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The effect of Different types of directors on the performance of the Company.

by

Gina Kanakia
2009

A Dissertation presented in part consideration for the degree of

MA in Finance and Investment.
Abstract

The role of the board of directors and their composition is a matter that revolves around different contradictory views for the determination of the performance of the firms. There are several contrasting views that have emerged related to the size of the board and its effect on performance. One set of researchers’ state that larger board size will have diverse skill and knowledge which in turn will have a positive impact on the performance of the firm. The other group of researchers state that a larger board size will have a negative effect on performance due to reasons like lack of coordination, slow decision making process and free rider issues. The third group states that the relationship between the size of the board and the performance of the firm is in form of an inverted U shaped curve. While some other researchers find low significance or no link between the board size and the performance of the firm. The researcher has thus formed the first and the third hypothesis based on these contradictory views.

Based on the contradictory opinions regarding the number of non-executive directors and their effect on performance of the firm the researcher has set the second hypothesis for this dissertation. There are three groups of researchers that study the effect of non-executive directors and their impact on the performance of the firm. One of them state that there is a positive impact on performance, the other state that there is a negative influence due to the outside directors and the third find no relation between the non-executive directors and the performance of the firms. This dissertation studies these issues, uses quantitative method to study the effect between variables, explains the vagueness in data obtained, discusses the findings and mentions the inferences and the implications formed out of this dissertation.
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Chapter 1: Introduction.

1.1 Overview.

The topic of this dissertation revolves around corporate governance in particular. The corporate governance system is related to processes, control and decision making in every level of the organisation. Mainly corporate governance is concerned with the manner in which the top managers or the board of directors manage and execute their responsibilities and how in turn are they accountable to the authority provided to them (Renzetti, 1992). Regardless to any type of organisation i.e. either big or small, private or public, corporate governance is essential since it helps in avoiding the misuse of the power allocated to these top managers or the board of directors (Renzetti, 1992). Its main concern is the need of openness, integrity, reliability and the decision making process of the organisation. In short corporate governance could be called as an extra wing to business ethics.

This dissertation aims at corporate governance and its mechanisms in particular. However the area of literature of corporate governance is so large that it is impossible for the researcher to cover every aspect. However the researcher has mentioned a gist of the different mechanisms of corporate governance that lead to the improvement of performance of companies. The researcher has summarized some of the mechanisms like the role of board of directors, the impact of the non-executive directors, executive compensation, and managerial labour market and so on. These mechanisms in turn help to align the interest of the managers and the shareholders, thus solving the agency conflict (Vafeas and Theodorou, 1998). Also large number of corporate scams and debacles in recent times has laid a significant amount of importance on the issues of corporate governance for the health of the organisations and the society as a whole. The board of directors or the board of the company vests the power to control over the governance in an organisation. Also several studies have been carried out to alleviate the potential conflicts that arise between board of directors or managers and the shareholders (Agency problem). Few main mechanisms of corporate governance is the role of outside directors or the non-executive directors on the board, the managerial compensation and equity ownership in the hand of active outside investors (Gibbs, 1993). Keeping in mind the vastness of the availability of data in the above mentioned areas, it is beyond the
capacity of the researcher to explore aspect of the data in detail. However, for the purpose of this dissertation the researcher has mainly focused on board level literature and information pertaining to non-executive directors.

1.2 Methodology

For the purpose of this dissertation, a sample size of 40 FTSE 100 companies from different sectors is selected. These companies are listed on the London stock exchange. The annual reports of these companies for a two year period namely 2006-07 and 2007-08 were utilized for the collection and comparison of data. A list of these companies has been given in Annexure 1. A multiple linear regression model is used to analyse the data collected. This quantitative method is discussed in detail in Chapter 3.
1.3 Board composition and Performance.

The board of directors is a very significant part of the corporate governance literature. Keeping the dissertation topic in mind, the researcher as mentioned earlier has investigated the board level literature and information relating to the non-executive directors. The structure of the board is one of the most arguable issues related to corporate governance in a firm. Thus it is essential to structure the board aptly, so as the mechanisms of corporate governance work to enhance the performance of the firm (Cheng, 2008). There is a vast amount of existing literature related to the size of the board and its effect on performance. Some of these findings are contradictory among themselves and the researcher would like to list them in short.

One group of researchers were of the view that a larger board size would improve the performance of a firm. This positive impact on performance was based on the fact that a larger board size would bring a larger source of knowledge and different expertise from different backgrounds to the board. Also if the board of directors have to monitor the management on behalf of the shareholders it would be right to say that the directors on the board should be from among one of them. (Weisbach, 1998; Hermalin and Weisbach, 1998).

There were another set of contradicting views suggested by the study of other researchers that a larger board size has a negative impact on the performance of the company. This was based on the research that larger board size would weaken the decision making process, create problems of coordination, lead to time-consuming management processes and increase the free-riding problems. It would also lead to transfer of the control power in the hands of the CEO. All these factors will affect the performance of the company. (Yermack, 1996 and Hermalin and Weisbach, 2001).

The third group of researchers through their study illustrate an inverted U shaped relationship between the board size and the performance of the company. They state if the size of the board extends beyond a particular optimum level, the performance of the firm would be negatively affected (Vafeas, 1999). These were some of the contrasting views related to the composition of the board.
1.4 Limitations in the existing literature.

1.4.a The lack of consideration of certain aspects of board size and non-executive directors and their effect on the performance of companies.

The board consists of two main types of directors: executive directors and non-executive directors. The first type of directors are full time executives of the firm along with being the members of the board. On the other hand the non-executive directors are a heterogeneous group and have different functions based on their expertise and knowledge.

As mentioned earlier, the research on entire board size and performance was studied by many researchers. However these researchers did not take into account the effect of each type of director on the performance of the firm. The main drawback that makes it difficult to study the effect of each type of director is the differences in the composition of the board across various industries and also the absence of any theoretical model that states the optimum structure of the board (Young et al, 2005).

Some researchers have taken into consideration the effect of a particular type of director without relating the total board composition to the performance as well. Similarly, some researchers studied the effect of non-executive directors on corporate performance without associating other factors like board size and board dynamics and so on.

The aim of this dissertation is to study this gap in the literature and explore the role of non-executive director along with the total board size and its effect on corporate performance.
1.5 Structure of the dissertation

This subsection explains the overall structure of the dissertation.

The following section, Chapter 2 Literature review is a prologue to this study. It explains and covers the basic concept of corporate governance and literature relating to the mechanisms of corporate governance in general and the board level literature in detail. It provides an unbiased and comprehensive observation to the available literature related to our study.

Chapter 3, Methodology illustrates the measures adopted in this dissertation and gives the justification for the implementation of these methods along with their limitations.

Implementation of these methods in Chapter 3, leads us to Chapter 4 that deals with the findings and results for the study of our dissertation. This is followed by Chapter 5, which analyses the findings obtained in the previous chapter in detail.

Chapter 6, Conclusion, as the title suggests, here the researcher concludes the dissertation with conjectures, important insights and also states the limitations of the study and further scope of research in this field.
1.6 Conclusion

To conclude, the researcher has studied the effect of different types of directors and board composition as a whole on the performance of the company. Also the role of different types of directors is taken into consideration to enhance the significance of the results obtained in the study. The following chapter illustrates a detailed literature review related to this area of study.
Chapter 2: Literature Review

2.1 Introduction

The main aim of this chapter is to summarize the basic concepts and role of corporate governance in general. For the purpose of study of the effect of different kinds of directors on the performance of the company, the researcher has explored the board level literature in particular. The researcher has explained different areas of the board like the board size, the ownership structure, and the background of the directors, all which affect the corporate performance.

2.2 Corporate Governance

Further below, the basic concept of corporate governance, its role and its mechanisms are explained to have a clear understanding of different stages included in the dissertation.

2.2.1 Basic concept of Corporate Governance

Corporate governance is defined in several ways and can be interpreted using diverse set of approaches. Corporate governance can be described as a system that includes the policies, fulfils the needs of the shareholders, monitors and controls the management of a firm and brings objectivity and transparency in the business (Gibbs, 1993). Moreover, the signs of good corporate governance are dependent on external market and the culture existing in the firm. To ensure the smooth functioning of the organisation, it is the duty of the managers and the board to monitor the activities of the firm as a whole (Carpenter and Westphal, 2001). Thus the main aim of corporate governance is to control and monitor the working of the management in an organisation through mechanisms which ensure to reduce the principal-agent problem (Jensen and Meckling, 1976). One common mechanism to solve this problem is to award the management in terms of stock for a specific level of performance. This in turn will help the management to work and show some vested interest to raise the prices of the stock. This safeguards the wealth of the shareholders and reduces the manager-stockholder dilemma since it aligns the interests of the management and the shareholders (Gibbs, 1993). Thus, corporate governance is an entire structure, which consists of controlling and monitoring in turn to achieve long
term success in company affairs pertaining to shareholders and stockholders of the company. It helps to comply with the legal and regulatory requirements and setting the rules for accurate decision making process within the organisation (Claessens et al, 2000).

Corporate governance can also be viewed as the system by which the shareholders can monitor and implement control over the internal management in an organisation to protect their interests (John and Senbet, 1998). Due to the separation of ownership and control as explained earlier, the main subject of governance is to reduce the conflict of interests among the shareholders and the management. In the absence of effective corporate governance system, the promises made by the top managers of the organisation are not credible to the shareholders. Thus in short, corporate governance includes how decisions are made in corporations, the influence of various stakeholders at every stage, the individual that is held accountable for the performance of the company and the standard of performance required (John and Senbet, 1998). There are several mechanisms of corporate governance that cater and deal with these problems. They are explained in the following section.
2.2.2 Mechanisms of Corporate Governance

The separation of stakeholders and the management is the primary reason for corporate governance and its mechanisms to exist. There are various other reasons due to which corporate governance has attained importance recently. It is not possible to include all the reasons that lead to the existence of governance however an example by Jensen (1989) states the existing corporate governance mechanisms have failed to perform in large US corporations which is one of the reasons why right corporate governance in these new markets are essential.

Corporate governance mechanisms deal with the stakeholders of a corporation taking direct control over the professional managers, entrepreneurs and the inside management of an organisation, to protect their self-interests (John and Senbet, 1998). There are internal as well as external mechanisms for corporate control. Various researchers have listed the different types of mechanisms of corporate governance in several ways. As per the article written by Jensen (1993) he lists the mechanisms for corporate governance in four ways: legal and regulatory mechanisms, internal mechanisms, external mechanisms and product market competition. Since the researcher in this dissertation focuses mainly on the effect of board composition on performance, we will primarily focus on internal mechanisms of corporate governance. These mechanisms include the board of directors and their fiduciary duties, executive compensation which aligns the interest of the managers along with the shareholders, ownership structure of compensation and the managerial labour market.

These mechanisms are studied in the following sub-section.
2.2.2 a Internal Mechanisms of Corporate Governance.

1) The role of board of directors

Generally, due to the distribution of ownership of firm’s stock the shareholders do not take direct interest in controlling the management of any firm (Gibbs, 1993). This leads to poor performance of the company and the stock prices fall down. For this purpose, the board of directors are appointed to control and monitor the management of the organisation. Thus, it is the duty of the board of directors to keep an eye on the management on behalf of these small powerless investors (Denis, 2001). The role and authority of the board of directors is to supervise, control, fire, compensate, hire or advice the top management for the benefit of the shareholders. It’s in the hands of the board to make all the major decisions in terms of the future of the company or even the distribution of income or assets (Thomas, 1992). It’s mandatory by law for every US Corporation to appoint a board of directors (Denis, 2001). The legal requirements differ from country to country, however every country has some terms and conditions to form a board of directors during the start up stage. To manage its role well, the board is divided into two major teams. This consists of the insider directors and the outside directors. The insider directors are also called as executive directors consist of the current managers of the top management. On the other hand, the outside directors, which are also called as non-executive directors, consist of professional individuals who scrutinize the top management (Fama, 1980).

However, in practice it is not clear that the board has an incentive to monitor the top management on behalf of the shareholders. This leads to an agency cost problem due to the separation of ownership and control (Jensen and Meckling, 1976). If a specified level of company stock is associated with top management as well, the interests of the management and the shareholders are aligned. The management will then work to increase the price of the stock, which in turn leads to the improvement in performance (Demsetz and Lehn, 1985).

In addition, another problem is the free rider issue among shareholders. Since an individual investor has very little holding in the company which is not sufficient to closely monitor and control the top management or the board, shareholders free ride on others to do this job (John and Senbet ,1998). Also according to Fama and
Jensen (1983) more the number of outside directors (Non-executive directors), greater is the efficiency in the monitoring and controlling of the board. It will also avoid the managers to be opportunistic and lessen the rise of agency problem. For example, supervision by outside directors can restrict self benefit managers to use the excess cash flow to diversify and increase unprofitable growth on the cost of the shareholders (Gibbs, 1993).

According to Denis (2001), the management has a greater influence on the appointment and the working of the board. The management can influence the decision of firing the members of the board for their individual sympathetic needs. Since the management has the authority to stack the board for their interests at any time, most of the decisions by the board are an outcome of the influence of the management or the CEO's. Due to all these reasons, the strength of the board especially that of the outside directors and their decisions for the management on behalf of the shareholders is questionable (Herman, 1981).

Various reforms have been set to overcome these problems due to public pressure. These reforms include, the reduction in size of the board for effective and quick decision making, increasing the number of non-executive directors, assigning the right to these outside directors to elect other directors for the board and to set executive compensations, separate the positions of chief executive officer (CEO) and the chairperson of the board and make it obligatory for every board member to own stock in the firm (Denis 2001).
2) Executive compensation

Managerial compensation is another mechanism to solve the agency problem. The structure of pay-off of different types of stakeholders is different and hence the interest of each also differs, this leads to the principal-agent problem. It’s the responsibility of the board to decide on the pay-offs of the top management. A manager will not risk a high paid job; however the interests should be aligned with that of the investors as well. Thus the level of compensation to the top managers is a highly arguable factor in corporate governance.

Thus, according to right corporate governance, management should act in the best interest of the shareholders and maximize their wealth. A general recommendation is to reward the managers some specified level of stock for their performance (Denis, 2001). If the wealth of the managers are closely linked with the wealth of the shareholders, the management will work to increase shareholder wealth. This aligns the interests of both the shareholders and the management, thus reducing the agency problem (Demsetz and Lehn, 1985). However, ownership of company stocks by the management is not as straightforward as it sounds. The incentives of managerial holding of common stocks are inconsistent since there are differences in risk bearing capabilities by the top management and the investors (Denis, 2001). We are aware that the outside investor is capable of holding a diversified portfolio compared to the top management who have their personal wealth tied up to the capital of the firm. To decrease the level of unsystematic risk due to an undiversified firm, managerial ownership of common stocks gives the managers an incentive to diversify the firm to increase the value of their individual portfolios (Gibbs, 1993). In the case of the difference of the compensation from an optimal level, the outside directors will restrict the behaviour of the management (Singh, 1990). Thus, the outside directors help in aligning management compensation.
3) Ownership structure

As mentioned earlier that the ownership of stocks are distributed in the hands of many shareholders. This however can differ in terms that the ownership of common stocks is concentrated. It is certain, that if small number of investors hold large sum of stocks of a firm it gives them a right to control and remove inefficiencies (Hill and Snell, 1989). However, the role of these investors is not clear. Many investors are ignorant and rather than playing an active role in monitoring the management aim on stock dumping. The roles of these outside investors are uncertain and vary across various companies (Jensen and Warner, 1988). Thus stock ownership is effective only if the stocks held are concentrated in a hand of few shareholders and also that the shareholders are active in monitoring the management of the firm. Also executive compensation, ownership structure and board composition are dependent on each other and vary on the type of firm (Jensen and Meckling, 1976). Mehran (1995) in his paper states his findings on ownership structure. One of his findings states that the compensation of managers is in the form of equity, if there are a higher percentage of outside directors appointed in the board. However, very little research has been done on the ownership structure of compensation.

The literature about the ownership structure does not just revolve around the management or executive directors but also the non-executive owners (outside investors or blockholders). These outside investors who hold some significant proportion of equity stakes in the particular firm, have a right to monitor and influence the working in that particular firm. The role played by these investors is very crucial for the success of governance mechanisms in a firm (Shleifer and Vishny, 1997). These non-executive owners not only monitor to enhance the performance of the company but also the benefits of other investors (Holderness, 2001). As stated earlier this ownership of equity among outside investors has an impact on the actions of a firm. However the positive impact of these outside block holders is mixed since it depends on their activism. Lack of activism on behalf of the outside investors may lead to less monitoring and hence poor performance in the firm. In sum, non-executive owners being active can alter a few actions in the firm but not necessarily enhance the performance (Romano, 2000).
4) Managerial Labour market

Labour market is yet another mechanism used to discipline the management in the firm (Fama, 1980). Today all firms experience intense competition both in terms of internal and external pressure. The labour market gives more importance to the managers which work in the interest of the shareholders and enhance the performance of the company which in turn leads to the increase in share prices of the company. However, self centred managers are valued less and are threatened to lose their jobs. Also if the management of a firm is well established in the market, they can compensate themselves irrespective of their performance and thus holding their jobs. However this will have a lower value in the outside market.

Also if the inefficiency of the management comes in the way of selling the products of the company as per the needs of the consumers and within the cost structure, it can create financial distress in the company. It can weaken the performance of the company and may also lead to bankruptcy, which in turn will mean a loss of investors. Thus market competition is one of the best mechanisms for good corporate governance (Jensen, 1993).

In the next section, the benefits of good corporate governance are looked at.
2.2.3 Benefits of good corporate governance

The impact of good corporate governance can be enumerated based on four major components: Ownership structure and influence, financial investor’s rights and relations, financial transparency and accountability and board structure and process (Shleifer and Vishny, 1997).

1) Ownership structure and influence:

As stated earlier, it is observed that the holdings of common stock are dispersed among shareholders due to which they have very little interest in the monitoring of the firm and corporate governance is a mechanism through which their rights can be protected. Ownership structure helps the shareholders to monitor and influence the management which in turn aligns their interests and determines the transfer of wealth between the two parties (Gibbs, 1993). This in turn helps to reduce or minimize the level of risk or fraud, since it presents a system by which, the shareholder can review the risk and assess the projects well.

2) Financial Investor’s rights and relations:

Corporate governance can help the shareholders to protect their rights against expropriation against the insider management of the firm (La Porta et al, 2000). The main reason why outside investors finance a firm is because their rights are protected within a firm that is regulated with good corporate governance mechanisms. However, sometimes the managers use the cash flow of the firm for their own personal benefit and take the investors for granted (Jensen and Meckling, 1976). Good corporate governance enables the investors to safeguard their rights and have the power to change the directors, to force the payment of dividends and also to restrict a project if that benefits the insider management on the cost of outside investors (La Porta et al, 2000). This enables the investors to gain cash from the insider management. Thus, corporate governance reduces the risk perceived by shareholders by protecting their rights making it easy for firms to raise finance.
3) Financial transparency and accountability

Financial transparency will ease and facilitate the monitoring actions of the management for the shareholders since it reduces the asymmetry in information between the firm and the investors. Managers will not act opportunistically since they will reveal timely information needed, and not withhold any adverse information. As a result, the firm will be looked as a low risk firm by the shareholders. Also it can enhance the performance of the firm due to clear accountability and can link reward to better performance, thus motivating the firm to perform even better (Demsetz, 1983; Singh, 1990).

4) Board structure and Process

Corporate governance is inclusive of certain aspects like, the board structure dealing with things like, board size and composition in terms of the proportion of number of outside and inside directors, board leadership, how knowledgeable and experienced the board members are, the number of outside directors and their competency and the rewards linked with the performance for the long term success of the firm. These aspects highlight the ability of the board to provide independent understanding of the performance of the firm and the actions which are held liable for the protection of rights of the shareholders (Gibbs, 1993). Also if a greater proportion of outside directors are included in the board the greater is the monitoring on the management of the firm. Thus the investors face less risk and the involvement of the outside directors help to provide unrestricted and political assurance towards the firm (Fama, 1980).

The following subdivision will look at some of these board characteristics and its effect on performance as a whole which is the main part of our study. This section will explain certain aspects necessary to understand the latter part of the dissertation and will look at board structure and process in detail.
2.3 Board Characteristics and its effect on corporate Performance

2.3.1. Overview

Recent high level corporate collapses, have suggested the importance of corporate governance and the board of directors as an integral part of the governance in large corporations (Bennedsen et al, 2008). The board of directors have a dominant position in the current corporate governance debates. The main duties of the board are to monitor the management, to hire or fire the managers, to set executive compensations and align the interests of the managers and the shareholders (Baysinger and Butler, 1985). The main important function of the board, is to safeguard the rights of the shareholders and resolve the agency conflict. Despite the prominence of study in this aspect, the managers still do not act in the best interests of the shareholders. This can be due to various reasons:

a) the managers could act opportunistnic and invest in unprofitable projects rather than paying dividends to the shareholders, b) since the managers have their finances linked to the capital of the firm, they bare risk and are risk averse as compared to the shareholders who are well diversified, c) managers are very narrow minded and produce immediate short term results in contrast with the shareholders who make their decisions based on long term results. All these suggest a manager – shareholder conflict which is called as an agency problem (Vafeas and Theodorou, 1998).

It is important to research on board structure since it's such an integral part of the governance system. However, the study of the same is very complicated. The main reason being, that various researchers have resulted in different and competing theories and the corporate laws along with the theory are majorly silent about the composition of board, size, compensation of directors, time, frequency of meeting and so on (Baysinger and Butler, 1985). This led to diversity in various elements mentioned above leading to differences in the board.

Various theories have different contributions to the theory of corporate governance. All these theories aim on one aspect i.e. to link the characteristics of the board and firm performance. Agency theory is the most widely used theory of corporate governance that involves the aligning of interests and resolving the stakeholder-
management conflict (Jensen and Meckling, 1976). Thus, this theory illustrates that there is a conflict of interests among the managers and the shareholders (Fama and Jensen, 1983). Agency theory has certain implications and recommendations to solve the agency problem in firms. A clear implication of this theory is to monitor and control the management of the firm to avoid the conflict of interests between the managers and the shareholders (Fama and Jensen, 1983). It also leads to standard recommendations for the board to hold majority independent and outside directors on the board (Non-executive directors) and the position of the CEO and the chairman should be held by different individuals (Bosch, 1995).

In contrast to this theory, stewardship theory states that managers are trustworthy and responsible hence are good guardians of the firm (Donaldson, 1990). It assumes that the insider managers in the firm have good knowledge about the firm and hence can take better decisions than the outside directors. Since they are honest and reliable they are assumed to maximise shareholder wealth. The managers will not act in their own personal benefit since they would not want to jeopardize their positions in the firm. Under this theory, the recommendations are that there should be more proportion of insider directors and the duality in position of the CEO and the chairman is considered as a positive strength to enhance the performance of the company (Donaldson and Davis, 1991).

In this context, countries like the US and UK also have contradictory but two different rules for the non-executive directors. Firstly, the non-executive directors are expected to have the same duties like the other executive directors and hence be on the board full time. Contradicting this, the non-executive directors should be independent as compared to their colleagues so as to have a self-determining role. The main reason for this is because the outside directors have certain duties like monitoring the management closely so as the rights of the shareholders are not misused, to set the executive compensation, supervising the quality and reliability of the financial disclosures and accountability of information and disciplining the executive directors if they are underperforming (Sullivan, 2000).

Thus it can be inferred, that various corporations have differences in terms of their functioning, objectivity, the composition of their boards, the control and power of the non – executive directors to monitor the management and safeguard the rights of the
shareholders and various other mechanisms. However, we can conclude by saying that corporate governance is shareholder oriented irrespective of the different theories or corporate laws. It can be considered that managers can be disciplined by various internal and external mechanisms.

Mentioned below are some of the major characteristics of the board.

2.3.2. Major characteristics of the board

2.3.2. a. Board Composition, structure and functions

The performance implications of board structure and composition have been evaluated in a growing body of organizational research, (Chaganti, Mahajan, & Sharma, 1985; Hill & Snell, 1988; Kesner, 1988; Kesner, Victor, & Lamont, 1986; Kohls, 1985; Mattar & Ball, 1985; Norbum, 1986; Vance, 1983). The role of the board is typically controversial in the presence of different types of mechanisms to control agency costs in corporations (Baysinger and Butler, 1985). However, primarily the role of the board of directors is viewed in the earlier subsections as a solution to the issues of the manager-stakeholder conflicts (Oviatt, 1988). It is the role of the board to provide the shareholders with reliable information about the company’s performance and the risk taking ability of the management which will lead to shareholder wealth maximisation (Cadbury Committee, 1992). The board of directors thus have the right to hire, fire, set the compensation of managers and monitor and control the actions of the management for the welfare of the shareholders. Thus, we can infer that the board is a vital part of the governance structure that reduces the conflicts caused due to the agency problem. As argued by Williamson (1985), "the board of directors should be regarded primarily as a governance structure safeguarding between the firm and owners of equity capital and secondarily as a way by which to safeguard the contractual relation between the firm and its management" (p. 298, emphasis added). To this secondary role of governance of the board, insider or executive directors play a very crucial role.

In order to understand the effectiveness of board, it’s necessary understand the structure and function of board and its relation to protecting shareholder interest. As stated by Zahara and Pearce (1989), board performs simultaneous functions related to service, control and strategies. Thus, thorough understanding of roles of boards and their functions should go beyond a distinction of independent or non-
independent. An integrative model of corporate governance, in a theoretical
development as argued by Zahra and Pearce (1989) that incorporates the resource-
based, the class-hegemony, agency views of corporate governance and legalistic
views. In identifying the board structure and composition in terms of its three
important roles: such as oversight, service and strategy, the firm’s external
contingencies such as industry, competitive environment, and legal environment
would interact with firms’ internal contingencies such as life cycle, CEO style, size
and resources. The functions related to oversight links to managerial monitoring,
interest of shareholders and performance of the company (Carpenter, 1988; Chapin,
1986; Ewing, 1979; Linck et al. 2005; Louden, 1982; Mattar and Ball, 1985; Mueller,
1979; Vance, 1983; Zahra and Pearce, 1989). The key roles of board members are
strategic decision making and advising executives (Bavly. 1985; Estes, 1980;
Kreiken, 1985; Harrison, 1987; Rosenstein, 1987; Schmidt and Brauer, 2006;
Tashakori and Boulton, 1985; Waldo, 1985; Zahra and Pearce, 1989) and role
related to service would increase the reputation of company, external contacts would
be strengthened, strategic bonds are facilitated with important entities (Carpenter,
1988; Leibowitz, 1978; Louden, 1982; Swaminathan and Moorman, 2003; Vance,
1983; Zahra and Pearce, 1989). As argued by Zahra and Pearce (1989), that the
board members unique individual characteristics and three primary roles would
enhance functions of the board. Furthermore, strategy development are the
important area, where some board members may contribute while others may be
involved in providing technical expertise, service etc. Monitoring function can be
performed by an independent director and they can also provide knowledge and
expertise in specific areas such as decision making process, information access and
legitimacy which are valuable resources to the company.
The board of directors are often portrayed as a legal body when active rather than a
collection of separate individuals who have different functions. Here the researcher
would like to explain the different types of directors that constitute the board on the
basis of their functions. Directors are individuals who serve useful purposes along
with strategic implementation apart from just the pure governance function
emphasized in economic and law literature (Mace, 1971). There are mainly two
types of directors as discussed earlier; the inside directors also called as executive
directors and outside directors who are referred as non-executive directors.
The first types are full time executives in the firm along with being the members of the board. The involvement of executive directors in the board is also depicted as a strategic advantage since they can reward their subordinates, communicate information about the firm from the top management to the non-executive directors during board meetings and provide an opportunity to discuss matters relating to performance, top management or the potential of budding junior executives (Mace, 1971; Gibbs, 1993).

The second type of directors called the non-executive directors facilitates board’s authorization to the strategies of the management, monitoring the performance of the firm and implementation of strategies that lead to welfare of the firm and the shareholders (Fama and Jensen, 1983). They are not uniform in terms of their function, relationship and knowledge. These directors can be categorized further into two types: affiliated and non-affiliated outsiders. The former types are the ones that have secured a place on the board due to their prior connection with the firm like they could be prior executives of the firm; they could even be suppliers or customers. The latter type are also called as independent non-executive directors. These directors have no other relationship with the firm, except their fees and stock ownership in the firm (Cadbury committee, 1992).

However, significant importance is associated to the role of these independent individual directors on the board. These outside directors may have several qualities like leadership, judgement along with some differences in terms of their expertise (Pfeffer, 1972). For instance directors with financial link on the board can give easy access to credit and provide financial advice. They are jointly called as grey directors. Also as mentioned above these directors could also be customers and suppliers, in order to connect with different organisations (Pfeffer, 1976). This helps in coping with competition in the market and coordinating pricing strategies.

As a starting point while examining board composition, three pivotal ideas are assumed, first, at the same time, different tasks will be performed by corporate boards, secondly, within the board each director plays a role by providing knowledge and skills and finally, according to the company characteristics and of their environment, corporate boards perform their tasks (Rindova, 1999). As noted by Sullivan (1990), there is a wide variability to the capabilities to their problem solving
skills, professional experience and exposure to business and thus, each board member could differ in their contribution to the firm. Subsequently, in terms of choice in strategic decision making, each board member brings great variety to a firm. Thus, in combination with experience of the managers of the firm and also expertise, brings a smooth structure on decision making.

Corporate governance is inclusive of certain aspects like, the board structure dealing with things like, board size and composition in terms of the proportion of number of outside and inside directors, board leadership, how knowledgeable and experienced the board members are, the number of outside directors and their competency and the rewards linked with the performance for the long term success of the firm. These features significantly highlight the capability of the board to provide independent and thoughtful understanding of the performance of the firm and the behaviour which is held responsible for the protection of rights of the shareholders (Gibbs, 1993). Also if the proportion of the outside directors is greater on the board, the management of the firm is monitored closely. Thus the level of risk faced by the investors is reduced and the involvement of the outside directors helps to provide unrestricted and political assurance towards the firm (Fama, 1980).

As emphasized by corporate reformers and legal scholars, in order to have efficient governing body, the board should be comprised of independent directors. This was also further emphasized by economists that a board with a collective nature should include both executive and non-executive directors (Fama and Jensen, 1983). As latter plays an important role in facilitating the authorization of management strategies along with performance monitoring and its progress towards implementation of these suitable strategies (Fama and Jensen, 1983; Williamson, 1985). Thus, the structure of the board has been viewed as a governing body within firms and the proportion of both the executive and the non-executive directors is considered important.

In addition, the management and administrative science literature also emphasized the importance of individual directors as these directors act as facilitators of strategy implementation and formulation. Apart from pure governance function, insider as well as outside directors also serves in formulating and implementation of strategy as stressed in the literature of law and economics (Mace, 1971). It is also emphasized that there are various other qualities that are possessed by these directors. These
qualities comprise of leadership skills, maturity, qualities of judgement and so on. Apart from this, directors also hold attributes, which are related to their occupation. For example, directors who are represented from the institute of finance may provide useful information related to credit and other financial market issues (Mace, 1971). In addition, in order to rationalize some of the problems related to exchange, it is common to call individual members from different independent organizations.

Thus while the board is an essential part in the governance structure of the firm, directors also performs various tasks as individuals for enhancing the performance of the firm. This shows that the board consists of different individuals and the selection process of each type of individual is crucial to the performance of the firm. Thus, the composition and structure of the board and its process is a key to financial performance and the success of a firm. Sometimes the board can be used to train the chief executive officer (CEO) as well. The main aspect of board composition is to study the proportion of independent directors included in the board. We will now see the impact of board size, diversity and the impact of non-executive directors on a firm’s performance in the following sections.

2.3.2. b. Effect of Board size on performance

Stimulated by the failure and overhauls of large business corporations like Enron, WorldCom, General Motors, IBM and Time Warner the relation between board structure i.e. reducing the size of the board and its effectiveness on performance has received much attention. There is a vast amount of space devoted to the influence of the top management due to the executives, the monitoring by the directors, takeover threats and other governance mechanisms. However, little empirical work has been done on the influence of the size of the board on corporate performance.

Yermack (1996) undertook the first empirical research of effects of board size on the performance of the company. For the purpose of his study, he examined 450 US firms from 1984 to 1991. This study demonstrated negative effect of board size on performance. According to Lipton and Lorsch (1992), directors do not generally criticize the decisions of the managers or hold strong decisions that favour the performance of the organisation. They suggest that these issues increase with the increasing number of directors. Even though monitoring is assumed to be efficient with a larger board size, the benefits are outnumbered by drawbacks like slower
decision-making process, lack of important decisions for the progress of the management, the directors being risk averse and increase in free rider problems. Jensen (1993) also states that with a larger size of the board, directors lay emphasis on politeness and consideration rather than truth and honesty. The results of his study also state that a board with more than nine members is ineffective and gives CEO’s the power to control. A larger board can increase the agency problems in a firm thus making it easy for the CEO to control and influence the decisions of the firm and become more powerful (Cheng, 2008). Overall, the negative effect of board size on the performance of the firm is confirmed by these group of researchers.

However, there is another group of researchers that state contradictory views about the effect of the size of the board and the performance of the firm. This group of researchers are of the view that a larger board size will bring in directors from diverse backgrounds and different set of knowledge, thus enhancing the performance of the firm. Also larger boards are meant to be more cautious in decision making process for the firm, since any mistakes made would be costing them their reputation and the losses for which are higher than any other personal gains. According to Goldien and Zajac, 2001 boards that are smaller in size face lack of any initiative in making a strategic change in the firm, or the lack of understanding and confidence of making any change. Using variables like the CEO turnover and director appointments to examine the effect of board composition on performance of firms, researchers like Weisbasch (1998); Hermalin and Weisbach (1998) obtained positive results between the two variables. Byrd and Hickman (1992) and Shivdasani(1993)has also confirmed a positive relationship between the size of the board and the performance of the firm.

There is a third group of researchers that state that the relationship between the two variables namely the size of the board and the performance is an inverted U shaped curve. These researchers state that the performance of the firm is positive until the size of the board goes beyond the optimal point (Goldien and Zajac, 2001 and Vafeas, 1999). As per the cognitive perspective on governance, a board is responsible to face complex issues and tasks (Forbes & Milliken, 1999) and the directors of boards help a lot by contributing with their cognitive abilities such as scanning, interpretations, and better choice (Rindova, 1999). Thus, the argument arising from cognitive perspective suggests that the number of outside directors is
positively related with the performance. Forbes and Milliken (1999) further discusses
that with the larger board size, the power and cohesiveness of the board members
may start decreasing and that will decrease the ability to use the cognitive skills and
knowledge of the board members. Similar literature suggests that large board size
and diversity in directors may dissipate the power and cohesiveness of the board
and that will obstruct the strategic involvement of the board directors in decision
making and performance (Finkelstein & Hambrick, 1996). Taking consideration of the
demand of strategic involvement of the board members being positively related with
the CEO perceptions of the effectiveness of board's decision making, it can be said
that a inverted U-shaped relation is likely which suggests that the effectiveness of
board's strategic participation increases with the increase in size of board up to a
point. After reaching this peak point, the effectiveness of board's strategic
participation starts decreasing with the increase in number of board members
(Fiegener, 2005). This third group of researchers thus incorporate both the ideas that
suggest positive growth in performance with increase in board size and decline in
performance with increase in board size beyond a particular optimum level.

There were another set of researchers that stated there was no link between the size
of the board and the performance of the company. Hermalin and Weisbach (1991),
Fosberg (1989) and Klein (1996) all fail to confirm any relation between the
composition of the board and performance.

However there is one problem in studying the effect of board size, since the number
of directors can vary in different firms. This problem arises endogenously as a result
of the elements like size, performance of the company, and the needs of the CEO
and so on. Sometimes the CEO’s might deceive the shareholders by including
independent directors in the firm illustrating a picture of an active monitoring system
(Byrd and Hickman, 1992). Often the size of the board also depends on the
willingness of the CEO’s in the firm. Thus we cannot directly accept the association
of board size and performance without specifying alternative explanations. Also the
optimum level beyond which the effect of board size and performance illustrates a
negative relationship due to the inverted U shaped curve would be difficult to find,
since the exact number of directors to be included in a board of a specific firm is also
uncertain. Each firm has to decide and find a perfect trade-off between the benefits
of having adequate capabilities and the costs arising due to the ineffectiveness of the
directors. The number of directors for a small or medium sized firm ranges from three to five (Jensen, 1989).

Based on these contradictory views regarding the effect of board size and performance, the lack of a conceptual model for the optimum level of members to be included in the board, the potential advantages and disadvantages of having a larger diverse set of members on the board, the researcher has formed the first and the third hypothesis for this dissertation.

2.3.2. c. Board diversity

As mentioned earlier, board of directors is the fundamental part of internal governance mechanisms that intend to closely align the interests of the managers, stakeholders and monitor the actions of the management. One of the major governance issues faced by firms today is the diversity in these boards in terms of their age, gender and independence. Diversity can be typically distinguished into two aspects: observable diversity (Demographics) e.g. age, ethnicity, race, gender and non-observable diversity (Cognitive) e.g. perceptions, values, beliefs (Watson and Merritt, 1998).

The vast literature on diversity and performance has in general some contrasting perspectives. Some researchers suggest that diversity can be a potential advantage; while others contradict by saying diversity can be a disadvantage as well. We first look at the advantages and then study the disadvantages mentioned by some researchers.

Usually the impact of diversity on performance focuses on demographic or observable diversity i.e. age, gender, race. Some researchers suggest that diversity is an advantage since it leads to a wider base of knowledge, vision and innovation which in turn acts as a competitive advantage (Watson and Merritt, 1998). It also leads to better performance of the firm since the directors encompass different skills and expertise from diverse fields. There were several other studies carried out based on diversity and firm performance in terms of cultural diversity, experience diversity, cognitive diversity, and educational diversity and so on. Similar findings were suggested by Simons and Pelled (1999) and they reported that there was a positive link to educational and cognitive diversity to that of the performance of the firm.
Maznevski (1994) also studied that group diversity is positive related to the performance of the company. She stated that group diversity is a potential advantage in terms of decision making, integration and communication. Also the work of Siciliano (1996) was based on 240 YMCA organisations for the comparisons of diversity within the board. The findings suggested that gender diversity plays a positive role in the performance of the company and more funds were raised for social welfare.

However there have been several researchers who have contradicted these findings. They state that diversity can have its own limitations as well. The findings of Hambrick et al (1996) were based on the performance of the top management team and diversity was measured in terms of their functions, education and tenure. He suggested that homogeneous group members outperformed the heterogeneous groups. The heterogeneous groups would disagree to decisions, act slowly thereby weakening the team. Researchers like Knight et al (1999) and Treichler (1995) have concluded that diversity is negatively related to performance, since it makes the process of decision making slower and increases the expenditure of satisfying the needs of different teams thus affecting performance. In sum, it appears there is some vague evidence about the effects of diversity on the performance of the firm.

Finally Murray (1989) based his study on 84 Fortune 500 companies to compare the role of heterogeneous and homogenous groups and their effect on organisational performance. The results suggested that the link between performance and diversity depends on the type of market the organisation is operating in. The findings state that in a situation of intense market competition homogeneous groups outperform the heterogeneous groups. On the other hand heterogeneous groups performed better when the firm was undergoing a change suggesting that this group can respond to a dynamic market change.

Although there has been mixed evidence regarding the link between diversity and performance, diversity is desirable due to two reasons. First it increases the discussions, helps in the exchange of ideas and improves group performance (Watson and Merritt , 1998). It provides new insights and perspectives thus improving the performance of the board and the firm. Lastly, if we state that the role of the board of directors is to align and protect the interests of the stakeholders, then
it is rightly said that the board should consist of members that represent these stakeholders (Huse and Rindova, 2001).

2.3.2. d. The impact of Non – Executive Directors on corporate performance.

An important aspect of the governance practice is monitoring the actions of the management which is the role of non-executive directors. It is a crucial part in the composition of the board. The role of the non-executive directors to monitor the behaviour of their colleague executives is primary to the governance angle of a firm (Baysinger and Butler, 1985). These directors identify with the interests of the shareholders since they invest their reputation capital in the firm. Since they are professionals and excel in their field of knowledge, they can help in making the right decision for the firm and restrict the management if it acts in their own self-interest (Cadbury, 1992). It is recommended to have a certain minimum number of outside directors on the board, and these members should play an active role in the areas of conflict within the firm which are likely to rise (Cadbury, 1992). A large proportion of empirical research and findings have attempted to evaluate the contribution of non-executive directors to a firm.

The findings of Pettigrew and McNulty (1995) were based on 200 UK companies both industrial and commercial and 50 financial institutions. He studied the influence of part time board members primarily non-executive directors on the firms. These part time members were either non-executive directors or/and chairman of the firms. From his study, he inferred that the power and the influence of these members depends on a set of simultaneous and interrelated effects of structural factors, position, expertise and willingness to transform potential power into actual influence. A great deal of research has also been carried out on the impact of shareholder welfare due monitoring and the contribution of non-executive directors or also their impact of resolving conflicts due to differences in interests among the shareholders and the managers. Baysinger and Butler (1985) through their findings suggest that number of non-executive directors have a positive but a delayed impact on the financial performance of the firm. This was also supported by findings of researchers like Schellenger et al (1989) and Pearce and Zahra (1992). There were several findings illustrated by various other researchers too. For example, Hermalin and Weisbach (1988) found that companies would replace the executive directors by a
number of non-executive directors after a sequence of poor performance. While on
the other hand Rosenstein and Wyatt (1990) state that, the announcement of non-
executive directors helps to increase the share price of the firm. Weisbach (1988)
also illustrated that the number of non-executive members are directly related to the
replacement of CEO’s by the non-executive directors due to their underperformance.
This behaviour of the non-executive directors in replacing the CEO’s has been
studied by a number of researchers as well. The replacement of CEO’s due to their
poor performance in the firm, and the appointment of the non-executive director’s
leads to a considerable progress in the performance of the company and
shareholder wealth (Borokhovich, 1996).

The evidence of these several studies carried out by researchers strengthens the
power and influence of the non-executive directors on firms.

However, there are several researchers that state that the link between the number
of non-executive directors and the performance as negatively related. They state that
although the non-executive directors bring different expertise and a vast source of
knowledge, it is very difficult to convert this to value for the organisation. Sometimes
the impact of non-executive directors is negative since the company gives them no
importance and counts them under the level of the board. This was supported by the
findings of Lorsch and Maclver (1989).

Given the available evidence about the presence of a large proportion of non-
executive directors and the positive and negative impact on the shareholder wealth
and performance of the company, it is important to note that various researchers did
not find any relation between the composition of the board (i.e. non-executive
directors) and the performance of the company (Sullivan, 2000). Various firms do not
Cadbury Code and have few non-executive directors on the board. These firms have
a further inclination towards one troop leadership structure within the organisation.
However; surprisingly it was examined in their study that the firms that do not
comply with the Cadbury Code are more likely to survive than the firms that follow
the suggestions of the Code. The non-executive directors are required to excel at
good decision making process and the executive directors on the other hand are
supposed to cover good management skills (Vafeas and Theodorou, 1998). These
conflicting roles of the non-executive and executive directors explain the failure of

Based on these contrasting views of the researchers about the impact of non-executive directors on the performance of the firm, the researcher sets the second hypothesis of this dissertation.
2.4. Conclusion

As per the literature review mentioned above, it is clear that the board of directors are a pivotal part of the composition of the firm which in turn is central to set the governance mechanisms in a firm. However there are several contradictory views for the size of the board and the number of non-executive directors and their effect on performance. The researcher has studied the board level literature in particular and hence has put forth the following hypothesis:

Based on the contradictory opinions on size of the board:

**Hypothesis 1:** Larger board size would enhance the performance of the firm as it would have a valuable blend of directors from diverse backgrounds with different expertise. Thus, larger board size would lead in better strategic decisions and hence positively affect the performance of the firm.

Based on the contrasting opinions on the number of non-executive directors:

**Hypothesis 2:** Larger the number of non-executive directors greater the independence and improvement in the performance of the company since these directors will focus on the core business of the firm.

**Hypothesis 3:** The board's strategic participation in a company is related with the board size in an inverted U-shaped curve. A company with a modest board size will have greater strategic participation of board members and hence, better performance than in a company with lesser or much more number of board members.

Thus, the literature review in this chapter leads to form the methodology based on the above mentioned hypothesis explained in the next session.
Chapter 3: Methodology

3.1. Introduction

Methodology can be defined as “The analysis of, the rationale for, the particular methods or methods used in a given study” (Jankwicz, 1995). This chapter looks at the method used by the researcher for the purpose of the dissertation. It includes different sections and explains details of the sample selection of data, the advantages of the research methodology used, the criteria for using secondary data and further analysing the method used to analyse the output.

3.2. Sample selection of data

This study aims at testing the three hypothesis mentioned above in the previous chapter. The first and the most important decision made in order to test these hypothesis was the use of secondary data through the annual reports of selected companies. This decision made by the researcher was based on logic and rationale since it would be difficult to collect primary or original data to test the mentioned hypothesis. The research available for this topic is vast which in turn has helped the researcher to identify the methodology that can be successful. A review of the data collected through secondary research helps the researcher to decide what needs to be done and what can be done. Thus, data collected from secondary research can be a rich basis to test the hypothesis (Malhotra, 2005).

For constructing a data set to test the hypothesis, the researcher has selected 40 FTSE 100 companies. Since they are all listed on the London stock exchange they comply with the corporate governance code. The sample set is heterogeneous since the companies selected are from different industries. This heterogeneous sample can lead to richness in data and provide an overall look for the UK companies as a whole. The full list of the sample companies along with the websites is given in Appendix 1.
3.3. Advantages of secondary data collection

The data that is not obtained originally and is collected with the help of published and unpublished sources is called secondary data (Gupta, 2008). There are several advantages in the collection of secondary data:

Firstly it is easy and convenient to collect information; it is relatively inexpensive than the process of collection of primary data and it is easily accessible. It also helps the researcher define a specific problem, identify and recognise the problem, have a better insight to approach and solve the issue, formulate an appropriate design for the identified variables, test the hypothesis and thus enable to answer the research question (Malhotra, 2005, pp.131).

3.4. The use of balance sheet variables.

For the purpose of the dissertation, the researcher has used the annual reports of the sample UK companies. For a better understanding and use of the model described above, the researcher has taken into account the comparison between two years 2006-2007 and 2007-2008. The researcher has used some variables from the income statements and other sections relating to the board of directors from these sample companies. These variables are as follows:

- Profit before tax (Dependent Variable)
- Operating Profit (Dependent Variable)
- Total no of directors on the board (Independent variable)
- Percentage of non-executive directors on the board (Independent variable)
- Turnover (Control Variable)
- Squared Board Size (adjusted squared total no. of directors on the board) (Independent variable)
3.5. Measures adopted for the proposed hypothesis

The researcher has used the multiple linear regression method to test the hypothesis since the model includes regress and variable depending on more than two variables. Thus, in short, multiple regression models are a technique that helps to examine the relationship between two or more variables at one time (Hair et al, 1998). The main objective to test the projected hypothesis with this method is to identify the effect of independent variables on the dependent variable. Thus, multiple linear regression models are suggested in this scenario.

The utilization of this technique helps to analyse the relation of independent variables to the dependent variables all of which are identified in our study. Also the significance of each can be tested. The co-efficient attached to each variable (Independent variables) indicates the percentage change in the dependent variable with every one unit change in the independent variable. Furthermore, as the case of research is of multiple linear regression, the researcher would like to check whether the board size and the dependent variables namely profit before tax and operating profit are in linear regression or are they in polynomial regression, and if they are in polynomial regression, do they further show an inverted U shaped relationship.
Conclusion:

Based on the methodology described above to support the hypothesis, the next chapter further looks at the results and findings of the regression model.
Chapter 4: Findings and Results

4.1. Introduction

This section includes the findings and the results of the regression analysis carried out using the SPSS 15 statistical software. The results are shown in the table format in the following sub-sections for clarity and better understanding. In addition, the researcher has illustrated a detailed explanation of the data collected (findings of a multiple regression model). Multiple linear regression analysis was carried out in order to find out an association between board of directors (Board size) and the percentage of non-executive directors with operating profit and profit before tax as indicators of corporate performance of the firm. In order to check whether there is a possible inverted U shaped relation between the squared term of board size and its regression over profits before tax and the operating profit, a square term of the Board size has been added. Since there was a wide variation within these dependent variables, these variables were transformed into logged versions. Turnover of companies (independent variable) was directly associated with performance of the firm, thus, this was also added in the model as a control variable. However, there was a wide variance for this control variable, thus, turnover variable was checked for heteroskedasticity and transformed into its logged version and adjusted while performing the analysis.

*Note: It would be important to note and highlight the point that variables like profit before tax, operating profit and turnover are the logged versions. Profit before Tax would thus mean the logged profit before tax, operating profit would mean logged operating profit and turnover would mean logged turnover of firms.*
4.2. Table 1. Multivariate analysis with special reference to logged operating profit for the year 2006-07

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dependent variable: Corporate performance of firms</th>
<th>Logged operating profit for the year 2006-2007</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β-coefficient</td>
<td>SE</td>
</tr>
<tr>
<td><strong>Independent variables: Multivariate model</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>-0.825</td>
<td>0.722</td>
</tr>
<tr>
<td>Board of Directors</td>
<td>-0.034</td>
<td>0.045</td>
</tr>
<tr>
<td>Squared Board of Directors</td>
<td>-0.019</td>
<td>0.018</td>
</tr>
<tr>
<td>Non executive Directors, %</td>
<td>0.018</td>
<td>0.008</td>
</tr>
<tr>
<td>Turnover 2006-07**</td>
<td>-0.747</td>
<td>0.607</td>
</tr>
<tr>
<td>R Square</td>
<td>0.160</td>
<td>*</td>
</tr>
<tr>
<td>Adjusted R square</td>
<td>0.091</td>
<td>*</td>
</tr>
</tbody>
</table>

* Not applicable SE – Standard Error of Mean; Multivariate model: Included board of directors, percentage of non-executive directors, squared board of directors and **logged turnover.
Table 1 shows the multivariate analysis with corporate performance of firms with special reference to logged operating profit for the year 2006-07. The researcher included dependent variable as logged operating profit and independent variables as board of directors and percentage of non-executive directors and logged turnover along with squared terms of board of directors and percentage of non-executive directors.

The important elements to be used in the assessment of the regression model are described in detail for Table 1, since the same will be applicable to all the cases.

**R-Square:** As explained earlier, R-square is the measure of how well the regression line fits the data. It is also termed as the coefficient of determination or the measure of “Goodness Of fit” (Gujrathi and Sangeetha, 2007). The value of R-square lies between 0 and 1 and closer the value to 1, the higher the explanatory power of the entire model. In table 1 the value of R-square is 0.160 which indicates that there is only 16% of change in the operating profit of the company explained by the board size of a company and this was mainly contributed by the percentage of non-executive directors (β=0.018, p=0.038). The value of R-square lies between 0-1, shows that model has an explanatory power. However, the non-decreasing property of R-square is a weakness due to which the change due to the increased number of independent variables can be further explained by the adjusted R-square.

**Adjusted R-square:** In case of any addition of new independent variables in the model, adjusted R-square is introduced to enhance the results obtained. As compared to R-square, adjusted R-square can increase or decrease with the introduction of additional independent variables. However, the change in adjusted R-square is dependent on the explanatory power and the significance of the newly added independent variables. In the table above adjusted R-square is 0.091, which shows that the explanatory power of the model still reduces with the increase of independent variables.

**F-Test:** After the review of R-square and adjusted R-square, it is important to test the model for statistical significance. There are two procedures namely the F-test and F-ratio to test the significance of the model. The F-statistic should be significant for the overall significance of the regression model. The F-statistical value in table 1 is 2.294.
along with a significance level of 0.094, which means a significant level greater than the acceptable level of 10 percent.

The regression Co-efficient associated with the model: The coefficient in a regression model, show the change in the dependent variable due to a unit change in the independent variable. SPSS labels these coefficients with the term B co-efficient. If the independent variable generates a larger B value, then the influence of that independent variable on the dependent variable is the most powerful. In the above table, the regression coefficient (B value) for the board of directors was -0.034, which states that with one member increase in the board, the performance of the firm decreases by 0.03%. However, a negative beta value also indicates, that there was a negative association between the total number of directors and logged operating profit for the year 2006-2007. In addition, the beta value is higher than the acceptable significant limit of 10% (p=0.457). This shows that there is a negative yet an insignificant association between the board of directors and the performance of the firm in terms of the logged operating profit for the year 2006-07. The regression coefficient of the squared board size was -0.019 also the beta value is less than 10% (p<0.001). Thus, a negative yet significant association is observed between the squared board size and performance of the firm. The regression coefficient of (-0.019) suggest that the performance of the firm decreased by 0.019% with each square unit increase in the board of directors.

The regression coefficient of the percentage of the number of non-executive directors is 0.018 taking logged operating profit into account, which states that with every one member increase in the number of non-executive directors on the board, the performance of the firm increases by 0.1%. In addition the beta value is less that 10% (p <0.1). Thus, positive and a significant association are observed between the percentage of non-executive directors and the performance of the firm.

Thus, a negative but insignificant association for the board of directors and a positive and significant association for the percentage of non-executive directors and performance of the firm along with a strong relation with the squared board size with performance of the firm, measured in terms of logged operating profit for the year 2006-2007. The intercept term is also negative. However, in our case it has very little economic meaning, since it does not represent any likely outcome. In short,
according to the findings in the above table, hypothesis 1 related to the size of the board (total number of directors) and the performance of the firm in terms of the logged operating profit, is rejected, while hypothesis 2 related to the percentage of non-executive directors and the performance of the firm has a positive association and is accepted. In addition, the significant relation between square terms and the performance of the firm also indicates that Hypothesis 3 is acceptable.
### 4.3. Table 2. Multivariate analysis with special reference to logged profit before tax for the year 2006-07

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dependent variable: Corporate performance of firms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Logged Profit Before Tax 2006-2007</td>
</tr>
<tr>
<td>β-coefficient</td>
<td>SE</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Intercept</td>
<td>-0.708</td>
</tr>
<tr>
<td>Board of directors</td>
<td>0.005</td>
</tr>
<tr>
<td>Squared board of directors</td>
<td>0.010</td>
</tr>
<tr>
<td>Non executive directors, %</td>
<td>0.013</td>
</tr>
<tr>
<td>Turnover 2006-07**</td>
<td>-0.012</td>
</tr>
<tr>
<td>R Square</td>
<td>0.804</td>
</tr>
<tr>
<td>Adjusted R square</td>
<td>0.787</td>
</tr>
</tbody>
</table>

* Not applicable SE – Standard Error of Mean; Multivariate model: Included board of directors, percentage of non-executive directors, squared board of directors and **logged turnover
Table 2 shows the multivariate analysis with corporate performance of firms with special reference to profit before tax for the year 2006-7. The researcher included dependent variable as logged profit before tax and independent variable as board of directors, percentage of non-executive directors and logged turnover (Control variable).

The R-square value was 0.804, which indicates that there is 80% change in the logged profit before tax of the company and adjusted R-square is 0.787, which shows that the explanatory power of the model still reduces with the increase of independent variables. In addition the F-value was 49.13 along with a significance level of 0.001, which means a significant level of less than 10 percent along with a positive impact on the performance of the firm. Thus the model is statistically significant.

In the above table, the regression coefficient (beta value) related to the total number of directors was 0.005, which states that with every one member increase in the board of directors the performance of the firm increases by less than 0.1%. In addition, the beta value is higher than the acceptable significant limit of 10% (p=0.383). Thus, positive but insignificant association indicated that there was no association between board of directors and logged profit before tax for the year 2006-2007. The regression coefficient related to square of total number of directors is 0.010 which suggest that 0.1% increase in performance was observed with a square unit increase in the board of directors and the beta value is lesser than the acceptable limit of 10% (p=0.098). Thus, a positive and a significant relation between square of board of directors and performance of the firm.

The regression coefficient value of non-executive directors was 0.013 after taking logged profit before tax into an account, states that with one member increase in the number of non-executive directors, the performance of the firm increased by 0.1%. In addition, the beta value is lower than the acceptable significant limit of 10% (p<0.001). Thus, positive and significant association indicated that there was an association between percentage of non-executive directors and logged profit before tax for the year 2006-2007.

Thus, a positive but insignificant association for the board of directors and positive but significant association for the percentage of non-executive directors and
performance of the firm, along with significant relation between squared board size and performance of firm, measured in terms of logged profit before tax for the year 2006-2007. The intercept term is negative. However, in our case it has very little economic meaning, since it does not represent any likely outcome. Thus according to the findings in table 2, hypothesis 1, relating to the board size and the performance of the firm has been rejected, while Hypothesis 2 relating to the percentage of number of non-executive directors to the performance of the firm has been accepted. In addition, the square term of board size has positive significant association with performance of the firm; hence, Hypothesis 3 seems to be reasonable too and hence accepted.
### 4.4. Table 3. Multivariate analysis with special reference to logged operating profit for the year 2007-08

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dependent variable: Corporate performance of firms</th>
<th>Logged operating profit for the year 2007-2008</th>
<th>β-coefficient</th>
<th>SE</th>
<th>T</th>
<th>F</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent variables: Multivariate model</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td></td>
<td></td>
<td>0.376</td>
<td>0.423</td>
<td>0.889</td>
<td>1.079</td>
<td>0.380</td>
</tr>
<tr>
<td>Board of directors</td>
<td></td>
<td></td>
<td>0.001</td>
<td>0.026</td>
<td>0.049</td>
<td>-</td>
<td>0.962</td>
</tr>
<tr>
<td>Squared board of directors</td>
<td></td>
<td></td>
<td>0.002</td>
<td>0.065</td>
<td>0.096</td>
<td>-</td>
<td>0.158</td>
</tr>
<tr>
<td>Non executive directors, %</td>
<td></td>
<td></td>
<td>-0.001</td>
<td>0.005</td>
<td>-0.169</td>
<td>-</td>
<td>0.866</td>
</tr>
<tr>
<td>Turnover 2007 – 08**</td>
<td></td>
<td></td>
<td>0.131</td>
<td>0.074</td>
<td>1.769</td>
<td>-</td>
<td>0.085</td>
</tr>
<tr>
<td>R Square</td>
<td></td>
<td></td>
<td>0.083</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Adjusted R square</td>
<td></td>
<td></td>
<td>0.006</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

* Not applicable

SE – Standard Error of Mean; Multivariate model: Included board of directors, percentage of non-executive directors and **logged turnover.
Table 3 shows the multivariate analysis with corporate performance of firms with special reference to logged operating profit for the year 2007-8. The researcher included dependent variable as logged operating profit and independent variable as board of directors, percentage of non-executive directors and logged turnover.

The R-square value was 0.083 which indicates that there is only 8% change in the operating profit of the company which is explained by the board size and the percentage of non-executive directors of the company. In addition, the adjusted R-square is 0.006, which shows that the explanatory power of the model still reduces with the increase of independent variables. The F-statistical value is 1.079 along with a significance level of 0.370, which means a significant level of greater than 10 percent. In the above table, the regression coefficient (beta value) related to the size of the board was 0.001, which states that with one member increase in the board the performance of the firm increase by less than 0.1%. However, a positive beta value indicates, that there was a positive association between the total number of directors and logged operating profit for the year 07-2008. In addition, the beta value is higher than the acceptable significant limit of 10% (p<0.962). Thus, positive but insignificant association indicated that there was no association between board of directors and logged operating profit for the year 2007-2008. The regression coefficient for squared terms of board members is 0.002, positive and very low, yet the p-value is with a significance level of 0.158, that is, lower than the allowed 10%. Hence, a positive and insignificant relationship between the total number of directors and logged operating profit for the year 07-2008.

The regression coefficient value of percentage of non-executive directors was -0.001 after taking logged turnover into an account, which states that with one percent increase in the non-executive directors, the performance of the firm decreased by less than 0.1%. In addition, the beta value is higher than the acceptable significant limit of 10% (p=0.866). Thus, negative and insignificant association indicated that there was no association between percentage of non-executive directors and logged operating profit for the year 2007-2008. Thus, all hypotheses are rejected for the year 2007-08 with special reference to logged operating profit.
4.5. Table 4. Multivariate analysis with special reference to logged profit before tax for the year 2007-08

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dependent variable: Corporate performance of firms</th>
<th>Logged Profit Before Tax 2007-2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β-coefficient</td>
<td>SE</td>
</tr>
<tr>
<td>Intercept</td>
<td>-0.861</td>
<td>0.174</td>
</tr>
<tr>
<td>Board of directors</td>
<td>0.013</td>
<td>0.011</td>
</tr>
<tr>
<td>Squared board of directors</td>
<td>0.026</td>
<td>0.023</td>
</tr>
<tr>
<td>Non executive directors, %</td>
<td>0.015</td>
<td>0.002</td>
</tr>
<tr>
<td>Turnover 2007 – 2008**</td>
<td>0.003</td>
<td>0.303</td>
</tr>
<tr>
<td>R Square</td>
<td>0.610</td>
<td>*</td>
</tr>
<tr>
<td>Adjusted R square</td>
<td>0.577</td>
<td>*</td>
</tr>
</tbody>
</table>

* Not applicable; SE – Standard Error of Mean; Multivariate model: Included board of directors, percentage of non-executive directors and **logged turned over for respective period.
Table 4 shows the multivariate analysis with corporate performance of firms with special reference to profit before tax for the year 2007-8. The researcher included dependent variable as logged profit before tax and independent variable as board of directors, percentage of non-executive directors and logged turnover.

The R-square value was 0.610 which indicates that there is 61% change in the logged profit before tax of the company is explained by the total number if directors (board size) and the percentage of non-executive directors. The adjusted R-square is 0.577, which shows that the explanatory power of the model still reduces with the increase of independent variables. In addition, the F-value was 18.748 along with a significance level of 0.001 which means a significant level of less than 10 percent. Hence, the model is statistically significant. In the above table, the regression coefficient (beta value) was 0.013, which states that with one member increase in the board of directors, the performance of the firm increases by 0.1%. In addition, the beta value is higher than the acceptable significant limit of 10% (p=0.233). Thus, positive but insignificant association indicated that there was no significant association between board of directors and logged operating profit for the year 2007-2008. On the other hand, the regression coefficient of the squared term of board size is 0.026, that is 0.026% of increase in profits with each square unit increase in number of board directors was observed, while the p-value is 0.098, that is, close to 10% yet smaller than 10%, hence a significant and positive relation between performance of the firm and square terms of board size. The regression coefficient (beta value) value of percentage of non-executive directors was 0.015 after taking logged turnover into an account, which states that with the increase of every unit of non-executive directors, the performance of the firm increases by 0.1%. In addition, the beta value is lower than the acceptable significant limit of 10% (p<0.001). Thus, positive and significant association indicated that there was a significant association between percentage of non-executive directors and logged profit before tax for the year 2007-2008.

Thus, a positive but insignificant association for the board of directors and the performance of the firm, measured in terms of logged profit before tax for the year 2007-2008 illustrates that hypothesis 1 is rejected. The intercept term is negative. However, in our case it has very little economic meaning, since it does not represent any likely outcome. Thus, overall we can infer that percentage of non-executive
directors has a positive impact on the performance of the firm and hence hypothesis 2 relating to the percentage of non-executive directors and performance is accepted. In addition, the squared terms of board size also have a significant relation with logged profit of the firm. Hence, a relative inverted U-shape relation between the independent variable board size and dependent variable performance of the firm is also visible, that is hypothesis 3 holds some gravity and hence it is accepted.
4.6 Conclusion:

In conclusion, overall, multivariate regression analysis showed that there was a strong and significant relationship with percentage of non-executive directors and Logged Profit before Tax than the logged Operating profit of companies. No such association exists for board of directors and performance of the firm measured in terms of logged profit before tax and logged operating profit. Also, a significant relation between squared terms of board size and the logged performance of the firm is present. In the next chapter, the researcher has explained these findings in detail and supported it with the existing literature.
Chapter 5: Detailed Analysis

5.1. Overview

Out of several studies detailed above, some have reported findings similar to this study while others have reported just opposite findings. The contrasting views not only invite discussion across studies but also possible explanations for the observed effects. Along with these differences in views about the composition of the board by various researchers, the absence of a theoretical model makes it difficult for policy makers and managers to generalize the benefits of a particular board size (Young, et al, 2005).

This chapter discusses the findings of this study in the light of previous studies and opinions and tries to ultimately reach to a consensus over the impact of the size of the board on performance. The findings of the present study are either supported with similar observations from previous studies or criticized with contrasting observations. The gaps in the literature are either explained based on new observations or suggested possible explanations. The researcher in this work has specifically aimed to comment on the possible effect of larger board size on performance and the effect of non-executive directors on the corporate performance of the selected sample companies along with the test for the inverted U shaped relationship between the size of the board and the performance of the company.
5.2. Does the size of board of directors affect corporate performance?

Our findings illustrated that a large sized board of directors does not improve performance of the firms. The β-coefficient in Tables 1-4 showed a very small either positive or negative value, however, the effect did not reach any statistical significance. Therefore, it is clear from our study that increasing the size of the board does not improve the performance significantly and there was no statistical link between size of the board and the performance of the company in terms of both logged operating profit and profit before tax. We tested the above hypothesis using both logged profit before tax and logged operating profit across two financial years (2006-07 and 2007-08), however, none supported the statement that larger board size improves the performance. Therefore, it is clear that increasing the size of the board is not essentially the key to improved performance.

At the same time, there are experts with opinion who believe that a larger board size would lead to a negative impact on the performance of the company. It has been stated that the negative impact could be due to several factors associated with a larger board such as slow decision making process, coordination problems and increase in agency issues like free rider problems (Yermack, 1996; Lipton and Lorsch, 1992). Sharing the above opinion, Cheng (2008) stated that larger board size gives the undue transfer of power in the hands of the chief executive officer (CEO). As stated above, the definition of the large or small board is what needs to be taken into account to really account for impact on performance as a matter of the size of the board. It is possible that the definition of small or large differs across the studies and it is therefore difficult to reach to a consensus. Our analysis did not support the view that increased board size may have adverse effect on performance.

The study of various researchers states that a larger board could have members from different backgrounds, who would bring different knowledge to ultimately help frame better strategies, seems quite strong. It is convincingly true that people with different opinions could give critical inputs in decision making, which could yield more user friendly policies, ultimately improving performance. Therefore, there must be very strong opponent factors, which may alleviate the effect of increase in board size, if the latter really improves the performance. Among several possible issues compromising or limiting performance in a larger board, the main issues are the
problem of communication and co-ordination within the organization. Apart from bringing in diverse knowledge, a larger board also brings in the possible conflicts the members could have on each other’s opinion. A decision, which could enhance performance and would have passed by majority may have some issues from few members such that the management has to either compromise with the point or have to altogether discard the idea. Therefore, the first and foremost conflicting issue with a larger board seems to be difficulty of reaching to a consensus on an issue. Failure of consensus between board members could raise several possible complications (Eisenberg, 1998). The first and primary complication could be failure to implement several good proposals, which could be key ones for the firm. Second important impact of failure of consensus could be wastage of time of the board. Suppose one or two members of the board have conflict on some issue, it could take time to make them understand the problem and proposed solution such that the same decision is taken in a longer time than usual, which again affects the performance. Third and most important could be the possibility of some possible and permanent conflicts between the members (Eisenberg et al, 1998). Once the board identifies a particular member who is often of different view, it could have negative impact on decision making such that the members overlook the performance over their personal issues with such a member. We were restricted due to time and the vastness of study to analyze the effect of size without taking into account the above parameters, thereby restricting our ability to figure out the responsible factor for not improving the performance with larger sized board.

It has also been stated that as the size of the board increases, the ability of the board to monitor the management of the firm decreases, thereby increasing the conflicts arising in the organization. Eisenberg et al (1998) stated that a larger board size makes it difficult to focus on managerial discussions that hold value and thus transfer greater control in the hands of the CEO. This is another side of what we have discussed in the above paragraph. In case of a large board, the delay in decisions and the possible conflicts could force the top managers such as CEO to take decisions on their own, which could miss expert opinion from several competent individuals of the board. This may not only compromise with decision making but also transfer additional duties on top managers of the company. Increased workload on the managers may lead to further complications and affect several other sectors.
of the firm, which may need their attention more urgently than these issues. It is probably because of these reasons that several studies have denied the view that larger board size increases the performance (Jensen, 1993; Yermack, 1996; Bhagat and Black, 1996; Lipton and Lorsch, 1992). We did not analyze the results in relation with this aspect; however, it may compromise performance.

Further, findings in tables 1-4 in this dissertation suggest that there is a possibility of an inverted U shaped relationship between the board size and the performance of the firm in terms of both logged operating profit and profit before tax. This indicated that the performance of firm will better with increase in board size up to a certain limit after which, it will start depleting. This result is supported by a third and different view of authors that state that the size of board needs to be optimum and both smaller and larger board sizes may compromise performance. These authors believe that the relationship between the board size and performance is an inverted U shaped curve, such that both, very small and very large, board sizes compromise the performance. These categories of researchers believe that there is a positive relationship between board size and performance; however, it turns negative if the size of the board goes on either side of an optimal level (Vafeas, 1999 and Golden and Zajac, 2001). Our multivariate regression analysis also suggests similar results.

The proposal seems to be very sensible since a very small board may not have enough strength to think on different issues and take appropriate decision, which would be liked by mass and would add to the performance of the firm. On the reverse, we have already discussed the possible issues, which could arise given a larger sized board. Therefore, it becomes very important to figure out the size of the board adequate to have enough power to take important decisions without compromising with basic needs and overall performance. Yet, finding that turning point is not so easy and it will take further research work and analysis to exactly find out the probable characteristic of the U-shape relation between the board size and the performance of the firm so that the point of turn may be calculated. One may try for hit and trial method to find the exact point of the board size that will provide optimal performance.

Some previous reports have also put forward similar observation that there was no link between the size of the board and the performance of the firm (Hermalin and
Weibasch, 1991; Fosberg, 1989 and Klein, 1996). However, the findings across different studies from time to time are not unequivocal and, positive, negative and no effects have been reported across studies. Hermalin and Weibasch, (1998) argued that larger board size enhances performance. The authors explained this on the basis that a larger board size would bring in knowledge and different expertise from diverse backgrounds, thus improving the performance of the company. It was emphasized that larger board has the capability to make better and cautious decisions since their reputation is in jeopardy and the losses incurred due to any mistakes made by them are much higher than personal benefits. Supporting the same view, Goilden and Zajac, (2001) stated that small board lacks the skill to identify problems, understand and make changes, thereby compromising the performance. Some others also supported that larger board size leads to a positive impact on performance (Shivdasani, 1993; Byrd and Hickman, 1992). However, the definition of the large board size remains unidentified. It is not enough to just say that larger board results in better performance and the analysis taking into account the size of the board with quantitative analysis is required to really understand if the term larger means the really meaningful large size. Our results though indicated some quantitative relationship between the size of the board and performance, however, it did not take the optimum size of the board into account and doing this analysis we cannot comment on the optimum size of the board.
5.3. Does the number of non-executive directors affect the performance?

Apart from the total number of the members on the board of directors, the type of members on the board is also important. The researcher in the present study compared the data on impact of the number of non executive directors on performance of a firm. To study the significance of the number of non executive directors, the researcher has introduced the percentage of non executive directors as an independent variable.

We would like to discuss the observations for the two year side by side. If we look at the p values obtained in case of operating profit (Table 1 and 3), the two financial years show inconsistent results. In the year, 2006-2007, it seems that the percentage of the non-executive directors was marginally linked with performance of the firm. In the next financial year, the p value for non-executive directors was not statistically significant. However, a fine look at the two p values leads us to a different conclusion. Though there was a very significant difference between the p values for the two years, the significance of the association in the year 2006-2007 was not very strong (p = 0.038). If we take more stringent analysis of this data at 99% level of significance, results become more consistent for both the years. The numbers of the non executive directors in both the financial years become non-significant at this level of significance. It can therefore be concluded that the percentage of the non-executive directors on board may not have a highly significant impact on the performance of a firm if we take into account the operating profit of the company. Yet, when we take the squared terms of % of members and analyze them with regression on performance of the firm, we find out a relatively significant relation. This further show that the probable relation between the board size comprised of both non-executive and executive directors and the performance of the firm is an inverted U shape relation, that is, the performance improve for a certain size of the board with executive and non-executive members and then it starts depleting.

Since the analysis has been taken up both on operating profit and profit before tax, it becomes interesting to see if the profit before tax had any impact of the performance. The observations upon this analysis were interesting and different from the above. A strong association of the percent of non executive directors was found in both the financial years (Table 2 and 4). The p values were significant not only at
95% level of confidence but also at 99% level of confidence. The analysis states not only that the role of non executive directors cannot be denied but also that their number significantly impacts the performance.

The significance of the number of non executive directors is also evident from the R square values in Tables 1-4. In the tables showing calculation using operating profit for the two financial years, the R square values are very small (0.160 in the year 2006-07 and 0.083 in the year 2007-08) indicating that the number of non-executive directors is not a good predictor of the performance of the firm. However, in the other case where the calculations are done using profit before tax, the R square values are very good (0.804 in the year 2006-07 and 0.610 in the year 2007-08), indicating that the percentage of non executive directors could be a good predictor of the performance. It is clear from the above observations that the number of non executive directors is an important issue, which needs consideration during the constitution of the board. The board of directors, especially the non-executive directors are the epicenter of research carried out today for better governance reforms. The main duty of the non-executive directors is to monitor the management and to resolve the manager shareholder conflict. Thus, the non-executive directors form a pivotal factor of the board composition. Based on this, the researcher found the hypothesis that increase in the number of non executive directors' increases performance to be true. This is sensible since non executive directors align the interests of the shareholders, use their expertise for objective decision making and control any self interest opportunistic behavior of the management (Sullivan, 2000). The reformation of these operations in a firm would thus enhance the profit of the company.

As mentioned earlier, the non-executive directors will de-motivate the managers from diversifying the firm beyond an optimum level for their own personal incentives and thus decreasing the shareholder value. This in turn will make the management very cautious and limit any opportunism existing. In addition, the outside directors reward the management based on their performance (i.e. the reward is based on the specific level of performance of the company). This makes the management closely link their interests in raising stock prices. This further aligns the interests between the management and the shareholders (Baysinger and Hossikon, 1990). Since non
executive directors are professionals and excel in their field of knowledge, they can help in making the right decision for the firm and restrict the management if it acts in their own self-interest (Cadbury, 1992). It is recommended to have a certain minimum number of outside directors on the board, and these members should play an active role in the areas of conflict within the firm which are likely to rise (Cadbury, 1992).

A large proportion of empirical research and findings have attempted to evaluate the contribution of non-executive directors to a firm. However, the literature is not all supportive on this issue. There are several previous studies, which support the view that the number of non-executive directors is important. Pettigrew and McNulty (1995) in a study on 200 UK companies (both industrial and commercial and 50 financial institutions) concluded that the number of non executive directors is important but the actual power and influence depends on a set of simultaneous and interrelated effects of structural factors, position, expertise and willingness to transform potential power into actual influence. Similarly, Baysinger and Butler (1985) through their findings suggested that number of non-executive directors have a positive but a delayed impact on the financial performance of the firm. Supporting the same, Hermalin and Weisbach (1988) found that companies would replace the executive directors by a number of non- executive directors after a sequence of poor performance.

However, negative relation between the numbers of non executive directors and performance has also been reported. It has been stated that although the non-executive directors bring different expertise and a vast source of knowledge, it is very difficult to convert this to value for the organization. Sometimes the impact of non-executive directors is negative since the company gives them no importance and counts them under the level of the board. This was supported by the findings of Lorsch and Maclver (1989). There were another set of researchers stating there was no link between the size of the board and the performance of the company. Hermalin and Weisbach (1991), Fosberg (1989) and Klein (1996) all fail to confirm any relation between the composition of the board and performance. Thus, according to the findings in our study, and the findings supporting the same in the existing literature, it would be right to say that the number of non-executive directors significantly affect
the performance. Hence our hypothesis that, larger the number of non-executive directors greater the performance of the company holds true.
5.4. Conclusion

The researcher in this chapter has discussed and analyzed the findings and results obtained in Chapter 4. These discussions and findings are supported with the existing literature and possible explanations. In the following chapter, the researcher would like to draw upon a conclusion and acknowledge the limitations that could be drawn from this work.
Chapter 6: Conclusion, Limitations and possible Suggestions

6.1. Conclusion:

At the end of this research work, the author has tested both the hypothesis and drawn appropriate conclusions. The hypotheses were tested on 2 financial years and the outcome across the two was compared to make final conclusions.

**Larger Board size is not the key to improved performance:** The hypothesis that increased board size positively affects the performance was found to be false. We took into account the actual numbers of the members on the board to evaluate the effect of the board size and observed across the Tables 1-4 that the increase resulted in small change in performance on positive or negative size but it never reached statistical significance. No evidence of a positive or negative impact of the total number of directors on the board was found irrespective of testing the hypothesis on the operating profit or profit before tax. The p values were not even near the significance level, thereby denying any possibility of a minor effect. As discussed above, there could be several possible reasons why increase the board size did not increase the performance; however, each factor remains a possibility unless tested in a well planned study.

**More number of non executive directors improves performance:** The second hypotheses that increase in the number of non executive directors in the board increases the performance, was found to hold true. It was observed that the hypothesis when tested on operating profit of the company was found not to be true at 99% level of significance; however, little significance was seen at 95% level in financial year 2006-07. However, when the hypothesis was tested on profit before tax, it was found to be significantly true in both the financial years. The number of non-executive members had so significant impact that the hypothesis was found to be true both at 95% and 99% level of significance. Therefore, it is clear that the more the numbers of non executive directors in the board, better is the performance of the firm. There could be several possible reasons why more number of non executive directors should improve the performance and some of these have been discussed in the chapter above.
Relation between the board size and the performance is probably an inverted U-shaped relation: the third hypothesis that there is an inverted U-shaped relation between board size and the performance of the firm is seen possible. It has been analyzed that the hypothesis when checked on operating profits of the company were at much greater significance than the case of linear relations. The 95% significant level shown between the squared terms of board size and when regressed on logged values of operating profits and profits before taxes suggests that there is a probable U-shaped relation between the independent variables Board Size and the dependent variable performance of the firm when measured in logged profit of the company. The result suggests that up to a certain limit, the increase in board size by non-executive director or an executive director will help to improve the performance of the company, yet after certain limit, the performance of the company will deplete either with increase of board size by any new executive or non-executive member of the board. The result seems to be quite likely as mentioned above and it agrees with some significant previous research works. Thus, the second and third hypothesizes holds truth.
6.2 Limitations

The researcher can figure out several limitations in the study of the impact of the total number of directors and the number of non-executive directors on board and its effect on the performance of the firm. Some of these limitations may be beyond the scope of this study while the others may be within the domain of the study but could not be eliminated due to unavoidable reasons. The researcher accepts these limitations and possible explanation for the same are as follows:

**Sample Size:** As stated earlier, the researcher has selected a sample size of 40 FTSE 100 UK companies. This stands as a main limitation for this work and hence the findings cannot be generalized and further study is encouraged to test the efficacy of these results.

**Sample Heterogeneity:** The selected sample companies in this work are from different industries such as retail industry, distribution sector, telecommunications, banking sectors and so on. All these industries face different issues, and go through different processes and have different needs for which their performance could be affected. The researcher however has not taken into account these differences in processes, issues and needs in these selected diverse companies, which could have affected the outcome. Therefore, better studies can be planned which take into account the data for one sector at a time such that the conclusions are applicable to that sector.

**Size of sample companies:** The researcher has not taken into consideration the size of the companies selected. This could have biased the results such that the actual effect could be altered. A small sized company may have different issues to be discussed in comparison to a big sized company. Similarly the relative importance of different issues could vary between small and large companies. The researcher could have missed the impact of the size of the company on the size of the board and hence overall performance. Further studies on similar sized company of the same sector could be planned to test the same hypotheses with more confidence.

**Lack of consideration of behavioral dynamics in and around the board room:** Having used quantitative data for this work, the researcher could not account for the
attitudes, beliefs, power, culture and influence around the board room. In addition to the needs and feasibilities, these factors could have affected the overall decision a board takes. It is possible that the impact of these factors could have entirely modified the outcome of this study. This could be done with the help of qualitative interviews, which was not possible in the present study as it was done on secondary data due to the limited time for the work and geographical location of the researcher. However, the researcher would like to invite further research in terms of the qualitative research and then compare it to the quantitative findings.

**Non consideration of managerial ownership:** The researcher could not account for any bifurcation in the ownership of equity among managers. This could moderately affect the performance of the firm. However, very few companies bifurcate the block holdings in different parties due to which the researcher could not account for this element. This would have introduced further heterogeneity in the analysis since some companies may do bifurcation and some others may not. However, the impact of bifurcation, if any, remains to be studied.

**No account of board sizes:** The researcher has not taken into account the board size for each company. Different companies may have board with different sizes according to the need and number of meetings. The researcher however, could not take this factor into account due to limited sample size (N = 40 companies). This was feasible in such a study; however, the researcher ignored this factor because it was not practically possible. In case the researcher would have classified the companies according to the board sizes, it would have introduced further complexity in the analysis and sample size for each board size would have further gone down. A possible solution to this could be to increase the sample size (the number of companies), however, due to limitation of time the researcher could not get data for more number of companies. This could have missed an important element of the study and therefore, further studies taking into account the number of directors are encouraged.

**How big or small?** Mentioning that increase in the board size increases the performance of the firm is not sufficient. Another important question is how small or big the board should be to have optimum or the best performance. It is not only the increase or decrease in the size of the board, which matters but also the actual
number of directors in the board. Similarly, it is not enough to say that increase in the number of non executive directors have positive impact on performance. It is equally important to take into account the actual number of non executive directors that the board should consist. The researcher could not take this into account since only limited information on board composition was available. It is also important how the size of the board or the number of the non executive directors vary with size of the company. It is possible that we are taking into account the data for a small company with big board and a big company with small board. First hand information from the company on board size and composition may be helpful in doing such analysis to find out the turning point of the probable U-shaped relationship between the board size and the performance of the company so that the exact size of board of directors to provide optimal performance can be calculated.

**Board heterogeneity:** Though this study did not aim at evaluating the impact of the board heterogeneity on performance, still it is possible that the two factors tested could have been affected by overall heterogeneity of the board. It was not possible for the researcher to really find out the composition of the board with minute details, therefore, the impact of heterogeneity on the overall size and number of non executive directors and performance could not be taken into account. It is possible to make the analysis even better by taking into account the heterogeneity of the board. Therefore, studies with more extensive analysis of not only the size but also the composition of the board are encouraged.

**Contribution of directors:** The researcher is of the opinion that if the data on the contributions of the non executive directors could be available, it would have helped the researcher to do a better analysis to figure out the real impact of each selected variable. However, this was not possible without getting into the work environment of the firm or taking personal qualitative and quantitative interviews. Further researchers, if have choice should consider getting such data for more powerful studies.
6.3. Implications

Through this work, the researcher would like to contribute certain recommendations to existing theory and the managers. In the opinion of the researcher, it is not enough to compare the total size of the board or the total numbers of the non executive directors on the board. Such an analysis should take several other factors such as board composition, size of the board and size of the company, nature of the firm into account to really understand the impact of any one or two factors on the overall performance of the firm. The study though has provided some valuable insights on the impact of the size of the board and the number of non executive directors. It has been significantly shown that there is a probable inverted U-shaped relation between board size and the performance of the company, that is why the performance of the company improves with increase in number of executive or non-executive members of board to a limit and than it decreases and shows negative trends. Due consideration to other factors as mentioned above is required to be given to understand the dynamics within the board which may affect the overall performance of the firm.

Simultaneous, consideration of several factors seems wiser since no factor operates in isolation and the performance is a balanced outcome reflecting the influence of every possible factor that may affect the performance. Therefore, a number of factors should be kept in mind in designing further studies and if the impact of the number of the directors and the number of the non executive directors still holds importance and they again show a inverted U-shaped relation with the performance of the firm, due consideration should be given to the total size of the board along with heterogeneity with cautious selection of the numbers of executives and non executives.
References


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## Appendix 1

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