REMPER matrix.

From table 5.9 the range of logarithmic models regression analysis output is summarised. These models display a range of explanatory power, but three levels or tiers of group models are identified. The first tier group is occupied by the CEO salary model which has the highest levels of explanatory power, which ranged from 0.355 to 0.183, with a consistent size performance driver in sales revenue. This is the most robust and relevant model to review practice, which may account for the attention focused on it and this may be extended to include the executive director models. This attention and interest may have had an impact on the extent of a theory–practice gap (a feature in other areas of research[207]). The concept of a theory-practice gap relates to the degree to which theory reflects practice, with increasing research interest serving to reduce this gap. The suggestion being that research would contribute to the narrowing of this gap, evidenced in an increasing level of explanatory power in its models, resulting in an increasing ability to view, explain and evaluate practice using appropriate theoretical models.

The second tier group had some of the highest explanatory power with some consistency of performance driver, these groups being the CEO and executive director group's short-term bonus models. They have increasing levels of explanatory power with cashflow as their main performance driver in the most recent years, replacing free cashflow as the main performance driver of earlier years. The linking of free cashflow and cashflow as metrics in economic value creating strategies with remuneration strategies is a common theme in current thinking [208,209].

The third tier group is made up of the chair and non-executive salary models, together with the CEO and executive directors' long-term incentive models that experience lower levels of explanatory power. For salary, the inconsistent pattern of performance driver reflects the changing nature of the membership of these groups. The long-term incentive models found return on capital employed (ROCE) to be the consistent performance variable, but with low explanatory power. The study of long-term incentive is a developing area of study for REMPER relationships, and its low explanatory power may reflect the need for more research. The theory-practice gap here is substantial and the hope here is that subsequent research would reduce this gap. It is hoped that, with increasing research in the area, the understanding of these relationships may better develop, in the same way that greater research on CEO salary has seemingly found an increasing level of explanatory power over time. Perhaps this is a feature of the impact of research on practice, which assists the remuneration policy makers in designing remuneration packages that are better aligned to relevant performance measures.

The multivariate REMPER models provide a means to represent an infinite number of combinations and levels of performance drivers in a selected company. The models reveal the importance of key performance drivers in the model and their impact on remuneration by changes in these drivers. For salary, some potential comparisons and benchmarking may be undertaken with other studies[127,147], but this cannot be extended easily to short-term bonus and long-term incentive. For these two sources of remuneration the models themselves are tentative, with the results indicating a starting point for future studies to further explore these two forms of remuneration. In the application of these models, one must consider the reservations, the rationale why the logarithmic model is preferred and why a four-stage procedure was employed to find the best model. These models being sufficiently robust to address the issue of heteroscedascity and multi-collinearity, capturing the respective director datasets in their entirety. In so doing, it links with the existing literature, extends and develops the area of study, while indicating the potential directions for future research.

6.4 Final Conclusions: Key Features of this Study

This study provides a framework to view and a vehicle by which the determination of remuneration of directors in top UK companies' boards can be formulated into remuneration policy and support company performance strategy. Size, as expressed in performance measures, continues to be a key indicator of the level of salary. The continuing reliance on size reflects the prevailing cost in securing a director in the corporate marketplace. This implies a 'minimal' performance of these directors, focussing on the custodian and stewardship role of directors. The pursuit of more salary through corporate growth measured by size seems to be a clear linkage, but the performance measure that drives this, changes with each type of director. This provides a rationale and a stimulus for increasing the size of a company, irrespective of its value-creating performance and is particularly appropriate for the CEO and executive director groups. But, for chair and non-executives, their salary is in a narrow range being more akin to a fee and not substantially influenced by company size or performance. This remuneration is tightly clustered around a low mean and level of explanatory power in its co-efficient. There is increasing evidence that the greater demands for professional non-executives will indicate an increasing level of non-executive remuneration, which may better reflect the size of company in the future[210]. The Myners'[211] report has sought to focus on the current nature of the non-executive role and its appropriate remuneration level, with the government's response indicating where they see practice developing[212].

The incentivised directors of the board, the CEO and the executive directors reflect their company's strategy in respect of reward packages for creating value in its linkages to specified performance measures. To empower the directors to pursue value creation requires the alignment of suitable remuneration to these performance drivers. The performance drivers of this remuneration are different for each type of director group. Bonus and incentive remuneration (short-term bonus and long-term incentive) are both rising and more important in the DRIP of incentivised directors.

The short-term bonus is becoming increasingly important over time, with its performance drivers changing to reflect the prevailing tactical business objectives. The study's results indicate that the drivers of short-term bonus are derived from the results metric financial group in all years.

It is through the long-term incentive plans and exercise of options that significant cash remuneration gains may be realised and become very significant for particular directors. There is much potential for companies who align their remuneration strategy to value creation, but often this is very reliant on a rising 'bull' stock market or adopting under-ambitious targets. For long-term incentive, the performance drivers are derived from the financial returns metric group with ROCE being the most prominent driver in the models. This is in contrast to the view that the stock market provides the best performance driver of TIR for this form of remuneration.

Both forms of incentivised remuneration, short-term bonus and long-term incentive, are increasing in their proportion and size in the incentivised directors' DRIP. With this being the case, the identification and importance of these performance drivers in their models becomes increasingly significant and the stimulus for future research.

Those directors who choose to hold equity through either realised share options or purchase of company shares (thereby aligning their interests through equity ownership with shareholders) receive a small proportion of their DRIP in this form. Those with high proportions derived these largely from 'inherited' ownership interests. For the majority of directors, ownership interest income is not a significant amount or percentage part of any director's DRIP. This is reflected in poor levels of explanatory power and suggests that director equity share holding may not be based on a REMPER relationship. In terms of the agency theory, the potential of the alignment of interests of principal owner shareholder with agent director by equity ownership and income is not apparent. Certainly UK directors do not have substantial holdings, unlike their US counterparts[148].

The REMPER models provide a mechanism by which the design, composition and linkage of remuneration to performance measures may be examined. This enables a range of peer practice to be undertaken provided by the director group distributions. The outlier extremes identified by residual analysis provide a basis to consider the efficacy of this remuneration in the four director dataset populations. The findings from this study show that the nature and form of relationship between DRIP components and performance is very dependent on which director group is being considered. The results of the REMPER analysis, in answering research question two, finds that there are models with different levels of explanatory power, which varied across the director groups' DRIP components and over the three year study period. Each model had a main performance driver, which is summarised in table 6.1 (below and in Appendix 1):

TABLE 6.1 REMPER PERFORMANCE DRIVERS							
		ABSOLUTE			LOGARITHMIC		
REM	DIRECTOR GROUP	1996	1997	1998	1996	1997	1998
SALARY	CHAIR	CE	CE	SR	SR	CF	TA
SALARY	CEO	MC	MC	MC	SR	SR	SR
SALARY	EXECUTIVE DIRECTORS	MC	MC	MC	SR	SR	SR
SALARY	NON-EXECUTIVE DIRECTOR	MC	MC	MC	MC	CF	FCF
STB	CEO	EBIT	EBIT	FCF	FCF	FCF	CF
STB	EXECUTIVE DIRECTORS	EBIT	EBIT	CF	FCF	CF	CF
LTI	CEO	ROCE	ROCE	ROCE	ROCE	ROCE	ROCE
LTI	EXECUTIVE DIRECTORS	ROCE	ROCE	ROCE	ROCE	ROCE	ROCE

This provides a rationale to question the legitimacy or appropriateness of remuneration and the performance criteria on which it is based. As a result, this study provides utility to interested stakeholders in the director remuneration community. Having drawn together these conclusions. This final chapter also identifies the contributions to knowledge of this study.

6.5 The Identification of the Contributions to Knowledge of this Study

This section identifies and summarises this study's contributions to knowledge in the area of director remuneration and performance. The study extends the scope of the area, embraces a wider range of concepts (DRIP and remuneration performance drivers) and employs some methodological innovations to enhance the understanding of the subject. It provides value to both the academic community and practitioners by using the DRIP and REMPER approach in viewing remuneration policy and practice. The study contributes to this literature by providing an insight into practice of directors of UK boards by the formulation of a framework (DRIP) and the development of models (REMPER) to view, predict and evaluate remuneration practice. The study's key contributions are identified below:

6.5.1 The Contributions

1. Subject of Study Definition (improvement in clarity of definition of subject studied): from executive to director.

The concept of an executive describes a range of managers that occupy senior management positions in companies. Rabin[6] identified some twenty-nine descriptions for executives that have been used in the literature. There are major concerns about the wide range of roles included in other studies' datasets, in terms of providing a uniform definition of subject to study, which must raise doubts with respect to the robustness of these results. The four director groups of the main board of the top UK companies were the focus of this study, providing clarity in dataset definition.

2. Extending the Scope of the Area of Research: from CEO to the four director groups of the board.

Much of the UK and US literature has focused its attention on the CEO or the board as a whole as the unit of analysis. By extending the analysis to encompass all the four director groups (Chair, CEO, executive director and non-executive director), this study has immediately extended the scope of the area.

3. Extending the Range of Remuneration Studied: from salary to DRIP, four remuneration components.

Past studies[167] of remuneration have focused on salary, salary and bonus, or total pay[10]. This study uses four remuneration sources as separate individual entities: salary, short-term bonus, long-term incentive and ownership income. These remuneration components are collectively given the term Director Remuneration Income Portfolio (DRIP).

4. Three Numerical basis of DRIP Analysis: the use of absolute, logarithmic and percentage of DRIP bases.

From natural absolute numbers to logarithmic and relative percentage scales.

The DRIP concept is used as a vehicle to examine the profile of the four director groups and the importance of each DRIP component to each group on an absolute, logarithmic and percentage basis. This provides different perspectives on which to view remuneration practice.

5. Individual Directors Datasets: individual datasets for each type of director: From one to four datasets.
Use of clearly identified director types rather than 'executives', CEOs or directors is an improvement on using a generic title that may contain different type of directors.

6. One director group dataset, but two subsets: from directors to independent and incentivised directors.
In exploring the four director groups' datasets, the chair and non-executive director groups were found to contain two subsets with directors of different types. One group is the incentivised directors, who receive short-term bonus and long-term incentive and the other group, who may be described as 'independent directors'[58]. These distinctions have not been considered in previous empirical studies. This research uses these distinctions and divides the datasets into incentivised directors and independent directors, whose differences are well documented in the corporate governance literature. The study shows that this has substantial implications on the subsequent statistical analysis.

7. Refinement of Director Dataset: from all directors' dataset to reduced classic type directors.
Presence of independent and incentivised directors.
Due to the two types of director in the chair and non-executive group there is a need to exclude the incentivised directors from the all directors' dataset to form the reduced dataset. This is a refinement not undertaken in other studies, but acknowledged as a key issue[10]. So, in the statistical analysis, the four director group datasets are formulated on two specifications. First, on a full dataset with all directors included and, secondly, on a reduced director dataset basis (which excludes incentivised directors) in the chair and non-executive groups. This provides greater clarity in the definition of the director dataset and the descriptive statistics of their DRIP profiles.

8. Use of Skewness and Kurtosis Measures: to highlight the nature of the director distribution.

From the descriptive statistics to the nature and shape of distribution.

The traditional focus on the descriptive statistics and its outliers has overlooked the overall distribution of the director dataset. Some director distributions have a few extreme cases that skew the data and some have high kurtosis measures indicating clustering of values in a narrow range not always alluded to in other studies.

9. The Role of the Outliers: an anomaly or distinctive feature?

Freak cases or examples of good performance?

The presence of outliers in many director distributions raises the issue of why they occur, how they should be treated and their influence on the subsequent analysis. Outliers make a substantial impact on the descriptive statistics and the distribution of their groups. Previous studies note them and include them in their analysis. They often show the potential remuneration for good performance. Their influence on the descriptive statistics can be substantial and this has been demonstrated in table 5.7. In the REMPER analysis their influence does not always improve explanatory power and so no clear consistent impact of their treatment is evident.

10. Methodological Development: use of ANOVA to establish that the four director groups have different DRIP profiles.

From the descriptive statistics and visual inspection of distributions to the ANOVA statistical test.

Often what is perceived as simple and clear observations, like the DRIP profiles of the four director groups are different (i.e. research question one), might requires an appropriate test to confirm this view. For this study, ANOVA provides this test and answers research question one. Although ANOVA has been applied on a limited basis by Veliyath[75], this study uses it in all four DRIP components across the four director groups. A clear methodological development in the area.

11. Extending the Range of Performance Variables in REMPER models: From selected variable (one) to a range of variables (twelve).

Most REMPER studies have selected one or a limited number of independent performance explanatory variables to link with remuneration. This study draws twelve variables from the literature and makes them available for selection in the best model with the highest explanatory power.

12. Methodological Development: From Univariate to Multivariate Models

Much of the existing literature has utilised single explanatory variable models. In using multivariate models, this study signals a methodological development in remuneration performance studies, while providing links to the existing body of knowledge. Both approaches are drawn from the existing literature. The use of multivariate models generally provides the potential of higher level of explanatory power than a univariate model. Multivariate models draw from and can incorporate a wider group of performance variables.

13. The Pursuit of Higher Explanatory Power: High R^2 to Higher Adjusted R^2.

The objective of model formulations and selection was to ascertain the highest level of explanatory power and the identification of the most important performance driver in each formulated model. In this way it provides an improved level of explanatory power in the model. The use of the adjusted R^2 provides a more robust means to measure explanatory power, because of upward bias of the more traditional measure of R^2.

14. Finding the Best Model: From a random selection of model independent variables to a four stage REMPER model.

Past studies have made selections on what the authors considered to be the best method to study the REMPER relationship. This study used a four-stage process model to determine the best model in terms of explanatory power, model variables and lags.

15. Finding the Performance Driver of Remuneration: the most influential variable in each REMPER model.

From the best model formulations, the most influential remuneration performance driver can be ascertained. The results of this REMPER study identify that different sectors of the REMPER matrix have different drivers. The models provide a range of explanatory power, indicating a varying level of relationship between remuneration and performance in three tiers.

16. Robustness and Challenges to Results: not methodology design faults, not statistical faults but data issues.
The study's results may have some challenges in that its limitations are due to the nature of the data in the director datasets. This is due to the range of values in the dataset, i.e. outliers, their residuals, multi-collinearity, inequality of variance and heteroscedascity. The REMPER study uses a logarithmic dataset in a four-stage process in a stepwise multivariate model (SMR) to address these challenges and maintains the quality and validity of results.

17. Use of Stepwise Method: used in last two stages of four-stage process regression model.
A standard regression method to selective stepwise model.
Use of stepwise in the final stages of model selection acknowledges criticism of the use of stepwise technique at the initial stage and provides a rationale for final best model formulation.

18. Extending the range of REMPER Models: from CEO salary (1) to (8) of the REMPER matrix.
The development of a wider range of models.
The extension from the CEO salary model to the eight sectors of the REMPER matrix over three years demonstrates the potential of extending the REMPER matrix.

19. Range of Model's Explanatory power: emerging levels of explanatory power in new parts of the REMPER matrix.
There are ranges of explanatory power in the best models.
Some have good levels of explanatory power in contrast to those whose relationship is less clear, which necessitates the need for future research to examine why this may be the case. The model's classification into three tiers provides an indication of the range of validity, robustness and hence the applicability to theory-practice issues.

The contributions to knowledge identified in this chapter vary in their importance and significance in this study. Often each contribution requires a consideration of other related issues. There are a large number of research issues akin to a labyrinth, which this study considered in selecting its own research strategy to make a contribution to knowledge.

6.6 The Direction of Future Research

Many potential research directions are noted for the future in this study, particularly those concerned with the reduction of the theory-practice gap. The focus of much research on the salary of CEOs has served to provide a better understanding of the linkage and relationship of this remuneration and performance. It is hoped that the same focus may be directed to other parts of the REMPER Matrix. The growth in incentive remuneration (short-term bonus and long-term incentive) provides momentum to further investigate its linkages to performance, in particular the linkage to the creation of value. The identification of performance drivers, the nature of this relationship (be it linear or logarithmic) or if there is a lagged effect, are all considered in this study. All of these issues are of interest to those who determine company remuneration polices and strategy, but there is a need for more study and research to more fully develop the area.

Future Research Direction One

One research direction for the future is the potential application of this study's work to the remuneration strategies adopted by international companies, particularly where their national corporate governance reporting environment does not disclose director remuneration information. Because of this non-disclosure, it would not be possible to undertake the type of empirical research conducted in this study. However, peer group and benchmarking to the US and UK experience[154], would allow such comparison and potentially provide a framework for the formulation of an appropriate remuneration strategy for such companies.

Research Direction Two

A second direction is of a more substantive nature, which involves the pursuit of qualitative research in the area. This is to identify how issues that emerged from the empirical results of the study may be addressed in order to develop a better understand in the area.

Introduction

Future research in this area can be conducted from a more precise and clearer base, as a result of features that emanates from this study. It provides a clearer definition of the dataset subject - the four distinct groups of director, the use of the DRIP concept and the availability of twelve performance variables in multivariate regression models. Economics implies that directors, according to the rational man model, are motivated by self-interest and this is managed through a remuneration contract in a principal-agent model. The alignment of principal shareholder-agent director interests is typically enshrined in a remuneration contract, which specifies remuneration as a result of a given level of performance measured by some financial metrics. This study provides robust models to explain the determination of salary for incentivised directors, but less so for short-term bonus and long-term incentive. These two areas of remuneration continue to provide some challenge to future research, and a potential avenue to further understand the nature of remuneration practice would be to study these remuneration contracts. At present the outcome of remuneration contract policy is disclosed, but the inputs to this process, the nature and form of the remuneration contract, are not. To provide an extension to the empirical work of this study, it is suggested that future research use the data from remuneration contracts, by employing a wide range of different research paradigms.
The empirical REMPER models provide good levels of explanatory power for CEO and executive director salary, but the short-term bonus and long-term incentive models do warrant further research activity. This suggests the employment of methods from a non-empirical paradigm. Such paradigms employ different approaches, where qualitative methods predominate and this would provide scope for a greater understanding of the area.

Access to the details of such contracts and other information used by remuneration professionals would provide valuable materials that could be the basis of this type of research. But this has the challenge of being able to gain access to this data and the co-operation of professional remuneration consultants and directors in this regard. An outline strategy to assist future research, and better understand the processes at work in determining and designing remuneration contrast policy and its relationship to performance, would be to engage in activities to achieve this objective. There are some encouraging signs that such opportunities may be offered as a result of the interest expressed in the empirical findings of this study.

Salary

The outcome of this study's research, based on empirical analysis, found different levels or tiers of evidence on which to base conclusions on remuneration practice and the process of its determination. It confirmed the view, present in the existing literature, that CEO and executive directors' salary is determined by financial size metrics - sales revenue as a performance driver. These salary models provide good explanatory power compared to the literature, stable 'performance drivers' and, as a result, are robust in their application to practice and may be classified in the study as tier one 'quality' models. In contrast, the Chair and non-executive salary models provide poor quality of explanatory power, inconsistent performance drivers and different lagged annual effects, which suggests that remuneration-performance relationship is not well aligned and therefore implies that other mechanisms and relationships are at work. Future research would need to adopt a more qualitative non-empirical research method and this would be better able, and more suitable, in providing an explanation of this relationship.

Incentivised Remuneration (Short-term Bonus and Long-term Incentive)

It must be stated that the future research should check out how incentive remuneration practice, especially short-term bonus, compares with the contents of actual director remuneration contracts. In addition, this is also true of the information that professional remuneration consultants draw upon, in advising and developing their professional service to UK Company remuneration committees. The incentive remuneration models of short-term bonus and long-term incentive of the incentivised CEO and executive director groups, developed in this study, provide the most pressing and important area for future research. This is because incentive remuneration is becoming increasingly important in absolute value and relative terms in the DRIP total.

Short-term Bonus

For short-term bonus, the emergence of cash flow and freecashflow as 'performance drivers' reflect the contemporary desire and pursuit of these short-term objectives. This may reflect the need and preference for cash and freecashflow as priorities for companies, and suggests a more 'economic value' perspective has been adopted. In the period of this study, not all of the incentivised CEOs or executive directors were in receipt of short-term bonus. This may be evidence of non-achievement of performance targets or incentive elements not being included in their remuneration contracts. There are indicators that this has changed over time, with more of these directors receiving short-term bonus, providing clear evidence of its presence in their contracts[148]. For the future, this would provide more data on which to model the relationship and ascertain the level of explanatory power, which will improve utility in both theoretical and practical application. Again, this could be ascertained by examining the nature and structure of remuneration contracts.

Long-term Incentive (from Long-term Incentive Plans and the exercise of options)

Of the two incentive components of DRIP (short-term bonus and long-term incentive), it is long-term incentive that seems to attract the greater attention as measured by media attention and size of remuneration award. Long-term incentive remuneration continues to grow, both in absolute and relative terms. This regularly comes to public attention by newspaper headlines reporting directors in receipt of high long-term incentive through the exercise of options. This is evidenced by the US experience and also with the UK showing a similar, but lagged trend[213]. With the long-term incentive component constituting a large component of DRIP, it provides increased demand with more pressure and challenge to provide better models that explain its determination. A clear rationale and process is needed to relate performance to long-term incentive option remuneration. In short, the process and determination of long-term incentive as an incentive for a director is not well understood or explained by the current literature, and raises a number of key issues. This is also an area that needs to be revisited by future research.

The gains that directors eventually get from holding options clearly depends upon changes in share price movements between the time that options were granted and exercised, by definition. It may be highly unlikely that such option gains and their award would be related to recent accounting performance measures, where options should seek to motivate future performance. This provides something of a paradox, and the solution may lie in a number of different approaches being utilised in explaining the process. This study has explored the empirical positivist relationship by investigating lags of from nil to five years (the periods of a vesting period), but no increased level of explanatory power was identified. It may be that alternative research paradigms in the form of social, behavioural or managerial models, may provide a better form of explanatory insight into these processes and this will be considered more fully later in this section.

The approach adopted in this study provided the opportunity for the share price gain and options gain realised relationship to be revealed. However, the empirical findings indicate that ROCE provides a higher explanatory power, which is surprising. This poses a challenging question, as to why this may be the case, and a number of explanations may be considered.

In offering an explanation for this outcome, it may be that the ROCE has attributes either implicit within its components or explicit as a metric, which relate to director practice in long-term incentive option exercise. The theme of positive accounting theory and financial statement analysis implies that the determination of stock market value is inferred through rigorous interpretation of the published financial data. This information is incorporated into the stock market values by key interested stakeholders - including analysts, investment bankers, corporate fund managers and remuneration consultants. These all express opinions and influence the market by this information provision, and subsequent trading in equity and other securities. It may be the case that the ROCE measures encapsulates concepts that are reflected in the share price/market value, through this 'loose fitting', 'rational', 'positive' theory linkage of financial statement to share price/market valuation.

The granting of options may be 'free' or non-contingent of a given level of performance. Alternatively, they may be granted/exercised only on the attainment of a target based on some criteria - a given level of financial performance. Thus two types of options may be present. At present the current disclosure requirements do not reveal the circumstance of grant or exercise. This important concept regarding the nature of the option is not publicly available. The grant and/or exercise may be contingent on performance measures that are reflected in the ROCE measure. Another potential explanation is that analysts, and other stock market determinates, see ROCE as a driver or influence on value at an individual micro level of a share or aggregate macro level company market value, resulting in the indicated resultant empirical relationship.

A very important issue in practice, which appears in the literature, is the valuation of options. The only clear value of an option is on exercise and at all other times its value is contingent on a series of assumptions, adoption of models and other expectations. The literature on option pricing is extensive, but the practice of valuation of share option in directors' contracts suffers from not knowing important information. This includes the terms of the contract (knowledge of terms of exercise of option- performance targets), the model of valuation adopted (typically Black-Scholes), the assumptions within the model about the time horizon and component volatility to the exercise of the option.

Options are an important component of a directors DRIP, an incentive to align a director's equity interest with that of their fellow shareholder principals. This may be viewed as both an incentive to motivate, an opportunity to minimise agency costs and confer the role of a shareholder with long-term equity interests. In practice, directors often realise options as soon as these vest and are above water - i.e. above the grant price, unless there is a feeling that a continuing upward price appreciation will continue. So this suggests that long-term incentive is just a longer form of bonus to be cashed when desired. In seeking to formulate a model to understand this relationship it would seem logical and entirely obvious that the long-term incentive would be highly related to share price market value appreciation.

New Research Perspective and Direction

In order to ascertain and provide clarity in regard to many of the issues raised above, it would require access to remuneration contracts. This would provide the research database to address these issues. Finding out the base information is the first step in this process. The study of the nature of the remuneration contract terms and conditions of options clauses in contracts is needed and desired. At present, although nominally, shareholders may inspect directors' contracts on an invitation, or very limited basis. In practice, it is extremely difficult to undertake. The opportunity to view contracts written in the period of this study would provide a more 'neutral' and advantageous insight into such practice. At the time of writing (2001/2), the period of study is at least three, and at a maximum, five years in the past, sufficient time not to be as sensitive as current contracts. There will be case event and transaction history to reflect on key dimension of the study and possible contact with the directors concerned. The opportunity to examine these contracts and a potential to undertake an interview/questionnaire/or adopt a case study approach, is typical of a qualitative style of research method, more conducive to achieving these research objectives and questions. In so doing, they provide a balance of research in this area and help to assist and position future research indicated by, and to be supplemented by, the empirical nature of this study.

Developing a New Non- Empirical Paradigm Approach to Remuneration– Performance Relationship:
Qualitative Enquiry –the use of questionnaire, interviews and case study in researching remuneration documentation.

With access to remuneration contracts and consultant materials, this would provide a basis to undertake other research approaches and methods. This would enable the consideration of the appropriateness of theories drawn from a non-empirical paradigm, which may encompass approaches in Human Capital, Managerial and Social theories. This would indicate a clear shift of paradigm. These theories have the potential to better explain incentive remuneration practice. By examining the remuneration contracts the actual terms and conditions of the remuneration-performance relationship can be determined. From this documentation case histories may be examined that could provide the opportunity to explore other dimensions of the remuneration practice using questionnaire, interview and case study method, the hallmarks of the qualitative paradigm. It is hoped that interested individuals from the professional remuneration consulting and director community will grant access in order that the human dimension of the area may be explored.

The selection of an empirical quantitative approach was predicated by the lack of access and ability to contact, interview and capture the thoughts and feeling of those involved with the setting and receipt of remuneration - directors and remuneration consultants. The author is pleased to report that as a result of this empirical study through its exposure at academic conferences (British Accounting Association), and practitioner focussed conferences (CIMA –MARG, Henley – Centre for Board Effectiveness), together with high level board courses (The PLC Board-Ashridge/Henley/Manchester Business School Consortium) it has generated much interest. This interest has included those in the director and remuneration consulting community. It is a means to explore the degree of fit between the empirical findings of this study and practice revealed by remuneration contracts, together with the experience of directors and their professional remuneration advisers.

Both future research directions provide the opportunity to further develop the understanding of the practice of remuneration policy and strategy of companies, to which this thesis seeks to contribute and be a part of the literature. The quest is to find an explanatory theoretical framework and model to better understand remuneration and its linkages to performance practice.

7.0 Bibliographies

7.1 Bibliography (Order in Thesis)

7.0 Bibliographies

7.1 Bibliography (In Thesis Order)

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9.1.4 Table 6.1 Summary of REMPER Performance Drivers

FIGURE 4.1 CHAIRS DRIP REMUNERATION PROFILE

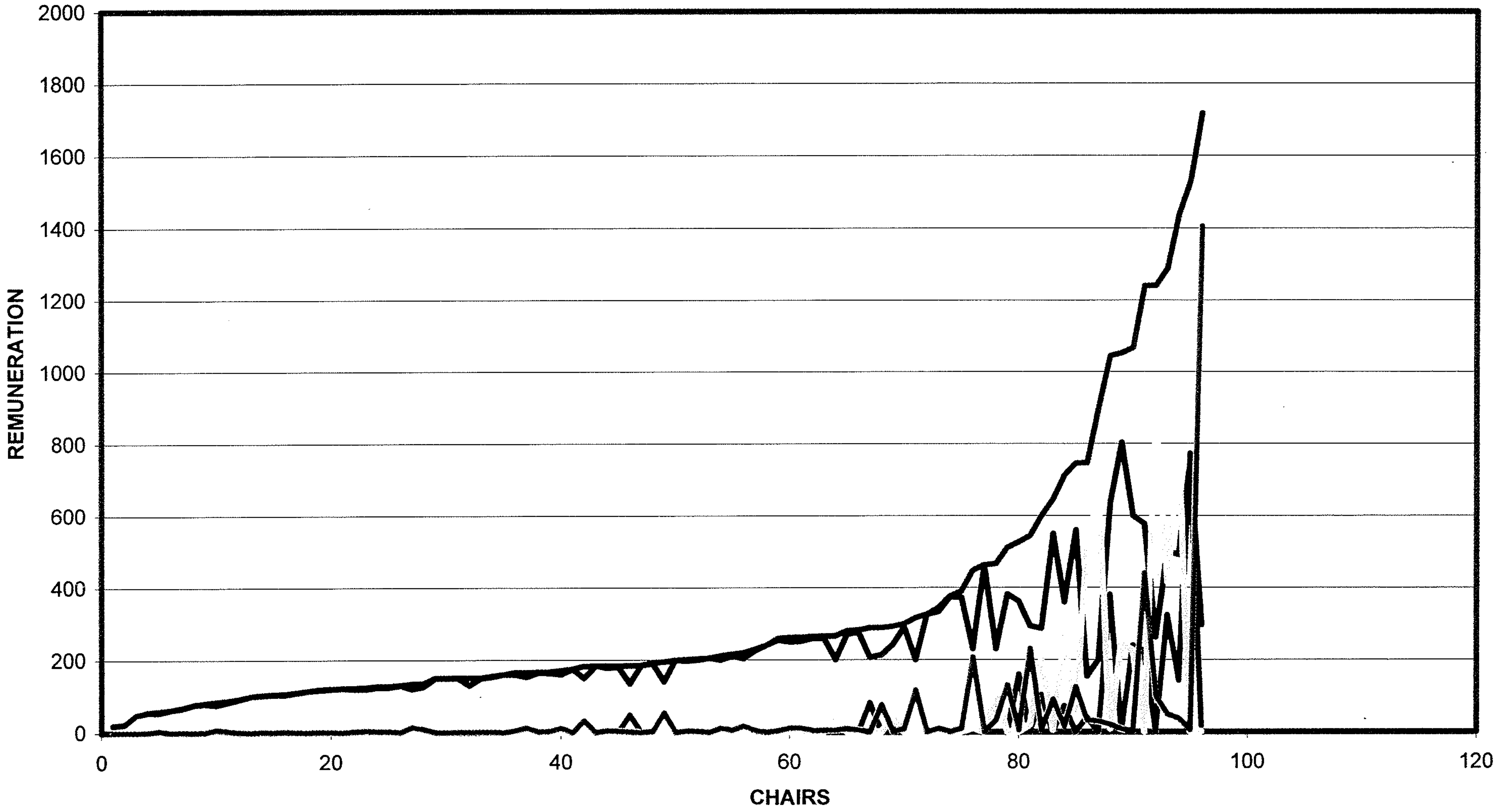

FIGURE 4.2 CHAIRS DRIP REMUNERATION RANK ORDER (ALL100)

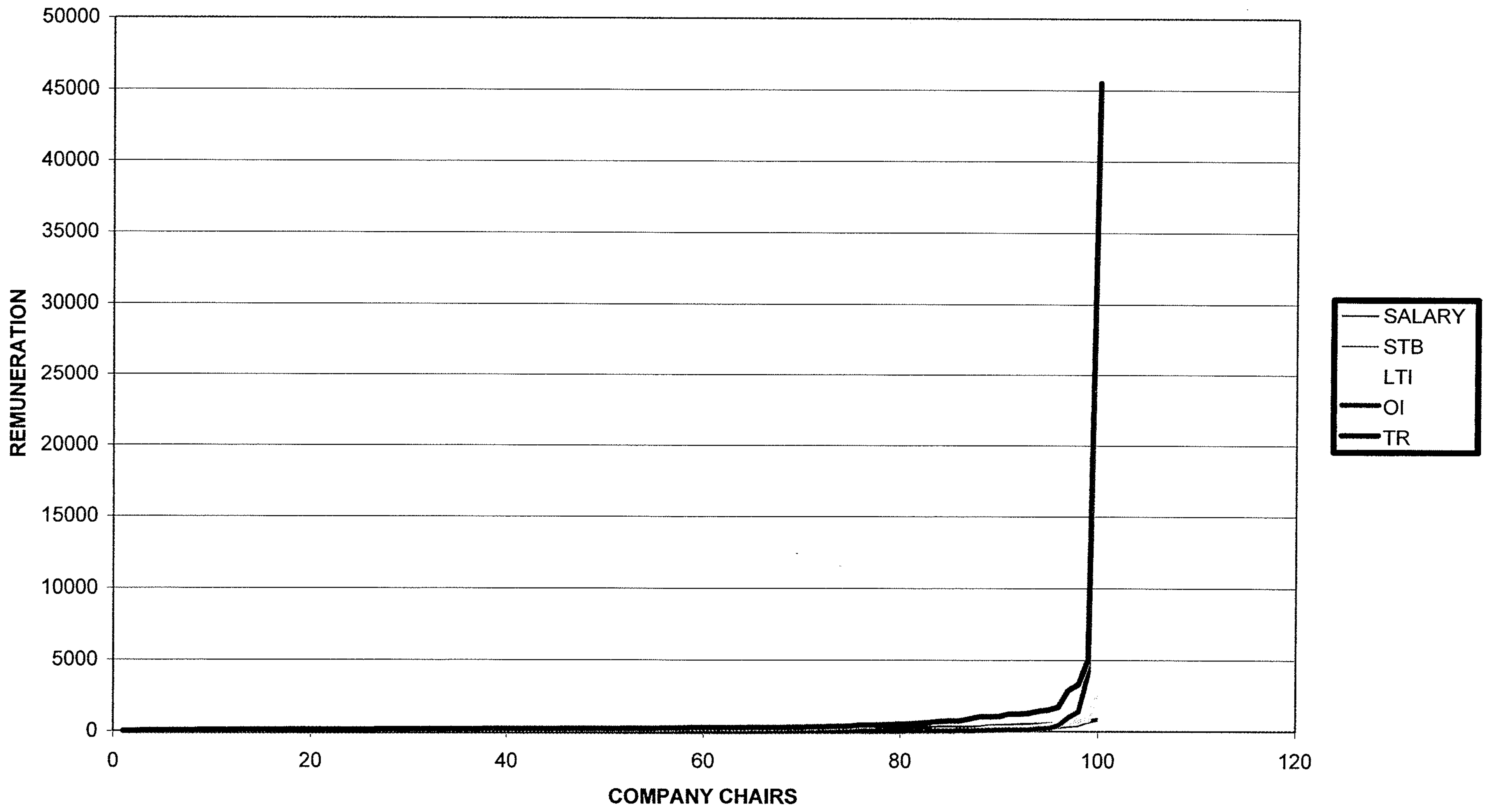

FIGURE 4.3 CHAIRS REMUNERATION (outliers excluded)

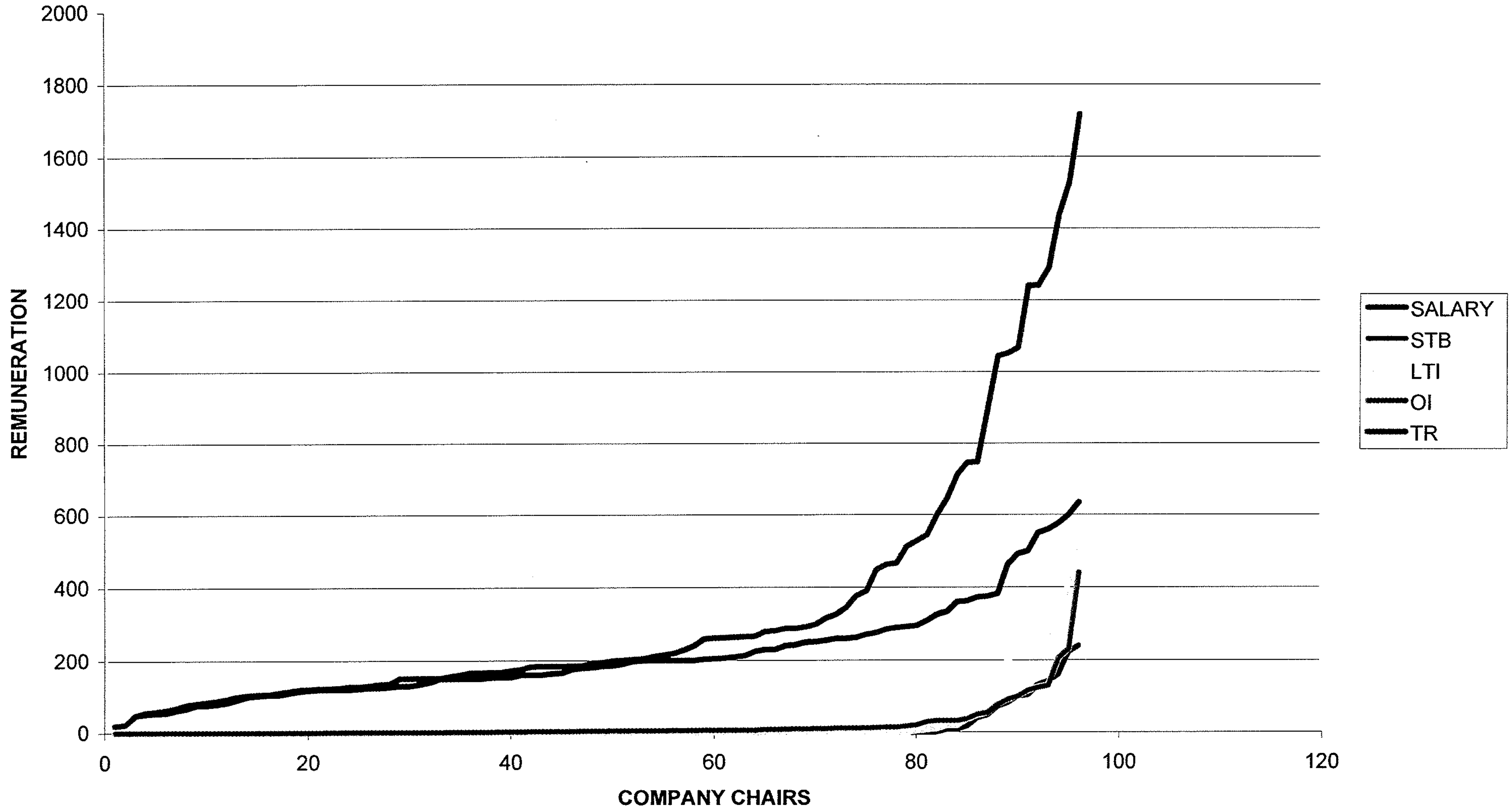

FIGURE 4.4 CEO REMUNERATION

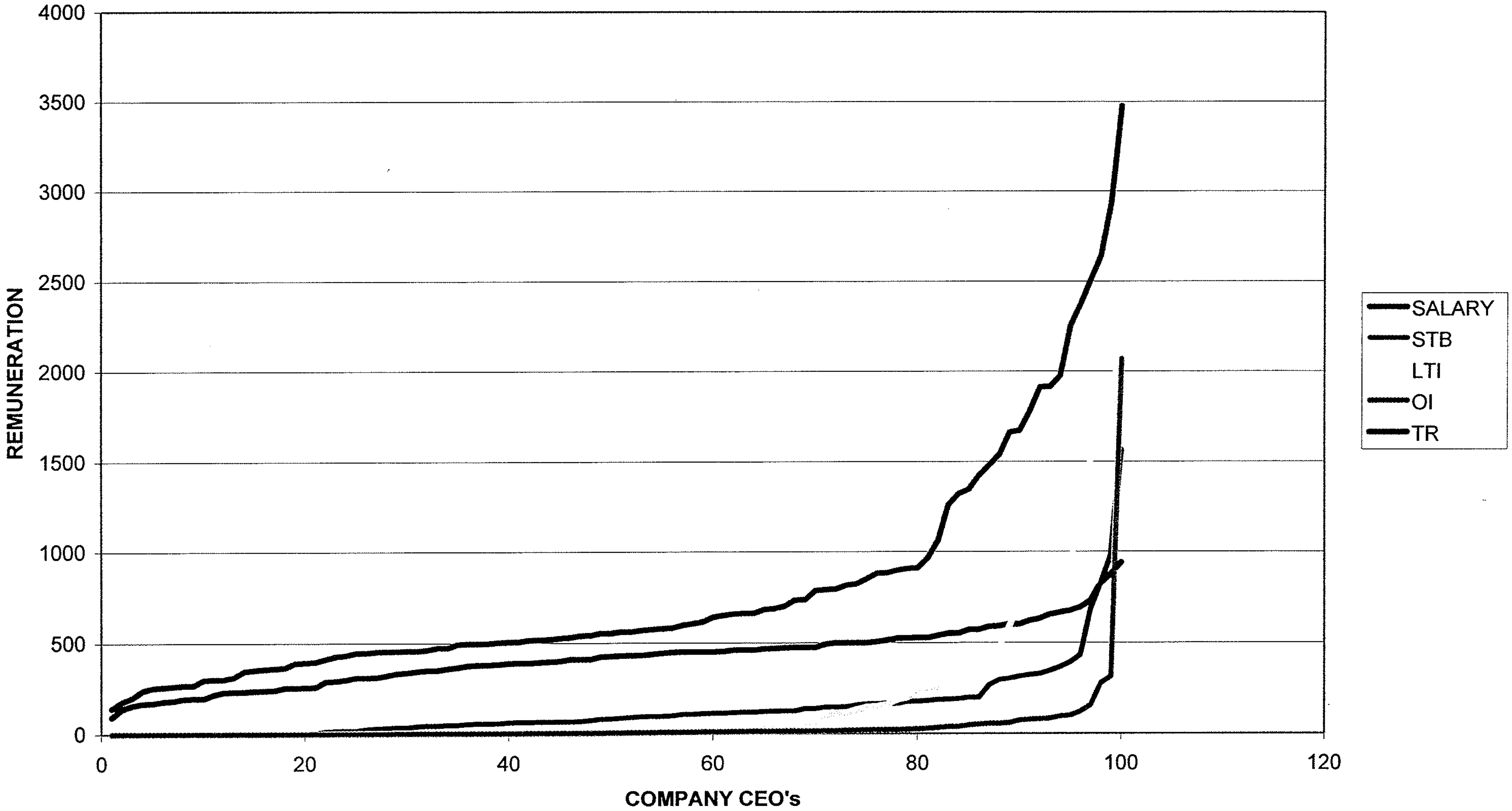

FIGURE 4.5 EXECUTIVE DIRECTORS DRIP REMUNERATION

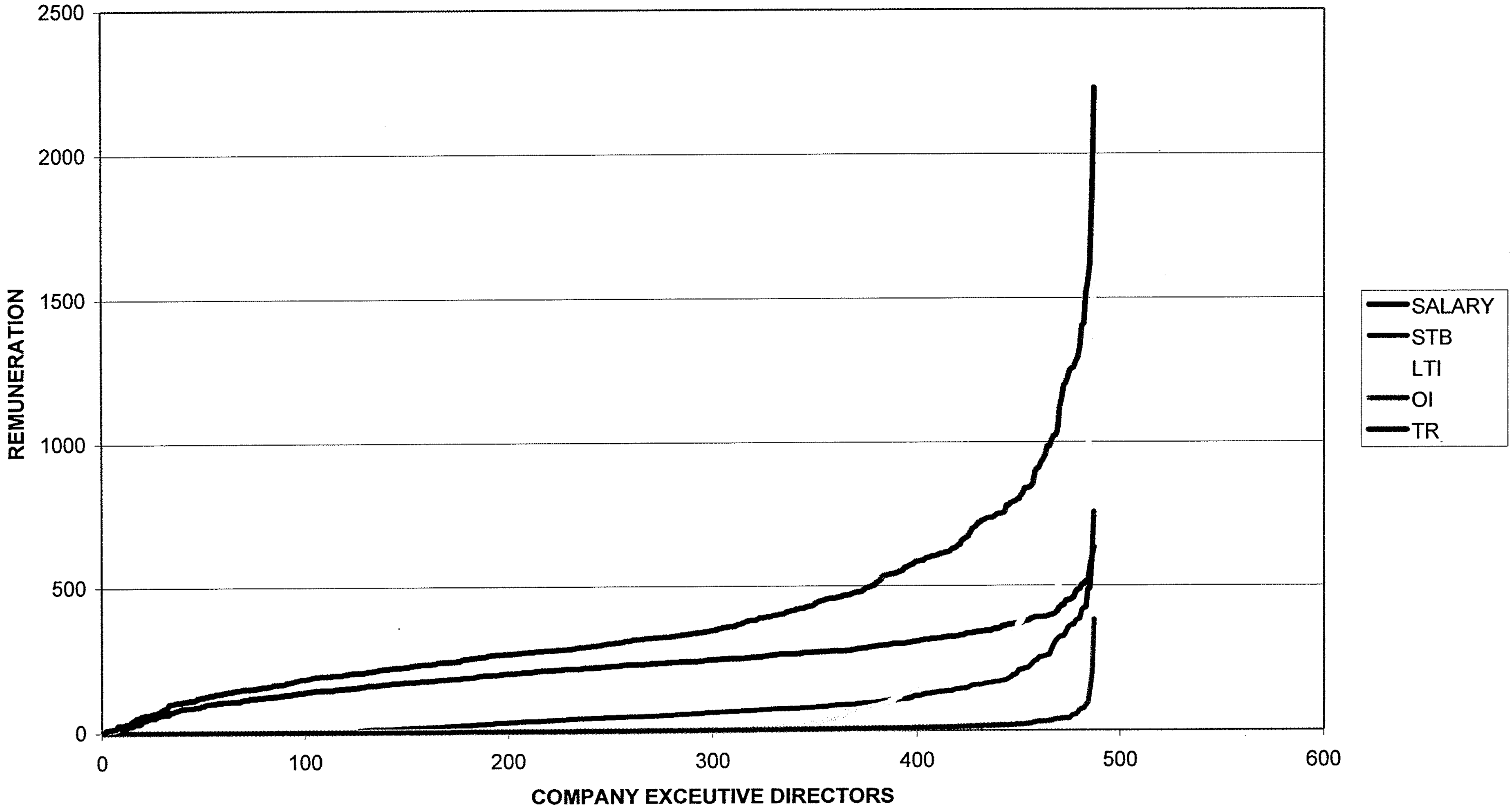

FIGURE 4.6 NON EXECUTIVE DIRECTORS DRIP REMUNERATION (ALL)

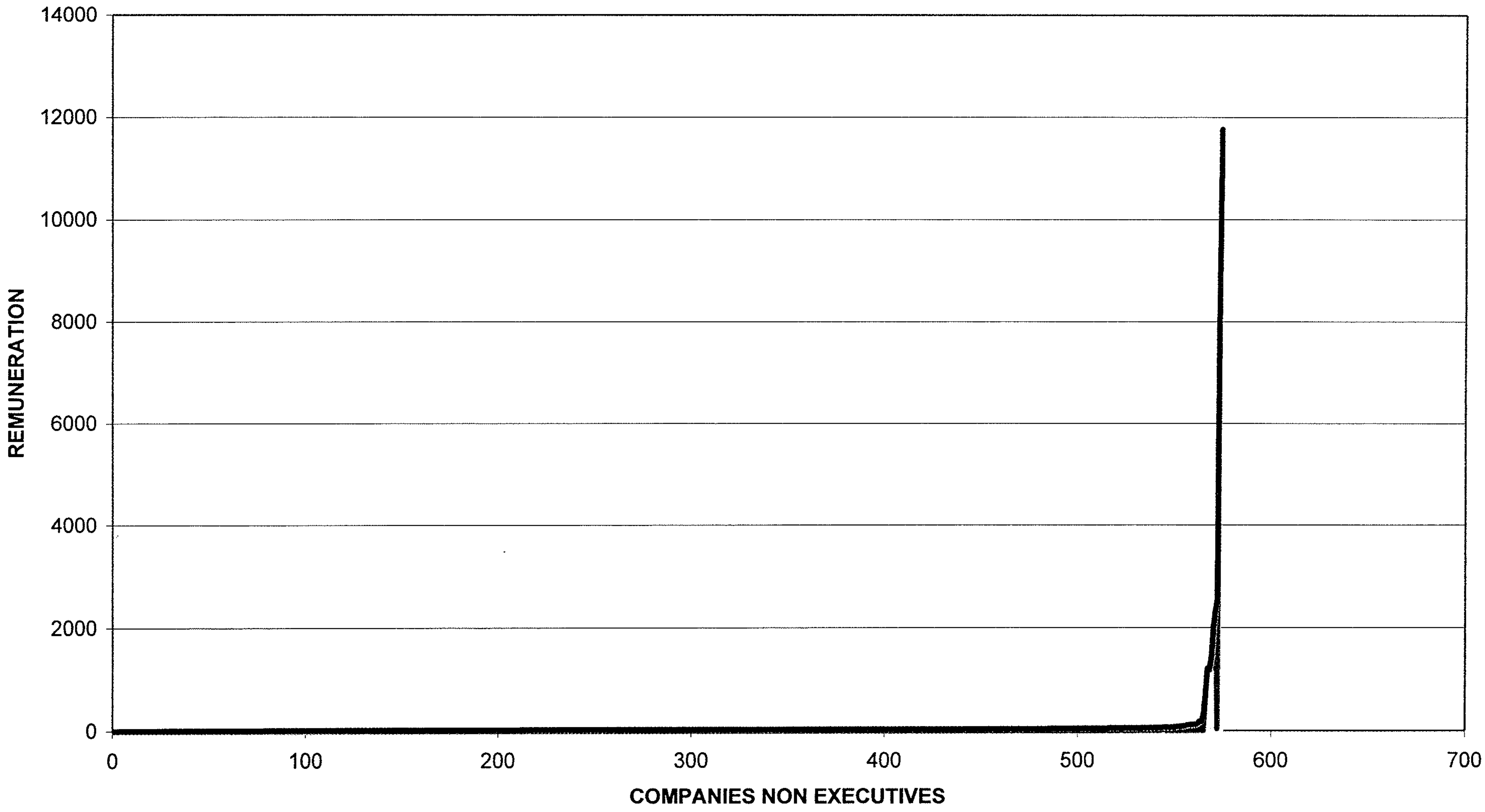

FIGURE 4.7 NON-EXECUTIVE DIRECTORS DRIP PROFILE (OUTLERS EXCLUDED)

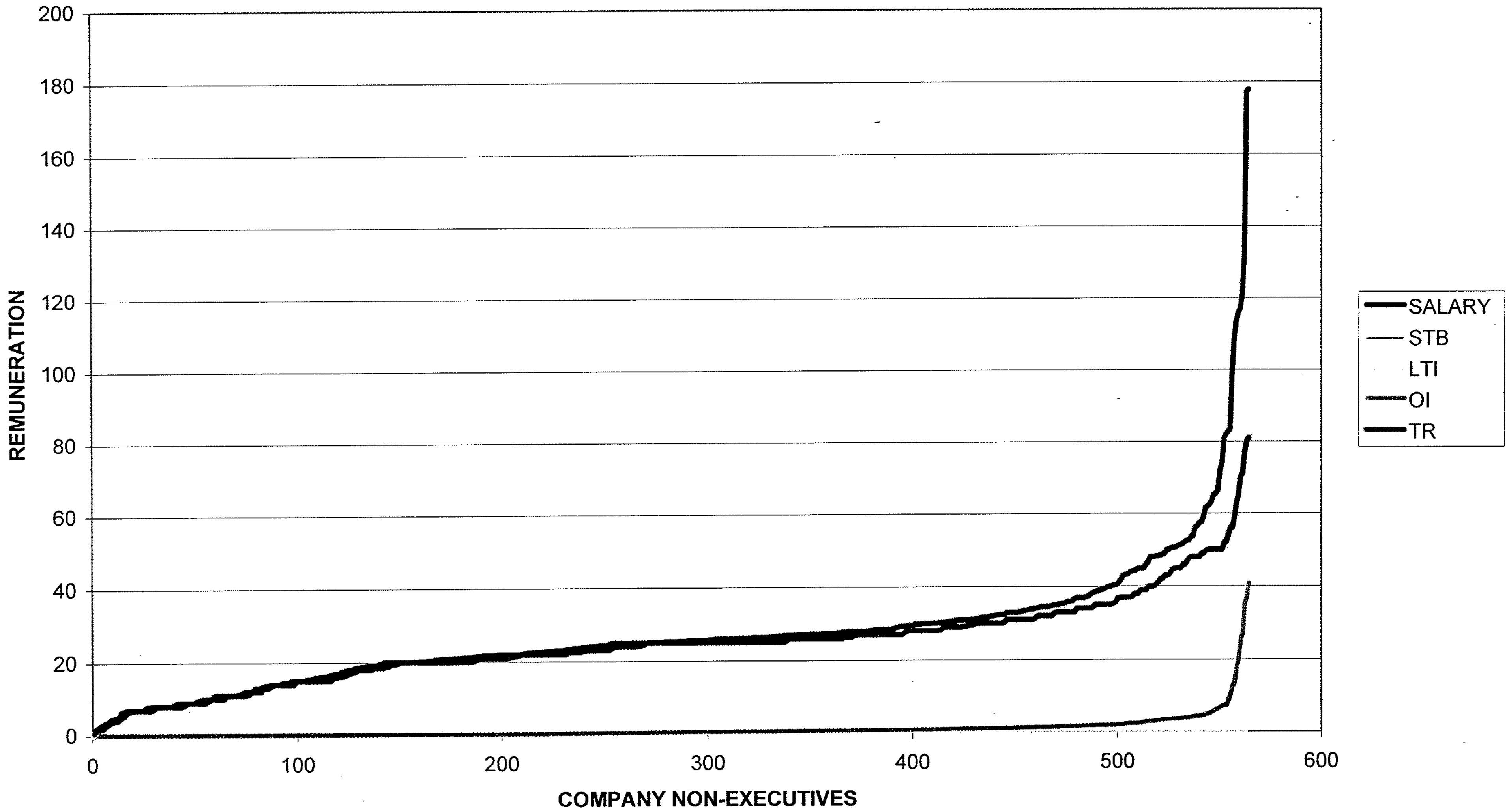

TABLE 4.1 PURE CHAIRS DRIP PROFILE								
COMPANY NAME	Z	ROLE	EXECUTIVE N	SALARY	STB	LTI	OI	TR
CARLTON COMMUNICATIO	Z	1	PITMAN	20	0	0	0	20
MIRROR	Z	1	SIR BLANK	63	0	0	0	63
GLAXO WELLCOME	Z	1	SIR CORNESS	77	0	0	0	77
UNITED UTILITIES/	Z	1	STAPLES	100	0	0	0	100
NATIONAL POWER/MAGNO	Z	1	BAKER	122.419	0	0	0	122.419
EUROTUNNEL	Z	1	MALPAS	160	0	0	0	160
SIEBE	Z	1	STEPHENS	183.333	0	0	0	183.333
REUTERS	Z	1	SIR HOGG	185	0	0	0	185
BURTON(ARCADIA)	Z	1	SIR HOSKYNS	199	0	0	0	199
ARJO WIGGINS	Z	1	STENHAM	205	0	0	0	205
THAMES WATER	Z	1	SIR CLARKE	241	0	0	0	241
BRITISH PETROLEUM	Z	1	LORD SIMON	326	0	0	0	326
ELEMENTIS(H&C)	Z	1	FRY	49	0	0	0.018	49.018
REED ELSEVIER/INT	Z	1	BRUGGINK	463.291	0	0	0.073	463.364
GEORGE WIMPEY	Z	1	GOUGH	22.5	0	0	0.1426	22.6426
LASMO	Z	1	AGNEW	150	0	0	0.23	150.23
BICC	Z	1	VISCOUNT W	150	0	0	0.25638	150.2564
KINGFISHER	Z	1	SIR BANHAM	175	0	0	0.295653	175.2957
SOUTHERN ELECT	Z	1	COATES	115	0	0	0.337782	115.3378
YORKSHIRE WATER	Z	1	GOUGH	120	0	0	0.45792	120.4579
SEVERN TRENT	Z	1	IRELAND	130	0	0	0.558628	130.5586
BASS	Z	1	SIR PERRY	56	0	0	0.586179	56.58618
BBA	Z	1	TREVES	68	0	0	0.809174	68.80917
TARMAC	Z	1	SIR BANHAM	92	0	0	0.893019	92.89302
BOOTS	Z	1	SIR ANGUS	150	0	0	0.933422	150.9334
BOC	Z	1	JOHN	375	0	0	0.94392	375.9439
BLUE CIRCLE	Z	1	TUGENDHAT	105	0	0	0.950765	105.9508
SOUTHWEST WATER	Z	1	HARVEY	80	0	0	1.024	81.024
BAA	Z	1	SIR SMITH	110	0	0	1.033836	111.0338
BPB IND	Z	1	GORMLY	103	0	0	1.10088	104.1009
LUCAS INS	Z	1	SIR PEASE	150	0	0	1.188155	151.1882
SCOTTISH HYDRO	Z	1	LORD WILSO	117.875	0	0	1.213	119.088
RECKITT AND COLEMAN	Z	1	DALBY	154	0	0	1.71	155.71
LADBROKES	Z	1	JACKSON	105	0	0	1.783601	106.7836
ZENECCA	Z	1	SIR LIPWORT	165	0	0	2.4065	167.4065
WHITBREAD	Z	1	SIR ANGUS	189.938	0	0	2.4871	192.4251
INCHCAPE	Z	1	MARSHALL	200	0	0	2.657255	202.6573
HYDER	Z	1	EVANS	125	0	0	2.88729	127.8873
SEARS	Z	1	SIR REID	120	0	0	2.89298	122.893

TABLE 4.1 PURE CHAIRS DRIP PROFILE CONTINUED								
RMC	Z	1	HAMPSON	125	0	0	2.9655	127.9655
COOKSON	Z	1	MALPASS	197	0	0	3.385416	200.3854
HILLSDOWN	Z	1	SIR NOTT	164	0	0	3.555	167.555
SCOTTISH POWER	Z	1	STUART	180	0	0	3.825	183.825
ALLIED DOMECQ	Z	1	HOGG	260	0	0	4.18144	264.1814
BTR	Z	1	EILLEDGE	225	0	0	4.186	229.186
BURMAH CASTROL	Z	1	URQUHART	120	0	0	4.292595	124.2926
BRITISH GAS	Z	1	GIORDANO	254.872	0	0	4.4117	259.2837
BRITISH STEEL	Z	1	SIR GOODSO	55	0	0	4.5	59.5
CARADON	Z	1	HITCHENS	84	0	0	4.564933	88.56493
BRITISH ENERGY	Z	1	ROBB	178.957	0	0	4.849931	183.8069
CABLE AND WIRELESS	Z	1	SMITH	260	0	0	5.085405	265.0854
TATE AND LYLE	Z	1	SIR SHAW	210	0	0	5.499	215.499
COURTAULDS TEX	Z	1	SIR LEES	160	0	0	5.739	165.739
SMITHKL	Z	1	SIR WALTER	276	0	0	5.873075	281.8731
TI GROUP	Z	1	HIGNETT	77	0	0	7.986888	84.98689
SCOTTISH AND NEWCAST	Z	1	SIR GRANT	127	0	0	8.82	135.82
ASDA GROUP	Z	1	NORMAN	271	0	0	8.89544	279.8954
REXAM	Z	1	HARTNALL	290	0	0	9.109292	299.1093
ASS BRIT PORTS	Z	1	STUART	334	0	0	10.19824	344.1982
BRITISH AIRWAYS	Z	1	SIR MARSHAL	251	0	0	10.98941	261.9894
RANK	Z	1	SIR HENDERS	250	0	0	11.25	261.25
BAT INDUSTRIES	Z	1	LORD CAIRNS	200	0	0	11.4	211.4
UNITED BISCUITS	Z	1	SHORT	160	0	0	11.67099	171.671
PILKINGTON	Z	1	SIR RUDD	153	0	0	12.8125	165.8125
WOLSELEY	Z	1	IRELAND	120	0	0	14.09909	134.0991
PEARSON	Z	1	SIR STEVENS	203	0	0	16.72614	219.7261
LONHRO	Z	1	SIR CRAVEN	150	0	0	32.76023	182.7602
NATIONAL GRID	Z	1	JEFFERIES	140	0	0	54.16963	194.1696
VODAFONE	Z	1	SIR HARRISO	213	0	0	75.319	288.319
NFU	Z	1	SIR BLAND	200	0	0	116.0295	316.0295
ASS BRIT FOODS	Z	1	WESTON	382	0	0	129.9983	511.9983

TABLE 4.4 HIGH DRIP CEOs								
COMPANY NAME	Z	ROLE	EXECUTIVE NAME	SALARY	STB	LTI	OI	TR
WILLIAM HOLDINGS	Z	2	CARR	654	0	129.212	278.2569	1061.469
LUCAS INS	Z	2	RICE	631.274	164.967	403.326	59.70379	1259.271
COOKSON	Z	2	OSTER	513.317	316.44	413.768	78.19853	1321.724
MARKS AND SPENCER	Z	2	OATES	526	17	747	54.99423	1344.994
BBA	Z	2	QUARTA	424	179	816	3.072866	1422.073
KINGFISHER	Z	2	SIR MULCAHY	665	680	111	25.15666	1481.157
CABLE AND WIRELESS	Z	2	BROWN	692.986	367.275	476.406	2.7699	1539.437
BASS	Z	2	SIR PROSSER	600	298	725.216	38.71451	1661.931
BOOTS	Z	2	LORD BLYTH	525	169	897	80.31531	1671.315
BRITISH PETROLEUM	Z	2	BROWNE	505	393	880.3452	0	1778.345
UNITED NEWS AND MEDIA	Z	2	HOLLICK	388	15.83	1508.174	0.109348	1912.113
TI GROUP	Z	2	SIR LEWINGTON	675	432	756.855	51.14998	1915.005
GRANADA	Z	2	ROBINSON	940	981	0	54.54809	1975.548
SCOTTISH POWER	Z	2	ROBINSON	350	119.875	1779.782	4.23606	2253.893
TOMKINS	Z	2	DUNCAN	570	193	1295	315.051	2373.051
SMITHKL	Z	2	LESCHLY	824	1564	0	123.0013	2511.001
CARLTON COMMUNICATIO	Z	2	GREEN	550	26	0	2067.138	2643.138
BRITISH AEROSPACE	Z	2	SIR EVANS	475	190	2268.766	0.970583	2934.737
GLAXO WELLCOME	Z	2	SIR SYKES	875	826	1774.59	0.139656	3475.73

TABLE 4.5 EXECUTIVE DIRECTOR DRIP PROFILES								
COMPANY NAME	Z	ROLE	EXECUTIVE NAME	SALARY	STB	LTI	OI	TR
BRITISH PETROLEUM	Z	3	STOMBERG	478	242	475	0	1195
GLAXO WELLCOME	Z	3	COOMBE	387	364	475.071	22.53739	1248.608
WOLSELEY	Z	3	WEBSTER	200	50	485.75	2.406968	738.157
GLAXO WELLCOME	Z	3	LANCE	506	296	489.513	0	1291.513
BASS	Z	3	NAPIER	275	139	508.612	6.604181	929.2162
UNILEVER	Z	3	JEMMETT	151.25	60.5	517.749	0	729.499
CABLE AND WIRELESS	Z	3	PETTIT	264.142	129.424	558.4416	1.220207	953.2278
SMITHKL	Z	3	GARNIER	518	758	582.733	7.831135	1866.564
UNILEVER	Z	3	KEMNER	367.6933	147	603.793	0	1118.486
BAT INDUSTRIES	Z	3	ALLVEY	391.298	120	651.466	41.06964	1203.834
BURTON(ARCADIA)	Z	3	MANEY	250	64	670.32	0.434511	984.7545
VODAFONE	Z	3	HORN-SMITH	326	0	686.887	6.917463	1019.804
TESCO	Z	3	GILDERSLEEVE	460	98	700	0.434273	1258.434
UNILEVER	Z	3	ANDERSON	392.835	378.193	744.429	0	1515.457
SHELL	Z	3	SIR JENNINGS	450.214	182.35	767.88	10.09476	1410.539
BRITISH PETROLEUM	Z	3	CHASE	336	252	815	0	1403
BRITISH PETROLEUM	Z	3	SEAL	259	256	815	0	1330
UNILEVER	Z	3	BROWN	330	315.765	910.298	1.169251	1557.232
BASS	Z	3	PORTNO	195	89	971	0	1255
TESCO	Z	3	REID	488	103	1024	0.727256	1615.727
MIRROR	Z	3	WILSON	23	0	1200.943	0	1223.943
SMITHKL	Z	3	POSTE	362	308	1555.328	2.101158	2227.429

TABLE 4.6 ENTERPRENEURIAL NON EXECUTIVE DIRECTORS								
COMPANY NAME	Z	ROLE	EXECUTIVE NAME	SALARY	STB	LTI	OI	TR
SOUTHERN ELECT	Z	4	CASLEY	77	0	3.66909	35.12637	115.7955
RANK	Z	4	STENHAM	29	0	11.396	4.537575	44.93358
MARKS AND SPENCER	Z	4	HON SIEFF	34	0	84	59.05281	177.0528
RECKITT AND COLEMAN	Z	4	WHITE	2	0	115	0	117
VODAFONE	Z	4	SIR WHENT	104	0	2387.157	36.80301	2527.96
RACAL ELECT	Z	4	SIR ASHMORE	36.944	7.075	0	0	44.019
BOOTS	Z	4	WHALAN	81	21	209	0	311
SOUTHWEST WATER	Z	4	HEWETT	19	22	14.552	6.178816	61.73082

TABLE 4.7 HIGH OWNERSHIP INCOME NON EXECUTIVE DIRECTORS								
COMPANY NAME	Z	ROLE	EXECUTIVE NAME	SALARY	STB	LTI	OI	TR
KINGFISHER	Z	4	GOLDSTEIN	26	0	0	652.852	678.852
ASS BRIT FOODS	Z	4	GALEN-WESTON	0	0	0	1208.642	1208.642
WILLIAM HOLDINGS	Z	4	RHODES	32	0	0	1177.086	1209.086
WHITBREAD	Z	4	WHITBREAD	26	0	0	1422.515	1448.515
CARLTON COMMUNICATION	Z	4	GREEN	35	0	0	1938.612	1973.612
SAINSBURY	Z	4	HON SIR SAINSBURY	22	0	0	2291.014	2313.014
VODAFONE	Z	4	SIR WHENT	104	0	2387	36.80301	2527.96
REED ELSEVIER/INT	Z	4	LORD HAMLYN	25	0	0	8057.889	8082.889
PEARSON	Z	4	DAVID-WEIL	25	0	0	11734.03	11759.03

TABLE 5.1 1998 ABSOLUTE FULL DRIP DATASET DESCRIPTIVE STATISTICS									
REMUNERATION									
	DIRECTOR TYPE	CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
	ROLE	Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Err
SAL	Mean	234.962	17.6478	420.48	16.0146	221.753	4.72161	26.0188	0.68073
	95% Confidence I L	199.945		388.704		212.476		24.6817	
		269.979		452.256		231.03		27.3558	
	5% Trimmed Mean	215.497		413.922		219.134		24.4029	
	Median	187.469		427.5		220.769		25	
	Variance	31144.5		25646.6		10857		265.991	
	Std. Deviation	176.478		160.146		104.197		16.3092	
	Minimum	20		93		0		0	
	Maximum	950		940		634.82		177	
	Range	930		847		634.82		177	
	Interquartile Range	151.686		193.75		126		11	
	Skewness	1.88583	0.24138	0.52773	0.24138	0.42962	0.11066	3.44301	0.10197
	Kurtosis	3.80392	0.47833	0.73023	0.47833	0.70162	0.22087	21.1593	0.2036
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
STB	Mean	34.9875	11.6738	139.469	21.5806	70.7783	4.25348	0.08724	0.05433
	95% Confidence I L	11.8241		96.6489		62.4209		-0.0195	
		58.1509		182.29		79.1358		0.19394	
	5% Trimmed Mean	12.6083		105.155		57.4297		0	
	Median	0		86		46		0	
	Variance	13627.9		46572		8810.83		1.69404	
	Std. Deviation	116.738		215.806		93.866		1.30155	
	Minimum	0		0		0		0	
	Maximum	773		1564		758		22	
	Range	773		1564		758		22	
	Interquartile Range	0		145.742		91		0	
	Skewness	4.60835	0.24138	4.08116	0.24138	2.73253	0.11066	15.8925	0.10197
	Kurtosis	23.4996	0.47833	21.4428	0.47833	10.639	0.22087	257.678	0.2036
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
LTI	Mean	83.0736	35.6647	204.375	44.0737	92.2671	10.0762	4.92121	4.18081
	95% Confidence I L	12.3071		116.923		72.4688		-3.2904	
		153.84		291.827		112.065		13.1328	
	5% Trimmed Mean	24.549		128.634		54.5948		0	
	Median	0		0		0		0	
	Variance	127197		194249		49444.9		10033	
	Std. Deviation	356.647		440.737		222.362		100.165	
	Minimum	0		0		0		0	
	Maximum	3263.2		2268.77		1809.44		2387.16	
	Range	3263.2		2268.77		1809.44		2387.16	
	Interquartile Range	0		158.953		68		0	
	Skewness	7.56311	0.24138	2.80748	0.24138	4.00783	0.11066	23.5774	0.10197
	Kurtosis	65.278	0.47833	7.93219	0.47833	20.6733	0.22087	561.261	0.2036
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
OI	Mean	536.4	452.005	43.5124	21.0106	7.44346	1.0473	50.9415	25.5938
	95% Confidence I L	-360.48		1.82276		5.38567		0.67243	
		1433.28		85.202		9.50125		101.211	
	5% Trimmed Mean	18.3348		15.6633		4.17382		0.67388	
	Median	4.18372		5.79933		1.5906		0.31813	
	Variance	2E+07		44144.6		534.158		375994	
	Std. Deviation	4520.05		210.106		23.1119		613.184	
	Minimum	0		0		0		0	
	Maximum	45072.8		2067.14		380.356		11734	
	Range	45072.8		2067.14		380.356		11734	
	Interquartile Range	11.8852		19.0674		6.91746		0.99281	
	Skewness	9.86298	0.24138	9.24337	0.24138	10.6083	0.11066	16.1925	0.10197
	Kurtosis	98.0638	0.47833	89.3095	0.47833	150.453	0.22087	281.232	0.2036

TABLE 5.2 1998 ABSOLUTE REDUCED DRIP DATASET DESCRIPTIVE STATISTICS										
REMUNERATION										
	DIRECTOR TYPE		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
			Statistic	Std. Err	Statistic	Std. Erro	Statistic	Std. Erro	Statistic	Std. Err
SAL	Mean		168.918	10.1502	420.48	16.0146	221.7531	4.7216	25.7099	0.6613
	95% Confidenc	L	148.674		388.704		212.4758		24.4111	
		U	189.162		452.256		231.0303		27.0088	
	5% Trimmed Mea		163.81		413.922		219.1335		24.2516	
	Median		154		427.5		220.769		25	
	Variance		7314.89		25646.6		10856.96		247.5	
	Std. Deviation		85.5271		160.146		104.1967		15.7321	
	Minimum		20		93		0		0	
	Maximum		463.29		940		634.82		177	
	Range		443.29		847		634.82		177	
	Interquartile Rang		90		193.75		126		10.625	
	Skewness		0.972	0.285	0.528	0.241	0.43	0.111	3.603	0.103
	Kurtosis		1.425	0.563	0.73	0.478	0.702	0.221	24.034	0.205
	DIRECTOR TYP		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
STB	Mean				139.469	21.5806	70.7783	4.2535		
	95% Confidenc	L			96.6489		62.4209			
		U			182.29		79.1358			
	5% Trimmed Me				105.155		57.4297			
	Median				86		46			
	Variance				46572		8810.829			
	Std. Deviation				215.806		93.866			
	Minimum				0		0			
	Maximum				1564		758			
	Range				1564		758			
	Interquartile Ra				145.742		91			
	Skewness				4.081	0.241	2.733	0.111		
	Kurtosis				21.443	0.478	10.639	0.221		
	DIRECTOR TYP		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
LTI	Mean				204.375	44.0737	92.2671	10.0762		
	95% Confidenc	L			116.923		72.4688			
		U			291.827		112.0654			
	5% Trimmed Mean				128.634		54.5948			
	Median				0		0			
	Variance				194249		49444.92			
	Std. Deviation				440.737		222.3621			
	Minimum				0		0			
	Maximum				2268.77		1809.44			
	Range				2268.77		1809.44			
	Interquartile Range				158.953		68			
	Skewness				2.807	0.241	4.008	0.111		
	Kurtosis				7.932	0.478	20.673	0.221		
	DIRECTOR TYP		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
OI	Mean		9.0003	2.6995	43.5124	21.0106	7.4435	1.0473	51.4112	25.9551
	95% Confidenc	L	3.6163		1.8228		5.3857		0.4309	
		U	14.3842		85.202		9.5013		102.3915	
	5% Trimmed Mea		4.5052		15.6633		4.1738		0.6393	
	Median		2.4871		5.7993		1.5906		0.316	
	Variance		517.392		44144.6		534.158		381295.7	
	Std. Deviation		22.7462		210.106		23.1119		617.4915	
	Minimum		0		0		0		0	
	Maximum		130		2067.14		380.36		11734.03	
	Range		130		2067.14		380.36		11734.03	
	Interquartile Rang		5.5774		19.0674		6.9175		0.9768	
	Skewness		4.211	0.285	9.243	0.241	10.608	0.111	16.079	0.103
	Kurtosis		18.356	0.563	89.309	0.478	150.453	0.221	277.289	0.205

TABLE 5.3 1998 LOGARITHMIC FULL DRIP DATASET DESCRIPTIVE STATISTICS										
REMUNERATION										
	DIRECTOR TYPE		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
			Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Erro	Statistic	Std. Err
SA	Mean		5.22312	0.07043	5.96166	0.0421	5.24944	0.03024	3.1016	0.02506
	95% Confidence I	L	5.08336		5.87813		5.19003		3.05238	
		U	5.36287		6.04519		5.30886		3.15082	
	5% Trimmed Mean		5.23418		5.97642		5.31838		3.12503	
	Median		5.23353		6.05795		5.39816		3.21888	
	Variance		0.49608		0.17723		0.4435		0.35987	
	Std. Deviation		0.70433		0.42098		0.66596		0.59989	
	Minimum		2.99573		4.5326		1.94591		-0.6079	
	Maximum		6.85646		6.84588		6.45334		5.17615	
	Range		3.86073		2.31328		4.50743		5.78404	
	Interquartile Range		0.80316		0.4855		0.59899		0.45676	
	Skewness		-0.2674	0.24138	-0.7291	0.24138	-2.0437	0.11088	-1.0796	0.10206
	Kurtosis		0.94154	0.47833	0.66494	0.47833	6.01328	0.22132	4.4725	0.20377
ST	Mean		0.0141	0.00828	0.83088	0.18661	3.72937	0.20992	3.07498	0.09002
	95% Confidence I	L	-0.0022		0.4606		3.31285		2.8981	
		U	0.03036		1.20116		4.14589		3.25185	
	5% Trimmed Mean		0		0.58623		3.77096		3.08823	
	Median		0		0		4.45408		3.82864	
	Variance		0.03933		3.48241		4.40648		3.94625	
	Std. Deviation		0.19833		1.86612		2.09916		1.98652	
	Minimum		0		0		0		0	
	Maximum		3.09104		6.65028		7.355		6.63068	
	Range		3.09104		6.65028		7.355		6.63068	
	Interquartile Range		0		0		2.16646		4.51086	
	Skewness		14.4332	0.10197	1.98673	0.24138	-0.8962	0.24138	-0.5897	0.11066
	Kurtosis		211.53	0.2036	2.3592	0.47833	-0.4601	0.47833	-1.0896	0.22087
LTI	Mean		1.02206	0.21337	2.36804	0.2756	1.76588	0.11045	0.05001	0.02096
	95% Confidence I	L	0.59869		1.82118		1.54886		0.00884	
		U	1.44543		2.91489		1.98291		0.09118	
	5% Trimmed Mean		0.75483		2.21622		1.59374		0	
	Median		0		0		0		0	
	Variance		4.55267		7.59568		5.94137		0.25223	
	Std. Deviation		2.1337		2.75603		2.43749		0.50222	
	Minimum		0		0		-0.6694		0	
	Maximum		8.09046		7.72699		7.50077		7.77786	
	Range		8.09046		7.72699		8.1702		7.77786	
	Interquartile Range		0		5.06804		4.21951		0	
	Skewness		1.85946	0.24138	0.59111	0.24138	0.86847	0.11066	11.4867	0.10197
	Kurtosis		1.98071	0.47833	-1.2928	0.47833	-0.9295	0.22087	143.556	0.2036
OI	Mean		1.59161	0.23284	1.81647	0.18706	0.86288	0.06513	-0.1058	0.0618
	95% Confidence I	L	1.1296		1.44531		0.73491		-0.2272	
		U	2.05362		2.18763		0.99084		0.0156	
	5% Trimmed Mean		1.47461		1.81222		0.83632		-0.1561	
	Median		1.4312		1.75751		0.46411		0	
	Variance		5.42158		3.49897		2.06564		2.192	
	Std. Deviation		2.32843		1.87055		1.43723		1.48054	
	Minimum		-4.0174		-3.8149		-5.55		-5.9114	
	Maximum		10.716		7.63392		5.94111		9.37025	
	Range		14.7334		11.4488		11.4911		15.2816	
	Interquartile Range		2.52709		2.64578		1.93405		0.59883	
	Skewness		0.99375	0.24138	0.11294	0.24138	0.3229	0.11066	1.63132	0.10197
	Kurtosis		2.25914	0.47833	0.55563	0.47833	0.58827	0.22087	12.0508	0.2036

TABLE 5.4 1998 LOGARITHMIC REDUCED DRIP DATASET DESCRIPTIVE STATISTICS									
REMUNERATION									
	DIRECTOR TYPE	CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
		Statistic	Std. Erro	Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Err
SAL	Mean	4.98805	0.06877	5.96166	0.0421	5.24944	0.03024	3.09133	0.02522
	95% Confidence L	4.85088		5.87813		5.19003		3.04179	
		5.12521		6.04519		5.30886		3.14088	
	5% Trimmed Mean	5.01939		5.97642		5.31838		3.11833	
	Median	5.03695		6.05795		5.39816		3.21888	
	Variance	0.33582		0.17723		0.4435		0.36013	
	Std. Deviation	0.5795		0.42098		0.66596		0.60011	
	Minimum	2.99573		4.5326		1.94591		-0.6079	
	Maximum	6.13836		6.84588		6.45334		5.17615	
	Range	3.14262		2.31328		4.50743		5.78404	
	Interquartile Range	0.57808		0.4855		0.59899		0.44662	
	Skewness	-1.0182	0.2848	-0.7291	0.24138	-2.0437	0.11088	-1.2362	0.10269
	Kurtosis	2.15766	0.56251	0.66494	0.47833	6.01328	0.22132	5.12923	0.20502
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
STB	Mean			0.83088	0.18661	3.72937	0.20992		
	95% Confidence L			0.4606		3.31285			
				1.20116		4.14589			
	5% Trimmed Mean			0.58623		3.77096			
	Median			0		4.45408			
	Variance			3.48241		4.40648			
	Std. Deviation			1.86612		2.09916			
	Minimum			0		0			
	Maximum			6.65028		7.355			
	Range			6.65028		7.355			
	Interquartile Range			0		2.16646			
	Skewness			1.98673	0.24138	-0.8962	0.24138		
	Kurtosis			2.3592	0.47833	-0.4601	0.47833		
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
LTI	Mean			2.36804	0.2756	1.76588	0.11045		
	95% Confidence L			1.82118		1.54886			
				2.91489		1.98291			
	5% Trimmed Mean			2.21622		1.59374			
	Median			0		0			
	Variance			7.59568		5.94137			
	Std. Deviation			2.75603		2.43749			
	Minimum			0		-0.6694			
	Maximum			7.72699		7.50077			
	Range			7.72699		8.1702			
	Interquartile Range			5.06804		4.21951			
	Skewness			0.59111	0.24138	0.86847	0.11066		
	Kurtosis			-1.2928	0.47833	-0.9295	0.22087		
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
OI	Mean	0.88302	0.19052	1.81647	0.18706	0.86288	0.06513	-0.133	0.06137
	95% Confidence L	0.50304		1.44531		0.73491		-0.2536	
		1.263		2.18763		0.99084		-0.0125	
	5% Trimmed Mean	0.87553		1.81222		0.83632		-0.1742	
	Median	0.91112		1.75751		0.46411		0	
	Variance	2.57717		3.49897		2.06564		2.13189	
	Std. Deviation	1.60536		1.87055		1.43723		1.4601	
	Minimum	-4.0174		-3.8149		-5.55		-5.9114	
	Maximum	4.86752		7.63392		5.94111		9.37025	
	Range	8.8849		11.4488		11.4911		15.2816	
	Interquartile Range	1.77038		2.64578		1.93405		0.60506	
	Skewness	0.02345	0.2848	0.11294	0.24138	0.3229	0.11066	1.6756	0.10269
	Kurtosis	0.94465	0.56251	0.55563	0.47833	0.58827	0.22087	12.9895	0.20502

TABLE 5.5 1998 PERCENTAGE FULL DRIP DATASET DESCRIPTIVE STATISTICS

REMUNERATION	DIRECTOR TYPE	CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
		Statistic	Std. Erro	Statistic	Std. Erro	Statistic	Std. Err	Statistic	Std. Err
%SA	Mean	82.8705	2.5845	66.294	2.3529	69.6492	1.041	94.5197	0.6306
	95% Confidence L	77.7423		61.6253		67.6038		93.2811	
		87.9988		70.9627		71.6945		95.7584	
	5% Trimmed Mean	85.9084		67.0411		70.7186		97.3322	
	Median	97.1993		71.5565		71.5059		98.8687	
	Variance	667.98		553.625		526.628		228.278	
	Std. Deviation	25.8453		23.5292		22.9484		15.1089	
	Minimum	0.68		15.53		0		0	
	Maximum	100		100		100		100	
	Range	99.32		84.47		100		100	
	Interquartile Rang	25.0344		33.501		36.1024		4.0851	
	Skewness	-1.656	0.241	-0.474	0.241	-0.492	0.111	-4.948	0.102
	Kurtosis	1.745	0.478	-0.763	0.478	-0.481	0.221	25.777	0.204
%ST	Mean	3.3021	0.9091	16.0548	1.3031	16.0024	0.6374	0.1019	6.91E-02
	95% Confidence L	1.4983		13.4692		14.7499		-3.38E-02	
		5.1059		18.6405		17.2549		0.2375	
	5% Trimmed Mean	1.7538		15.2		14.9947		0	
	Median	0		15.1979		14.5883		0	
	Variance	82.642		169.811		197.473		2.737	
	Std. Deviation	9.0907		13.0312		14.0525		1.6543	
	Minimum	0		0		0		0	
	Maximum	50.57		62.29		74.34		35.64	
	Range	50.57		62.29		74.34		35.64	
	Interquartile Rang	0		21.5755		25.5406		0	
	Skewness	3.072	0.241	0.653	0.241	0.715	0.111	19.05	0.102
	Kurtosis	9.671	0.478	0.571	0.478	0.157	0.221	388.323	0.204
%LTI	Mean	6.1844	1.7497	14.2047	2.2657	12.2345	0.9595	0.6263	0.2829
	95% Confidence L	2.7127		9.7089		10.3493		7.05E-02	
		9.6562		18.7004		14.1197		1.182	
	5% Trimmed Mean	2.7973		11.5878		9.6134		0	
	Median	0		0		0		0	
	Variance	306.142		513.361		447.398		45.949	
	Std. Deviation	17.4969		22.6575		21.1518		6.7786	
	Minimum	0		0		0		0	
	Maximum	98.4		78.96		100		98.29	
	Range	98.4		78.96		100		98.29	
	Interquartile Rang	0		22.4512		17.551		0	
	Skewness	3.466	0.241	1.524	0.241	1.742	0.111	12.267	0.102
	Kurtosis	12.373	0.478	1.073	0.478	2.142	0.221	158.617	0.204
%OI	Mean	7.6429	1.701	3.4465	0.8739	2.1139	0.2575	4.7522	0.5487
	95% Confidence L	4.2677		1.7124		1.608		3.6744	
		11.0181		5.1806		2.6199		5.8299	
	5% Trimmed Mean	4.6051		2.0537		1.2243		2.4875	
	Median	1.7603		1.3902		0.4933		1.1041	
	Variance	289.35		76.376		32.226		172.835	
	Std. Deviation	17.0103		8.7393		5.6768		13.1467	
	Minimum	0		0		0		0	
	Maximum	99.03		78.21		73.11		100	
	Range	99.03		78.21		73.11		100	
	Interquartile Rang	4.5922		2.8701		1.8586		3.9385	
	Skewness	3.613	0.241	6.796	0.241	7.278	0.111	5.706	0.102
	Kurtosis	14.137	0.478	55.199	0.478	69.93	0.221	35.944	0.204

TABLE 5.6 1998 PERCENTAGE REDUCED DRIP DATASET DESCRIPTIVE STATISTICS									
REMUNERATION									
	DIRECTOR TYPE	CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
		Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Err
%SAL	Mean	96.1758	0.8296	66.294	2.3529	69.6492	1.041	95.3313	0.5519
	95% Confidence I L	94.5213		61.6253		67.6038		94.2472	
		97.8304		70.9627		71.6945		96.4154	
	5% Trimmed Mean	97.3894		67.0411		70.7186		97.5737	
	Median	98.5625		71.5565		71.5059		98.9093	
	Variance	48.864		553.625		526.628		172.43	
	Std. Deviation	6.9903		23.5292		22.9484		13.1313	
	Minimum	63.29		15.53		0		0	
	Maximum	100		100		100		100	
	Range	36.71		84.47		100		100	
	Interquartile Range	3.2025		33.501		36.1024		3.8058	
	Skewness	-3.126	0.285	-0.474	0.241	-0.492	0.111	-5.795	0.103
	Kurtosis	10.023	0.563	-0.763	0.478	-0.481	0.221	36.769	0.205
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
%STB	Mean			16.0548	1.3031	16.0024	0.6374		
	95% Confidence I L			13.4692		14.7499			
				18.6405		17.2549			
	5% Trimmed Mean			15.2		14.9947			
	Median			15.1979		14.5883			
	Variance			169.811		197.473			
	Std. Deviation			13.0312		14.0525			
	Minimum			0		0			
	Maximum			62.29		74.34			
	Range			62.29		74.34			
	Interquartile Range			21.5755		25.5406			
	Skewness			0.653	0.241	0.715	0.111		
	Kurtosis			0.571	0.478	0.157	0.221		
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
%LTI	Mean			14.2047	2.2657	12.2345	0.9595		
	95% Confidence I L			9.7089		10.3493			
				18.7004		14.1197			
	5% Trimmed Mean			11.5878		9.6134			
	Median			0		0			
	Variance			513.361		447.398			
	Std. Deviation			22.6575		21.1518			
	Minimum			0		0			
	Maximum			78.96		100			
	Range			78.96		100			
	Interquartile Range			22.4512		17.551			
	Skewness			1.524	0.241	1.742	0.111		
	Kurtosis			1.073	0.478	2.142	0.221		
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
%OI	Mean	3.8242	0.8296	3.4465	0.8739	2.1139	0.2575	4.6687	0.5519
	95% Confidence I L	2.1696		1.7124		1.608		3.5846	
		5.4787		5.1806		2.6199		5.7528	
	5% Trimmed Mean	2.6106		2.0537		1.2243		2.4263	
	Median	1.4375		1.3902		0.4933		1.0907	
	Variance	48.864		76.376		32.226		172.43	
	Std. Deviation	6.9903		8.7393		5.6768		13.1313	
	Minimum	0		0		0		0	
	Maximum	36.71		78.21		73.11		100	
	Range	36.71		78.21		73.11		100	
	Interquartile Range	3.2025		2.8701		1.8586		3.8058	
	Skewness	3.126	0.285	6.796	0.241	7.278	0.111	5.795	0.103
	Kurtosis	10.023	0.563	55.199	0.478	69.93	0.221	36.769	0.205

TABLE 5.1 1997 ABSOLUTE FULL DATASET DRIP DESCRIPTIVE STATISTICS										
REMUNERATION										
	DIRECTOR TYPE		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
	STATISTICS		Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Err
SA	Mean		243.30	18.97	379.78	14.34	209.31	4.76	26.67	1.32
	95% Confidence I	L	205.66		351.32		199.96		24.06	
		U	280.95		408.24		218.66		29.27	
	5% Trimmed Mean		224.73		373.26		203.98		24.05	
	Median		192.50		385.00		205.94		24.00	
	Variance		36000.11		20568.22		11270.91		952.82	
	Std. Deviation		189.74		143.42		106.16		30.87	
	Minimum		19.00		85.00		0.00		0.00	
	Maximum		880.00		866.00		944.73		617.00	
	Range		861.00		781.00		944.73		617.00	
	Interquartile Range		204.50		179.07		118.19		8.00	
	Skewness		1.50	0.24	0.67	0.24	1.21	0.11	14.04	0.10
	Kurtosis		1.92	0.48	0.95	0.48	4.96	0.22	253.39	0.21
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
ST	Mean		25.11	6.58	111.60	16.52	65.19	5.25	0.12	0.11
	95% Confidence I	L	12.06		78.82		54.86		-0.10	
		U	38.17		144.38		75.51		0.34	
	5% Trimmed Mean		13.83		87.65		51.50		0.00	
	Median		0.00		74.50		35.00		0.00	
	Variance		4327.50		27296.10		13751.61		6.86	
	Std. Deviation		65.78		165.22		117.27		2.62	
	Minimum		0.00		0.00		0.00		0.00	
	Maximum		434.00		1212.00		2000.00		61.00	
	Range		434.00		1212.00		2000.00		61.00	
	Interquartile Range		10.75		139.31		81.75		0.00	
	Skewness		3.70	0.24	4.08	0.24	9.79	0.11	23.25	0.10
	Kurtosis		16.51	0.48	22.40	0.48	150.32	0.22	541.41	0.21
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
LTI	Mean		94.71	25.96	161.30	31.85	72.74	12.23	3.41	2.24
	95% Confidence I	L	43.20		98.09		48.71		-0.98	
		U	146.21		224.50		96.77		7.80	
	5% Trimmed Mean		46.57		117.38		30.48		0.00	
	Median		0.00		0.00		0.00		0.00	
	Variance		67380.72		101470.23		74485.44		2715.26	
	Std. Deviation		259.58		318.54		272.92		52.11	
	Minimum		0.00		0.00		0.00		0.00	
	Maximum		1648.50		1388.00		4573.56		1165.96	
	Range		1648.50		1388.00		4573.56		1165.96	
	Interquartile Range		7.89		146.74		22.72		0.00	
	Skewness		3.65	0.24	2.18	0.24	10.43	0.11	20.93	0.10
	Kurtosis		15.29	0.48	4.07	0.48	153.14	0.22	461.15	0.21
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
OI	Mean		494.76	401.08	42.39	20.88	8.44	1.08	50.47	25.04
	95% Confidence I	L	-301.07		0.95		6.31		1.28	
		U	1290.59		83.83		10.57		99.66	
	5% Trimmed Mean		23.62		15.62		4.59		0.81	
	Median		4.66		6.91		1.50		0.38	
	Variance		16086509.72		43615.50		583.60		340466.72	
	Std. Deviation		4010.80		208.84		24.16		583.50	
	Minimum		0.00		0.00		0.00		0.00	
	Maximum		39886.06		2066.96		342.32		10829.19	
	Range		39886.06		2066.96		342.32		10829.19	
	Interquartile Range		19.00		20.75		6.39		1.08	
	Skewness		9.78	0.24	9.41	0.24	7.80	0.11	15.71	0.10
	Kurtosis		96.78	0.48	91.72	0.48	84.94	0.22	264.48	0.21

TABLE 5.2 1997 ABSOLUTE REDUCED DRIP DATASET DESCRIPTIVE STATISTICS										
REMUNERATION										
	DIRECTOR TYPE		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
	STATISTICS		Statistic	Std. Err	Statistic	Std. Error	Statistic	Std. Err	Statistic	Std. Err
SAL	Mean		177.55	18.92	379.78	14.34	209.31	4.76	25.50	0.77
	95% Confidence Inte	L	139.67		351.32		199.96		23.99	
			215.43		408.24		218.66		27.00	
	5% Trimmed Mean		159.50		373.26		203.98		23.94	
	Median		122.50		385.00		205.94		24.00	
	Variance		20753.53		20568.22		11270.91		309.84	
	Std. Deviation		144.06		143.42		106.16		17.60	
	Minimum		19.00		85.00		0.00		0.00	
	Maximum		830.00		866.00		944.73		250.00	
	Range		811.00		781.00		944.73		250.00	
	Interquartile Range		151.75		179.07		118.19		8.00	
	Skewness		2.49	0.31	0.67	0.24	1.21	0.11	6.17	0.11
	Kurtosis		8.32	0.62	0.95	0.48	4.96	0.22	65.07	0.21
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
STB	Mean				111.60	16.52	65.19	5.25		
	95% Confidence Inte	L			78.82		54.86			
					144.38		75.51			
	5% Trimmed Mean				87.65		51.50			
	Median				74.50		35.00			
	Variance				27296.10		13751.61			
	Std. Deviation				165.22		117.27			
	Minimum				0.00		0.00			
	Maximum				1212.00		2000.00			
	Range				1212.00		2000.00			
	Interquartile Range				139.31		81.75			
	Skewness				4.08	0.24	9.79	0.11		
	Kurtosis				22.40	0.48	150.32	0.22		
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
LTI	Mean				161.30	31.85	72.74	12.23		
	95% Confidence Inte	L			98.09		48.71			
					224.50		96.77			
	5% Trimmed Mean				117.38		30.48			
	Median				0.00		0.00			
	Variance				101470.23		74485.44			
	Std. Deviation				318.54		272.92			
	Minimum				0.00		0.00			
	Maximum				1388.00		4573.56			
	Range				1388.00		4573.56			
	Interquartile Range				146.74		22.72			
	Skewness				2.18	0.24	10.43	0.11		
	Kurtosis				4.07	0.48	153.14	0.22		
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
OI	Mean		14.47	4.56	42.39	20.88	8.44	1.08	51.84	25.80
	95% Confidence Inte	L	5.34		0.95		6.31		1.16	
			23.60		83.83		10.57		102.53	
	5% Trimmed Mean		7.71		15.62		4.59		0.73	
	Median		2.58		6.91		1.50		0.37	
	Variance		1205.52		43615.50		583.60		350756.82	
	Std. Deviation		34.72		208.84		24.16		592.25	
	Minimum		0.00		0.00		0.00		0.00	
	Maximum		164.73		2066.96		342.32		10829.19	
	Range		164.73		2066.96		342.32		10829.19	
	Interquartile Range		8.58		20.75		6.39		1.04	
	Skewness		3.43	0.31	9.41	0.24	7.80	0.11	15.48	0.11
	Kurtosis		11.49	0.62	91.72	0.48	84.94	0.22	256.62	0.21

TABLE 5.3 1997 LOGARITHMIC FULL DATASET DRIP DESCRIPTIVE STATISTICS									
REMUNERATION									
	DIRECTOR TYPE	CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
	STATISTICS	Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error
SAL	Mean	5.2102	0.0787	5.8643	0.0405	5.1740	0.0317	3.0815	0.0277
	95% Confidenc L	5.0540		5.7839		5.1117		3.0271	
		5.3663		5.9447		5.2363		3.1360	
	5% Trimmed Mea	5.2304		5.8761		5.2400		3.1181	
	Median	5.2593		5.9532		5.3276		3.1781	
	Variance	0.6191		0.1641		0.5011		0.4170	
	Std. Deviation	0.7868		0.4050		0.7079		0.6457	
	Minimum	2.9444		4.4427		0.0000		0.0000	
	Maximum	6.7799		6.7639		6.8509		6.4249	
	Range	3.8355		2.3212		6.8509		6.4249	
	Interquartile Ran	1.0388		0.5014		0.6062		0.3365	
	Skewness	-0.2969	0.2414	-0.6190	0.2414	-2.5907	0.1094	-1.1591	0.1048
	Kurtosis	0.2357	0.4783	0.7828	0.4783	12.8444	0.2184	6.4059	0.2093
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
STB	Mean	1.0736	0.1857	3.5928	0.1957	3.0071	0.0851	0.0064	0.0077
	95% Confidenc L	0.7052		3.2045		2.8400		-0.0087	
		1.4420		3.9811		3.1742		0.0215	
	5% Trimmed Mea	0.8885		3.6383		3.0210		0.0000	
	Median	0.0000		4.3108		3.5553		0.0000	
	Variance	3.4473		3.8294		3.6030		0.0321	
	Std. Deviation	1.8567		1.9569		1.8982		0.1792	
	Minimum	0.0000		0.0000		0.0000		-0.6931	
	Maximum	6.0730		7.1000		7.6009		4.1109	
	Range	6.0730		7.1000		7.6009		4.8040	
	Interquartile Ran	2.3741		2.5129		2.6988		0.0000	
	Skewness	1.3763	0.2414	-0.8216	0.2414	-0.5335	0.1094	22.1487	0.1048
	Kurtosis	0.3048	0.4783	-0.4497	0.4783	-0.9988	0.2184	511.0413	0.2093
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
LTI	Mean	1.2777	0.2364	2.1329	0.2723	1.4467	0.1023	0.0779	0.0252
	95% Confidenc L	0.8086		1.5926		1.2458		0.0285	
		1.7468		2.6733		1.6476		0.1273	
	5% Trimmed Mea	1.0489		1.9864		1.2734		0.0000	
	Median	0.0000		0.0000		0.0000		0.0000	
	Variance	5.5896		7.4160		5.2091		0.3435	
	Std. Deviation	2.3642		2.7232		2.2824		0.5861	
	Minimum	-1.2694		-0.3455		-5.5519		0.0000	
	Maximum	7.4076		7.2356		8.4280		7.0613	
	Range	8.6770		7.5812		13.9800		7.0613	
	Interquartile Ran	1.9640		4.9880		3.1234		0.0000	
	Skewness	1.4670	0.2414	0.6998	0.2414	0.9662	0.1094	8.3636	0.1048
	Kurtosis	0.4995	0.4783	-1.2393	0.4783	-0.1343	0.2184	75.1292	0.2093
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
OI	Mean	1.7962	0.2308	1.9857	0.1653	0.8747	0.0671	-0.1267	0.0674
	95% Confidenc L	1.3382		1.6577		0.7428		-0.2590	
		2.2542		2.3137		1.0065		0.0056	
	5% Trimmed Mea	1.6520		1.9231		0.8414		-0.1991	
	Median	1.5388		1.9328		0.4052		0.0000	
	Variance	5.3279		2.7326		2.2438		2.4631	
	Std. Deviation	2.3082		1.6531		1.4979		1.5694	
	Minimum	-2.6882		-0.8273		-4.9426		-5.9114	
	Maximum	10.5938		7.6338		5.8357		9.2900	
	Range	13.2820		8.4611		10.7784		15.2014	
	Interquartile Ran	2.9858		2.4305		1.8553		0.9195	
	Skewness	1.0047	0.2414	0.5045	0.2414	0.4123	0.1094	1.5188	0.1048
	Kurtosis	1.6020	0.4783	0.1982	0.4783	0.4272	0.2184	9.8523	0.2093

TABLE 5.4 1997 LOGARITHMIC REDUCED DRIP DATASET DESCRIPTIVE STATISTICS										
REMUNERATION										
	DIRECTOR TYPE		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
	STATISTICS		Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Error
SAL	Mean		4.9218	0.0970	5.8643	0.0405	5.1740	0.0317	3.0716	0.0275
	95% Confidence Inte	L	4.7276		5.7839		5.1117		3.0175	
		U	5.1159		5.9447		5.2363		3.1257	
	5% Trimmed Mean		4.9383		5.8761		5.2400		3.1138	
	Median		4.8079		5.9532		5.3276		3.1781	
	Variance		0.5453		0.1641		0.5011		0.3998	
	Std. Deviation		0.7384		0.4050		0.7079		0.6323	
	Minimum		2.9444		4.4427		0.0000		0.0000	
	Maximum		6.7214		6.7639		6.8509		5.5215	
	Range		3.7770		2.3212		6.8509		5.5215	
	Interquartile Range		1.0152		0.5014		0.6062		0.3365	
	Skewness		-0.2701	0.3137	-0.6190	0.2414	-2.5907	0.1094	-1.5130	0.1064
	Kurtosis		0.8029	0.6181	0.7828	0.4783	12.8444	0.2184	5.8728	0.2124
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
STB	Mean				3.5928	0.1957	3.0071	0.0851		
	95% Confidence Inte	L			3.2045		2.8400			
		U			3.9811		3.1742			
	5% Trimmed Mean				3.6383		3.0210			
	Median				4.3108		3.5553			
	Variance				3.8294		3.6030			
	Std. Deviation				1.9569		1.8982			
	Minimum				0.0000		0.0000			
	Maximum				7.1000		7.6009			
	Range				7.1000		7.6009			
	Interquartile Range				2.5129		2.6988			
	Skewness				-0.8216	0.2414	-0.5335	0.1094		
	Kurtosis				-0.4497	0.4783	-0.9988	0.2184		
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
LTI	Mean				2.1329	0.2723	1.4467	0.1023		
	95% Confidence Inte	L			1.5926		1.2458			
		U			2.6733		1.6476			
	5% Trimmed Mean				1.9864		1.2734			
	Median				0.0000		0.0000			
	Variance				7.4160		5.2091			
	Std. Deviation				2.7232		2.2824			
	Minimum				-0.3455		-5.5519			
	Maximum				7.2356		8.4280			
	Range				7.5812		13.9800			
	Interquartile Range				4.9880		3.1234			
	Skewness				0.6998	0.2414	0.9662	0.1094		
	Kurtosis				-1.2393	0.4783	-0.1343	0.2184		
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
OI	Mean		1.0791	0.2255	1.9857	0.1653	0.8747	0.0671	-0.1582	0.0683
	95% Confidence Inte	L	0.6276		1.6577		0.7428		-0.2924	
		U	1.5307		2.3137		1.0065		-0.0240	
	5% Trimmed Mean		1.0026		1.9231		0.8414		-0.2316	
	Median		0.9479		1.9328		0.4052		0.0000	
	Variance		2.9492		2.7326		2.2438		2.4593	
	Std. Deviation		1.7173		1.6531		1.4979		1.5682	
	Minimum		-1.6094		-0.8273		-4.9426		-5.9114	
	Maximum		5.1043		7.6338		5.8357		9.2900	
	Range		6.7138		8.4611		10.7784		15.2014	
	Interquartile Range		2.2842		2.4305		1.8553		0.8942	
	Skewness		0.5869	0.3137	0.5045	0.2414	0.4123	0.1094	1.5788	0.1064
	Kurtosis		-0.2385	0.6181	0.1982	0.4783	0.4272	0.2184	10.3209	0.2124

TABLE 5.5 1997 PERCENTAGE FULL DRIP DATASET DESCRIPTIVE STATISTICS									
REMUNERATION									
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
	DIRECTOR TYPE	Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Err
%SAL	Mean	78.7701	2.61951	68.1764	2.36942	72.1905	0.98594	93.1269	0.7179
	95% Confidence I L	73.5724		63.475		70.2533		91.7167	
	0	83.9678		72.8778		74.1276		94.5371	
	5% Trimmed Mea	81.1006		69.0336		73.5432		96.3902	
	Median	92.3467		72.9082		73.6617		98.5112	
	Variance	6.86182		5.61414		4.84092		2.7985	
	Std. Deviation	26.1951		23.6942		22.0021		16.7287	
	Minimum	0.7708		18.3916		7.27871		0	
	Maximum	100		100		100		100	
	Range	99.2292		81.6084		92.7213		100	
	Interquartile Ran	30.0397		35.6582		33.5217		5.03792	
	Skewness	-1.2069	0.24138	-0.4875	24.138	-63.135	10.9436	-400.65	10.4829
	Kurtosis	0.28107	0.47833	-0.8346	47.8331	-19.467	21.8439	1664.52	20.9278
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
%STB	Mean	3.20685	0.70391	14.5433	1.28825	15.6677	0.64195	0.03985	0.01683
	95% Confidence I L	0.0181		0.11987		14.4064		0.0068	
	0	0.04604		0.17099		16.929		0.0729	
	5% Trimmed Mea	0.02104		0.1343		14.4718		0	
	Median	0		0.13155		15.0344		0	
	Variance	0.00495		0.0166		2.05228		0.00154	
	Std. Deviation	0.07039		0.12882		14.3258		0.39208	
	Minimum	0		0		0		0	
	Maximum	0.28158		0.65382		91.4913		5.16256	
	Range	0.28158		0.65382		91.4913		5.16256	
	Interquartile Ran	0.00999		0.1895		21.1893		0	
	Skewness	2.32676	0.24138	1.18445	24.138	117.403	10.9436	1032.46	10.4829
	Kurtosis	4.44869	0.47833	2.23499	47.8331	250.475	21.8439	10981	20.9278
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
%LTI	Mean	9.35652	2.00181	13.4958	2.1867	9.78735	0.84518	1.1108	0.36091
	95% Confidence I L	5.3845		9.15696		8.1268		0.40185	
	0	13.3285		17.8347		11.4479		1.81976	
	5% Trimmed Mean	6.48986		11.2045		7.02076		0	
	Median	0		0		0		0	
	Variance	4.00723		4.78166		3.55733		0.70729	
	Std. Deviation	20.0181		21.867		18.8609		8.41005	
	Minimum	0		0		0		0	
	Maximum	75.2225		74.5887		91.2099		91.133	
	Range	75.2225		74.5887		91.2099		91.133	
	Interquartile Range	1.88332		22.5852		8.94178		0	
	Skewness	2.13629	0.24138	1.44593	24.138	211.201	10.9436	813.608	10.4829
	Kurtosis	3.34761	0.47833	0.65651	47.8331	379.664	21.8439	6811.24	20.9278
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
%OI	Mean	8.66654	1.73869	3.78449	0.90936	2.35449	0.25304	5.72248	0.63006
	95% Confidence I L	5.2166		1.98012		1.85734		4.48482	
	0	12.1165		5.58886		2.85165		6.96014	
	5% Trimmed Mean	5.55981		2.33961		1.42695		2.93226	
	Median	1.93782		1.54226		0.58163		1.45168	
	Variance	3.02304		0.82694		0.31886		2.15559	
	Std. Deviation	17.3869		9.09361		5.64676		14.6819	
	Minimum	0		0		0		0	
	Maximum	99.1745		80.8821		56.3739		100	
	Range	0.99175		0.80882		56.3739		100	
	Interquartile Range	0.07289		0.03196		0.02164		0.04627	
	Skewness	3.44838	0.24138	6.65347	0.24138	5.71566	0.10944	4.85326	0.10483
	Kurtosis	12.9671	0.47833	53.2758	0.47833	41.5142	0.21844	25.4928	0.20928

TABLE 5.6 1997 PERCENTAGE FULL DATASET DRIP DESCRIPTIVE STATISTICS

REMUNERATION										
	DIRECTOR TYPE		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
	STATISTICS		Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error
%SAL	Mean		0.9456	0.0117	0.6818	0.0237	0.7219	0.0099	0.9428	0.0065
	95% Confidence I	L	0.9222		0.6347		0.7025		0.9301	
			0.9690		0.7288		0.7413		0.9555	
	5% Trimmed Mean		0.9583		0.6903		0.7354		0.9713	
	Median		0.9851		0.7291		0.7366		0.9857	
	Variance		0.0079		0.0561		0.0484		0.0221	
	Std. Deviation		0.0890		0.2369		0.2200		0.1486	
	Minimum		0.5638		0.1839		0.0728		0.0000	
	Maximum		1.0000		1.0000		1.0000		1.0000	
	Range		0.4362		0.8161		0.9272		1.0000	
	Interquartile Range		0.0624		0.3566		0.3352		0.0444	
	Skewness		-2.4758	0.3137	-0.4875	0.2414	-0.6313	0.1094	-4.8230	0.1064
	Kurtosis		6.3776	0.6181	-0.8346	0.4783	-0.1947	0.2184	24.9959	0.2124
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
%STB	Mean				0.1454	0.0129	0.1567	0.0064		
	95% Confidence I	L			0.1199		0.1441			
					0.1710		0.1693			
	5% Trimmed Mean				0.1343		0.1447			
	Median				0.1316		0.1503			
	Variance				0.0166		0.0205			
	Std. Deviation				0.1288		0.1433			
	Minimum				0.0000		0.0000			
	Maximum				0.6538		0.9149			
	Range				0.6538		0.9149			
	Interquartile Range				0.1895		0.2119			
	Skewness				1.1845	0.2414	1.1740	0.1094		
	Kurtosis				2.2350	0.4783	2.5048	0.2184		
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
%LTI	Mean				0.1350	0.0219	0.0979	0.0085		
	95% Confidence I	L			0.0916		0.0813			
					0.1783		0.1145			
	5% Trimmed Mean				0.1120		0.0702			
	Median				0.0000		0.0000			
	Variance				0.0478		0.0356			
	Std. Deviation				0.2187		0.1886			
	Minimum				0.0000		0.0000			
	Maximum				0.7459		0.9121			
	Range				0.7459		0.9121			
	Interquartile Range				0.2259		0.0894			
	Skewness				1.4459	0.2414	2.1120	0.1094		
	Kurtosis				0.6565	0.4783	3.7966	0.2184		
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
%OI	Mean		0.0544	0.0117	0.0378	0.0091	0.0235	0.0025	0.0572	0.0065
	95% Confidence I	L	0.0310		0.0198		0.0186		0.0445	
			0.0778		0.0559		0.0285		0.0699	
	5% Trimmed Mean		0.0417		0.0234		0.0143		0.0287	
	Median		0.0149		0.0154		0.0058		0.0143	
	Variance		0.0079		0.0083		0.0032		0.0221	
	Std. Deviation		0.0890		0.0909		0.0565		0.1486	
	Minimum		0.0000		0.0000		0.0000		0.0000	
	Maximum		0.4362		0.8088		0.5637		1.0000	
	Range		0.4362		0.8088		0.5637		1.0000	
	Interquartile Range		0.0624		0.0320		0.0216		0.0444	
	Skewness		2.4758	0.3137	6.6535	0.2414	5.7157	0.1094	4.8230	0.1064
	Kurtosis		6.3776	0.6181	53.2758	0.4783	41.5142	0.2184	24.9959	0.2124

TABLE 5.1 1996 ABSOLUTE FULL DRIP DATASET DESCRIPTIVE STATISTICS									
REMUNERATION									
	DIRECTOR ROL	CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
	STATISTICS	Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Err
SAL	Mean	240.26	20.35	357.38	13.66	210.98	4.57	24.12	0.76
	95% Confidence L	199.88		330.27		202.00		22.62	
		280.63		384.49		219.97		25.62	
	5% Trimmed Mean	219.66		355.61		205.52		22.59	
	Median	166.75		375.75		200.00		21.70	
	Variance	41402.92		18666.12		10295.57		310.68	
	Std. Deviation	203.48		136.62		101.47		17.63	
	Minimum	15.00		0.00		0.00		0.00	
	Maximum	1125.00		800.00		695.93		244.33	
	Range	1110.00		800.00		695.93		244.33	
	Interquartile Range	204.50		171.25		115.45		9.35	
	Skewness	1.80	0.24	0.17	0.24	1.04	0.11	5.65	0.11
	Kurtosis	3.54	0.48	0.48	0.48	2.33	0.22	57.77	0.21
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
STB	Mean	28.57	6.24	90.52	12.43	56.69	3.45	1.29	0.98
	95% Confidence L	16.18		65.86		49.91		-0.63	
		40.96		115.19		63.47		3.21	
	5% Trimmed Mean	18.82		72.95		46.20		0.00	
	Median	0.00		57.80		35.00		0.00	
	Variance	3899.53		15450.56		5855.32		507.71	
	Std. Deviation	62.45		124.30		76.52		22.53	
	Minimum	0.00		0.00		0.00		0.00	
	Maximum	303.00		928.00		628.70		477.00	
	Range	303.00		928.00		628.70		477.00	
	Interquartile Range	26.50		128.37		73.48		0.00	
	Skewness	2.51	0.24	3.81	0.24	3.03	0.11	19.24	0.11
	Kurtosis	5.94	0.48	21.24	0.48	13.92	0.22	389.09	0.21
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
LTI	Mean	148.97	81.67	164.34	41.47	70.57	9.64	2.99	2.27
	95% Confidence L	-13.08		82.06		51.62		-1.47	
		311.02		246.62		89.51		7.45	
	5% Trimmed Mean	24.21		94.43		33.04		0.00	
	Median	0.00		0.00		0.00		0.00	
	Variance	667001.71		171953.79		45759.01		2737.63	
	Std. Deviation	816.70		414.67		213.91		52.32	
	Minimum	0.00		0.00		0.00		0.00	
	Maximum	7796.67		3140.13		2476.47		1165.96	
	Range	7796.67		3140.13		2476.47		1165.96	
	Interquartile Range	0.00		125.56		22.57		0.00	
	Skewness	8.60	0.24	4.60	0.24	5.78	0.11	21.14	0.11
	Kurtosis	79.69	0.48	27.54	0.48	45.44	0.22	464.68	0.21
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
OI	Mean	501.25	394.55	297.90	271.87	20.23	10.47	46.57	23.34
	95% Confidence L	-281.63		-241.55		-0.34		0.71	
		1284.13		837.36		40.81		92.43	
	5% Trimmed Mean	29.03		13.40		4.05		0.72	
	Median	2.21		5.99		1.20		0.34	
	Variance	15567330.79		7391515.67		53936.52		289342.89	
	Std. Deviation	3945.55		2718.73		232.24		537.91	
	Minimum	0.00		0.00		0.00		0.00	
	Maximum	39237.71		27203.48		4949.00		9929.16	
	Range	39237.71		27203.48		4949.00		9929.16	
	Interquartile Range	23.64		17.02		5.49		0.95	
	Skewness	9.76	0.24	9.99	0.24	19.97	0.11	15.61	0.11
	Kurtosis	96.63	0.48	99.85	0.48	417.71	0.22	261.29	0.21

TABLE 5.2 1996 ABSOLUTE REDUCED DRIP DATASET DESCRIPTIVE STATISTICS

REMUNERATION									
	DIRECTOR ROLE	CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
	STATISTICS	Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Err
SAL	Mean	182.4372	18.5081	357.381	13.6624	210.983	4.5745	23.9703	0.7705
	95% Confidence I L	145.4025		330.272		201.995		22.4567	
		219.4719		384.49		219.971		25.4839	
	5% Trimmed Mean	166.0516		355.614		205.524		22.4654	
	Median	140		375.75		200		21.5	
	Variance	20553.08		18666.1		10295.6		308.08	
	Std. Deviation	143.3635		136.624		101.467		17.5522	
	Minimum	15		0		0		0	
	Maximum	700		800		695.93		244.33	
	Range	685		800		695.93		244.33	
	Interquartile Range	149		171.25		115.452		9.25	
	Skewness	1.884	0.309	0.165	0.241	1.035	0.11	5.809	0.107
	Kurtosis	4.027	0.608	0.477	0.478	2.332	0.22	60.194	0.214
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
STB	Mean			90.5213	12.43	56.6912	3.4498		
	95% Confidence I L			65.8574		49.913			
				115.185		63.4694			
	5% Trimmed Mean			72.9514		46.2008			
	Median			57.796		35			
	Variance			15450.6		5855.32			
	Std. Deviation			124.3		76.5201			
	Minimum			0		0			
	Maximum			928		628.7			
	Range			928		628.7			
	Interquartile Range			128.366		73.4785			
	Skewness			3.809	0.241	3.029	0.11		
	Kurtosis			21.24	0.478	13.917	0.22		
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
LTI	Mean			164.342	41.4673	70.5664	9.644		
	95% Confidence I L			82.0622		51.6179			
				246.623		89.5149			
	5% Trimmed Mean			94.4277		33.0373			
	Median			0		0			
	Variance			171954		45759			
	Std. Deviation			414.673		213.914			
	Minimum			0		0			
	Maximum			3140.13		2476.47			
	Range			3140.13		2476.47			
	Interquartile Range			125.563		22.5705			
	Skewness			4.602	0.241	5.776	0.11		
	Kurtosis			27.541	0.478	45.441	0.22		
		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
OI	Mean	30.1309	11.7523	297.904	271.873	20.2334	10.4703	47.6087	23.8814
	95% Confidence I L	6.6146		-241.55		-0.3388		0.6923	
		53.6471		837.36		40.8055		94.5251	
	5% Trimmed Mean	12.7279		13.3992		4.0477		0.7083	
	Median	1.5762		5.9865		1.2015		0.346	
	Variance	8286.957		7391516		53936.5		295998	
	Std. Deviation	91.0327		2718.73		232.242		544.057	
	Minimum	0		0		0		0	
	Maximum	527.76		27203.5		4949		9929.16	
	Range	527.76		27203.5		4949		9929.16	
	Interquartile Range	8.6649		17.0196		5.4921		0.9387	
	Skewness	4.375	0.309	9.989	0.241	19.971	0.11	15.432	0.107
	Kurtosis	20.25	0.608	99.849	0.478	417.706	0.22	255.335	0.214

TABLE 5.3 1996 LOGARITHMIC FULL DATASET DRIP DESCRIPTIVE STATISTICS										
	REMUNERATION									
	DIRECTOR ROLE		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
	STATISTICS		Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Err
SAL	Mean		5.1742	0.0804	5.7536	0.0714	5.2112	0.0278	2.9506	0.0356
	95% Confidence Int	L	5.0147		5.6118		5.1565		2.8807	
		U	5.3337		5.8953		5.2659		3.0205	
	5% Trimmed Mean		5.1865		5.8226		5.2605		3.0351	
	Median		5.1162		5.9289		5.2983		3.0773	
	Variance		0.6462		0.5104		0.3815		0.6720	
	Std. Deviation		0.8039		0.7144		0.6176		0.8198	
	Minimum		2.7081		0.0000		0.0000		-0.5674	
	Maximum		7.0255		6.6846		6.5452		5.4985	
	Range		4.3175		6.6846		6.5452		6.0659	
	Interquartile Range		1.0970		0.5099		0.5933		0.4231	
	Skewness		-0.1622	0.2414	-5.4664	0.2414	-2.3636	0.1101	-1.9824	0.1060
	Kurtosis		0.3972	0.4783	42.4386	0.4783	13.0389	0.2198	5.5094	0.2116
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
STB	Mean		1.1736	0.1988	3.2969	0.2092	2.8947	0.0862	0.0237	0.0155
	95% Confidence Int	L	0.7791		2.8818		2.7254		-0.0067	
		U	1.5680		3.7119		3.0640		0.0541	
	5% Trimmed Mean		1.0022		3.3233		2.9019		0.0000	
	Median		0.0000		4.0568		3.5553		0.0000	
	Variance		3.9524		4.3755		3.6517		0.1270	
	Std. Deviation		1.9881		2.0918		1.9109		0.3564	
	Minimum		0.0000		0.0000		0.0000		0.0000	
	Maximum		5.7137		6.8330		6.4437		6.1675	
	Range		5.7137		6.8330		6.4437		6.1675	
	Interquartile Range		3.2719		4.8558		4.2970		0.0000	
	Skewness		1.2094	0.2414	-0.7202	0.2414	-0.5316	0.1101	15.9926	0.1060
	Kurtosis		-0.3390	0.4783	-1.0022	0.4783	-1.1372	0.2198	259.1820	0.2116
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
LTI	Mean		1.0664	0.2232	2.1700	0.2642	1.4006	0.1027	0.0500	0.0206
	95% Confidence Int	L	0.6235		1.6457		1.1989		0.0096	
		U	1.5094		2.6943		1.6023		0.0904	
	5% Trimmed Mean		0.7883		2.0110		1.2157		0.0000	
	Median		0.0000		0.0000		0.0000		0.0000	
	Variance		4.9832		6.9823		5.1860		0.2245	
	Std. Deviation		2.2323		2.6424		2.2773		0.4739	
	Minimum		-1.2694		-0.3455		-4.4292		0.0000	
	Maximum		8.9615		8.0520		7.8146		7.0613	
	Range		10.2309		8.3976		12.2438		7.0613	
	Interquartile Range		0.0000		4.8327		3.1166		0.0000	
	Skewness		1.8808	0.2414	0.6919	0.2414	1.1058	0.1101	11.5420	0.1060
	Kurtosis		2.3105	0.4783	-1.1375	0.4783	-0.1398	0.2198	144.5630	0.2116
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
0.I	Mean		1.5439	0.2586	1.8549	0.1821	0.6896	0.0764	-0.1551	0.0664
	95% Confidence Int	L	1.0309		1.4936		0.5394		-0.2856	
		U	2.0570		2.2161		0.8398		-0.0247	
	5% Trimmed Mean		1.4224		1.7327		0.6722		-0.2340	
	Median		0.7913		1.7887		0.1836		0.0000	
	Variance		6.6855		3.3148		2.8751		2.3422	
	Std. Deviation		2.5856		1.8207		1.6956		1.5304	
	Minimum		-5.6727		-1.0109		-6.5468		-6.1305	
	Maximum		10.5774		10.2111		8.5069		9.2032	
	Range		16.2501		11.2220		15.0538		15.3337	
	Interquartile Range		3.1772		2.6152		1.7192		0.8768	
	Skewness		0.7735	0.2414	1.2491	0.2414	0.2030	0.1101	1.7281	0.1060
	Kurtosis		1.2188	0.4783	3.4445	0.4783	2.0911	0.2198	10.2280	0.2116

TABLE 5.4 1996 LOGARITHMIC REDUCED DRIP DATASET DESCRIPTIVE STATISTICS										
REMUNERATION										
	DIRECTOR TYPE		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
	STATISTICS		Statisti	Std. Err	Statistic	Std. Err	Statistic	Std. Err	Statistic	Std. Err
SA	Mean		4.9377	0.0990	5.7536	0.0714	5.2112	0.0278	2.9468	0.0357
	95% Confidence I	L	4.7397		5.6118		5.1565		2.8766	
			5.1357		5.8953		5.2659		3.0170	
	5% Trimmed Mean		4.9548		5.8226		5.2605		3.0306	
	Median		4.9416		5.9289		5.2983		3.0681	
	Variance		0.5875		0.5104		0.3815		0.6625	
	Std. Deviation		0.7665		0.7144		0.6176		0.8140	
	Minimum		2.7081		0.0000		0.0000		-0.5674	
	Maximum		6.5511		6.6846		6.5452		5.4985	
	Range		3.8430		6.6846		6.5452		6.0659	
	Interquartile Range		1.0072		0.5099		0.5933		0.4195	
	Skewness		-0.3775	0.3087	-5.4664	0.2414	-2.3636	0.1101	-1.9828	0.1072
	Kurtosis		0.8135	0.6085	42.4386	0.4783	13.0389	0.2198	5.5608	0.2140
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
ST	Mean				3.2969	0.2092	2.8947	0.0862		
	95% Confidence I	L			2.8818		2.7254			
					3.7119		3.0640			
	5% Trimmed Mean				3.3233		2.9019			
	Median				4.0568		3.5553			
	Variance				4.3755		3.6517			
	Std. Deviation				2.0918		1.9109			
	Minimum				0.0000		0.0000			
	Maximum				6.8330		6.4437			
	Range				6.8330		6.4437			
	Interquartile Range				4.8558		4.2970			
	Skewness				-0.7202	0.2414	-0.5316	0.1101		
	Kurtosis				-1.0022	0.4783	-1.1372	0.2198		
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
LTI	Mean				2.1700	0.2642	1.4006	0.1027		
	95% Confidence I	L			1.6457		1.1989			
					2.6943		1.6023			
	5% Trimmed Mean				2.0110		1.2157			
	Median				0.0000		0.0000			
	Variance				6.9823		5.1860			
	Std. Deviation				2.6424		2.2773			
	Minimum				-0.3455		-4.4292			
	Maximum				8.0520		7.8146			
	Range				8.3976		12.2438			
	Interquartile Range				4.8327		3.1166			
	Skewness				0.6919	0.2414	1.1058	0.1101		
	Kurtosis				-1.1375	0.4783	-0.1398	0.2198		
			CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
OI	Mean		0.9348	0.2865	1.8549	0.1821	0.6896	0.0764	-0.1590	0.0674
	95% Confidence I	L	0.3616		1.4936		0.5394		-0.2914	
			1.5081		2.2161		0.8398		-0.0266	
	5% Trimmed Mean		0.9107		1.7327		0.6722		-0.2408	
	Median		0.4550		1.7887		0.1836		0.0000	
	Variance		4.9239		3.3148		2.8751		2.3571	
	Std. Deviation		2.2190		1.8207		1.6956		1.5353	
	Minimum		-5.6727		-1.0109		-6.5468		-6.1305	
	Maximum		6.2686		10.2111		8.5069		9.2032	
	Range		11.9413		11.2220		15.0538		15.3337	
	Interquartile Range		2.4915		2.6152		1.7192		0.8853	
	Skewness		0.3132	0.3087	1.2491	0.2414	0.2030	0.1101	1.7605	0.1072
	Kurtosis		0.8500	0.6085	3.4445	0.4783	2.0911	0.2198	10.3414	0.2140

TABLE 5.5 1996 PERCENTAGE FULL DATASET DRIP DESCRIPTIVE STATISTICS										
REMU										
	DIRECTOR T		CHAIR		CEO		EXECUTIVE		NON-EXECUTIVE	
	STATISTICS		Statistic	Std. Err	Statistic	Std. Err	Statisti	Std. Err	Statistic	Std. Err
%SAL	Mean		0.7853	0.0273	0.6827	0.0244	0.7204	0.0102	0.9258	0.0081
	95% Confide	Lo	0.7311		0.6342		0.7005		0.9098	
		Up	0.8394		0.7311		0.7404		0.9417	
	5% Trimmed Me		0.8129		0.6972		0.7342		0.9625	
	Median		0.9200		0.7320		0.7430		0.9852	
	Variance		0.0745		0.0596		0.0507		0.0347	
	Std. Deviation		0.2730		0.2442		0.2252		0.1863	
	Minimum		0.0078		0.0000		0.0000		0.0000	
	Maximum		1.0000		1.0000		1.0000		1.0000	
	Range		0.9922		1.0000		1.0000		1.0000	
	Interquartile Ran		0.3271		0.3559		0.3365		0.0467	
	Skewness		-1.3700	0.2414	-0.7295	0.2414	-0.6797	0.1101	-3.8719	0.1062
	Kurtosis		0.9188	0.4783	-0.0624	0.4783	-0.1816	0.2198	14.9937	0.2120
			CHAIR		CEO		EXECU		NON-EXEC	
%STB	Mean		0.0531	0.0112	0.1383	0.0125	0.1543	0.0066	0.0038	0.0026
	95% Confide	Lo	0.0309		0.1136		0.1412		-0.0012	
		Up	0.0752		0.1630		0.1673		0.0088	
	5% Trimmed Me		0.0364		0.1278		0.1412		0.0000	
	Median		0.0000		0.1258		0.1298		0.0000	
	Variance		0.0125		0.0155		0.0217		0.0034	
	Std. Deviation		0.1116		0.1245		0.1472		0.0587	
	Minimum		0.0000		0.0000		0.0000		0.0000	
	Maximum		0.6014		0.5270		0.8723		1.0000	
	Range		0.6014		0.5270		0.8723		1.0000	
	Interquartile Ran		0.0263		0.2102		0.2362		0.0000	
	Skewness		2.5473	0.2414	0.9651	0.2414	1.1324	0.1101	16.1546	0.1062
	Kurtosis		7.2866	0.4783	0.9084	0.4783	1.5255	0.2198	261.8047	0.2120
			CHAIR		CEO		EXECU		NON-EXEC	
%LTI	Mean		0.0731	0.0193	0.1355	0.0228	0.0981	0.0088	0.0066	0.0029
	95% Confide	Lo	0.0348		0.0902		0.0809		0.0009	
		Up	0.1115		0.1807		0.1154		0.0122	
	5% Trimmed Me		0.0371		0.1062		0.0702		0.0000	
	Median		0.0000		0.0000		0.0000		0.0000	
	Variance		0.0374		0.0521		0.0378		0.0044	
	Std. Deviation		0.1933		0.2282		0.1945		0.0664	
	Minimum		0.0000		0.0000		0.0000		0.0000	
	Maximum		0.9537		0.9906		0.8491		0.9646	
	Range		0.9537		0.9906		0.8491		0.9646	
	Interquartile Ran		0.0000		0.2243		0.0785		0.0000	
	Skewness		3.1030	0.2414	1.8118	0.2414	2.0660	0.1101	12.1824	0.1062
	Kurtosis		9.3977	0.4783	2.5616	0.4783	3.2637	0.2198	159.1712	0.2120
			CHAIR		CEO		EXECU		NON-EXEC	
%O.I	Mean		0.0885	0.0194	0.0436	0.0123	0.0271	0.0039	0.0639	0.0072
	95% Confide	Lo	0.0501		0.0191		0.0195		0.0497	
		Up	0.1270		0.0680		0.0347		0.0781	
	5% Trimmed Me		0.0530		0.0208		0.0136		0.0317	
	Median		0.0130		0.0121		0.0049		0.0141	
	Variance		0.0375		0.0152		0.0074		0.0278	
	Std. Deviation		0.1937		0.1233		0.0860		0.1667	
	Minimum		0.0000		0.0000		0.0000		0.0000	
	Maximum		0.9916		0.9784		1.0000		1.0000	
	Range		0.9916		0.9784		1.0000		1.0000	
	Interquartile Ran		0.0620		0.0251		0.0188		0.0417	
	Skewness		3.1168	0.2414	5.5952	0.2414	7.5942	0.1101	4.3726	0.1062
	Kurtosis		9.4783	0.4783	36.3178	0.4783	69.8292	0.2198	19.9447	0.2120

TABLE 5.6 1996 PERCENTAGE REDUCED DRIP DATASET DESCRIPTIVE STATISTICS

REMUNERATION										
	DIRECTOR TYPE		CHAIR		CEO		EXECUTIVE		NON-EXECUTI	
	STATISTICS		Statistic	Std. Err	Statistic	Std. E	Statistic	Std. Err	Statisti	Std. Er
%SAL	Mean		0.9254	0.0210	0.6827	0.0244	0.7204	0.0102	0.9354	0.0074
	95% Confidence Int	L	0.8835		0.6342		0.7005		0.9209	
		U	0.9674		0.7311		0.7404		0.9499	
	5% Trimmed Mean		0.9534		0.6972		0.7342		0.9679	
	Median		0.9902		0.7320		0.7430		0.9859	
	Variance		0.0264		0.0596		0.0507		0.0283	
	Std. Deviation		0.1623		0.2442		0.2252		0.1682	
	Minimum		0.1799		0.0000		0.0000		0.0000	
	Maximum		1.0000		1.0000		1.0000		1.0000	
	Range		0.8201		1.0000		1.0000		1.0000	
	Interquartile Range		0.0542		0.3559		0.3365		0.0417	
	Skewness		-3.1647	0.3087	-0.7295	0.2414	-0.6797	0.1101	-4.3422	0.1074
	Kurtosis		10.3877	0.6085	-0.0624	0.4783	-0.1816	0.2198	19.5900	0.2144
			CHAIR		CEO		EXECUTIVE		NON-EXECUTI	
%STB	Mean				0.1383	0.0125	0.1543	0.0066		
	95% Confidence Int	L			0.1136		0.1412			
	0.00	U			0.1630		0.1673			
	5% Trimmed Mean				0.1278		0.1412			
	Median				0.1258		0.1298			
	Variance				0.0155		0.0217			
	Std. Deviation				0.1245		0.1472			
	Minimum				0.0000		0.0000			
	Maximum				0.5270		0.8723			
	Range				0.5270		0.8723			
	Interquartile Range				0.2102		0.2362			
	Skewness				0.9651	0.2414	1.1324	0.1101		
	Kurtosis				0.9084	0.4783	1.5255	0.2198		
			CHAIR		CEO		EXECUTIVE		NON-EXECUTI	
%LTI	Mean				0.1355	0.0228	0.0981	0.0088		
	95% Confidence Int	L			0.0902		0.0809			
	0.00	U			0.1807		0.1154			
	5% Trimmed Mean				0.1062		0.0702			
	Median				0.0000		0.0000			
	Variance				0.0521		0.0378			
	Std. Deviation				0.2282		0.1945			
	Minimum				0.0000		0.0000			
	Maximum				0.9906		0.8491			
	Range				0.9906		0.8491			
	Interquartile Range				0.2243		0.0785			
	Skewness				1.8118	0.2414	2.0660	0.1101		
	Kurtosis				2.5616	0.4783	3.2637	0.2198		
			CHAIR		CEO		EXECUTIVE		NON-EXECUTI	
%OI	Mean		0.0746	0.0210	0.0436	0.0123	0.0271	0.0039	0.0646	0.0074
	95% Confidence Int	L	0.0326		0.0191		0.0195		0.0501	
		U	0.1165		0.0680		0.0347		0.0791	
	5% Trimmed Mean		0.0466		0.0208		0.0136		0.0321	
	Median		0.0098		0.0121		0.0049		0.0141	
	Variance		0.0264		0.0152		0.0074		0.0283	
	Std. Deviation		0.1623		0.1233		0.0860		0.1682	
	Minimum		0.0000		0.0000		0.0000		0.0000	
	Maximum		0.8201		0.9784		1.0000		1.0000	
	Range		0.8201		0.9784		1.0000		1.0000	
	Interquartile Range		0.0542		0.0251		0.0188		0.0417	
	Skewness		3.1647	0.3087	5.5952	0.2414	7.5942	0.1101	4.3422	0.1074
	Kurtosis		10.3877	0.6085	36.3178	0.4783	69.8292	0.2198	19.5900	0.2144

TABLE 5.7: STATISTICAL RESULTS 1998; DRIP COMPONENT MEANS AND PERCENTAGES

CHAIR						
0	£	£	£	%	%	%
CHAIR	ALL	CLASSI	ENT'LIS	ALL	CLASSI	ENT'LIS
SAL	234	168	396	26%	95%	15%
STB	34	0	120	4%	0%	5%
LTI	83	0	286	9%	0%	11%
OI	536	9	1827	60%	5%	69%
DRIP	887	177	2629	100%	100%	100%
CEO						
0	£	£	£	%	%	%
CEO	ALL	CLASSI	ENT'LIS	ALL	CLASSI	ENT'LIS
SAL	420	418	420	65%	97%	49%
STB	139	0	158	22%	0%	18%
LTI	43	0	232	7%	0%	27%
OI	43	12	47	7%	3%	5%
DRIP	645	430	857	100%	100%	100%
EXECUTIVE DIRECTOR						
	£	£	£	%	%	%
EXECUTIVE DIRECTO	ALL	CLASSI	ENT'LIS	ALL	CLASSI	ENT'LIS
SAL	212	154	233	56%	97%	53%
STB	70	0	88	18%	0%	20%
LTI	92	0	114	24%	0%	26%
OI	7	5	7	2%	3%	2%
DRIP	381	159	442	100%	100%	100%
NON-EXECUTIVE DIRECTOR						
	£	£	£	%	%	%
NON-EXECUTIVE DIRE	ALL	CLASSI	ENT'LIS	ALL	CLASSI	ENT'LIS
SAL	26	25	47	32%	33%	11%
STB	0.08	0	6	0%	0%	1%
LTI	4	0	353	5%	0%	83%
OI	50	51	17	62%	67%	4%
DRIP	80.08	76	423	100%	100%	100%

TABLE 5.8 SUMMARY ANOVA TEST STATISTIC OF ALL DATASETS													
ABSOLUTE FULL DATASET							ABSOLUTE REDUCED DATASET						
ANOVA	1996		1997		1998		ANOVA	1996		1997		1998	
	F	Sig.	F	Sig.	F	Sig.			Sig.	F	Sig.	F	Sig.
SALARY	557.406	0	567.946	0	734.323	0	SALARY	672.152	0	661.995	0	891.009	0
STB	91.7784	0	70.509	0	96.778	0	STB	109.079	0	72.2381	0	112.941	0
LTI	13.8036	7E-09	21.4539	0	29.8285	0	LTI	28.7265	0	24.379	0	45.4174	0
OI	4.0777	0.007	4.67723	0.00296	4.47113	0.00394	OI	2.79681	0.03906	1.06203	0.36424	1.02734	0.37955
LOGARITHMIC FULL DATASET							LOGARITHMIC REDUCED DATASET						
ANOVA	1996		1997		1998		ANOVA	1996		1997		1998	
	F	Sig.	F	Sig.	F	Sig.		F	Sig.	F	Sig.	F	Sig.
SALARY	1026.36	0	1129.57	0	1390.56	0	SALARY	1004.78	0	1118.89	0	1230.62	0
BONUS	370.17	0	454.89	0	463.932	0	BONUS	451.295	0	521.558	0	541.962	0
LTI	70.4981	0	69.2158	0	97.9553	0	LTI	88.3038	0	89.9039	0	122.531	0
OI	60.0026	0	83.7162	0	75.1028	0	OI	51.6255	0	74.2543	0	70.5086	0
PERCENTAGE FULL DATASET							PERCENTAGE REDUCED DATASET						
ANOVA	1996		1997		1998		ANOVA	1996		1997		1998	
	F	Sig.	F	Sig.	F	Sig.		F	Sig.	F	Sig.	F	Sig.
%SAL	91.2996	0	107.97	0	155.84	0	%SAL	118.32	0	146.055	0	177.58	0
%STB	165.123	0	234.461	0	258.549	0	%STB	214.77	0	235.492	0	277.977	0
%LTI	38.3446	0	36.5574	0	53.826	0	%LTI	54.051	0	58.1703	0	72.3762	0
%OI	8.82948	9E-06	11.8011	1.3E-07	9.39825	3.8E-06	%OI	7.31813	7.3E-05	8.19001	2.1E-05	5.64829	0.00076

TABLE 5.9 ABSOLUTE AND LOGARITHMIC REGRESSION MODELS: SUMMARY STATISTICS AND DRIVERS								
		MODEL SUMMARIES						
REMUNERATION	DIRECTOR	ABSOLUTE REDUCED MODELS	ABS	ABS	ABS	LOG	LOG	LOG
SAL	CHAIR		1996	1997	1998	1996	1997	1998
		ITEM	ADJUS	ADJUS	ADJUS	ADJUS	ADJUS	ADJUS
		CURRENT FULL 12 VARIABLE						
		R2	0.262	0.17	0.249	0.453	0.21	0.307
		ADJUSTED R2	0.082	-0.1	0.088	0.053	-0.581	-3.505
		CURRENT FOUR VARIABLE MODEL						
		R2						
		ADJUSTED R2	0.082	0.055	0.083	0.078	0.044	0.057
		MODEL VARIABLES						
			CE	CE	SR	SR	SR	TA
			CF	CF	CF	EBIT	CF	FCF
			ROCE	ROCE	TIR	TIR	ROE	TIR
		METRIC GROUP OF MAIN DRIVER IN	SIZE	SIZE	SIZE	SIZE	SIZE	SIZE
		LAGGED MODELS						
		MINUS ONE	0.036	0.065	0.083	0.018	0.049	0.092
		MINUS TWO		0.026	0.085		0.064	0.102
		MINUS THREE			0.107		0.08	0.11
		MINUS FOUR			0.114		0.04	0.063
		MINUS FIVE			0.103			
		BEST MODEL	0	-1	-4	0	-3	-3
		BEST MODEL ADJ R2	0.082	0.065	0.114	0.018	0.08	0.11
		FINAL MODEL VARIABLES						
						SR	CF	TA
						EBIT		
						TIR		

TABLE 5.9 ABSOLUTE AND LOGARITHMIC REGRESSION MODELS: SUMMARY STATISTICS AND DRIVERS								
REMUNERATION	DIRECTOR	ABSOLUTE REDUCED MODELS	ABS	ABS	ABS	LOG	LOG	LOG
SAL	CEO	0	1996	1997	1998	1996	1997	1998
		ITEM	ADJUS	ADJUS	ADJUS	ADJUS	ADJUS	ADJUS
		CURRENT FULL 12 VARIABLE						
		R2	0.406	0.417	0.36	0.707	0.472	0.508
		ADJUSTED R2	0.322	0.342	0.267	0.606	0.249	0.123
		CURRENT FOUR VARIABLE MODEL						
		R2						
		ADJUSTED R2	0.114	0.191	0.234	0.224	0.309	0.312
		MODEL COMPONENTS						
			MC	MC	MC	SR	SR	SR
			EBIT	CF	CF	TIR	CF	FCF
				ROCE	ROE		ROCE	ROE
		METRIC GROUP OF MAIN DRIVER IN	SIZE	SIZE	SIZE	SIZE	SIZE	SIZE
		LAGGED MODELS						
		MINUS ONE	0.124	0.221	0.238	0.183	0.301	0.355
		MINUS TWO	0.114	0.149	0.265			0.315
		MINUS THREE			0.211			
		MINUS FOUR						
		MINUS FIVE						
		BEST MODEL	-1	-1	-2	0	0	-1
		MULTIPLE MODEL						
		BEST MODEL ADJ R2	0.124	0.221	0.265	0.224	0.309	0.355
		FINAL MODEL VARIABLES						
						SR	SR	SR
						TIR	ROCE	ROE

TABLE 5.9 ABSOLUTE AND LOGARITHMIC REGRESSION MODELS: SUMMARY STATISTICS AND DRIVERS									
REMUNERATION	DIRECTOR	ABSOLUTE REDUCED MODELS	ABS	ABS	ABS	LOG	LOG	LOG	
SAL	ED	0	1996	1997	1998	1996	1997	1998	
		ITEM	ADJUS	ADJUS	ADJUS	ADJUS	ADJUS	ADJUS	
		CURRENT FULL 12 VARIABLE							
		R2	0.234	0.23	0.254	0.345	0.23	0.178	
		ADJUSTED R2	0.215	0.212	0.234	0.312	0.181	0.081	
						0	0	0	
		CURRENT FOUR VARIABLE MODEL				0	0	0	
		R2					0	0	
		ADJUSTED R2	0.217	0.177	0.207	0.162	0.112	0.123	
		MODEL VARIABLES							
			MC	MC	MC	SR	MC	SR	
			CF	CF	CF	FCF	CF	FCF	
			TIR	ROCE	ROCE		ROE	ROE	
		METRIC GROUP OF MAIN DRIVER IN	SIZE	SIZE	SIZE	SIZE	SIZE	SIZE	
		LAGGED MODELS				0	0	0	
		MINUS ONE	0.218	0.199	0.222	0.147	0.116	0.134	
		MINUS TWO	0.236	0.181	0.254		0.11	0.089	
		MINUS THREE	0.219		0.211				
		MINUS FOUR							
		MINUS FIVE							
		BEST MODEL	-2	-1	-2	0	-1	-1	
		MULTIPLE MODEL							
		BEST MODEL ADJ R2	0.236	0.199	0.254	0.162	0.116	0.134	
		MODEL VARIABLES							
						SR	SR	SR	
						FCF	ROCE	ROE	

TABLE 5.9 ABSOLUTE AND LOGARITHMIC REGRESSION MODELS: SUMMARY STATISTICS AND DRIVERS									
REMUNERATION	DIRECTOR	ABSOLUTE REDUCED MODELS	ABS	ABS	ABS	LOG	LOG	LOG	DIRECT
SAL	ND	0	1996	1997	1998	1996	1997	1998	ND
		ITEM	ADJUS	ADJUS	ADJUS	ADJUS	ADJUS	ADJUS	
		CURRENT FULL 12 VARIABLE							
		R2	0.062	0.07	0.078	0.298	0.182	0.073	
		ADJUSTED R2	0.039	0.049	0.051	0.264	0.137	0.081	
		CURRENT FOUR VARIABLE MODEL							
		R2							
		ADJUSTED R2	0.16	0.26	0.049	0.07	0.055	0.022	
		MODEL VARIABLES							
			MC	MC	MC	MC	MC	SR	
			CF	CF	FCF	EBIT	CF	FCF	
			ROE	ROCE	ROE	ROE	ROE	ROE	
		METRIC GROUP OF MAIN DRIVER IN	SIZE	SIZE	SIZE	SIZE	SIZE	SIZE	
		LAGGED MODELS							
		MINUS ONE	0.01	0.034	0.049	0.018	0.043	0.014	
		MINUS TWO		0.028	0.057				
		MINUS THREE			0.037				
		MINUS FOUR							
		MINUS FIVE							
		BEST MODEL	0	-1	-2	0	0	0	
		MULTIPLE MODEL							
		BEST MODEL ADJ R2	0.16	0.034	0.254	0.07	0.055	0.022	
		MODEL VARIABLES							
						MC	CF	FCF	
						ROE	ROE	ROCE	

TABLE 5.9 ABSOLUTE AND LOGARITHMIC REGRESSION MODELS: SUMMARY STATISTICS AND DRIVERS									
REMUNERATION	DIRECTOR	ABSOLUTE REDUCED MODELS	ABS	ABS	ABS	LOG	LOG	LOG	DIRECT
STB	CEO	0	1996	1997	1998	1996	1997	1998	CEO
		ITEM	ADJUS	ADJUS	ADJUS	ADJUS	ADJUS	ADJUS	
		CURRENT FULL 12 VARIABLE							
		R2	0.204	0.202	0.278	0.995	0.409	0.558	
		ADJUSTED R2	0.092	0.099	0.174	0.994	0.158	0.077	
		CURRENT FOUR VARIABLE MODEL							
		R2							
		ADJUSTED R2	0.19	0.086	0.161	0.255	0.147	0.238	
		MODEL VARIABLES							
			EBIT	EBIT	FCF	FCF	FCF	CF	
			TIR	ROCE	ROE	TIR	TIR	TIR	
			TERN	X	X		SR		
				CE	MC				
				SIZE					
		METRIC GROUP OF MAIN DRIVER IN	RESUL	RESUL	RESUL	RESUL	RESUL	RESULTS	
		LAGGED MODELS							
		MINUS ONE	0.05	0.07	0.16	0.13	0.076	0.194	
		MINUS TWO							
		MINUS THREE							
		MINUS FOUR							
		MINUS FIVE							
		BEST MODEL	0	0	0	0	0	0	
		MULTIPLE MODEL							
		BEST MODEL ADJ R2	0.19	0.086	0.161	0.255	0.147	0.238	
		MODEL VARIABLES							
						FCF	FCF	CF	
						TIR	TIR	TIR	

TABLE 5.9 ABSOLUTE AND LOGARITHMIC REGRESSION MODELS: SUMMARY STATISTICS AND DRIVERS									
REMUNERATION	DIRECTOR	ABSOLUTE REDUCED MODELS	ABS	ABS	ABS	LOG	LOG	LOG	DIRECT
STB	ED	0	1996	1997	1998	1996	1997	1998	ED
		ITEM	ADJUS	ADJUS	ADJUS	ADJUS	ADJUS	ADJUS	
		CURRENT FULL 12 VARIABLE							
		R2	0.107	0.101	0.344	0.704	0.271	0.445	
		ADJUSTED R2	0.085	0.08	0.327	0.687	0.147	0.38	
		CURRENT FOUR VARIABLE MODEL							
		R2							
		ADJUSTED R2	0.186	0.08	0.24	0.339	0.138	0.219	
		MODEL VARIABLES							
			EBIT	EBIT	CF	FCF	CF	CF	
			TIR	ROCE	ROCE	TIR	TIR	ROE	
			TDIV	X	X		X		
			0	CE	MC		SR		
		METRIC GROUP OF MAIN DRIVER IN	RESUL	RESUL	RESUL	RESUL	RESUL	RESULTS	
		LAGGED MODELS							
		MINUS ONE	0.125	0.05	0.216	0.141	0.072	0.154	
		MINUS TWO							
		MINUS THREE							
		MINUS FOUR							
		MINUS FIVE							
		BEST MODEL	0	0	0	0	0	0	
		MULTIPLE MODEL							
		BEST MODEL ADJ R2	0.186	0.086	0.24	0.339	0.138	0.219	
		MODEL VARIABLES							
						FCF	CF	CF	
						TIR	TIR	TIR	

TABLE 5.9 ABSOLUTE AND LOGARITHMIC REGRESSION MODELS: SUMMARY STATISTICS AND DRIVERS

REMUNERATION	DIRECTOR	ABSOLUTE REDUCED MODELS	ABS	ABS	ABS	LOG	LOG	LOG	DIRECT
LTI	CEO	0	1996	1997	1998	1996	1997	1998	CEO
		ITEM	ADJUS	ADJUS	ADJUS	ADJUS	ADJUS	ADJUS	
		CURRENT FULL 12 VARIABLE							
		R2	0.091	0.066	0.282	0.774	0.74	0.558	
		ADJUSTED R2	-0.037	0.053	0.178	0.592	0.63	-0.105	
		CURRENT FOUR VARIABLE MODEL							
		R2							
		ADJUSTED R2	0.068	0.013	0.076	0.079	0.047	0.089	
		MODEL VARIABLES							
			ROCE	ROCE	ROCE	TIR	ROCE	ROCE	
				EBIT	EBIT		EBIT	FCF	
				X	TDIV		CE	X	
			CE	CE			SR	SR	
		METRIC GROUP OF MAIN DRIVER IN	RETUR	RETUR	RETUR	RETUR	RETUR	RETURNS	
		LAGGED MODELS							
		MINUS ONE	0.006	0.000	0.133	0.019	0.004	0.085	
		MINUS TWO			0.035				
		MINUS THREE							
		MINUS FOUR							
		MINUS FIVE							
		BEST MODEL	0	0	-1	0	0	0	
		MULTIPLE MODEL							
		BEST MODEL ADJ R2	0.068	0.013	0.133	0.079	0.047	0.089	
		MODEL VARIABLES							
						ROCE	ROCE	ROCE	
								FCF	

TABLE 5.9 ABSOLUTE AND LOGARITHMIC REGRESSION MODELS: SUMMARY STATISTICS AND DRIVERS

REMUNERATION	DIRECTOR	ABSOLUTE REDUCED MODELS	ABS	ABS	ABS	LOG	LOG	LOG	DIRECT
LTI	ED		1996	1997	1998	1996	1997	1998	ED
		ITEM	ADJUS	ADJUS	ADJUS	ADJUS	ADJUS	ADJUS	
		CURRENT FULL 12 VARIABLE							
		R2	0.091	0.113	0.225	0.241	0.34	0.289	
		ADJUSTED R2	-0.037	0.092	0.204	0.136	0.298	0.183	
		CURRENT FOUR VARIABLE MODEL							
		R2							
		ADJUSTED R2	0.052	0.06	0.117	0.079	0.041	0.86	
		MODEL VARIABLES							
			ROCE	ROCE	ROCE	ROCE	ROCE	ROCE	
			EBIT	EBIT	EBIT		EBIT	EBIT	
					TDIV		CE		
			CE	CE			SR	SR	
		METRIC GROUP OF MAIN DRIVER IN	RETUR	RETUR	RETUR	RETUR	RETUR	RETURNS	
		LAGGED MODELS							
		MINUS ONE	0.031	0.035	0.135	0.037	0.023	0.05	
		MINUS TWO		0.000	0.104				
		MINUS THREE							
		MINUS FOUR							
		MINUS FIVE							
		BEST MODEL	0	0	-1	0	0	0	
		MULTIPLE MODEL							
		BEST MODEL ADJ R2	0.052	0.06	0.135	0.079	0.041	0.86	
		MODEL VARIABLES							
						ROCE	ROCE	ROCE	
						EBIT	EBIT	EBIT	

TABLE 5.10 BEST REMPER MODELS FOR THE DIRECTOR DRIP MATRIX

CURRENT YEAR(1998) FULL 12 VARIABLE REGRESSION MODEL

Model Summary

	R	R Square	Adjusted R	Std. Error	Change Statistics					Durbin-Watson Statistic	
Model	ROLE = 2.00 (Selected)				R Square	F Change	df1	df2	Sig. F Ch	ROLE =	ROLE ~= 2.00 (Unselected)
1.000	0.762	0.580	0.123	0.394	0.580	1.268	12.000	11.000	0.350	0.984	0.118

a Predictors: (Constant), 98DIVIDENDS, TIR 98, ROE 98, SR98, CE98, 98FREECASHFLOW, MC98, 98TEARNINGS, EBIT98, ROCE 98, TA98, 98CA

b Unless noted otherwise, statistics are based only on cases for which ROLE = 2.00.

c Dependent Variable: SALARY

Correlations

		SALARY	SR98	TA98	CE98	MC98	EBIT98	98CASH	98FREEC	ROE 98	ROCE 98	TIR 98	98TEAR	98DIVID
Pearson Correlation	SALARY	1.000	0.527	0.269	0.117	0.426	0.396	0.440	0.372	0.362	0.300	0.231	0.305	0.427
	SR98	0.527	1.000	0.733	0.582	0.745	0.725	0.718	0.637	0.205	0.224	0.219	0.580	0.706
	TA98	0.269	0.733	1.000	0.929	0.791	0.802	0.800	0.689	0.174	0.170	0.249	0.741	0.825
	CE98	0.117	0.582	0.929	1.000	0.696	0.711	0.712	0.559	0.058	0.061	0.235	0.695	0.747
	MC98	0.426	0.745	0.791	0.696	1.000	0.921	0.950	0.718	0.424	0.453	0.294	0.851	0.905
	EBIT98	0.396	0.725	0.802	0.711	0.921	1.000	0.874	0.735	0.516	0.537	0.291	0.907	0.885
	98CASH	0.440	0.718	0.800	0.712	0.950	0.874	1.000	0.759	0.357	0.363	0.298	0.887	0.937
	98FREEC	0.372	0.637	0.689	0.559	0.718	0.735	0.759	1.000	0.438	0.472	0.302	0.744	0.736
	ROE 98	0.362	0.205	0.174	0.058	0.424	0.516	0.357	0.438	1.000	0.946	0.098	0.556	0.344
	ROCE 98	0.300	0.224	0.170	0.061	0.453	0.537	0.363	0.472	0.946	1.000	0.012	0.573	0.360
	TIR 98	0.231	0.219	0.249	0.235	0.294	0.291	0.298	0.302	0.098	0.012	1.000	0.288	0.194
	98TEAR	0.305	0.580	0.741	0.695	0.851	0.907	0.887	0.744	0.556	0.573	0.288	1.000	0.883
	98DIVID	0.427	0.706	0.825	0.747	0.905	0.885	0.937	0.736	0.344	0.360	0.194	0.883	1.000

TABLE 5.10 BEST REMPER MODELS FOR THE DIRECTOR DRIP MATRIX

1998 4 VAR RESTRICTED MODEL										
Model Summary										
	R	R Square	Adjusted R	Std. Error	Change Statistics					Durbin-Watson
Model					R Square	F Change	df1	df2	Sig. F Change	
1.000	0.591	0.349	0.299	0.353	0.349	6.964	3.000	39.000	0.001	
2.000	0.587	0.345	0.312	0.349	-0.004	0.247	1.000	41.000	0.622	1.801
a	Predictors: (Constant), ROE 98, SR98, 98FREECASHFLOW									
b	Predictors: (Constant), ROE 98, SR98									
c	Dependent Variable: SALARY									
1997 4 VAR RESTRICTED MODEL										
Model Summary										
	R	R Square	Adjusted R	Std. Error	Change Statistics					Durbin-Watson
Model	ROLE = 2.00 (Selected)				R Square	F Change	df1	df2	Sig. F Ch	ROLE =
1.000	0.627	0.393	0.344	0.341	0.393	7.982	3.000	37.000	0.000	
2.000	0.622	0.387	0.355	0.338	-0.006	0.371	1.000	39.000	0.546	1.782
a	Predictors: (Constant), ROE 97, 97FREECASHFLOW, SR97									
b	Predictors: (Constant), ROE 97, SR97									
c	Unless noted otherwise, statistics are based only on cases for which ROLE = 2.00.									
d	Dependent Variable: SALARY									
1996 4 VAR RESTRICTED MODEL										
Model Summary										
	R	R Square	Adjusted R	Std. Error	Change Statistics					Durbin-Watson
Model					R Square	F Change	df1	df2	Sig. F Change	
1.000	0.589	0.346	0.307	0.350	0.346	8.836	3.000	50.000	0.000	
2.000	0.584	0.341	0.315	0.348	-0.006	0.437	1.000	52.000	0.512	1.341
a	Predictors: (Constant), ROE 96, SR96, 96FREECASHFLOW									
b	Predictors: (Constant), SR96, 96FREECASHFLOW									
c	Dependent Variable: SALARY									

TABLE 5.10 BEST REMPER MODELS FOR THE DIRECTOR DRIP MATRIX

Collinearity Diagnostics							
		Eigenvalu	Condition In	Variance Proportions			
Model	Dimension			(Constant	SR97	97FREEC	ROE 97
1.000	1.000	3.904	1.000	0.000	0.000	0.001	0.007
	2.000	0.086	6.751	0.003	0.002	0.013	0.953
	3.000	0.009	20.903	0.151	0.015	0.720	0.018
	4.000	0.002	49.895	0.845	0.983	0.267	0.022
2.000	1.000	2.923	1.000	0.000	0.000		0.012
	2.000	0.075	6.244	0.009	0.008		0.975
	3.000	0.002	38.122	0.990	0.992		0.012
a	Dependent Variable: SALARY						
b	Selecting only cases for which ROLE = 2.00						
Residuals Statistics							
	ROLE = 2.00 (Selected)						
	Minimum	Maximum	Mean	Std. Devi	N		
Predicted Value	5.339	6.594	5.976	0.263	85.000		
Std. Predicted Value	-2.379	2.415	0.053	1.003	85.000		
Standard Error of Pred	0.034	0.183	0.075	0.035	85.000		
Adjusted Predicted Val	5.236	6.740	5.975	0.280	85.000		
Residual	-1.194	0.785	-0.009	0.326	85.000		
Std. Residual	-3.529	2.320	-0.027	0.964	85.000		
Stud. Residual	-3.897	2.626	-0.026	1.014	85.000		
Mahal. Distance	0.010	11.318	1.990	2.377	85.000		
a	Dependent Variable: SALARY						
b	Pooled Cases						

TABLE 5.10 BEST REMPER MODELS FOR THE DIRECTOR DRIP MATRIX												
SINGLE VARIABLE MODEL												
1997 SR SALARY MODEL												
Model Summary												
	R		R Square	Adjusted	Std. Error	Change Statistics					Durbin-Watson Stati	
Model	ROLE =	ROLE ~= 2.00 (Unselected)				R Square	F Change	df1	df2	Sig. F Ch	ROLE =	ROLE ~=
1.000	0.538		0.289	0.271	0.359	0.289	15.859	1.000	39.000	0.000		
2.000	0.622	0.144	0.387	0.355	0.338	0.098	6.057	1.000	38.000	0.019	1.782	0.134
a	Predictors: (Constant), SR97											
b	Predictors: (Constant), SR97, ROE 97											
c	Unless noted otherwise, statistics are based only on cases for which ROLE = 2.00.											
d	Dependent Variable: SALARY											
Residuals Statistics												
	ROLE = 2.00 (Selected)					ROLE ~= 2.00 (Unselected)						
	Minimum	Maximum	Mean	Std. Devi	N	Minimum	Maximum	Mean	Std. Devi	N		
Predicted Value	5.339	6.594	5.976	0.263	85.000	5.339	6.594	5.986	0.264	944.000		
Std. Predicted Value	-2.379	2.415	0.053	1.003	85.000	-2.379	2.415	0.092	1.010	944.000		
Standard Error of Pred	0.034	0.183	0.075	0.035	85.000	0.034	0.183	0.075	0.034	944.000		
Adjusted Predicted Val	5.236	6.740	5.975	0.280	85.000	5.339	6.594	5.986	0.264	944.000		
Residual	-1.194	0.785	-0.009	0.326	85.000	-6.145	0.513	-1.852	1.232	944.000		
Std. Residual	-3.529	2.320	-0.027	0.964	85.000	-18.170	1.518	-5.476	3.644	944.000		
Mahal. Distance	0.010	11.318	1.990	2.377	85.000	0.010	8.884	1.767	1.936	944.000		
a	Dependent Variable: SALARY											
b	Pooled Cases											

	TABLE 5.11 BEST MODELS OF LOG REGRESSION MODELS : MODEL SUMMARIES AND CO-EFFICIENTS												
ABSOLUTE MODEL													
LOGARITHMIC MODELS													
98 SALARY CHAIR (SALCH) BEST MODEL: 97 THREE YEAR LAG MODEL													
Model Summary													
	R	R Squar	Adjusted	Std. Erro	Change Statistics					Durbin-Watson			
Model	ROLE = 1.00 (Selected)				R Squar	F Chang	df1	df2	Sig. F Change				
1	0.3712	0.13779	0.0986	0.55019	0.13779	3.51589	2	44	0.03832				
2	0.36004	0.12963	0.11029	0.54661	-0.0082	0.41667	1	46	0.52196	1.65787			
a	Predictors: (Constant), 95FREECASHFLOW, TA95												
b	Predictors: (Constant), TA95												
c	Unless noted otherwise, statistics are based only on cases for which ROLE = 1.00.												
Coefficients													
		Unstandardized C		Standar	t	Sig.	95% Confidence I		Correlations			Collinearity Statisti	
Model		B	Std. Erro	Beta			Lower B	Upper B	Zero-ord	Partial	Part	Toleranc	VIF
1	(Consta	0.8358	1.56885		0.53275	0.59689	-2.326	3.9976					
	TA95	0.31508	0.12916	0.42856	2.4394	0.01881	0.05477	0.57539	0.36004	0.34515	0.34148	0.63489	1.57507
	95FREE	-0.0489	0.07583	-0.1134	-0.6455	0.52196	-0.2018	0.10387	0.14555	-0.0969	-0.0904	0.63489	1.57507
2	(Consta	1.03701	1.52757		0.67886	0.5007	-2.0397	4.11369					
	TA95	0.2647	0.10225	0.36004	2.58882	0.01293	0.05876	0.47064	0.36004	0.36004	0.36004	1	1
a	Dependent Variable: SALARY												
b	Selecting only cases for which ROLE = 1.00												
98 CEO:													
Model Summary													
	R		R Squar	Adjusted	Std. Erro	Change Statistics					Durbin-Watson Statistic		
Model	ROLE =	ROLE ~= 2.00 (Unselected)				R Squar	F Chang	df1	df2	Sig. F C	ROLE =	ROLE ~= 2.00 (Un	
1	0.62683		0.39291	0.34369	0.34105	0.39291	7.98219	3	37	0.00032			
2	0.62195	0.14352	0.38682	0.35455	0.33822	-0.0061	0.37111	1	39	0.54613	1.78181	0.13441	
a	Predictors: (Constant), ROE 97, 97FREECASHFLOW, SR97												
b	Predictors: (Constant), ROE 97, SR97												
c	Unless noted otherwise, statistics are based only on cases for which ROLE = 2.00.												
d	Dependent Variable: SALARY												
Coefficients													
		Unstandardized C		Standar	t	Sig.	95% Confidence I		Correlations			Collinearity Statisti	
Model		B	Std. Erro	Beta			Lower B	Upper B	Zero-ord	Partial	Part	Toleranc	VIF
1	(Consta	2.39584	0.85017		2.81807	0.00771	0.67323	4.11846					
	SR97	0.23639	0.07264	0.53603	3.25411	0.00243	0.0892	0.38358	0.53767	0.47171	0.41683	0.6047	1.65372
	97FREE	-0.0272	0.04469	-0.0985	-0.6092	0.54613	-0.1178	0.06332	0.24409	-0.0997	-0.078	0.62715	1.5945
	ROE 97	0.13711	0.05756	0.31226	2.38192	0.02248	0.02048	0.25374	0.41233	0.36463	0.30511	0.9547	1.04745
2	(Consta	2.47432	0.83337		2.96904	0.00515	0.78725	4.16139					
	SR97	0.20944	0.05714	0.47491	3.6655	0.00075	0.09377	0.32511	0.53767	0.51109	0.46562	0.96126	1.0403
	ROE 97	0.14	0.05689	0.31886	2.46102	0.01851	0.02484	0.25516	0.41233	0.37077	0.31262	0.96126	1.0403
a	Dependent Variable: SALARY												
b	Selecting only cases for which ROLE = 2.00												
98ED MODEL													
Model Summary													
	R		R Squar	Adjusted	Std. Erro	Change Statistics					Durbin-Watson Statistic		
Model	ROLE =	ROLE ~= 3.00 (Unselected)				R Squar	F Chang	df1	df2	Sig. F C	ROLE =	ROLE ~= 3.00 (Un	
1	0.38039		0.14469	0.13126	0.69413	0.14469	10.7706	3	191	1.4E-06			
2	0.3787	0.05159	0.14342	0.13449	0.69283	-0.0013	0.28535	1	193	0.59384	1.57267	0.13486	
a	Predictors: (Constant), ROE 97, 97FREECASHFLOW, SR97												
b	Predictors: (Constant), ROE 97, SR97												
c	Unless noted otherwise, statistics are based only on cases for which ROLE = 3.00.												
d	Dependent Variable: SALARY												
Coefficients													
		Unstandardized C		Standar	t	Sig.	95% Confidence I		Correlations			Collinearity Statisti	
Model		B	Std. Erro	Beta			Lower B	Upper B	Zero-ord	Partial	Part	Toleranc	VIF
1	(Consta	1.49042	0.8035		1.8549	0.06515	-0.0945	3.0753					
	SR97	0.20299	0.07087	0.25905	2.86407	0.00465	0.06319	0.34279	0.3325	0.20292	0.19166	0.54739	1.82685
	97FREE	0.02338	0.04377	0.04725	0.53418	0.59384	-0.063	0.10972	0.23277	0.03862	0.03575	0.57224	1.74751
	ROE 97	0.16079	0.05863	0.18898	2.74258	0.00668	0.04515	0.27643	0.25168	0.19465	0.18353	0.94313	1.0603
2	(Consta	1.40018	0.78408		1.78576	0.07572	-0.1463	2.9467					
	SR97	0.22762	0.05373	0.29048	4.23657	3.5E-05	0.12165	0.33359	0.3325	0.29239	0.28298	0.94901	1.05373
	ROE 97	0.15832	0.05834	0.18608	2.714	0.00725	0.04326	0.27339	0.25168	0.19221	0.18128	0.94901	1.05373
a	Dependent Variable: SALARY												
b	Selecting only cases for which ROLE = 3.00												
98ND													
Model Summary													
	R		R Squar	Adjusted	Std. Erro	Change Statistics					Durbin-Watson Statistic		
Model	ROLE =	ROLE ~= 4.00 (Unselected)				R Squar	F Chang	df1	df2	Sig. F C	ROLE =	ROLE ~= 4.00 (Un	
1	0.16484		0.02717	0.01486	0.59564	0.02717	2.2065	3	237	0.088			
2	0.16297		0.02656	0.01838	0.59457	-0.0006	0.14941	1	239	0.69944			
3	0.16002	0.17464	0.02561	0.02153	0.59362	-0.001	0.23273	1	240	0.62995	1.51916	0.11819	
a	Predictors: (Constant), ROE 98, SR98, 98FREECASHFLOW												
b	Predictors: (Constant), ROE 98, 98FREECASHFLOW												
c	Predictors: (Constant), 98FREECASHFLOW												
d	Unless noted otherwise, statistics are based only on cases for which ROLE = 4.00.												
e	Dependent Variable: SALARY												
Coefficients													
		Unstandardized C		Standar	t	Sig.	95% Confidence I		Correlations			Collinearity Statisti	
Model		B	Std. Erro	Beta			Lower B	Upper B	Zero-ord	Partial	Part	Toleranc	VIF
1	(Consta	2.10724	0.60239		3.49812	0.00056	0.92051	3.29396					
	SR98	0.0212	0.05484	0.03466	0.38654	0.69944	-0.0868	0.12924	0.13172	0.0251	0.02477	0.51039	1.95927
	98FREE	0.06482	0.04287	0.15053	1.51194	0.13188	-0.0196	0.14927	0.16002	0.09774	0.09687	0.41412	2.41475
	ROE 98	-0.0198	0.04857	-0.0302	-0.4075	0.684	-0.1155	0.07589	0.04914	-0.0265	-0.0261	0.74978	1.33373
2	(Consta	2.30675	0.31004		7.44009	1.8E-12	1.69597	2.91753					
	98FREE	0.07611	0.03133	0.17675	2.42958	0.01586	0.0144	0.13782	0.16002	0.15557	0.15538	0.77286	1.2939
	ROE 98	-0.023	0.04775	-0.0351	-0.4824	0.62995	-0.1171	0.07104	0.04914	-0.0313	-0.0309	0.77286	1.2939
3	(Consta	2.32233	0.30786		7.54345	9.3E-13	1.71586	2.9288					
	98FREE	0.06891	0.02749	0.16002	2.50614	0.01287	0.01474	0.12307	0.16002	0.16002	0.16002	1	1
a	Dependent Variable: SALARY												
b	Selecting only cases for which ROLE = 4.00												

TABLE 5.11 BEST MODELS OF LOG REGRESSION MODELS : MODEL SUMMARIES AND CO-EFFICIENTS

98STBCEO													
Model Summary													
	R		R Squar	Adjusted	Std. Erro	Change Statistics					Durbin-Watson Statistic		
Model	ROLE =	ROLE ~= 2.00 (Unselected)				R Squar	F Chang	df1	df2	Sig. F C	ROLE =	ROLE ~= 2.00 (Un	
1	0.5274	0.54855	0.27816	0.23805	0.80616	0.27816	6.93613	2	36	0.00283	0.63642	0.32101	
a	Predictors: (Constant), TIR 98, 98CASHFLOW												
b	Unless noted otherwise, statistics are based only on cases for which ROLE = 2.00.												
c	Dependent Variable: STB												
Coefficients													
		Unstandardized Co		Standard	t	Sig.	95% Confidence In		Correlations			Collinearity Statisti	
Model		B	Std. Erro	Beta			Lower B	Upper B	Zero-ord	Partial	Part	Toleranc	VIF
1	(Constan	0.38824	1.48022		0.26229	0.7946	-2.6138	3.39027					
	98CASH	0.29085	0.12016	0.35906	2.42061	0.02067	0.04716	0.53454	0.44659	0.37413	0.34276	0.91131	1.09733
	TIR 98	0.20721	0.10458	0.2939	1.98137	0.05523	-0.0049	0.41931	0.40084	0.31357	0.28057	0.91131	1.09733
a	Dependent Variable: STB												
b	Selecting only cases for which ROLE = 2.00												
98STBED													
Model Summary													
	R		R Squar	Adjusted	Std. Erro	Change Statistics					Durbin-Watson Statistic		
Model	ROLE =	ROLE ~= 3.00 (Unselected)				R Squar	F Chang	df1	df2	Sig. F C	ROLE =	ROLE ~= 3.00 (Un	
1	0.47338	0.45874	0.22409	0.2195	0.86232	0.22409	48.8086	2	338	0	0.39103	0.34291	
a	Predictors: (Constant), ROE 98, 98CASHFLOW												
b	Unless noted otherwise, statistics are based only on cases for which ROLE = 3.00.												
c	Dependent Variable: STB												
Coefficients													
		Unstandardized Co		Standard	t	Sig.	95% Confidence In		Correlations			Collinearity Statisti	
Model		B	Std. Erro	Beta			Lower B	Upper B	Zero-ord	Partial	Part	Toleranc	VIF
1	(Constan	-0.8374	0.55634		-1.5052	0.1332	-1.9317	0.25692					
	98CASH	0.3471	0.04645	0.38766	7.47266	6.7E-13	0.25573	0.43846	0.44941	0.37654	0.35803	0.85297	1.17238
	ROE 98	0.18068	0.05821	0.16103	3.10405	0.00207	0.06619	0.29518	0.30968	0.16648	0.14872	0.85297	1.17238
a	Dependent Variable: STB												
b	Selecting only cases for which ROLE = 3.00												
98LTICEO													
Model Summary													
	R	R Squar	Adjusted	Std. Erro	Change Statistics								
Model	ROLE = 2.00 (Selected)				R Squar	F Chang	df1	df2	Sig. F Change				
1	0.3692	0.13631	0.04035	1.83447	0.13631	1.42042	2	18	0.26743				
2	0.36629	0.13417	0.0886	1.78776	-0.0021	0.04469	1	20	0.83495				
3	1.1E-08	1.1E-16	0	1.87264	-0.1342	2.94419	1	21	0.10245				
a	Predictors: (Constant), ROCE 98, 98FREECASHFLOW												
b	Predictors: (Constant), 98FREECASHFLOW												
c	Predictor: (constant)												
Coefficients													
		Unstandardized Co		Standard	t	Sig.	95% Confidence In		Correlations			Collinearity Statisti	
Model		B	Std. Erro	Beta			Lower B	Upper B	Zero-ord	Partial	Part	Toleranc	VIF
1	(Constan	-0.7219	3.33106		-0.2167	0.83086	-7.7202	6.27637					
	98FREE	0.47225	0.34372	0.34147	1.37394	0.18633	-0.2499	1.19437	0.36629	0.30809	0.30096	0.77683	1.28729
	ROCE 9	0.15491	0.73278	0.05254	0.2114	0.83495	-1.3846	1.69442	0.21385	0.04977	0.04631	0.77683	1.28729
2	(Constan	-0.7197	3.24623		-0.2217	0.8269	-7.5142	6.0747					
	98FREE	0.50657	0.29523	0.36629	1.71586	0.10245	-0.1113	1.1245	0.36629	0.36629	0.36629	1	1
3	(Constan	4.83273	0.27029		17.8796	9.1E-14	4.26891	5.39655					
a	Dependent Variable: LTI												
b	Selecting only cases for which ROLE = 2.00												
98LTIED													
Model Summary													
	R		R Squar	Adjusted	Std. Erro	Change Statistics					Durbin-Watson Statistic		
Model	ROLE =	ROLE ~= 3.00 (Unselected)				R Squar	F Chang	df1	df2	Sig. F C	ROLE =	ROLE ~= 3.00 (Un	
1	0.30226		0.09136	0.08175	1.72622	0.09136	9.50193	2	189	0.00012			
2	0.30201	0.25109	0.09121	0.08643	1.72182	-0.0002	0.03208	1	191	0.85804	1.62665	1.93295	
a	Predictors: (Constant), EBIT98, ROCE 98												
b	Predictors: (Constant), EBIT98												
c	Unless noted otherwise, statistics are based only on cases for which ROLE = 3.00.												
d	Dependent Variable: LTI												
Coefficients													
		Unstandardized Co		Standard	t	Sig.	95% Confidence In		Correlations			Collinearity Statisti	
Model		B	Std. Erro	Beta			Lower B	Upper B	Zero-ord	Partial	Part	Toleranc	VIF
1	(Constan	-2.6582	1.73877		-1.5288	0.128	-6.088	0.77175					
	ROCE 9	0.04338	0.24222	0.01523	0.17911	0.85804	-0.4344	0.52118	0.18505	0.01303	0.01242	0.66452	1.50484
	EBIT98	0.53644	0.15563	0.29318	3.44692	0.0007	0.22945	0.84344	0.30201	0.2432	0.239	0.66452	1.50484
2	(Constan	-2.7601	1.63882		-1.6842	0.09379	-5.9927	0.47254					
	EBIT98	0.55259	0.12654	0.30201	4.3668	2.1E-05	0.30298	0.8022	0.30201	0.30201	0.30201	1	1
a	Dependent Variable: LTI												
b	Selecting only cases for which ROLE = 3.00												

TABLE 5.12 REMPER MODELS REMUNERATION PERFORMANCE LOG CONVERSION MODEL											
1998 CEO SALARY RESTRICTED MODEL											
SINGLE MODEL											
S1			**CONSTAN**	**PERFORMANCE VARIABLES AND CO-EFFICIENTS**							
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	β4
	£ BASE 10	LOG		1BILLION	**SR**	.10%	**ROE**	**NIL**	**FCF**	**NIL**	**NIL**
£	£			1000000		0.1	0	0	0	0	0
LOG			2.47432	13.8155	0.20944	-2.3026	0.14	#NUM!	0.14	#NUM!	0.14
LOG		5.04544	2.47432		2.89348		-0.3224		#NUM!		#NUM!
£	**155.31**										
S2			CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE 10	LOG		2 BILLIO	SR	.10%	ROE	FCF	**FCF**	NIL	**NIL**
£	£			2000000		0.1	0	0	0	0	0
LOG			2.47432	14.5087	0.20944	-2.3026	0.14	#NUM!	0.14	#NUM!	0.14
LOG		5.19061	2.47432		3.03865		-0.3224		#NUM!		#NUM!
£	**179.58**										
DIFFER	**24.27**										
S3	HIGH		CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE 10	LOG		50 BILLI	SR	.10%	ROE	.10%	**FCF**	.10%	**NIL**
£	£			5E+07		0.1	0	0	0	0	0
LOG			2.47432	17.7275	0.20944	-2.3026	0.14	#NUM!	0.14	#NUM!	0.14
LOG		5.86476	2.47432		3.7128		-0.3224		#NUM!		#NUM!
£	352.40										
DIFFER	**197.09**										
S4	LOW		CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE 10	LOG		0.250 BIL	SR	.10%	ROE	.10%	FCF	.10%	**NIL**
£	£			250000		0.1	0	0	0	0	0
LOG			2.47432	12.4292	0.20944	-2.3026	0.14	#NUM!	0.14	#NUM!	0.14
LOG		4.75509	2.47432		2.60314		-0.3224		#NUM!		#NUM!
£	116.17										
DIFFER	-39.14										
MULTIVARIATE TWO VARIABLE MO			PERFORMANCE VARIABLES AND CO-EFFICIENTS								
S5			CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE 10	LOG		ONE BIL	SR	0.1%	ROE	.10%	FCF	.10%	ROE
£	£			1000000		0.1	0	0	0	0	0
LOG			2.47432	13.8155	0.20944	-2.3026	0.14	#NUM!	0.14	#NUM!	0.14
LOG		5.04544	2.47432		2.89348		-0.3224		#NUM!		#NUM!
£	**155.31**										
S6			CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE 10	LOG		ONE BIL	SR	10%	ROE	.10%	FCF	.10%	ROE
£	£			1000000		10	0	0	0	0	0
LOG			2.47432	13.8155	0.20944	2.30259	0.14	#NUM!	0.14	#NUM!	0.14
LOG		5.69017	2.47432		2.89348		0.32237		#NUM!		#NUM!
£	**295.94**										
DIFFER	**140.63**										

TABLE 5.13 REMPER MODELS REMUNERATION PERFORMANCE LOG CONVERSION MODEL											
	1998 CEO SHORT TERM BONUS LOGARITHMIC RESTRICTED MODEL										
SINGLE MODEL											
S1			**CONSTA**		**PERFORMANCE VARIABLES AND CO-EFFICIENTS**						
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	β4
	£ BASE	LOG		100 MILLIO	**CF**	0.1%	**TIR**	NIL	NIL	NIL	NIL
£	£			100000		0.1		0	0	0	0
LOG			0.388241	11.512925	0.29085	-2.3026	0.20721	#NUM!	0.14	#NUM!	0.14
LOG		3.25964	0.388241		3.34852		-0.4771		#NUM!		#NUM!
£	**26.04**										
S2			CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE	LOG		200 MILLIO	**CF**	0.1%	**TIR**	NIL	NIL	NIL	NIL
£	£			200000		0.1	0	0	0	0	0
LOG			0.388241	12.206073	0.29085	-2.3026	0.20721	#NUM!	0.14	#NUM!	0.14
LOG		3.46124	0.388241		3.55013		-0.4771		#NUM!		#NUM!
£	**31.86**										
DIFFER	**5.82**										
S3	HIGH		CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE	LOG		5 BILLION	**CF**	0.1%	**TIR**	NIL	NIL	NIL	NIL
£	£			50000000		0.1	0	0	0	0	0
LOG			0.388241	17.727534	0.29085	-2.3026	0.20721	#NUM!	0.14	#NUM!	0.14
LOG		5.06715	0.388241		5.15604		-0.4771		#NUM!		#NUM!
£	**158.72**										
DIFFER	**132.68**										
S4	LOW		CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE	LOG		250 MILLIO	**CF**	0.1%	**TIR**	NIL	NIL	NIL	NIL
£	£			250000		0.1	0	0	0	0	0
LOG			0.388241	12.429216	0.29085	-2.3026	0.20721	#NUM!	0.14	#NUM!	0.14
LOG		3.52614	0.388241		3.61503		-0.4771		#NUM!		#NUM!
£	**33.99**										
DIFFER	**7.95**										
MULTIVARIATE TWO VARI			PERFORMANCE VARIABLES AND CO-EFFICIENTS								
S5			CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE	LOG		100 MILLIO	**CF**	0.1%	**TIR**	NIL	NIL	NIL	NIL
£	£			100000		0.1	0	0	0	0	0
LOG			0.388241	11.512925	0.29085	-2.3026	0.20721	#NUM!	0.14	#NUM!	0.14
LOG		3.25964	0.388241		3.34852		-0.4771		#NUM!		#NUM!
£	**26.04**										
S6			CONSTANT								
BASE	REMUNERATION		α	X1	β1	X2	β2	X3	β3	X4	
	£ BASE	LOG		100 MILLIO	**CF**	10%	**TIR**	NIL	NIL	NIL	NIL
£	£			100000		10	0	0	0	0	0
LOG			0.388241	11.512925	0.29085	2.30259	0.20721	#NUM!	0.14	#NUM!	0.14
LOG		4.21389	0.388241		3.34852		0.47713		#NUM!		#NUM!
£	**67.62**										
DIFFER	**41.58**										

TABLE 6.1 REMPER PERFORMANCE DRIVERS

		ABSOLUTE			LOGARITHMIC		
REM	**DIRECTOR GROUP**	**1996**	**1997**	**1998**	**1996**	**1997**	**1998**
SALARY	CHAIR	CE	CE	SR	**SR**	**CF**	**TA**
SALARY	CEO	***MC***	***MC***	***MC***	***SR***	***SR***	***SR***
SALARY	EXECUTIVE DIRECTORS	***MC***	***MC***	***MC***	***SR***	***SR***	***SR***
SALARY	NON-EXECUTIVE DIREC	***MC***	***MC***	***MC***	**MC**	**CF**	**FCF**
STB	CEO	EBIT	EBIT	FCF	**FCF**	**FCF**	**CF**
STB	EXECUTIVE DIRECTORS	EBIT	EBIT	CF	**FCF**	**CF**	**CF**
LTI	CEO	***ROCE***	***ROCE***	***ROCE***	***ROCE***	***ROCE***	***ROCE***
LTI	EXECUTIVE DIRECTORS	***ROCE***	***ROCE***	***ROCE***	***ROCE***	***ROCE***	***ROCE***