Ownership Structure and Board Characteristics as Determinants of CEO Turnover in South African JSE-Listed Companies

by

Rethabile Thandolwethu Mofokeng (MFKRET003)

Supervisor: Colin C Smith

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Student number	MFKRET003
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ABSTRACT

The CEO of a large listed firm is often under public scrutiny due to listing requirements of stock exchanges of the respective country as well as pressures from stakeholders. Of these stakeholders, shareholders are mostly interested in the firm performance as it relates to their investment to determine if their investment is still worthwhile as well as to determine its returns. A CEO has the duty of ensuring that a firm meets its set targets and the responsibility of having to account for any deviations from these targets. In a firm with sound corporate governance measures, any underperformance experienced by the firm should result in the CEO being replaced and when targets met, the CEO being rewarded. However this is not always the case and this study considers the key determinants of CEO turnover as it later aims to determine what these key determinants are in South African JSE-listed firms as well as the correlation with CEO turnover. This study examines the relationship between ownership structure and board characteristics on CEO-firm performance sensitivity.

The population for this study was 60 companies listed on the Johannesburg Stock Exchange. The period covered for this study runs over 5 years from 2013 to 2017. This period was chosen mainly because data for some companies was missing for the period beyond 2017. Thus, excluding companies that had no data for the period beyond 2017 could have reduced the sample further and would have made the analysis less meaningful.

The study reports three important findings. The first is that CEO turnover is insensitive to firm performance, irrespective of whether it is an accounting-based firm performance (i.e CEO turnover vs EBIT/Assets ratio) or market-based measure of firm performance (lagged stock returns, 18, 24, and 36 months respectively). Second, the findings of this study show that CEO age and institutional ownership are inversely related to CEO turnover. In addition, board size becomes a significant determinant of CEO turnover when the model in includes returns lagged over 36 months or when the EBIT/Assets ratio is part of the Model (see models 7 and 8), although this is only at 10% level of significance. Third, board insiders and firm size are found to be unrelated to CEO turnover.

Keywords

CEO turnover, Prior period performance, Ownership structure, Board characteristics, Corporate Governance

Table of contents

1 Introduction

The CEO of a large listed firm is often under public scrutiny due to listing requirements of stock exchanges of the respective country as well as pressure from stakeholders. Of these stakeholders, shareholders are mostly interested in the firm performance as it relates to their investment to determine if their investment is still worthwhile as well as to determine its returns. A CEO has the duty of ensuring that a firm meets its set targets and the responsibility of having to account for any deviations from these targets (Coates & Kraakman, 2010). However, there are factors that may influence the CEO not meeting these targets, hence leading to underperformance. These factors include CEO duality, CEO tenure as well as CEO age.

In contrast, there are also other factors that have since formed an ongoing discourse and debate regarding their ability to ensure that effective monitoring and control mechanisms are in place to deter top management from pursuing self-interests. The discourse around these factors was a result of a surge in high-profile scandals and other disasters that took place across the globe in the last two decades (Mitra, 2019). The surge in these scourges was a result of deficiency in sound governance. The belief is that, the success of any firm is posited to be firmly rooted to sound corporate governance. Sound governance mechanisms include both internal mechanisms such as board of directors, and its structures (i.e. committees), and ownership structures and external mechanisms such as hostile takeover bids, legal protection of minority shareholders and disciplining managers in the external labour market (Mitra, 2019). The focus of this study is mainly on the internal mechanisms as measures for mitigating governance problems.

Owing to the above, the hypothesised view is that, in a firm where there is sound corporate governance measures, any underperformance experienced by the firm should result in the CEO being replaced, while in a situation where set targets are met, the CEO is rewarded (Parrino, 1997; Nguyen, 2011; Warner et al, 1988, Wilkes, 2004). Several studies, many of which were conducted in developed countries (see for example, Mitra, 2019, Kao et al, 2019) have shown that board structures mechanisms (see for instance, Kao et al, 2019; Drakos and Bekiris, 2010; Guest, 2009; Chao and Kim, 2007) and ownership structures (see for example Kao et al, 2019, Bonilla, 2010, Andres, 2008; Maury, 2006) are key determinants of firm value. As such, the present study aims to examine the impact of ownership structures and governance structures on CEO-turnover performance sensitivity on South African none finance listed companies.

1.1 Research Background

CEOs, as agents of shareholders, play a pivotal role in establishing company policy and strategy and are arguably considered by shareholders as the most noticeable or visible persons in the company. CEOs (who are agents of shareholders), are responsible for running firms on behalf of shareholders (who are the principals). However, despite that CEOs are employed by shareholders to represent their interests, CEOs might abuse their power, shirk their jobs, reward themselves with benefits and be involved in self-dealing and other entrenchment strategies (Nguyen, 2011) at the expense of shareholders. Thus, if a situation exists, where executives act on their own interests at the expense of shareholders, then the agency problem is said to exist. Because of the possibility of the Principal-agent problem, shareholders appoint a board of directors to monitor and control top management in order to protect the value of their investment in the firm. Since control of top executives is aimed at reducing the abuse of power by executives, the board of directors is pivotal "*in such a control incentive trade off*" (Nguyen, 2011, p.53). Through its monitoring and control roles, the board of directors is able to make decisions on the level of managerial control and managerial incentives (Nguyen, 2011). Furthermore, the board of directors make important decisions regarding the hiring and firing of top executives (Nguyen, 2011). The board of directors monitors the performance of top management in terms of their ability to create value for shareholders. Through its monitoring mechanisms, the board of directors has the power to fire top management if shareholder value is being destroyed. The board of directors monitors the ability of the top executives to maximise shareholder value through an observation of the performance of the firm. Thus, after its evaluation of the firm performance, the board of directors has the power to fire top executives if they perceive that the ability or performance of their executive managers is below the average ability or performance of other potential managers in the labour market. Therefore, the threat of dismissal acts as an implicit incentive to motivate top executives to put their best effort in pursuit of shareholder wealth maximisation. Owing to the board's ability to hire and replace top executives, an understanding of the determinants of top executive changes is crucial in examining the effectiveness of corporate governance mechanisms (Nguyen, 2011).

However, effective governance depends on or is influenced by many factors including board size and composition, particularly its independence (Hermalin and Weisbach, 1998; Bhagat and Black, 2002), capital structure, stock ownership of board members and CEO duality (Brickley et al, 1997). Furthermore, other disciplinary mechanisms apart from the board structures could also act as control mechanisms for CEO power. For example, the power of the CEOs could be disciplined through monitoring by large blockholders or potential competition among managers (Warner et al., 1988).

Arguments in prior studies suggest that changes made by the board to top management are also critical to firm performance. For example, Volpin (2002) and Gibson (2003) suggested that good corporate governance may be reflected by the higher sensitivity between CEO turnover and firm performance. Consistent with the above, extant studies that examined the relationship between stock return performance and CEO turnover found that poor prior stock return performance is associated with the increase in CEO turnover (see for example, Weisbach 1988; Bonnier and Bruner 1989; Furtado and Rozeff 1987). The conclusion from these studies was that boards react to protect shareholder wealth.

Although, the relationship of CEO turnover with firm performance has gained more attention, most of the evidence in prior studies is based on developed and industrialised markets, such as the U.K. (Conyon and Florou, 2002), Germany (Kaplan, 1994), the U.S. (Huson et a1.,2001), and Japan (Kaplan, 1994) while scant research has been conducted from the developing countries perspective (Mitra, 2019), particularly in Africa (Abosede and Kajola, 2011).

1.2 Rationale for the study

An extensive amount of studies on CEO turnover have shown that there are many factors which could influence the decision to dismiss the CEO. Some of the factors considered in prior studies are ownership structure, board composition, and CEO characteristics. Hypothetically, firm performance is posited as the main factor that leads to the decision to dismiss the CEO (Boone eta1., 2007; Linck et al., 2008). This is based on the notion that poor firm performance or results increases the likelihood that the CEO would be dismissed.

As alluded to above, there are also arguments in prior studies that associate firm performance and CEO turnover through the effects of other factors such as board composition (see for example, Wijaya et al, 2020; Kao et al, 2019; Aluchna and Kaminski, 2017; Abdallah and Ismail, 2017; Battaglia and Gallo, 2017, Ducassy and Guyot, 2017; Darko et al, 2016), ownership structures (see for instance, Wijaya et al, 2020; Mitra, 2019; Kao, et al, 2019; Wei, 2007; Abdallah and Ismail, 2017; Battaglia and Gallo, 2017, Ducassy and Guyot, 2017; Shahveisi et al, 2017; Darko et al, 2016) and CEO characteristics (see for example, Lam et al, 2013; Yim, 2013; Peterson et al, 2012; Buyl et al, 2011; Brick et al, 2006; Roth, 1995).

Given the scarcity of research based on developing countries in Africa as indicated by Abosede and Kajola (2011), this study uses South Africa as the ideal location for the study. The reasons for selecting South Africa as a suitable location for this current study are manifold. First, South Africa is an emerging economy that has sound governance, and sophisticated financial markets whose

characteristics are similar to those of the developed world. Second, South Africa has a sound legal and regulatory framework which is also well developed and independent of the state apparatus. Thus, the enforcement of rules and regulations is sound, and so is the governance of companies. Third, several governance reforms have taken place since the democratic elections held in 1994. Owing to the above, there are greater chances that in South Africa that the CEOs could be held accountable for their actions or get fired for abuse of power or if they perform poorly. As a result, an examination of CEO turnover determinants and the association between performance and CEO turnover is critical in understanding the soundness of corporate governance mechanism and practise in South Africa. Fourthly, this study could provide some insights into the determinants of CEO turnover from a developing country perspective.

Fifth, the most recent scandals in South Africa, which include firms such as Naspers, KPMG, McKinsey and SAP as well as the scandal at Steinhoff, EOH, Tongaat-Hulett and Old Mutual to name just a few, provide a litmus test of the effectiveness of governance mechanisms in South Africa. Therefore, studying CEO turnover which is the result of corporate governance practices could provide insights into how South Africa could improve its corporate governance systems.

1.3 Research objectives

The main objective of this study is:

- To examine the impact of ownership structure, board composition and CEO characteristics on CEO turnover-performance sensitivity.

1.4 Research Question

- Does ownership structure, board composition and CEO characteristics have an impact on performance- CEO turnover sensitivity?

1.5 Contribution to the existing body of Knowledge

The contributions of this current study are manifold. First, this study provides further evidence on the determinants of CEO turnover from a developing country perspective and on whether board mechanisms are effective in ousting CEOs who are performing poorly. Second, this study provides an update on prior findings on the effectiveness of institutional investors in strengthening governance systems in a developing country perspective. Third, this study also provides an update on the effectiveness of governance mechanisms in South Africa following continuous governance reforms in South Africa as its sample examines a period between two governance reforms in South Africa, that is, after the implementation of King III (2009) and King IV (2016). Fourth, there has been a myriad of corporate scandals in South Africa in the recent past, thus an examination of the effectiveness of ownership structure, governance structures and CEO characteristics on performance-turnover sensitivity is critical as this provides some insights into the effectiveness of the impact of determinants discussed above in replacing underperforming or scandalous top executives. Fifth, the findings of this study may also influence decisions by policy makers and other governance bodies through an identification of key factors or determinants that could be critical to discharging effective governance from a developing country perspective.

1.6 Organisation of the study

The remainder of the study is organised as follows. Section 2 presents a review of related prior studies, while section 3 presents a discussion of the methodology adopted for this study. Section 4 discusses the findings of this study, after which section 5 provides a conclusion and recommendation for future research in this field.

2. Literature Review and hypothesis development

2.1 Prior period performance and CEO turnover

A Chief Executive Officer ("CEO") forms part of the management of a firm and is tasked with the duty of meeting performance measures set by firms and to act in the interests of shareholders as well as maximising shareholder value (Nguyen, 2011). Therefore, firm performance is an important measure of CEO competence in a firm. Assuming an effective corporate governance structure, if a firm performs poorly, it is expected that the CEO will be replaced. If the firm performs well, the CEO is rewarded. International literature indicates a negative correlation between firm prior performance and CEO turnover. Using a sample of CEOs listed in the Forbes annual compensation, for the period 1971-1995 and who have held their position for one year or less at public firms in the USA, Huson, Malatesta & Parrino (2004) find that firm performance deteriorates prior to a CEO turnover event. The results of this study give the consensus that prior deteriorating firm performance triggers management turnover and that boards of directors tend to punish poor performance by replacing CEOs. Other similar studies, for example, a by Parrino (1997), Warner et al (1988) and more recently, Nguyen (2011) found that a CEO is more likely to be replaced for poor prior performance in a firm with an effective corporate governance structure.

In a study conducted in South African context, Wilkes (2014) found that there exists a strong negative correlation between corporate performance and CEO turnover as it is believed that the CEO is held primarily responsible for the performance of a firm. Wilkes (2014)'s study covered the period between 1 April 2007 and 31 May 2012, based on a sample of 143 CEO turnover events. The study used the pre event and post event corporate performance of the old and newly installed CEO respectively in JSE-listed firms. The results in Wilkes (2014) show that that poor corporate performance is a major driver of CEO turnover due to 58% of corporations undergoing CEO turnover due to underperforming their peers, one year prior to the turnover event.

2.2 The role of a board of directors

The agency theory of corporate governance states that the role of a board of directors of a firm is to monitor management on behalf of the shareholders of the firm (Fama & Jensen 1983). Therefore, the assumption under this theory is that the interests of directors should be aligned with those of shareholders. The interests of shareholders within the firm include the monitoring of the overall performance of that firm to ensure that shares invested in the firm will still provide them with returns financially. A well-run firm is one that has its operations closely monitored and has measures in place,

in the event of poor performance to ensure the goal remains the interests of shareholders. To ensure that this objective is met, corporate governance within a firm is used as an effective measure of internal control. Boards of directors of a firm carry the duty of monitoring firm performance and replacing managers of poorly performing firms. In a South African context, the King IV (2016) on Corporate Governance for South Africa, states that the board of directors should "formally evaluate the performance of the CEO against agreed performance measures and targets at least annually". Thus, for firms that have a board of directors who are performing their duties as expected, the internal monitoring controls are effective in determining if the firm is meeting its performance targets. In an effective corporate governance structure, if a firm performs poorly, the CEO will be replaced and if a firm performs well, the CEO is rewarded (Nguyen, 2011).

2.2.1 Board characteristics and CEO turnover

There are various factors that key to the effectiveness of the corporate governance structure of a firm. These factors include board characteristics such as the independence of directors, board size, CEO duality and CEO tenure. These characteristics are discussed in detail in the ensuing sub section.

2.2.1.1 Board size and CEO turnover

Board size considers the number of directors that sit on a board. There are conflicting views on the impact of a board size on CEO turnover. Larger boards may be found to result in a loss of productivity as it becomes harder to co-ordinate its members (Huson et al, 2001; Yermack, 1996; Jensen, 1993). Jensen (1993) also found that keeping small boards of less than eight directors helps improve the performance of a firm. Similarly, Yermack (1996) concludes that there exists an inverse relationship between firm value and board size. Larger boards result in poor communication and decision-making, which overwhelms the overall effectiveness of these boards, in a sample of the 500 largest public firms in the USA during the period 1984 to 1991. More recently, Nguyen (2011) and Nakano & Nguyen (2013) also find that boards with fewer directors are more efficient than those with more.

Uadiale (2010) states that there is a positive relationship between board size and firm performance and therefore a larger board size should be encouraged. A larger board is also thought to bring about diversity, however there is often a trade-off between diversity and effectiveness of a large board. Similarly, Johl et al (2015) conclude that a positive relationship exists between board size and firm performance for a sample of 700 publicly listed firms in Malaysia for the year ended 2009. Fauzia & Locke (2012) also conclude on a positive relationship between board size and firm performance on a sample of 79 New Zealand listed firms for the period 2007 to 2011.

The Companies Act No. 71 of 2008 ("Companies Act") is compulsory for all South African companies that meet the definition of a Public Interest Entity. JSE-listed companies are Public Interest Entities and thus this is compulsory legislation. The Companies Act requires a minimum of three directors to sit on a board and King IV requires that the CEO and at least one other executive sit on a board. This implies that a minimum of three directors on a board is effective in performing its duties. Wilkes (2014) finds that larger boards have stronger governance procedures, which means that the more likely it is for these boards to replace CEOs for poor corporate performance in JSE-listed firms. The South African stock market also seems to value having larger boards due to their ability to access critical resources for a firm (Tshipa & Mokoaleli-Mokoteli, 2015).

2.2.1.2 Board independence and CEO turnover

Board independence considers the proportion of members who are independent, non-executive directors within the board (King IV, 2016). An executive director is involved in the day to day operations of a firm, including the hiring and firing of management. Management in a firm also includes the CEO who is part of top management. Therefore an independent, non-executive director can bring an unbiased and objective viewpoint to the firm, without much prior knowledge or expertise about the firm. The effective monitoring of a CEO by the board of directors has been brought into question as it relates to board independence. Several research studies have been conducted looking into the relationship between CEO turnover and board independence.

A consensus exists that the more independent the board of directors are, the more likely it is for the board to replace a CEO for poor performance, as is discussed below. Hermalin & Weisbach (1998) question the effective monitoring of a CEO by the board of directors if executive directors sitting on the board, would have been part of the election process of the CEO in question. Similarly, Nguyen (2011) has shown that boards dominated by independent directors are more likely to replace CEOs for poor performance and replace the CEO with an outsider. However, boards are not fully independent given that executive directors also are chosen by the CEO in most instances and not shareholders. Thus, it was found that the more independent a board is, the more willing it will be to effectively monitor the performance of the CEO and thus replace them for poor performance (Huson, Malatesta & Parrino, 2004; Huson et al, 2001; Yermack, 1996).

It has also been concluded that these boards of directors are most effective in monitoring the performance of the CEO if they are independent non-executives as they are able to give unbiased criticism (Jensen 1993). Fama & Jensen (1993) also argue that independent non- executive directors tend to be more effective monitors of management than executive directors because they are generally

key decision makers at other firms who are more concerned about their reputations in the managerial-labour market. Board independence therefore is effective in disciplining management in poor performing firms (Bhagat & Bolton, 2008).

Laux (2008), using a model that looks into board independence and CEO turnover, finds that the more independent a board is, the more likely it is for a CEO to be replaced and the more generous the severance packages and the larger the stock option grants. It is assumed that the longer a CEO stays in a firm, the more knowledge and expertise they acquire about the firm. In the event of prior poor performance, the board of directors would need to know about what has been happening in the firm, from the CEO. Boards with dependent/executive directors have a lower probability of replacing a CEO in this event as it is assumed that their incentives are dependent on the performance of the CEO. Boards with independent directors are assumed to have interests aligned with those of shareholders and so there is a higher probability that a CEO will be replaced in the event of poor prior period performance (Laux, 2008).

Therefore, assuming an effective corporate governance structure in a firm, board independence can be used as a tool in monitoring firm performance and responding to poor performance by replacing the CEO. Due to the knowledge and expertise gathered by the CEO over the years within the firm, there is an expectation from the CEO to be paid out for this information that will be given to directors in the event of a CEO turnover (Laux, 2008). Independent boards are more likely to pay out a larger sum of a severance benefit and stock option grants to a CEO as they are more likely to replace a CEO under these circumstances, whereas dependent board members will most likely not pay out a severance packages as they have a lower probability of replacing the CEO (Laux, 2008). It also appears that CEOs may have their own bargaining power in the event of a possible turnover due to poor prior performance.

Johl et al (2015) find that board independence does not affect firm performance. Bhagat & Bolton (2013) find a positive correlation post 2002 between board independence and operating performance for a sample of 13 000 US firms. Similarly, Uadiale (2010) finds a positive relationship between independent non-executive directors and firm performance for a sample of 30 Nigerian firms listed on the Nigerian Stock Exchange ("NSE").

However, there are exceptions to this as seen in the literature by Klein, Shapiro & Young (2005), who do not find a relationship between corporate governance and firm performance for a sample of 263 Canadian firms. Particularly, good corporate governance indicators used to measure the correlation with firm performance, such as board independence, are more dependent on the ownership

structures that are most common in different countries and will thus vary with the country that is being observed. In Canada, a negative correlation exists between board independence and firm performance for companies that are family-owned, as the presence of an outside director who has limited information on the firm as well as no financial stake in the firm, is less effective than the presence of an executive director. As a result of this, some scepticism exists amongst investors regarding the correlation between corporate governance and firm performance (Bradley, 2004). Bhagat & Black (2001) found no correlation between boards with more independent directors and firm performance.

Further, in some instances a negative correlation is observed for firms with more independent directors and firm performance. Possible reasons for this include the need for executive directors on boards for their skills and expertise. Executive directors are thought to know more regarding the firm and would thus be able to make better-informed decisions concerning the board, than independent directors (Bhagat & Black, 2001). Although independent directors may act or respond to potential dilemmas sooner, the decisions made may not be as well informed given that they are not involved in the day to day operations of the firm, as are executive directors. However independent directors do still serve a purpose in giving and making unbiased opinions and decisions. The optimal outcome appears to be for a suitable mix of both executive and independent, non-executive directors on boards of firms, who bring a mix of skills and knowledge. Executive directors are also thought to be more useful given that they have financial capital linked to the firm, which serves as an incentive to perform their duties effectively (Bhagat & Black, 2001).

In South Africa, a sound corporate governance is observed, like that of the UK and is also improving (Tshipa & Mokoaleli-Mokoteli, 2015). Further, SA was the first sub-Saharan African country to adopt a corporate governance code in the form of King in 1994. Most recently, it is compulsory for all JSE-listed public companies to apply the King IV. According to the King IV, a board must consist of a mixture of both non-executive and executive directors, of which the majority must be non-executive. Of the non-executive directors, majority must be independent. This suggests that King IV (2016) expects firms with more independent directors to perform better financially.

Wilkes (2014) has found that these independent non-executive directors are more likely to remove a CEO for poor performance than executive directors are. Ntim (2013) and Meyer & De Wet (2013) also find that that the more independent a board of a directors is, the higher the firm's financial performance for a sample of JSE-listed companies, covering the period 2002 to 2007 and 2010 to 2012 respectively.

Owing to the above this study posits that:

H1a: Board size affects the effectiveness of coordination between board members and decision-making process. Thus, larger boards tend to be less effective, reducing the CEO turnover-firm performance sensitivity

H1b: CEO turnover performance depends on board independence. Thus, CEO turnover-performance sensitivity is decreasing with a fraction of non-independent directors.

2.2.2 Ownership structures

Shareholders, as mentioned above have a financial interest in firms of which they would want to be continuously monitored to ensure that their investment in that firm is still beneficial. As per the agency theory, directors are employed to act on behalf of shareholders and in their best interests. In addition to the board of directors, there exists groups of shareholders that have more of an influence on directors than others and these groups of shareholders are able to ensure that their interests are met. Jensen (1993) defines active investors as individuals or institutions that can actively participate in the decision-making of a firm due to large debt and/or equity positions they hold in that firm. These types of investors are vital in the corporate governance system of a firm as they have the financial interest as well as independence to critique a firm's management decisions in an unbiased manner. Thus, these groups of shareholders can take corrective measures if needed, earlier on to ensure their financial interest is protected. Natural active investors include institutional investors and block holders.

An institutional investor is a shareholder that invests on behalf of individuals. This includes financial institutions such as banks, pension funds, insurance companies, mutual funds and money managers (Jensen, 1993). A block-holder is an influential shareholder in a firm due to the significant number of shares they own in a firm (Investopedia, 2019). Past literature has found varying results in respect of the influence these types of shareholders have on directors and CEO turnover. Each of the groups of shareholder is discussed separately in the subsequent sub sections.

2.2.2.1 The presence of institutional investors

The influence of institutional investors on management is unclear. This may indicate either that the firm is "well-managed" and as a result, institutional investor would want to invest in the firm, or this may indicate that the firm is poorly managed and institutional investors would want to invest, take over from current management and make profits. In the latter case, this may indicate that the CEO-

turnover sensitivity is higher. A greater CEO-turnover sensitivity should be expected in firms with big institutional shareholders, only if they are active shareholders (Kaplan & Minton, 1994).
Hermalin (2005) also observes a positive market trend in the presence of institutional investors. Huson, Parrino & Starks (2001) discusses that the presence of institutional investors increases activism in governance matters and as such puts pressure on firms to increase board independence through the stockholder proxy process.

Institutional investors' impact on CEO-turnover performance sensitivity, on the other hand, has been found to be unclear (Nguyen, 2011). Evidence in prior studies show that the presence of large Institutional investors might signal a firm's good management and financial health, hence, making top executives change less likely (Nguyen, 2011). Furthermore, evidence in past studies suggests that institutional investors tend to vote with their feet, in which case they are assumed to leave the firm rather than have to voice their disagreements (see for example, Parrino et al, 2003). In this vein, the findings in prior studies show that aggregate institutional ownership and the number of institutional shareholders decrease in the year before a forced CEO turnover.

On the contrary, prior studies also argue that the presence of institutional investors act as a threat because of their financial muscle and their reputation for launching proxy contests (Nguyen, 2011). In addition, institutional investors are argued to as well engage in private negotiations with firms on issues related to governance and that they could engage in shareholder activism based on strategies that are consistent with their own governance principles (Nguyen, 2011). Shareholder activism is present in South Africa, and thus institutional investors actively participate in important decisions made by firms. Thus, based on this viewpoint, institutional investors are assumed to be less likely to be subjected to management influence. Because institutional investors are less inclined to management, they are likely to oppose management when they cast their vote (Nguyen, 2011).

The other argument in prior studies is that institutional investors are different from any other group of shareholders in terms of strategy and objectives. First, institutional investors are in most cases passive investors who have strategies that are different to any other forms of ownership, as they tend to engage in short term investments and second, institutional investors' objective could be more financial than otherwise (see Nguyen, 2011). In addition, arguments by Shleifer and Vishny (1997) show that institutional investors have strong incentives to mitigate executive management's opportunism tendencies and control executive managers' exploitation of investors. Consistent with the argument above, Choi et al (2007) opined that institutional investors could assist independent

none executive directors in their monitoring role, hence, in the process contributing to the firm's performance.

In addition to the above, numerous other studies found a positive and significant relationship between institutional ownership and firm performance (see for example, Mitra, 2019; Kao et al, 2019; Lin and Fu, 2017; Piesse et al, 2007; Choi et al, 2007, Omran et al, 2008, Young et al, 2008). However, Nguyen (2011) finds that the presence of institutional investors has no impact on sensitivity for a sample of the largest French-listed firms for the period 1994-2001.

2.2.2.2 The presence of blockholders

Boards of directors and blockholders are important internal control mechanisms in a firm, whereas the takeover market is a major source of external control (Huson, Parrino & Starks, 2001). Blockholders tend to exert more control over management to improve firm performance since their stake is big enough to offset the costs of control. Grossman & Hart (1980) state that smaller shareholders tend to free ride on the efforts of larger shareholders. In publically held firms, management tend to have more influence as there are no large shareholders that have incentives to monitor the performance of the firm (Shleifer & Vishny 1986). Therefore, blockholders can serve as an effective tool in monitoring firm performance. Laux (2008) also concludes that directors with substantial stock ownership, such as blockholders are quick to replace a CEO of a firm in the event of poor firm performance.

Large shareholders in firms of 51% share ownership and upwards have outright control in their firms and are also incentivised to monitor the management of the firm due to their personal financial interest (Shleifer & Vishny, 1997). As a result, it can be concluded that large shareholders play a vital role in the corporate governance of a firm. However, when government is the large shareholder, there is the risk that the interests of these shareholders, do not necessarily align with those of the firm as they could be politically influenced. As a result, these shareholders would not be considered as an effective monitoring tool for management.

Based on a sample of 119 publicly traded Japanese industrial corporations, Kaplan & Minton (1994) report that the existence of large shareholders increases the probability of top management being replaced when the firm performs poorly. Furthermore, outside directors as well as large shareholders play a role in the monitoring of governance in a firm. Top executive turnover is also found to be related to firm earnings and stock performance, particularly low earnings. Blockholders exert their

control on management if their incentive is large enough and will thus have an impact on CEO-turnover sensitivity.

However, based on a sample of French large firms, Nguyen (2011) found that the presence of blockholders reduced the CEO turnover-performance sensitivity significantly. In conclusion, Nguyen (2011) opined that blockholders are less likely to fire CEOs for poor performance.

2.2.2.3 The presence of both institutional investors and blockholders

Yermack (1996) finds that smaller boards of directors are more likely to include active investors as monitors of the firm's performance. Ownership structures within a firm have an influence on board decisions, as large shareholders such as institutional shareholders and blockholders can put pressure on management in making decisions (Huson, 2004).

Contrary to the above, Nguyen (2011) found that the co-existence of both blockholders and institutional investors does not yield to a significant correlation with CEO turnover sensitivity. CEOs are also less likely to be fired for poor performance in firms in which the government holds a stake. McConnell & Servaes (1990) instead find a strong positive relation between institutional investors and Tobin's Q but none for blockholders. Therefore, this implies that a positive relation between corporate value and institutional share ownerships. Thus, the value of the firm increases first and then declines as insider ownership increases.

In a South African context, shareholder activism is still growing and thus literature in this field is limited. Institutional investors have been observed to continuously play a growing role in the corporate governance monitoring of firms. Organizations such as the Government employees' pension fund ("GEPF") and the Public Investment Corporation ("PIC") hold shares in many listed companies. The GEPF is Africa's largest pension fund with more than 1.2 million active members (GEPF, 2019). Its main aim is to manage and administer pensions and other benefits for government employees in South Africa. The GEPF also invests contributions received by members into various asset classes such as equities, properties, bonds and cash/money market instruments (GEPF, 2019). The PIC is a fully state-owned asset management firm in South Africa (PIC, 2019). It is also South Africa's largest investment manager and the GEPF represents the PIC's largest client, accounting for 89% of the assets managed by PIC. The firm runs a diversified investment portfolio that consists of equities, real estate, capital market, private equity and impact investing. As a result of listed investments, the PIC controls over 10% of the JSE and has direct and indirect exposures to almost all sectors in the South African economy (PIC, 2019).

The investment mandate of the PIC is driven by the individual client. As most of the PIC's clients are focused on long-term value maximisation, so is PIC's mandate when investing into large listed firms. Thus, the PIC takes a monitoring role in firms to ensure shareholder value is being preserved (Komati, 2017).

2.2.2.4 Director share ownership

Director share ownership looks at the percentage share ownership directors sitting on a board hold. This affects board independence as directors become less independent as their share ownership increases. There are conflicting views on whether director share ownership acts as an effective tool in the monitoring of firm performance and thus replacing CEOs in the event of poor firm performance. Morck et al (1988) using Tobin's Q found a non-monotonic relationship between director share ownership and firm value. This implies that firm value first increases and then declines as director share ownership increases. Firm value increases when the share ownership increases up to 25% and then declines when share ownership increases beyond 25% (Morck et al, 1988).

This evidence in Morck et al (1998) suggests that initially the interests of directors and shareholders are aligned when directors own up to 25% of shares in the firm but that firm value is destroyed as director ownership increases beyond 25%. Bhagat & Bolton (2008) find that stock ownership by board members is positively correlated to subsequent operating performance. Thus, director share ownership can be used as a proxy for good corporate governance within a firm. Bhagat & Bolton (2013) also find a positive relationship between director ownership and financial performance using a sample of 13 000 US firms during the period 1998 to 2007. Similarly, Ntim (2013) finds a positive relationship between director share ownership and financial performance for a sample of JSE-listed firms in South Africa.

This may imply that the market believes that an increase in director ownership may help align the interests of management and shareholders (Tshipa & Mokoaleli-Mokoteli, 2015). Owing to data constraints for most of the variables, this study focuses on the institutional ownership on CEO turnover performance sensitivity only.

Thus, based on to the investment philosophy of institutional owners, this study posits that:

H2 Institutional investors tend to be passive, hence they yield no influence on CEO turnover performance sensitivity

2.2.3 CEO characteristics and CEO turnover-firm performance sensitivity

2.2.3.1 CEO duality and CEO turnover

CEO duality refers to the combination of the role of a CEO and Chairman of a firm. Literature on this topic finds a correlation between duality and firm performance. Jensen (1993) concludes that the role of the CEO and Chairman should be kept separate in order to achieve effectiveness in the performance of the firm. Similarly, Bhagat & Bolton (2008) find that firms that separate the roles of a CEO and Chairman have a better operating performance than those which do not. Uadiale (2010) and Nguyen (2011) found a negative relationship between CEO duality and firm performance, implying that firms are more effective when the role of a CEO and Chairman is kept separate. Thus, the consensus is that CEO non-duality results in the CEO performing its duties effectively and this would then lessen the likelihood of the CEO being replaced by the board as the firm would be performing well.

In South Africa, King IV (2016) requires the Chairman of a firm to be independent and thus the role of a CEO and Chairman must be kept separate. Therefore, the effect of CEO duality will not be investigated further for JSE-listed firms.

2.2.3.2 CEO tenure and CEO turnover

CEO tenure refers to the number of years a CEO is in office. The consensus is that the longer the CEO's tenure is, the less independent the board of directors becomes, which decreases the likelihood of the CEO will be replaced due to poor firm performance (Hermalin & Weisbach, 1998). Kaplan & Minton (1994) found that CEO turnover is positively correlated to poor prior period performance. In addition, the presence of blockholders as well as independent directors on boards increases the likelihood of a CEO being replaced.

CEOs are assumed to have private information regarding the company and will thus attempt to negotiate for high severance pay-outs in the event of a CEO turnover due to poor performance (Laux, 2008). Executive directors are less likely to replace the CEO under these circumstances especially if their incentives are linked to those of the CEO. Therefore, there is a positive correlation between board independence, CEO turnover due to poor performance and severance pay-outs (Laux, 2008). However, the exact reason for this correlation is unknown and has been coined as "the unsolved puzzle" by Bhagat & Black (2001). The longer a CEO stays in office, the more knowledge and skills the CEO acquires giving him/her bargaining power in the event of poor firm performance.

A firm with a less independent board is less likely to pay out a large compensation and thus the CEO stays employed despite the poor firm performance. Boards with greater activism could however, influence board members of a firm to replace the CEO in the event of poor firm performance which concurrently leads to greater CEO compensation being paid out.

Greater board diligence results in a greater probability in CEO turnover for poor performance. Therefore, shorter CEO tenures on average are expected in firms that have diligent boards of directors (Hermalin, 2005). The CEO's efforts in these firms is greater, to avoid being replaced. Boards which are more independent tend to choose more external CEOs than internal. The capabilities of an internally chosen CEO are known better than those of an externally chosen CEO. As such, it is expected that an external CEO will have a tenure that is shorter than that of an internal CEO (Hermalin, 2005).

In the South African context, Wilkes (2004) found that there exists a strong negative correlation during the first 4 years of CEO tenure and CEO turnover for a sample of JSE-listed firms, after which this correlation becomes weak. This implies that the longer the CEO tenure, the less likely it becomes for the CEO to be replaced due to an increase in the power and influence of this CEO within the firm. This is especially true in a corporation with weak governance mechanisms.

2.2.3.3 CEO age and CEO turnover

CEO age is used as control variable to control for differences in the ages of the CEOs. This is in recognition of the differences in their risk-taking behaviour between the old and the young CEOs. Previous studies model CEO age around risk taking difference between the young and older CEOs. Hambrick and Mason (1984) for example argue that younger managers are generally associated with attempting to be novel, unprecedented, and taking risks.

Conversely, older CEOs are perceived to be at a point in their lives whereby financial and career security are more important, have greater commitment to the status quo of the firm, have less physical and mental stamina and less able to come up or grasp new ideas or learn new behaviours (Serfling, 2014) or tend to seek more information to evaluate information in greater depth, hence, leading to lengthy decision making. Prior studies generated conflicting findings on the how CEO age impacts risk taking behaviour of CEOs. Serfling (2014) for example, found a negative association between CEO age and stock return volatility. This finding was consistent with the hypothesis that CEOs' risk-taking behaviour decreases as they become older. In addition, Serfling (2014) found that older CEOs reduce the firm's risk through implementation of less risky policies and that: they invest less in

research and development, make more diversifying acquisitions, manage firms with more diversified operations, maintain lower operating leverage. Serfling (2014) further shows that firm risk and the riskiness of corporate policies are lowest when both the CEO and the next influential executive are older and higher when both are younger. Overall, Serfling (2014) concluded that CEO age could have a significant effect on the risk-taking behaviour and firm performance. Despite the findings by Serfling (2014), prior studies on the impact of CEO on risk preferences and risk-taking behaviour produced mixed results.

For instance, studies that modelled CEO age around career concerns, predicted that young CEOs would be more risk averse because they do not have the reputation similar to the more experienced and older CEOs. Similarly, Serfling (2014) argued that since young CEOs would be harshly penalised for poor performance, they would be more concerned about their future opportunities and adopt more conservative investment policies in order to save their careers. Thus, this implies that younger CEOs would shun innovative investments and take investments that are easier for the market to evaluate (Zwiebel, 1995). Conversely, there are also studies that developed models that predicted that young CEOs invest more aggressively and take greater risk as a signal of greater superiority or talent. For example, Yim (2013) found that younger CEOs make more acquisitions because an increase in performance linked compensation incentivises them to make more acquisitions early in their career.

Empirical evidence shows a positive relationship between CEO age on CEO turnover (see for example, Murphy and Zimmerman, 1993, Weisbach, 1988). Owing to the above, this study hypothesises that:

H3 CEO age positively impacts CEO turnover-performance sensitivity

3. Data and Methodology

3.1 Sample selection and data sources

The data for this study were collected from the Bloomberg terminal that is house in the University of Cape Town's main library. The population for this study was the 158 companies listed on the Johannesburg Stock Exchange. The final sample of 60 companies examined was arrived at by excluding all the companies listed under the financial industry, that is banks, insurance and property companies as these are governed by a legislation which is different from the companies Act. Exclusion of the companies listed on the financial industry is also consistent with prior studies. In addition to companies listed under the financial industry, companies with missing data for any of the variables for any given year were also excluded. The period covered for this study runs over 5 years from 2013 to 2017. This period was chosen mainly because data for some companies was missing for the period beyond 2017. Thus, excluding companies that had no data for the period beyond 2017 could have reduced the sample further, which could have complicated the analysis meant for this study.

3.2 Data collection procedure

Data for all the variables were collected using the Bloomberg terminal that is situated in the main library at the University of Cape Town.

3.2.3 Research Models and measurement of Variables

This study follows the research method that was used by Nguyen (2011). The dependent variable is CEO turnover. The independent variables used include two board variables namely:

- Board size and proportion of non-independent directors or executive directors;
- One measure of ownership structure, that is institutional ownership;
- Three lagged measures related to market stock performance, namely 18 months stock returns, 24 months stock returns and the 36 months stock returns and
- EBIT/Assets (EBIT-ASSET DUMMY) which is a proxy for prior period accounting performance.

The study also uses two control variables, that is, CEO age – to control for differences in risk taking based on age differences. The other control variable used is LOG ASSETS, which controls for differences in firm sizes.

To examine the impact of ownership structure and board structure on CEO turnover sensitivity the following 8 models were used:

Model 1

CEO Turnover = $\propto_0 + \beta_1 Performance\ 18\ months + \beta_2 CEO\ Age + \beta_3 BoardInsiders + \beta_4 LogAssets + \varepsilon_i$

Model 2

CEO Turnover = $\propto_0 + \beta_1 Performance\ 24\ months + \beta_2 CEO\ Age + \beta_3 BoardInsiders + \beta_4 LogAssets + \varepsilon_i$

Model 3

CEO Turnover = $\propto_0 + \beta_1 Performance\ 36\ months + \beta_2 CEO\ Age + \beta_3 BoardInsiders + \beta_4 LogAssets + \varepsilon_i$

Model 4

CEO Turnover = $\propto_0 + \beta_1 EBIT/ASSETSDummy + \beta_2 CEO\ Age + \beta_3 BoardInsiders + \beta_4 LogAssets + \varepsilon_i$

Model 5

CEO Turnover = $\propto_0 + \beta_1 Performance\ 18\ months + \beta_2 CEO\ Age + \beta_3 Total\ InSt + \beta_4 BoardSize + \beta_5 BoardInsiders + \beta_6 LogAssets + \varepsilon_i$

Model 6

CEO Turnover = $\propto_0 + \beta_1 Performance\ 24\ months + \beta_2 CEO\ Age + \beta_3 Total\ InSt + \beta_4 BoardSize + \beta_5 BoardInsiders + \beta_6 LogAssets + \varepsilon_i$

Model 7

CEO Turnover = $\propto_0 + \beta_1 Performance\ 36\ months + \beta_2 CEO\ Age + \beta_3 Total\ InSt + \beta_4 BoardSize + \beta_5 BoardInsiders + \beta_6 LogAssets + \varepsilon_i$

Model 8

CEO Turnover = $\propto_0 + \beta_1 EBIT/ASSETSDummy + \beta_2 CEO\ Age + \beta_3 Total\ InSt + \beta_4 BoardSize + \beta_5 BoardInsiders + \beta_6 LogAssets + \varepsilon_i$

Where

- CEO Turnover is the variable that captures if the CEO was replaced in a particular year, captured as "1" if replaced, otherwise "0" if not replaced
- Performance 18 months is the stock return lagged for 18 months
- Performance 24 months is the stock return lagged for 24 months
- Performance 36 months is the stock return lagged for 36 months
- EBIT/ASSETS Dummy is a proxy for accounting performance
- CEO age represents the age of the CEO
- TotalINST is the proportion of shareholding by institutional investors
- BoardSize is the number of directors on the board
- BoardInsiders is the proportion of executive directors
- LogAssets is company size measured as a natural logarithm of total assets

4 Data analysis and Research results

4.1 Descriptive statistics and tests for multicollinearity, models' goodness of fit and model specification.

The study uses Logistic regressions that include CEO turnover as a dependent variable and prior performance as the main independent variable. Before performing the regressions, various tests were conducted to test for multicollinearity, goodness of fit of each model and a link test is conducted to check if the dependent variable was specified correctly. Table 1 represents a correlation matrix for the dependent and independent variables. The correlation co-efficients are very low, which suggests that the multicollinearity issue is not a problem. In addition to the correlation matrix the VIF tables were also generated for the dependent variable and each of the independent variables as further test for multicollinearity. The results in Table 2, show that the VIFs for all the independent variables are less than 10 and the mean variance is not too different from 1, which suggests that there is no problem of multicollinearity. Furthermore, the link test was also conducted to check if the dependent variable was specified correctly. The results in Table 3 below show that the hatsq for all the models except model 3 is insignificant, which suggests that the dependent variables were specified correctly except for model 3.

Table 1 Correlation Matrix

	CEO Turnover	Performance _18month	Performance _24month	Performance _36month	EBIT_ASSET~y	CEO_AGE	TotalINST	BOARD_SIZE	Board_Insi~s	Log_Assets
CEO_ Turnover	1									
Performance_ 18month	0,1329	1								
Performance _24month	0,0607	0,9389	1							
Performance_ 36month	-0,0084	0,7516	0,8338	1						
EBIT_ASSET~y	0,009	0,2131	0,2652	0,2859	1					
CEO_AGE	-0,209	-0,0963	-0,094	-0,0616	0,037	1				
TotalINST	-0,1539	0,1492	0,161	0,1808	0,0999	0,0452	1			
BOARD_SIZE	0,0914	0,0613	0,0702	0,1049	-0,0937	0,2291	-0,0531	1		
Board_Insi~s	-0,0993	0,0083	0,0065	0,0153	0,2072	0,2964	0,1504	-0,0218	1	
Log_Assets	0,0854	-0,1639	-0,1728	-0,1334	-0,1604	0,1136	-0,1009	0,4355	-0,1325	1

Table 2 VIF Test for Multicollinearity.

	M1	M2	M2	M4	M5	M6	M7	M8
Variable	VIF	VIF	1/VIF	VIF	VIF	VIF	VIF	VIF
Perfomance_18month	1,03				1,26			
Perfomance_24month		1,04				1,34		
Perfomance_36month			1,02				1,54	
EBIT_ASSET Dummy				1,06				1,2
Board_Insiders	1,13	1,13	1,13	1,13	1,52	1,52	1,52	1,53
CEO_AGE	1,13	1,13	1,13	1,17	1,32	1,32	1,33	1,31
Log_Assets	1,07	1,07	1,06	1,06	2,11	2,12	2,06	2,07
BOARD_SIZE					1,46	1,48	1,49	1,41
TotalINST					1,14	1,15	1,15	1,13
Ind2					1,45	1,49	1,68	1,45
Ind3					1,88	1,93	2,13	1,84
Ind4					1,28	1,31	1,38	1,22
Ind5					1,7	1,71	1,75	1,79
Ind6					1,41	1,42	1,41	1,45
Ind8					1,43	1,43	1,42	1,4
Mean VIF	1,09	1,09	1,09	1,11	1,5	1,52	1,57	1,48

Table 3 Linktest results

		Coef.	Std. Err.	z	P>z
M1	_hat	0,9927769	0,8019306	1,24	0,216
	_hatsq	-0,0027854	0,2892279	-0,01	0,992
M2	_hat	1,858192	1,107183	1,68	0,093
	_hatsq	0,2966549	0,3616504	0,82	0,412
M3	_hat	3,004258	1,072336	2,8	0,005
	_hatsq	0,6513993	0,3214633	2,03	0,043
M4	_hat	2,401915	1,11218	2,16	0,031
	_hatsq	0,4691035	0,3485337	1,35	0,178
M5	_hat	0,8545626	0,3661805	2,33	0,02
	_hatsq	-0,0629686	0,1370633	-0,46	0,646
M6	_hat	0,9702147	0,4602825	2,11	0,035
	_hatsq	-0,0121375	0,166343	-0,07	0,942
M7	_hat 1.28547	0,5121471	2,51	0,012	0,28168
	_hatsq	0,1088594	0,1716428	0,63	0,526
M8	_hat	1,009864	0,4791267	2,11	0,035
	_hatsq	0,0038936	0,168632	0,02	0,982

Furthermore, the goodness of fit of each model was conducted using the Pearson goodness of fit test. The results in Table 4 show that, there is no evidence to reject the null hypothesis that the model fits the data well.

Table 4 Logistic model for CEO Turnover, goodness-of-fit test

	M1	M2	M3	M4	M5	M6	M7	M8
Pearson chi2	201,28	206,96	215,74	210,09	202,95	210,13	216,28	211,62
Prob > chi2	0,4414	0,3346	0,1977	0,2812	0,2633	0,1632	0,1013	0,1461

After conducting the test for the assumptions discussed above, the descriptive analysis of the dependent and independent variables was conducted and the results for this are shown in Table 5 below

Table 5

	(1)	(2)	(3)	(4)	(5)
VARIABLES	N	mean	sd	min	max
TWO_TIER_BOARD	252	1	0	1	1
TotalINST	252	48.64	38.371	1.68	100.00
CEO_AGE	252	53.62	5.975	37	70
BOARD_SIZE	252	11.39	2.556	6	20
Perfomance_18month	252	0.1615	0.5355	-0.867	3.2169
Perfomance_24month	252	0.2102	0.6456	-0.8941	3.3719
Perfomance_36month	252	0.4481	0.8895	-0.9115	3.4453
CEO Turnover	252	0.171	0.377	0	1
EBIT_ASSETS_Dummy	252	0.929	0.258	0	1
CEO_Founder	252	1	0	1	1
Log_Assets	252	9.978	1.154	5.858	13.06
Board_Insiders	252	24.25%	8.657	7.692%	50%

For the descriptive statistics, only variables of interest are discussed. The descriptive analysis of all the other variables are however presented in Table 5. Variables of interest that are briefly discussed are CEO age and board size and the proportion of executive directors who are herein coded as board insiders. The results in Table 5 show that the average age for the CEO was 53.62, with a minimum age of 37 and maximum of 70, which suggests the youngest CEO was 37 which the oldest had 70 years. The standard deviation for the CEO age was 5.975%. Board size had an average of 11.9, a minimum of 6 and a maximum of 20, which suggests that the smallest board had 6 directors whereas the largest had 20 on the board. Board insiders have an average of 24.25%, a minimum of 7.69% and

a maximum of 50%, with a standard deviation of 8.86%. This suggests that the minimum proportion of executive directors on a board was 7.69% while the maximum representation by executive directors was 50%.

4.2 Results of the association between ownership structure and board structure on CEO turnover- performance sensitivity (Models 1 -8)

The results in Table 5 test the sensitivity of CEO turnover to prior performance using 18 months, 24 months and 36 months lagged stock returns as proxies for stock performance. Consistent with Nguyen (2011), this study also uses a dummy for positive variation between year N (year under consideration) and N-1 (year prior to the one under consideration) of the EBIT/Assets ratio as a proxy for accounting performance. Thus, the Table 5 presents results from Logistic regressions that use CEO turnover as a dependent variable and previous performance as the main independent variable. The results in Models 1, 2, 3 and 4 control for the CEO age, proportion of insiders and firm size.

However, the results for Models 1, 2, 3 and 4 show that there is an insignificant positive relationship between CEO turnover and any of the four measures of performance. In other words, CEO turnover is not associated with prior firm performance irrespective of whether it is market based (stock returns) or accounting based (accounting based, that is EBIT/Assets ratio). The findings of this study, therefore, imply that CEO turnover cannot be traced to the firm's prior performance. This could be because this study did not make a distinction between the reasons for the CEO turnover. Accounting for this could have possibly produced different results. These findings are inconsistent with the findings of Nguyen (2011, Huson et al, 2001; Denis and Denis, 1995; Denis et al, 1997) who found that CEO turnover is negatively related prior firm performance.

Models 1, 2, 3 and 4, on the other hand, all show that CEO turnover is negatively impacted by CEO age. In other words, the results show that there is a significantly negative relationship between CEO turnover and CEO age. Similar to the findings based on prior performance, the Models 1, 2 3, and 4 show that there is no significant relationship between firm size and CEO turnover.

Models 5, 6, 7 and 8 include a number of control variables for the firm, CEO characteristics, board structure and industry of affiliation. The findings based on Models 5, 6, 7 and 8 show that CEO turnover is insignificantly related to all measures of performance, irrespective of whether it is market or accounting based measure of performance. These findings is also inconsistent with Nguyen (2011), Huson et al (2001), Denis et al (1997) and Denis (1995). However, models 5, 6, 7 and 8, all show that CEO turnover is negatively and significantly related to CEO age and proportion of Institutional shareholding (that is, TotalINST), albeit at different levels of significance. Models 5, 6 and 7 show

that CEO age is negatively related to CEO turnover at 5% while Model 8 shows that CEO age is negatively related to CEO turnover at 1% significance level. Models 5, 6 and 8 show that CEO turnover is negatively related to the proportion of shareholding of institutional shareholders at 1% while CEO turnover is negatively related to shareholding of institutional shareholders at 5%.

In addition to that, models 7 and 8 show that CEO turnover is positively and significantly related to board size at 10%, while Models 5 and 6 show that there is a positive but insignificant relationship between CEO turnover and board size. The findings in Model 7 and 8 are inconsistent with the findings of Nguyen (2011) who found no relationship between CEO turnover and board size while those shown by Models 5 and 7 are consistent with the findings by Nguyen (2011) who also found that CEO turnover is not impacted by board size. Apart from the above, the results in Models 5, 6, 7 and 8 show that there is no relationship between CEO turnover and firm size and the proportion of board insiders. The findings in Models 5, 6 and 7 are consistent with the findings of Nguyen (2011) who found no relationship between CEO turnover board insiders and firm size respectively while Model 8 is inconsistent with the findings of Nguyen (2011) who found a negative and significant relationship between CEO turnover and firm size at 10%.

Table 6 Robust Regression Models

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	M1	M2	M3	M4	M5	M6	M7	M8
Perfomance_18month	0.486				0.579			
	(1.533)				(1.423)			
Perfomance_24month		0.114				0.115		
		(0.418)				(0.368)		
Perfomance_36month			-0.110				-0.153	
			(-0.545)				(-0.505)	
EBIT_ASSETS_Dummy				0.241				0.395
				(0.351)				(0.552)
CEO_AGE	-0.105***	-0.109***	-0.113***	-0.111***	-0.0913**	-0.0966**	-0.103**	-0.101***
	(-2.712)	(-2.744)	(-2.778)	(-2.881)	(-2.423)	(-2.493)	(-2.555)	(-2.635)
TotalINST					-1.825***	-1.729***	-1.652**	-1.723***
					(-2.709)	(-2.614)	(-2.523)	(-2.650)
BOARD_SIZE					0.125	0.144	0.168*	0.155*
					(1.373)	(1.609)	(1.852)	(1.805)
Board_Insiders	-0.00533	-0.00606	-0.00627	-0.00758	0.00291	0.00312	0.00191	0.00171
	(-0.208)	(-0.240)	(-0.250)	(-0.298)	(0.112)	(0.124)	(0.0755)	(0.0681)
Log_Assets	0.180	0.156	0.140	0.153	-0.224	-0.281	-0.323	-0.284
	(1.032)	(0.927)	(0.842)	(0.915)	(-0.856)	(-1.147)	(-1.399)	(-1.200)
Constant	2.360	2.886	3.360	2.871	5.174*	5.746**	6.177**	5.562*
	(0.853)	(1.059)	(1.245)	(1.076)	(1.758)	(1.989)	(2.188)	(1.952)
Observations	204	204	204	204	204	204	204	204
Pseudo R2	0.0693	0.0593	0.0599	0.0590	0.144	0.134	0.135	0.134
LR Chi2	14.95	10.91	8.831	9.017	21.27	19.82	21.12	19.65
Prob>chi2	0.00481	0.0277	0.0655	0.0607	0.0466	0.0705	0.0487	0.0741

Robust z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

5 Conclusion and recommendations for future studies

5.1 Conclusion

This study examines the relationship between ownership structure and board characteristics on CEO-firm performance sensitivity. The study reports three important findings. The first is that CEO turnover is insensitive to firm performance, irrespective of whether it is an accounting-based firm performance (i.e CEO turnover vs EBIT/Assets ratio) or market-based measure of firm performance (lagged stock returns, 18, 24, and 36 months respectively). Second, the findings of this study show that CEO age and institutional ownership are inversely related to CEO turnover. In addition, board size becomes a significant determinant of CEO turnover when the model in includes returns lagged over 36 months or when the EBIT/Assets ratio is part of the Model (see models 7 and 8), although this is only at 10% level of significance. Third, board insiders and firm size are found to be unrelated to CEO turnover. In other words, the findings of this study show that board insiders and the size of the firm do not impact CEO turnover. Put differently, the results of this study show that there is no statistical relationship between CEO turnover and the proportion of executive directors and firm size respectively.

5.2 Recommendations for future research

This study examined the relationship between Ownership structure, board characteristics and firm performance on CEO turnover over a 5-year period, thus, a longer time frame could also be considered for future studies. In addition, a limited number of ownership, board and CEO characteristics were considered for this study, and thus future studies could build from this current study by incorporating some of the other variables that could be taken from ownership and board structures and CEO characteristics. Other qualitative factors influencing CEO turnover, such as the influence a CEO has on the board and management, the CEO's stake in the company and the role that Key performance indicators may play, could also be further researched, above what has already been considered in this study. Furthermore, future research in this field could as well incorporate variables taken from board committees, especially those committees that could be linked to issues related to decisions that affect the CEO for example, Remuneration committee, Nomination committee, Audit committee and Risk committee. Other competing measures of performance could be used, for example EVA, MVA, ROA and ROE, most importantly EVA and MVA as these are related to value creation since the CEO has a mandate to maximise firm value as a whole and not only to shareholders as prior. Thus, future studies should consider performance measures that provide a holist measure of value to all shareholders as this matches the propositions in the code of corporate governance.

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