THE SOUTH AFRICAN CODE OF CORPORATE GOVERNANCE. THE RELATIONSHIP BETWEEN COMPLIANCE AND FINANCIAL PERFORMANCE: EVIDENCE FROM SOUTH AFRICAN PUBLICLY LISTED FIRMS

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Abstract

The paper examines corporate governance compliance by South African listed firms. The study seeks to explore if better governed firms exhibit greater financial performance than poorly governed firms. The paper employs a panel study methodology for a sample of 137 Johannesburg Stock Exchange (JSE) listed firms between 2002 and 2011. The paper provides empirical insights about the impact of corporate governance on firm performance. The results show that the compliance levels to corporate governance in South Africa (SA) has been improving since 2002 when King II came into force. However, the compliance level in large firms appears to be higher than in small firms. Further, the findings show that the market value of large firms is higher than that of small firms. These results largely support the notion that better governed firms outperforms poorly governed firms in terms of financial performance. Notably, the empirical results indicate that board size, CEO duality and the presence of Independent non-executive directors positively impact the performance of a firm, whereas board gender diversity, director share-ownership and frequency of board meetings have no impact on firm performance. Unexpectedly, the presence of internal key board committees, such as remuneration, Audit and Nomination negatively impact firm performance. Notably, the results also show that only 9 per cent of the positions in the board of SA listed firms are occupied by women. Even though the sample size for this study was the largest to date in SA studies, the sample size of 137 listed firms represents only 40 per cent of the total number of listed firms as at August 2012. As a result, generalizability of the findings might be questioned. Therefore, future research is encouraged to increase the sample size. Similar to UK, South Africa has a flexible approach to corporate governance, in which listed firms are required to comply or explain non-conformance to King recommendations. This study has policy implications as it determines whether the flexible corporate governance approach employed by SA improves corporate governance compliance than the mandatory corporate governance approach as employed by countries such as Sri Lanka and whether compliance translates into firm performance. The study also suggests that greater representation of independent non-executive director, a larger board size and the separation of CEO and Chairman should be encouraged to enhance firm performance. The significant finding of this study is that compliant firms enjoy a higher firm performance as proxied by ROA and Tobin's Q. This implies that compliance to corporate governance code of practice matters, not just as box ticking exercise but as a real step change in the governance of South African listed firms. This paper fulfils an identified need of how compliance to corporate governance influences firm performance in South Africa. The findings have implications to JSE listing rules, policy, investor confidence and academia.

Keywords: Corporate Governance, Compliance, South Africa, JSE, Firm Performance

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1 Introduction

Global corporate failures and massive corporate scandals such as those of Enron Corporation (Corp)., WorldCom Incorporated (Inc). and Global Crossing Limited (Ltd)., among others, have heightened the subject of corporate governance (Li, 2010; Rashid, 2011). South Africa had its fair share of high profile corporate governance scams since 1994. The scandals included Macmed in 1999, Regal Treasury Bank in 2001, Saambou in 2002, Leisurenet in 2002, JCI in 2005, Sentula Mining in 2006 and Fidentia in 2007. These accounting frauds are related to weak corporate governance (Berkman, Zou & Shaofeng, 2009).

In spite of the preceding scandals, studies of corporate governance in African emerging markets are few and far between. This has invariably led to limitations in understanding domestic corporate

governance issues and making comparison to other countries. As pressure from the institutional investors to beef up corporate governance structures mount, it has become more crucial to understand the relationship of corporate governance and financial performance as well as the compliance levels of publicly listed firms from an emerging market perspective.

Exacerbating concerns regarding corporate governance and firm performance nexus is the often conflicting findings by scholars and researchers. This has led to ongoing debate on whether better corporate governance leads to better firm performance. Khatab, Masood, Zaman, Saleem and Saeed (2011) concluded that firms having good corporate governance measures perform well as compared to the firms having no or less corporate governance practices while Chidambaram, Palia and Zheng (2007) find no evidence regarding the impact of corporate governance on firm performance. Therefore there is no unequivocal evidence to suggest that better corporate governance enhances firm performance (Klein, Shapiro and Young, 2005). As a result, investors are still much skeptical about the existence of the link between good governance and performance indicators (Bradley, 2004).

South Africa arguably offers an interesting research context where the corporate governance and financial performance association can be empirically examined. First, and unlike most African countries, South Africa appears to possess a relatively sound financial and corporate regulatory structure similar to that of the UK. Secondly, as is the case in UK, corporate governance seems to be improving steadily (Mallin, 2007). Thirdly, South Africa's stock exchange dominates the African region in terms of market capitalization (Andrianaivo & Yartey , 2010). Fourthly, South Africa (SA) was the first Sub-Saharan African country to introduce a corporate governance (CG) code in the form of the 1994 King Report (Mallin, 2007). The recommendations of the 1994 King Report were heavily informed by those of the UK's Cadbury Report of 1992 (Mangena & Chamisa, 2008).

The paucity of rigorous empirical corporate governance studies in Africa as a whole, and particularly South Africa, offers opportunities to make contributions to the existing literature. The total numbers of studies in corporate governance and firm performance nexus are less than ten in South Africa. In fact the only research on the subject of corporate governance and firm performance conducted on South African listed firms are those by Klapper and Love (2004); Durnev and Kim (2005); Chen, Chen and Wei (2009); Khumalo (2011); Semosa (2012) Ntim (2013) and Meyer and De Wet (2013). However, not only are their findings conflicting but they are also fraught with limitations which makes it impossible to generalise results. Hence a need for further research that could lead to new contribution to the scant body of knowledge of corporate governance is needed.

For instance, Klapper and Love (2004) investigate the relationship between good governance practices and firm value using a sample of 374 listed firms from 14 emerging markets, including South Africa, from 1998 to 1999. They find that corporate governance as measured by the Credit Lyonnais Securities Asia's (CLSA) index is closely related to firm value, as proxied by Tobin's Q. Similarly Durnev and Kim (2005) use CLSA index to examine the impact of corporate governance on firm performance in 27 emerging countries, including South Africa, from 1999 to 2000. They report that firms with higher corporate governance rankings yield higher market valuation than their counterparts. Additionally, Munisi and Randoy (2013) investigate the relationship between good corporate governance practices and firm performance using data from Sub-Saharan African countries from 2005 to 2009. They also find that corporate governance have a positive impact on firm performance. Chen et al. (2009) also used the same CLSA subjective analysts' corporate governance rankings to investigate the relationship between corporate governance and the cost of equity capital.

However, even though the above studies of Klapper and Love (2004), Durnev and Kim (2005), Chen et al. (2009) and Munisi and Randoy (2013) all confirmed a positive relationship between corporate governance and firm performance, the findings cannot be generalized for the following reasons: First, all four prior studies employ CLSA rating, which suffer from subjectivity bias since some of the answers to the questions are not "matter- of –fact" but rather completed based on the experiences of the analysts. Secondly, the CLSA, which includes a number of Asian countries, may not be feasible to adopt in South Africa because of cultural and institutional differences. Thirdly, analysts' ratings are not updated frequently in accordance with the ongoing developments in corporate governance across countries (Hassan & Marston, 2008). Fourthly, CLSA scores are subjective and their credence has been questioned by Durnev and Kim (2007). In addition, the sample size on all four previous studies has been significantly small. Arguably, this makes the findings to be less-representative of South African listed firms.

Ntim (2013) investigated the effect of internal corporate governance structures and firm financial performance in a sample of 100 South African listed firms from 2002 to 2006 (a total of 500 firm-year observations). In an effort to mitigate the CLSA's subjective nature and small sample size of prior research as evident in studies of Klapper and Love (2004), Durnev and Kim (2005), Chen et al. (2009) and Munisi and Randoy (2013), Ntim (2013) collected data directly from company annual reports. In his 5-year panel study, Ntim (2013) found that board diversity, frequency of board meetings and the presence of key internal board committees have no

impact on firm performance. Secondly, board size is statistically significant and positively associated with Tobin's Q , but statistically insignificant and negatively related to return on assets (ROA). Thirdly, role or CEO duality is statistically significant and positively related to ROA, but statistically insignificant and negatively associated with Tobin's Q. Fourthly, director share-ownership is statistically insignificant and positively related to ROA, but statistically significant and negatively associated with the Tobin's Q. However, the study by Ntim (2013) was conducted on data from 2002 to 2006, which reflect outdated corporate governance practices due to the implementation of the new Companies Act of 2008 and the latest publication of the King Report (2009) on Corporate Governance (King III).

Whilst Meyer and De Wet (2014) study took care of the above shortcomings of Ntim (2013) it fell short on including other governance variables, such as, CEO duality, frequency of board meetings, presence of key board committees and board diversity as stipulated by the latest King Report. In addition, the study of Meyer and De Wet (2014) was conducted from 2010 to 2012 which is a relatively short span for a corporate governance study.

The remainder of the paper proceeds as follows. The next section lays out the literature on the underlying theories of corporate governance, then followed by hypotheses emanating from the literature, research objectives, data and research methodology, descriptive statistics, discussion on the regression results, conclusion and avenues for future research.

2 Review of literature

The hypothesis will be developed taking a cue from the Companies Act of 2008, the latest publication of the King Report (2009) on Corporate Governance (King III) and Johannesburg Stock Exchange (JSE) listing rules on board specific variables as well as from previous studies.

A brief explanation of internal attributes of corporate governance in relation to different theories of corporate governance and their impact on firm performance is presented below.

Board size (BS): The issue of board size as a corporate governance mechanism has received considerable attention in recent years from academics, regulators and market participants. It continues to receive attention because theory provides conflicting views as to the impact of board size on firm performance whilst at the same time the empirical evidence is inconclusive (Uadiale, 2010; Johl, Kaur & Cooper, 2015).

Zakaria, Purhanudin & Palanimally (2014) examine a sample of 73 firms for the period of 6 years from 2005 to 2010, using ROA as a measure for firm performance. Their findings revealed that board size positively influences firm performance. Notably, the study captured three stages of economic conditions: before crisis (2005-2006), during crisis (2007-2008) and after crisis (2009-2010). The findings seem to suggest that greater emphasis need to be taken by firms to have larger board size in order to provide greater monitoring, increase the independence of the board and counteract the managerial entrenchment, hence increasing firm performance (Johl, Kaur & Cooper, 2015; Fauzi & Locke, 2012; Moscu, 2013).

On the contrary Samuel (2013) disputed the positive relationship between larger board size and firm performance. Employing a sample of 50 firms quoted on the Nigerian Stock Exchange during the period 2001 to 2010 with NPAT as the dependent variable, he finds that larger board size affects the value of a firm negatively. This finding corroborates Nakano and Nguyen (2013) investigation of the relationship between board size and financial performance in a sample of 1771 Japanese firms listed on the Tokyo Stock Exchange between 2003 and 2007. They also found an inverse relationship between firm market value as represented by Tobin's Q and ROA and the size of the board of directors.

Finally using a sample of 8 banking firms listed on the Ghana Stock Exchange, with data spanning from 2007 to 2012, Agyemang, Aboagye, Antwi and Frimpong (2014) found no significant relationship between board size and firm performance. However, Yasser, Entebang and Mansor (2011) clear the confusion of the conflicting results by suggesting that the board size should be confined to a sizeable limit.

According to the South African Companies Act 71 of 2008, all pubic companies must have a minimum of three directors, while the JSE's Listings Rules mandate listed firms to have a minimum of four directors. None of them sets a maximum board size. King III also does not specify the exact number of directors that should form a board. However, it sets out a general principle that every board must consider whether its size makes it effective. This suggests that even though King III admits that a company's board size may probably affect its performance, it leaves the option of determining the actual board size for the companies themselves to decide.

A plausible explanation for not prescribing a specific board number is to avoid a tacit conclusion that it is possible to adopt a "one size fits all" approach to corporate management (MacNeil & Xiao, 2006). Thus, hypothesis one is as follows:

H1: There is a statistically significant positive relationship between board size and financial firm performance, as proxied by both ROA and Tobin's Q.

Frequency of board meetings (FMBs): First, there is limited evidence on the relationship between the frequency of board meetings and financial performance. Secondly, the limited evidence is also conflicting, which makes the frequency of board meetings and financial performance association a ripe area for further research.

Using a sample of 307 US listed firms over the 1990-1994 period, Vefeas (1999a) reports a

statistically significant and negative association between the frequency of board meetings and financial performance, as proxied by Tobin's Q. On the contrary, in a study of 169 South African listed firms, Ntim and Osei (2013) investigate the impact of corporate board meetings on firm performance. Their findings suggest a statistically significant and positive relationship between frequency of board meetings and firm performance, implying that as the number of board meetings increases, the monitoring and advisory role of boards improves, hence translating into firm performance (Agyemang, Aboagye, Antwi & Frimpong, 2014).

El Mehdi (2007) finds that the frequency of board meetings has no association with economic performance in a small sample of 24 Tunisian listed firms from 2000 to 2005. He suggests that financial performance, which is tied most closely to the quality of the day-to-day management of the company, is likely to be less affected by the frequency of board meetings.

King III and the JSE's Listings Rules task South African listed firms to establish a policy for the frequency, purpose, conduct and duration of their boards of directors and board subcommittees' meetings. Specifically, King III recommends that the board of directors should sit at least once a quarter and the frequency of meetings should however be determined with reference to specific circumstances within the company.This implies that King III expects a higher frequency of board meetings to impact positively on financial performance. Therefore, the hypothesis to be tested is:

H2: There is a statistically significant positive relationship between the frequency of board meetings and financial firm performance, as measured by both ROA and Tobin's Q.

Independent non-executive directors (INEDs): In South Africa corporate governance guidelines such as King III require boards to be comprised of the majority of non-executive directors, of whom the majority should be independent. (KPMG, 2009). However, there is a death of studies in South Africa pertaining to the relationship between independent non-executive directors and firm performance. The only research conducted in South Africa on the subject are those by Ntim (2011), Khumalo (2011), Semosa (2012), and Meyer and De Wet (2013).

Using a sample of 236 Taiwanese listed firms from 2011 to 2012, Lin and Chang (2014) report a positive relationship between Independent Non-Executive Directors (INED) and both ROA and ROE. Gupta and Fields (2009) examine a US sample of 744 INED resignations from 1990 to 2003 to ascertain the value that the market places on board independence. They report that, on average, the announcement of INED resignations result in 1.22 per cent loss in a firm's market value. This suggests that investors value independent boards to ensure greater monitoring of managerial behaviour.

Dahya, Dimitrov and McConnell (2008) in their analysis of 799 firms across 22 countries find a significant positive relationship of independent directors and firm performance in the presence of dominant shareholders and countries with weak protection of shareholder rights. Further, their results also find a negative relationship between the higher proportion of independent directors on board and related party transactions. This clearly highlights that the presence of non-executive directors on these boards enhances monitoring and advisory role thus leading to firm performance (Agyemang, Aboagye, Antwi & Frimpong, 2014). By contrast, Wahba (2015) report that increasing the proportion of non-executive members to the total number of directors has a negative impact on firm financial performance. However, a third stream of empirical papers (Vafeas & Theodorou 1998; Weir & Laing, 2000; Haniffa & Hudaib, 2006), indicates that the presence of INED has no impact on performance. For example, Hermalin and Weisbach (1991) report no link between board composition and performance for a sample of 142 US listed firms.

The South African Companies Act 71 of 2008 requires every public company to appoint at least three independent NEDs. King III and the JSE Listings Rules also require South African corporate boards of directors to consist of a majority of INED. King III further recommends a majority of non-executive directors, of whom sufficient should be independent of management. This suggests that King III expects firms with more INED on their boards to perform financially better than those with less INED.

This expectation is further corroborated by Ho and Williams (2003) who find a statistically significant and positive association between the percentage of INED and intellectual capital performance. The third respective hypothesis to be tested in this study is that:

H3: There is a statistically significant positive relationship between the percentage of independent INEDs and financial firm performance, as measured by both ROA and Tobin's Q.

Board gender diversity (BGD): Board diversity is one of the under researched board structure variables and yet a topical subject (Carter, D'Souza, Simkins & Simpson, 2010). Surprisingly few studies have been carried out in the developing countries (Wachudi & Mboya, 2009). These few studies have been conducted in the context of a few developed economies, such as the USA (Adams & Ferreira, 2009), Canada (Francoeur, Labelle & Sinclair-Desgagne, 2008), Germany (Rose, Munch-Madsen & Funch, 2013) and Spain (Martin-Ugedo & Minguez-Vera, 2014). While these studies focus only on gender diversity, other studies have focused on gender diversity along with other demographic attributes, such as race or ethnic background (Akpan & Amran, 2014). Board diversity has broadly been defined as the various attributes that may be represented among directors in the boardroom

in relation to board process and decision-making, including age, gender, ethnicity, culture, religion, constituency representation, independence, knowledge, educational and professional background, technical skills and expertise, commercial and industry experience, career and life experience (Van der Walt and Ingley, 2003). This study addresses board diversity in terms of gender, irrespective of race.

There are mixed theoretical propositions as to the impact of board diversity on shareholder value: those who argue for more diversity in boardrooms and those who are in favour of corporate monoculture and boardroom uniformity. In a sample of 90 quoted companies in the Nigerian Stock Exchange from a period 2010 to 2012, Akpan and Amran (2014) shows that the presence of women in Nigerian boards had a negative significant influence on company performance.

A panel study of 12 years with a sample of 32 Commercial banks in Kenya from 1998 to 2009, Wachudi and Mboya (2009) found that the board gender diversity has no effect on performance of banks in Kenya. They found that on average, in a typical board size of 8 members, only 1 is female director. In support of a no-effect impact on firm value is Carter et al. (2010) study of firms in the S&P 500 index for the 5-year period over the period 1998 to 2002, which reveals that the inclusion of women and ethnic minorities on corporate boards have no effect on firm performance. Contrary to the above, Julizaerma and Sori (2012) find a positive association between gender diversity and firm performance. Similarly Oba and Fodio (2013) find that both female director presence and proportion have positive impact on financial performance. Triana, Miller and Trzebiatowski (2013) provide a different perspective to the debate by suggesting that board gender diversity is double-edged because it can propel or impede strategic change depending on firm performance and the power of women directors.

To sum up, and consistent with the mixed nature of the extant board gender diversity theoretical literature, the prior empirical evidence is equally conflicting. The conflicting international evidence may partly be explained by the fact that prior studies use different board diversity and performance proxies, sample periods and estimation techniques. However, it may also be explained by country and environmental differences.

In this regard, South Africa offers an interesting research context to explore the impact of board diversity on firm performance. South Africa has ethnically diverse populace (made up of people from almost every part of the world, including European Whites or Caucasians, Chinese, Indians, Mixed Race and Black Africans). Examining board diversity under this context can arguably bring new insights that may enrich the board gender diversity and firm performance literature. The study will also contribute to the debate of whether governments should consider adopting quota legislation to increase the number of women in board of directors, such as in Spain, Norway, The Netherlands and France.

The South African Employment Equity Act 1998 stipulates that every firm with more than 100 employees should ensure that its labour force, including top management is constituted by a balance between non-whites and whites. Among the non-whites, black men and women are expected to be given special preference. By contrast, King III and the JSE's Listings Rules do not set any specific targets for firms. However, they suggest that every company should consider whether its board is diverse enough in terms of skills (profession and experience) and demographics (age, ethnicity and gender). This is expected to ensure that the composition of South African corporate boards reflect the diverse South African context, as well as make them effective. They also encourage firms to comply with the provisions of the Employment Equity Act. This indicates that King III expects board gender diversity to have positive impact on the financial performance of firms.

H4: Board gender diversity is positively related to financial firm performance, as measured by both ROA and the Tobin's Q.

Presence of key internal board committees (PCom): The establishment of board sub-committees has been strongly recommended as a suitable mechanism for improving corporate governance, by delegating specific tasks from the main board to a smaller group and harnessing the contribution of non-executive directors (Spira & Bender, 2004). In the UK, the Cadbury committee proposals focused on audit committees while the Greenbury study group advocated remuneration committees. In South Africa, King III and JSE listing requirements, requires the establishment of Audit, Remuneration and Nomination committees.

Fauzi and Locke (2012) report that board committees, namely Audit, Nomination and Remuneration, exhibit a positive and significant relationship with ROA and Tobin's Q, alluding to the viewpoint that the presence of key internal board committees increases firm performance. In a study of 25 listed Nigerian firms for the period 2004 to 2011, Aanu, Odianonsen and Foyeke (2014), find that measures of Audit Committee effectiveness, such as Audit Committee independence and Audit Committee financial expertise have a positive impact on firm performance while other measures of Audit Committee effectiveness such as Audit Committee size and Audit Committee meetings have no effect on firm performance. The implications of their study are that Audit Committee members with financial skills do contribute positively to firm performance and likewise the independence of the members. Similarly Aldamen, Duncan, Kelly, McNamara and Nagel (2012), Tornyeva and Wereko (2014) and Amer, Ragab and Shehata (2014) find that the combination of education and experience impact firm performance

positively. Their results support the view of the literature that knowledge and experience of Audit Committee influences better financial reporting and in turn, ceteris paribus, increases firm performance.

By contrast and unexpectedly, the study of Ghabayen (2012) which included 102 non-financial listed in the Saudi Market could not provide evidence about the relationship between Audit Committee composition and firm performance. In a sample of 220 large British listed firms, Main and Johnston (1993) examine the role of remuneration committees in British boardrooms. They report that the presence of a remuneration committee is associated with higher executive pay, which reduces shareholder value. Similarly, using 307 US listed firms from 1990 to1994, Vefeas (1999a) reports a negative relationship between the establishment of board committees (namely, audit, remuneration, and nomination) and firm value. Using a sample of 606 large US listed firms, Vefeas (1999b) documents a positive relationship between the establishment of nomination committees and the quality of new director appointments. This implies that nomination committees can improve board quality, which may ultimately improve the effectiveness with which the board carries out its monitoring and advisory roles. In separate studies, but using samples of US listed firms, Chhaochharia and Grinstein (2009) and Sun and Cahan (2009) report a significant decrease in CEO compensation for US firms with independent compensation committees compared with those without compensation committees. This suggests that the establishment of independent compensation committees is associated with better monitoring of managerial compensation.

The South African Companies Act 71 of 2008 requires every public company to establish an audit committee, which must consist of at least two independent Non-Executive Directors (NEDs). Similarly, King III and the JSE's Listings Rules require South African listed firms to institute audit, remuneration, and nomination committees. They specify that each committee should be chaired by an independent NED. They must also be composed either entirely of independent NEDs (in the case of the remuneration committee) or by a majority of independent NEDs (in the case of audit and nomination committees). Further, the audit committee members must be financially literate and should be chaired by a person other than the chairman of the board. This suggests that King III expects that the establishment of board committees may directly or indirectly impact positively on financial firm performance. Therefore, the respective fifth hypothesis to be tested in this study is that:

H5: There is a statistically significant positive relationship between the presence of audit, remuneration and nomination committees and financial firm performance, as proxied by both ROA and the Tobin's Q.

CEO non-duality (CDual): Empirically, the evidence regarding the relationship between role or CEO duality and financial firm performance is mixed (Weir, Laing & McKnight, 2002; Gill & Mathur, 2011; Moscu, 2013). Agency theory suggests that CEO duality is bad for firm performance as it compromises the monitoring and control of the CEO. However, in the last few years many firms have converted from the dual CEO leadership structure to non-dual structure, while a much smaller number of firms converted in the opposite direction (Moscu, 2013). Hence the problem of separating the roles of CEO and Chairman of the board still seems to be unresolved.

Moscu (2013) investigate the relationship between role or CEO duality and two accounting measures of financial performance (ROE and ROA) of 64 Romanian firms listed on the Bucharest Stock Exchange. They report that CEO duality does not have an effect on either ROA or ROE. Similarly, using data sample from 39 listed companies in Bahrain Bourse from 2010 to 2012, Amba (2013) reveals that CEO duality has no significant effect on ROA, ROE and Asset Turnover.

In a study that constituted all firms listed in the Nigerian Stock Exchange for the period 1992 to 2009 for ownership dispersed firms and 2003 to 2009 for ownership concentrated firms, Ujunwa (2012) find that CEO duality, irrespective of the ownership structure impacts negatively on the financial performance of Nigerian firms. This is consistent with the agency theory and the study of Mesut, Leyli, Veysel and Serdar (2014) which assert that CEO duality has a negative impact on firm performance. This indicates that monitoring by the board improves when the roles of CEO and chairman are split.

Another stream of empirical papers suggests that CEO duality has a positive impact on financial performance. In a sample of 75 Canadian service firms listed on Toronto Stock Exchange for a period of 3 years from 2008 to 2010, Gill and Mathur (2011) show that CEO duality positively impact profitability. Similarly, Al-Matari, Al- Swidi,Bt- Fadzil and Al-Matari (2012) also show that CEO duality has a positive impact on firm performance. Interestingly, Yang and Zhao (2014) report that duality firms outperform non-duality firms by 3-4 per cent. This result underscores the benefits of CEO duality in saving information costs and making speedy decisions.

King III and JSE Listings Rules state explicitly that the positions of the chairman and the CEO should not be held by the same individual. Also, it states that the chairman must be independent. The chairperson is responsible for the effective functioning of the board and the chief executive officer is responsible for the running of the company's business. There should be a clear distinction between these roles. This suggests that King III recognises role or CEO non- duality as a

desirable development. Therefore, the respective sixth hypothesis to be tested in this study is that:

H6: There is a statistically significant positive relationship between role or CEO non- duality and financial firm performance, as proxied by both ROA and Tobin's Q.

Director share-ownership (DEQTY): Director share-ownership is another important internal corporate governance mechanism that has been proposed as a possible solution to the agency problem. Consistent with the conflicting nature of the theoretical literature, the empirical evidence on director share-ownership-performance relationship is mixed. Specifically, a group of researchers reports positive relationship, another documents negative association, while a third group finds a non-linear relationship between director share-ownership and financial performance.

Morck, Shleifer and Vishny (1988) investigate the relationship between director share-ownership and firm value, as proxied by Tobin's Q using a cross-sectional sample of 371 Fortune 500 US firms in 1980. They report a non-monotonic relationship between director share-ownership and firm value. This suggests market value of firms, first increases, then declines, and finally increases slightly, as ownership by directors increases. Specifically, Morck et al. (1988) document a statistically significant and positive director ownership-performance link at lower levels (0 per cent to 5 per cent - interests convergence), a statistically significant and negative relationship at moderate levels (5 per cent to 25 per cent - entrenchment), and additionally a statistically significant and positive association at higher levels (above 25 per cent - interests convergence) of director ownership. Their evidence suggests that at low levels of director ownership, interests alignment help increase firm value, while at high levels, director entrenchment negatively affects financial performance.

By contrast, using a sample of 13 000 firm-year observation of US firms during the period 1998 to 2007, Bhagat and Bolton (2013) report that director share-ownership impacts positively on firm performance. Consistent with the evidence of Bhagat and Bolton (2013), Ntim (2013) document a positive association between director share-ownership and financial performance, as measured by Tobin's Q, ROA and Total Share Return in a sample of 169 South African listed firms over the period 2002 to 2007. Similarly, Gugong, Arugu and Dandago (2014) in panel data for 17 listed Nigerian firms for the period 2001 to 2010 , indicate a significant relationship between director shareholding and ROA and ROE. This suggests that the market perceives director share-ownership serving as an extra incentive to enhance shareholder value.The results of studies by Krivogorsky (2006), and Kapopoulos and Lazaretou (2007) have supported the positive relationship for a sample of 87 European and 175 Greek listed firms, respectively.

In contrast, but of particular importance to this study, Ho and Williams (2003) find that director ownership is negatively related to a firm's physical and intellectual capital performance in a sample of 84 South African listed firms. This implies that the director share-ownership and financial performance relationship can also be expected to be negative for South African listed firms. Sanda et al. (2005) report an inverse relationship between director share-ownership and a number of financial performance measures, including ROA, ROE, Tobin's Q and P/E ratio in a sample of 93 Nigerian listed firms from 1996 to 1999. The negative relationship between director share-ownership and financial performance has also been supported by the findings of Haniffa and Hudaib (2006) in a sample of 347 Malaysian listed firms over the period 1996-2000.

In separate studies, Vafeas and Theodorou (1998) and El Mehdi (2007) provide evidence which is consistent with the view that director share-ownership has no impact on financial performance in samples of 250 UK and 24 Tunisian listed firms, respectively.

King III and the JSE's Listings Rules do not set any ownership requirements for directors. However, King II suggests that the performance-related elements of directors' remuneration, such as stock options should constitute a substantial portion of their total remuneration package in order to align their interests with those of shareholders. It should also be designed to provide incentives to directors to perform at the highest operational levels. This indicates that King III expects director share-ownership to have a positive impact on financial firm performance. Hence, the respective seventh hypothesis to be tested in this study is as follows:

H7: There is a statistically significant positive relationship between director share-ownership and financial firm performance, as proxied by both ROA and the Tobin's Q.

Control variables: it is difficult to adequately model firm performance. Any study that omits relevant economic variable(s) that predict(s) financial performance and corporate governance could result in wrong conclusions (Black, Jang & Kim, 2006a; Chenhall & Moers, 2007a). Therefore a sensitivity test will be conducted for control variables such as Firm size (measured by taking the natural logarithm total firm assets), Leverage (measured by the ratio of total debt to assets), Big 4 Audit firm size (a dummy one if firm audited by one of the big 4, otherwise zero) and Big 5 industry (a dummy 1 if firm is in a big 5 industry, otherwise zero). Studies such as (Ntim, 2013; Botosan, 1997; Shockley, 1981; Palmrose, 1986; Sori et al., 2006; Haniffa & Cooke, 2002; Lim et al., 2007 have reported positive relationship between firm size, leverage, Audit firm size, industry and firm performance.

3 Data and methodology

3.1 Data

The aim of this paper is to investigate the compliance levels of South African listed firms and whether compliance to corporate governance best practices as recommended by the Companies Act of 2008, the latest publication of the King Report (2009) on Corporate Governance (King III) and Johannesburg Stock Exchange (JSE) listing rules, influences firm performance. Data relevant to internal corporate governance structures and performance measures were taken from annual reports of South African listed firms on the Johannesburg Stock Exchange (JSE) from 2002 to 2011. South Africa has ten major industries, namely, basic materials, consumer goods, consumer services, financials, health care, industrials, oil and gas, technology, telecommunications and utilities. The South African market is dominated by financials, industrials, basic materials, and consumer services and consumer goods industries. Together, the five industries account for approximately 91 per cent of the entire JSE population of listed firms. To be included in the final sample, a firm has to meet the following two criteria: (1) a company's full ten-year annual reports from 2002 to 2011 inclusive must be available either in McGregor BFA datastream or via other media used, such as e-mail, company official website and postal delivery and (2) its corresponding ten -year stock market and financial accounting information must also be available in McGregor BFA datastream.

These criteria are imposed for several reasons. First, the criteria will assist in meeting the requirements for a balanced panel data analysis, which favours, including only firms with several consecutive years of data (Yermack, 1996; Cheng, Evans & Nagarajan, 2008). There are advantages for using panel data. By combining time series of cross-sectional observations, balanced panel data provides: (i) more degrees of freedom; (ii) less collinearity among variables; (iii) more cross-sectional and time series variability; (iv) more asymptotic efficiency; (v) more informative data; and (vi) account more for observable and unobservable firm-level heterogeneity in individual-specific variables (Gujarati, 2003). Secondly, the criteria will generate comparatively larger sample sizes in relation to those of previous South African studies to the extent that the generalisability of the research results should not be substantially impaired by survivorship bias. In addition, it is in line with previous corporate governance researchers who have used panel data (Gompers, Ishii & Metrick, 2003; Bhagat & Bolton, 2008). Thirdly, using 10-year data is also generally in line with conventional capital markets-based research (Kothari, 2001). Fourthly, contrary to much of the existing literature that uses one year cross-sectional data, analysis of 11-year data with both cross-sectional and time series properties may help in ascertaining whether the observed cross-sectional internal corporate governance structures and performance link also holds over time. Fifthly, a 10-year panel will ensure that sufficient series are obtained to permit carrying out proposed statistical and robustness analyses, such as endogeneity test.

Sixthly, the sample begins from the 2002 financial year because it is the year King II came into force in which JSE listed firms were required to comply with its provisions or explain in the case of non-compliance (King Report, 2002). Finally, the sample ends in 2011 because it is the most recent year for which data will be available at the time of data collection.

Using the above criteria, the full data required have been obtained for a total of 137 (40.2 per cent) out of the 341 JSE listed firms, constituting all ten industries. Out of the original sample size of 341, 130 firms had listed on the JSE after 2002, which would have meant that one or more annual reports are missing. A further 74 firms were those that had listed prior to 2002, but either delisted before 2011 or had one or more annual reports missing, or market or accounting performance variables missing. The remaining 137 firms had full sets of annual reports with corresponding financial data. However, the sample of 137 firms is large when compared with previous South African studies such as Firer and Meth (1986); April, Bosma and Deglon (2003); Ho and Williams (2003); Mangena and Chamisa, (2008); Ntim, (2011), Khumalo (2011); Semosa (2012) and Meyer and De Wet (2013).

3.2 Variables

In line with South Africa's King III best practice of corporate governance and prior research, this study includes Board size, Proportion of independent non-executive directors, Board gender diversity, Director share-ownership, Presence of internal key board committee, Frequency of board meetings and CEO-duality or role as governance measures. This study is aligned with previous studies in U.S and Europe which have concentrated on several aspects of governance such as Board size (Eisenberg, Sundgren, & Wells, 1998; Dalton, Daily, Ellstrand & Johnson, 1999; Weir & Laing, 2000; Kajola, 2008), Board composition (Judge, Naoumova & Koutzevol, 2003; Bhagat & Bolton, 2008), Chief Executive Officer (CEO)/chairman duality and tenure (Weir & Laing, 2000; Judge et al., 2003; Bhagat & Bolton, 2008), Board activities (Conger, Finegold & Lawler, 1998; Vafeas, 1999), Board Committees (Kohli & Saha, 2008).

Table 1. Definition of variables

Variable	Definition
Dependent variables	
Return on assets (ROA)	Ratio of profit before taxes to total assets.
Tobin's Q	Ratio of a firm's total assets minus its total book value of ordinary equity plus total market value of equity divided by its assets.
Independent variables	
Board size (BS)	The total number of directors on the board of a firm.
Independent non-executive(INED)	The number of independent non-executive directors to total directors in a firm's board.
Frequency of board meetings (FBMs)	The number of times the firm holds board meetings in a financial year.
Board gender diversity (BGD)	The number of women to total directors in firm's board.
CEO non-duality (CDual)	A binary 1 if CEO and chairperson roles are separate, 0 otherwise.
Internal key board committees (PCom)	A binary 1 if firm has established ALL key board committees, 0 otherwise.
Director share-ownership (DEQTY)	A binary 1 if CEO of firm has shares, 0 otherwise

3.3 Methodology

A panel data was used because the sample contained data across firms and over time. The ordinary least squares (OLS) method is used to estimate the relationship between the internal attributes of corporate governance and the measures of performance. The econometric equation to be tested is as follows:

$$FP_{it} = a_0 + (\beta_2 NEDs)_{it} + (\beta_3 CDUAL)_{it} + (\beta_4 BGD)_{it} + (\beta_5 FBMs)_{it} + (\beta_6 PCOM)_{it} + (\beta_7 DEQTY)_{it} + \sum_{k=1}^{n} (\beta_1 CONTROLS)_{it} + \varepsilon_{it} \quad (1)$$

where, FP_{it} stands for ROA (proxy for accounting based financial performance measure for the *i*th firm at time *t)* and Tobin's Q (proxy for the market based financial performance measure for the *i*th firm at time *t), BS* is board size for the *i*th firm at time *t, i INEDs* is outside directors for the *i*th firm at time *t, it CDual* is CEO non-duality for the *i*th firm at time *t, FBM* is frequency of board meetings for the *i*th firm at time *t, BGD* is board gender diversity for the *i*th firm at time *t, PCom* is the presence of key internal board committees for the *i*th firm at time *t, DEQTY* is the director share-ownership for the *i*th firm at time *t, Control* is the *j*th control variables for the *i*th firm at time *t* and ε_{it} *error term*.

3.4 Robustness tests

This study uses OLS multivariate regressions for hypothesis testing. However, the regression analysis is constrained by several assumptions such as normality, multicollinearity, linearity and homoscedasticity, which the data will be tested against. Although the studendized residual indicates no outliers, Cooks D test show that there are twelve observations which are influential and therefore are deleted from the data. As the outliers have been deleted, all variables of interest show a normal distribution except for frequency of board meetings (FBMs), CEO non-dual or role (CDual), director share-ownership (DEQTY) and the control variable Big 5 industry (B5I). Thus, the normality test shows no serious problem of normality. According to Gujarati (2003), multicollinearity may exist whenever the correlation coefficient among particular independent variables exceeds 0.80. As shown in Table VII, none of the pairwise correlations between independent variables are above 0.8, indicating that the likelihood of multicollinearity issues arising in the OLS regressions is low. According to Gozali (2007), Park tests might detect the presence of heteroscedasticity whenever the coefficient of estimates is significant at conventional levels. The results of Park tests reveal that none of the coefficients of the estimates reaches such significance levels and thus the Homocedasticity assumption is not violated. Thus, robustness or sensitivity analyses suggest that the empirical results are generally reported to be robust to potential endogeneity problems.

4 Empirical results

4.1 Descriptive statistics and correlation of variables

According to Table VI, the findings indicate that the introduction of code of best practice on corporate governance in South Africa in 2002 has resulted in more companies adopting the recommended corporate governance practices and increase in performance is strongly associated with corporate governance practices. Similar findings were reported by Reddy, Locke and Scrimgeour (2010) after the introduction of New Zealand Securities Exchange Guidelines.

Table II indicates that larger firms have an average board size of 14.53 board members to 9.2 of small firms. Secondly, half of the board size of large firms consists of independent non-executive directors, while small firms have only 37 percent of independent non-executive directors in their boards. Thirdly, almost all large firms (99 percent) have separated the roles of CEO and chairperson, while only 87 percent of small firms complied with King II recommendation in that regard. As far as control variables are concerned, leverage, big 5 industry, big 4 audit firm size and firm size are statistically significant in both measures of firm performance. Interestingly, the findings also reveal that in South African listed firms only 9 per cent of board members are women. The market based performance measure, Tobin's Q, is 1.33 for large firms and 0.98 for small firms, which indicates that the managers and share-holders interests are aligned in the case of large firms. Therefore the higher the Tobin's Q value, the more effective the governance mechanism and the better the market perception of the company. A lower Tobin's Q values as shown by South African small firms suggests a less effective governance mechanism and greater managerial discretion (Weir, Laing & McKnight 2002). Based on the preceding, large firms, which are relatively more compliant to King II best practice of corporate governance exhibits higher firm value than small firms.

Table 2. Descriptive statistics

Independent Variable column (1)	Statistics (2)	All Firms (N=1370) (3)	All Large Firms(N=276) (4)	All Small Firms(N=1094) (5)
BSize	Mean	10.28	14.53	9.2
	Std Dev	4.06	3.83	3.35
	Median	10	14	9
INEDs	Mean	0.39	0.5	0.37
	Std Dev	0.23	0.19	0.23
	Median	0.43	0.5	0.4
FBMs	Mean	5.06	6.01	4.82
	Std Dev	1.87	2.25	1.68
	Median	4	6	4
CEO non-duality	Mean	0.9	0.99	0.87
	Std Dev	0.3	0.12	0.33
	Median	1	1	1

Note: Large (Small) firms are those with a market value above (below) the average at the year end. This table shows statistics on characteristics of dependent and independent variables. Column 1 shows the independent variables and column 2 shows the mean, standard deviation and median

Table 3. Descriptive statistics

Dependent Variable column (0)	Statistics (1)	All Firms (N=1370) (2)	All Large Firms(N=1094) (3)	All Small Firms(N=276) (4)
ROA	Mean	0.08	0.08	0.08
	Std Dev	0.07	0.07	0.07
	Median	0.08	0.07	0.08
Tobin's Q	Mean	Mean	1.33	0.98
	Std Dev	Std Dev	1.01	0.81
	Median	Median	1.20	0.82

Notes: Large (Small) firms are those with a market value above (below) the average at the year end. This table shows statistics on characteristics of dependent and independent variables. Column 1 shows the dependent variables and column 2 shows the mean, standard deviation and median.

Table 4. Effect of explanatory variables on Tobin's Q

Variable	Expected sign	Parameter estimate	Standard error	P-value
NEDs	+	355.923	115.546	0.00212 **
FBMs	+	16.098	12.618	0.202
BGD	+	126.152	247.921	0.611
CDual	_	152.977	81.366	0.06037*
DEQTY	+	39.615	94.465	0.675
BS	+	33.308	7.854	2.42e-05 ***
PCom	+	47.732	52.056	0.359
Intercept	?			
Multiple R^2		0.1214		
Adjusted R^2		0.1121		
F-Statistics		13.05		2.20E-16***
Degrees of freedom		1050		

Notes: **** Significant at 0.1%; *** significant at 1%; ** significant at 5%; * significant at 10%

Table 5. Effect of explanatory variables on ROA

Variable	Expected sign	Parameter estimate	Standard error	P-value
NEDs	+	-0.014	0.010	0.171
FBMs	+	-0.001	0.001	0.538
BGD	+	0.016	0.021	0.446
CDual	_	0.013	0.007	0.07227 *
DEQTY	+	-0.007	0.008	0.377
BS	+	0.003	0.001	1.70e-05 ***
Pcom	+	-0.013	0.004	0.00488 **
Intercept	?			
Multiple R^2		0.122		
Adjusted R^2		0.1127		
F-Statistics		13.13		2.20e-16 ***
Degrees of freedom		1050		

Notes: **** Significant at 0.1%; *** significant at 1%; ** significant at 5%; * significant at 10%

Table 6. Spearman and Pearson correlation matrix for All (N=1370) JSE listed firms

	ROA	Tobin's Q	NEDs	FBMs	BGD	CDual	DEQTY	BS	Pcom
ROA		(0.56)***	(-0.11)***	(-0.04)	(0.07)**	(0.09)***	(-0.01)	(0.07)**	(-0.07) **
Tobin's Q	(0.5)****		(0.06)*	(0.09)	(0.09)***	(0.1)***	(0.07)**	(0.15)****	(0.06)*
NEDs	(-0.09)***	(0.08)***		(0.3)****	(0.26)****	(0.07)**	(0.2)****	(0.24)****	(0.46)****
FBMs	(-0.04)	(0.05)	(0.25)****		(0.18)****	(0.09)***	(0.1)	(0.37)****	(0.24)****
BGD	(0.07)**	(0.1)***	(0.25)****	(0.12)****		(0.22)****	(0.09)***	(0.32)****	(0.24)****
CDual	(0.07)***	(0.08)***	(0.08)***	(0.05)*	(0.2)****		(0.28)****	(0.29)****	(0.17)****
DEQTY	(-0.01)	(0.06)**	(0.2)****	(0.04)	(0.06)**	(0.28)****		(0.22)****	(0.17)****
BS	(0.04)*	(0.08)***	(0.21)****	(0.28)****	(0.24)****	(0.25)****	(0.2)****		(0.46)
Pcom	(-0.07)****	(0.08)***	(0.26)****	(0.22)****	(0.21)****	(0.17)****	(0.17)****	(0.43)****	

Notes: the bottom left half of the table presents Pearson's parametric correlation coefficients, while the upper right half presents Spearman's non-parametric correlation coefficients (Coefficient estimates in brackets and p values represented as **** significant at 0.1%; *** significant at 1%; ** significant at 5%; *significant at 10%)

Table 7. A summary table of all hypothesis and results on all JSE listed firms

Dependent Variable	Return on Assets (ROA)					Tobin's Q			
Independent Variable	Hypothesis Number	Hypothesised Sign	Actual sign of result	Statistical Significance of result	Conclusion (Hypothesis)	Hypothesised Sign	Actual sign of result	Statistical Significance of result	Conclusion (Hypothesis)
Board Size	1	+	+	Significant(0.00)	Accept	+	+	Significant(0.00)	Accept
Frequency of board meetings	2	+	_	Insignificant	Reject	+	+	Insignificant	Reject
Independent Non-exec dir.	3	+	_	Insignificant	Reject	+	+	Significant(0.001)	Accept
Board Gender diversity	4	+	+	Insignificant	Reject	+	+	Insignificant	Reject
Presence of key committees	5	+	_	Insignificant	Reject	+	+	Insignificant	Reject
CEO non-duality	6	+	+	Significant(0.05)	Accept	+	+	Significant(0.05)	Accept
Dir share-ownership	7	+	_	Insignificant	Reject	+	+	Insignificant	Reject

Notes: The table presents a summary of all the seven hypothesis tested and results for the equilibrium-variable model

5 Regression results

Seven main hypotheses were tested for the econometric model. These hypotheses relate to board gender diversity, board size, role or CEO non-duality, the percentage of independent non-executive directors, the frequency of board meetings, the presence of key board committees (namely, audit, nomination and remuneration) and director share-ownership.

Results in Table IV and V show that both CEO non-duality and board size are statistically significant and positively related to both market based and accounting based performance measures, Tobin's Q and ROA, respectively. Further, independent non-executive director exhibits a statistically significant and positive association to Tobin's Q while presence of internal key board committees is statistically significant and negatively related to ROA. However, frequency of board meetings, board gender diversity and director share-ownership are all insignificant to both ROA and Tobin's Q. As a result, hypotheses are accepted or rejected as shown in Table VIII.

6 Discussion of empirical results

6.1 Results based on the accounting measure of financial performance

Table V contains OLS multiple regression results for the econometric model based on the accounting-based measure of financial performance (ROA). To facilitate comparison and comprehension, Table VIII presents a summary of all seven hypothesis and results for the econometric model for both the ROA and the Tobin's Q. Both Tables VIII and V do not include control variables.

Table V shows that board size is positive and statistically significant. This implies hypothesis one (see Table VIII) that there is a statistically significant and positive relationship between board size and ROA, can be accepted. The results contradict that of earlier South African studies (Ho & Williams, 2003; Mangena & Chamisa, 2008), as well as other international evidence (Kiel & Nicholson, 2003; Shabbir & Padgett, 2008). However, the results support those of existing studies that document a statistically significant and positive link between board size and accounting returns (Sanda, Mikailu & Garba, 2005; Haniffa & Hudaib, 2006; Mangena & Tauringana, 2008; Sheikh, Wang & Khan, 2013; Mishra & Mohanty, 2014). According to Table V, frequency of board meetings (FBMs) is statistically insignificant and negative to ROA, implying that hypothesis two (see Table VIII) can be rejected. This also implies that the recommendation of King II, that South African corporate boards must hold a minimum of four meetings a year is not empirically supported. Empirically, this finding is consistent with the result obtained by El Mehdi (2007) who reports a statistically insignificant association between frequency of board meetings and ROA. However, the finding does not support the results of Mangena and Tauringana (2006) who document a statistically significant and positive relationship between frequency of board meetings and ROA.

Table V shows that the percentage of independent non-executive directors (INEDs) is negatively related to accounting returns, and is statistically insignificant. The statistically insignificant and negative relationship between the percentage of INEDs and ROA means that hypothesis three (see Table VIII) cannot be supported. This finding contradicts many corporate governance codes, including King III, which promote the inclusion of more INEDs on corporate boards. Empirically, the finding also does not support the results of South African studies by Ho and Williams (2003) and Mangena and Chamisa (2008) that indicate that more INEDs impact positively on firm performance.

However, it supports previous corporate governance evidence (Fich & Shivdasani, 2006; Haniffa & Hudaib, 2006), that identify a negative link between the percentage of INEDs and ROA.

The statistically insignificant relationship between board gender diversity and ROA proves that hypothesis four (see Table VIII and Table V) can be rejected. This is so because the number of women serving on South African corporate boards is very small that they will not be able to make any significant impact on board decisions. The positive coefficients are consistent with the findings of Adler (2001) who reports that board diversity impact positively on accounting returns. However, this finding rejects the results of Shrader, Blackburn and Iles (1997) who establish a negative association between board diversity and ROA. The statistically significant and negative coefficient on the presence of key internal committees rejects hypothesis five (see Tables VIII and V). The finding contradicts the call by King III that the presence of nomination, audit and remuneration committees improves financial performance. Empirically this finding agrees with the results of Bozec (2005).

The statistically significant and positive association between CEO non-duality and ROA accepts hypothesis six (see Tables VIII and V) that CEO non-duality has a significantly positive effect on firm performance. The results offer empirical support to the recommendations on corporate governance codes, including King III, that the roles of company chairperson and CEO should be split. Empirically, this finding is in agreement with previous studies that report a statistically significant and positive relationship between ROA and CEO non-duality (Haniffa & Hudaib, 2006; Ujunwa, 2012). However, these results contradict the findings of Donaldson and Davis (1991), Boyd (1995) and Arora (2011) that there is a statistically significant and positive nexus between CEO duality and ROA.

As shown in Table V, director share-ownership is found to be negatively linked to accounting returns, but not statistically significant. This implies that hypothesis seven (see Table VIII) is not supported, although the finding is consistent with the results of previous South African studies by Ho and Williams (2003) and Mangena and Chamisa (2008).

6.2 Results based on the market measure of financial performance

Table IV contains OLS multiple regression results based on the market-based measure of financial performance (Tobin's Q). Similarly, the variables investigated in this model are the seven corporate governance variables. As is evident from Table IV, and in agreement with accounting returns (ROA), board size is found to be positively related to the market-based measure of performance and to be statistically significant. This lends support to hypothesis one (see Table VIII) that there is a statistically significant and positive relationship between board size and Tobin's Q. This also supports past evidence that documents a statistically significant and positive nexus between board size and Tobin's Q (Beiner, Drobetz, Markus & Zimmermann, 2006; Henry, 2008; Mangena & Tauringana, 2008; Arora, 2011; Meyer & De Wit, 2013). The finding of this study, however, contradicts results of past studies that report a statistically significant and negative link between board size and Tobin's Q (Yermack, 1996; Vefeas 1999a and b; Haniffa & Hudaib, 2006; Cheng et al., 2008)

Table IV indicates the statistically insignificant and positive nexus between frequency of board meetings and Tobin's Q. This shows that hypothesis two (see Table VIII) is not empirically supported. The finding also implies that the recommendations of King III that South African corporate boards must hold a minimum of four meetings in a year cannot be empirically supported. It is also not in line with the results of those studies that report a statistically significant and negative association between frequency of board meetings and Tobin's Q (Vefeas, 1999a; Carcello, Hermanson, Neal & Riley, 2002; Fich & Shivdasani, 2006).

However, the positive coefficient supports the results of Karamanou and Vefeas (2005) and Mangena and Tauringana (2006) that document a positive relationship between frequency of board meetings and Tobin's Q. Unlike the findings of this study, the results of Karamanou and Vefeas (2005), Mangena and Tauringana (2006) and Arora (2011) are statistically significant. The statistically significant and positive relationship between INEDs and Tobin's Q lends empirical support to the recommendations of King III and hypothesis three (see Tables VIII and IV). The positive coefficient of the percentage of INEDs also lends support to the results of previous South African studies (Ho and Williams, 2003; Mangena and Chamisa, 2008). Mangena and Chamisa 2008; Meyer & De Wit, 2013) report, for example, that South African corporate boards dominated by INEDs are less likely to be suspended from the stock exchange.

As shown in Table IV, findings show that board gender diversity has no statistically significant impact on firm performance in South Africa. This fails to support hypothesis four (see Table VIII). The findings do not lend support to the recommendations of King III and the general efforts in South Africa to diversify corporate boards. As has been explained already, this is empirically less surprising given the small number of women that are currently on South African corporate boards.

Contrary to the results of the ROA, Table IV indicates that the existence of nomination, audit and remuneration committees are positively related to Tobin's Q, though insignificantly so. This rejects hypothesis five (see Table IV). Empirically, the findings are consistent with the results of prior studies that report a statistically insignificant relationship between board committees and Tobin"s Q (Vafeas & Theodorou, 1998; Weir et al., 2002). However, the finding does not offer empirical support to the results of previous studies that report statistically significant and positive or negative association between board committees and Tobin"s Q (Vefeas, 1999a; Karamanou and Vefeas, 2005). As with ROA, the statistically significant and positive coefficient of CEO non-duality accepts hypothesis six that separating the role of CEO and chairperson is positively significant to Tobin"s Q (see Table VIII). The results support the recommendations of King III that separating the roles of CEO and chairperson at board level impact positively on the market value of the firm. Empirically, this finding supports the resuls of Arora (2011) that CEO non-duality enhances firm value. However, this finding rejects the results of Mangena and Chamisa (2008) that purport role non-duality has no impact on the likelihood that a firm will be suspended from listing on the JSE in a sample of 81 South African listed firms. The result of director share-ownership is positively insignificant to market performance (Table IV). This indicates that hypothesis seven is not supported (see Table VIII). The statistically insignificant and positive link between director share-ownership and Tobin's Q contradicts the entrenchment hypothesis (Beiner et al., 2006), as well as the results of previous South African studies (Ho & Williams, 2003; Mangena & Chamisa, 2008; Meyer & De Wit, 2013).

7 Debate on regression results

A positive relationship between board size and firm performance (both ROA and Tobin's Q) confirms the predictions of resource dependency theory suggesting that a board with high levels of links to external environment would improve a firm's access to various

resources, hence, positively affecting firm performance. More importantly, the results may reflect the nature of the environment in which South African firms operate. For instance, the South African boards consist mainly of interlocking and high profile individuals. As a result the probability of obtaining various resources at reduced costs is high, which in turn have a positive influence on corporate performance. A positive relationship between board size and firm performance is congruent with the findings of Pfeffer (1973), Anderson, Mansi and Reeb (2004), Kiel and Nicholson (2003), Van den Berghe and Levrau (2004), Abor and Biekpe (2007), Jackling and Johl (2009), Ehikioya (2009) and Sheikh, Wang and Khan (2013).

South Africa boasts a relatively high representation of independent non-executive directors (47 percent) on their boards, which empirically is positively related to the market based measure (Tobin's Q). This could mean that the market views positively the independence of the board and associate a high market value to such a firm. The positive relationship between independent non-executive directors and performance in South Africa is consistent with the findings of Ho and Williams (2003), Dahya, Dimitrov and McConnell (2008), Mayasekhi and Bazaz (2008), Jackling and Johl (2009), Zubaidah, Nurmala and Jusoff (2009) and Gupta and Field (2009).

CEO non-duality is positively related to both accounting based performance measure and market based performance measure, ROA and Tobin's Q respectively. This finding is supports to the predictions of agency theory, suggesting that combining both roles (i.e., the decision management delegated to the CEO, and the decision control delegated to the chairman of the board) into a single position would weaken board control, and negatively affect firm performance. However, the positive relationship is in contradiction with the predictions of stewardship theory suggesting that authoritative decision making under the leadership of a single individual leads to higher performance. A positive relationship between CEO non-duality and firm performance is consistent with the findings of Rechner and Dalton (1991), Lipton and Lorsch (1992), Jensen (1993), Haniffa and Hudaib (2006) and Ehikioya (2009).

A negative relationship between presence of internal key board committees (nomination, remuneration and audit) and ROA is incongruent with Harrison (1987) and Sun and Cahan (2009) theoretical literature suggests that the establishment of these committees can impact positively on performance. First, unlike the main board or operating committees (e.g., finance/executive), monitoring board committees are usually entirely composed of independent NEDs, making them better placed to protect shareholders' interests by effectively scrutinising managerial actions (Klein, 1998; Vefeas, 1999b). Secondly, by their relative small size, board committees are able to meet more frequently. This provides sufficient time for meaningful dialogue and in reaching consensus decisions quicker (Karamanou & Vefeas, 2005).

Thirdly, by their composition, board committees help in bringing individual director's specialist knowledge and expertise to bear on the board decision-making process (Harrison, 1987). This also allows the main board to devote attention to specific areas of strategic interests and responsibility. Finally, board committees enhance corporate accountability, legitimacy and credibility by performing specialist functions (Weir, Laing & McKnight, 2002). The principal function of the audit committee, for example, is to meet regularly with the firm's external and internal auditors to review the company's financial statements, audit process and internal accounting controls. This helps reduce agency costs and information asymmetry by facilitating timely release of unbiased accounting information by managers to shareholders (Klein, 1998). Also, effective monitoring by the audit committee may help minimise financial fraud and increase firm value. The remuneration committee determines and reviews the nature and amount of all compensation for directors and senior officers of the firm. This also helps in reducing the agency problem by constructing and implementing remuneration schemes and incentives designed to better align the interests of managers and shareholders (Klein, 1998; Weir & Laing, 2000).

In addition to internal attributes of corporate governance, four control variables were included in the regression equations to control the firm-specific characteristics that may affect the performance. These control variables include leverage and firm size. Leverage is negatively related to corporate firm performance which indicates that agency issues may lead firms to use higher than appropriate levels of debt, which in turn increase a lender's influence that might limit managers' ability to manage the operations effectively, hence negatively affecting the performance.

The negative relationship between leverage and firm performance is consistent with the findings of Abor and Biekpe (2007) and Sheikh et al. (2013). Industry effects are positively significant to firm performance. The significance of industry effects points to consistent differences in industry structures that are pervasive around the world (Victer & McGahan, 2006). The Big 4 Audit firm size in this study has no effect on firm performance. This is also corroborated by the study of Farouk and Hassan (2014) whose results shows that auditor size and auditor independence has significant impact on the financial performance of quoted cement firms in Nigeria.

Firm size has a positive relationship with firm performance. This indicates that large size firms enjoy the benefits of scale economies which in turn

positively affect firm performance. The positive relationship between firm size and performance is consistent with the findings of Sheikh et al. (2013)

In summary, since the introduction of King II in 2002, SA firms' compliance levels have generally been improving. This should restore investor's confidence in the country's capital market and hopefully increased portfolio investment would grow the SA economy. Notably, empirical results indicate that internal governance mechanisms have material effects on firm performance. Moreover, empirical findings somehow proceed to confirm that theories of corporate governance (such as Agency theory, stakeholder theory etc) surely provide some support to understanding the relationship between governance mechanisms and firm performance.

8 Conclusions

With no prior comprehensive evidence in South Africa, the study sought to ascertain empirically whether compliance to the South African Code of corporate governance translates into financial performance. The findings of this study show that the introduction of a code of best practice on corporate governance in South Africa in 2002 has resulted in more companies adopting the recommended corporate governance practices. The study also confirms that compliance to good corporate governance practices as recommended by the JSE listing rules and King Code translates to better firm performance. Put differently, the study revealed that better governed firms perform better than poorly governed firms. Similar findings were reported by Reddy, Locke and Scrimgeour (2010) after the introduction of New Zealand Securities' Exchange Guidelines. These findings are also consistent with the results of a number of studies, in different contexts and using different governance and performance measures (e.g. Gompers et al. 2003; Klapper and Love, 2003; and Black et al. 2006a) all of whom find a positive relationship between various governance related variables and pertinent proxies of firm performance. Notably the results also show that only 9 per cent of the positions in the SA listed boards are occupied by women. Though startling, the number is still higher than Brazilian listed firms which has 5, 4 per cent of women in their boards (Lazzaretti, Godoi, Camilo & Marcon, 2013).

Based on the preceding, the study revealed the several policy implications. First, the findings suggest that regardless of the firm performance measure used, board gender diversity has no statistically significant impact on firm performance in SA. This implies no support for the recommendations of King III and for the general efforts in SA to diversify corporate boards on grounds of gender. Secondly, the findings indicate that market returns (Tobin's Q) and accounting returns (ROA) are significantly higher if a firm has a larger board. As discussed, the significant positive association between board size and Tobin's Q is contrary to much of the UK and US evidence, which reports a significant negative relationship between board size and Tobin's Q. This implies that, unlike in the UK and US contexts, the board's ability to secure greater access to critical resources, that is often associated with larger boards, is valued higher by the South African stock market.

In this regard, the decision by King III not to prescribe a "one-size-fits-all" board size may be seen as a step in the right direction. King III recommends that every board should consider whether or not its size, diversity and other demographics make it effective.

Thirdly, the findings indicate that firms (large firms) that separate the roles of board chairperson and CEO tend to be associated with higher market (Tobin's Q) returns. This implies that the policy of King III and the JSE's listings rules for South African firms to follow Cadbury-style suggestion to split the two roles, may be appropriate. Fourthly, the findings indicate that boards with a higher percentage of independent non-executive directors tend to be associated with lower accounting returns. However, having more independent non-executive directors on the board is perceived positively by the market. This seems to indicate that the Cadbury-style recommendation of King III and the JSE's listings rules that South African boards should comprise a majority of independent non-executive directors may be applicable in SA.

Fifthly, the findings suggest that frequency of board meetings has no statistically significant impact on firm performance, regardless of the performance measure used. However, contrary to ROA, Tobin's Q has a positive coefficient, which suggests that the market sees frequency of board meetings as a good practice. This could be because the market and investors believe, that if the more meetings are convened, more monitoring of their affairs will be conducted. Sixthly, the findings are mixed when it comes to board sub-committees. The findings suggest that audit, remuneration and nomination committees are statistically insignificant for both ROA (but negatively related) and Tobin's Q (but positively related). However, though the findings are statistically insignificant for Tobin's Q, the positive relationship suggests that the market seems to put value on the establishment of all three board committees: audit, nomination and remuneration. This could be because investors and potential investors are at ease knowing that (1) financial controls are in place (audit committee), (2) the salaries of executive directors and non-executive directors are competitive and no exorbitant bonuses are paid (remuneration committee), (3) the board is skilful and experienced (nomination committee). This generally implies that the Cadbury-style suggestion of King III and the JSE's listings Rules that South African listed firms should establish audit, nomination and remuneration committees may be applicable.

The seventh and final finding indicates that director share-ownership does not have any significant impact on either accounting or market measures. However, contrary to ROA, the coefficient for Tobin's Q is positive, which seems to suggest that the market believes that issuing stocks to directors might align their interests with those of shareholders and reduce the agency problem. In this regard, the ongoing attempts by the JSE to encourage diffused ownerships of listed firms might not necessarily be a positive development. The next section summarises the contributions of the study to the existing corporate governance literature.

9 Avenues for further research

There are several potential avenues for future research and improvements. Firstly, the study has mainly examined the association between internal corporate governance structures and firm performance. Future studies can investigate how external corporate governance mechanisms, such as the market for corporate control, the managerial labour market, and the law, among others, affect firm performance. Future research can also analyse interactions or interdependences between internal and external corporate governance mechanisms and their impact on financial firm performance. Secondly, future studies can examine the relationship between internal corporate governance structures and cost of equity capital or risk. This is because if better-governed firms tend to be associated with higher financial returns, then such firms will theoretically be expected to be associated with lower cost of equity capital or risk.

Thirdly, and with regard to the research design, event study methodology can be used by future researchers to investigate share price reaction to the adoption of the corporate governance provisions of King II. Future research can also examine share price reaction to board changes, including appointments, resignations, dismissals, deaths, and retirements of directors (i.e., chairpersons, CEOs, executive, non-executive, and independent non-executive directors). Finally, since this study revealed that, in many respects, the level of compliance in large companies is relatively higher than in small companies, a study comparing (large and small firms) the impact of internal corporate governance structures on financial performance would be interesting. The study will reveal the distinction of determinants of internal corporate governance structures between large and small firms. A similar study could be conducted on the five large industries, namely, basic material, consumer goods, consumer services, industrials and financials.

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