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Corporate Ownership and Market Valuation in South Africa: Uncovering the Effects of Shareholdings by Different Groups of Corporate Insiders and Outsiders

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SHORT BIOGRAPHY

Collins Ntim is a Senior Lecturer in accounting at the School of Management, University of Southampton. He holds a PhD in accountancy from the University of Glasgow. His research focuses on three main themes: accounting and corporate governance; accountability and ethics; and corporate finance and market-based research. He has published widely in internationally recognised journals, including the *Accounting Forum*, *Corporate Governance: An International Review, International Review Financial Analysis*, and the *Journal of Business Ethics*, amongst others. He has presented his research at a number of national and international conferences, workshops, and seminars in various countries, as well as won external research grant award from funding bodies, such as the *Leadership Foundation for Higher Education*. He is also a frequent ad hoc reviewer for a number of international journals, such as the *British Accounting Review*, *Corporate Governance: An International Review, European Journal of Finance*, and the *International Business Review*, and research funding councils, such as the *Engineering and Physical Sciences Research Council*.

Corporate Ownership and Market Valuation in South Africa: Uncovering the Effects of Shareholdings by Different Groups of Corporate Insiders and Outsiders

Abstract

This paper examines the connection between shareholdings by different groups of corporate officers (insiders and outsiders), and market valuation in South Africa. Specifically, and distinctively, we examine the effect of shareholdings by employees, chief executive officers, chief financial officers, other executive directors, and non-executive (outside) directors on market valuation. Consistent with past evidence, we find that total ownership by all corporate officers (insiders and outsiders) has a positive effect on market valuation. However, when we examine the link between ownership by individual groups of corporate officers (insiders and outsiders) and market valuation, our results suggest that firms with higher ownership by chief executive officers and other executive directors have lower market valuation, but we do not find any evidence that ownership by chief financial officers has any significant effect on market valuation, except when interacted with ownership by CEOs. In contrast, we find that ownership by employees and non-executive (outside) directors has a positive effect on market valuation. The central tenor of our evidence remains largely unchanged across a number of econometric models that sufficiently address different types of endogeneities and market valuation measures. Overall, our findings are generally consistent with the predictions of agency theory.

Keywords: Corporate governance, Market valuation, Corporate officer ownership groups, Agency theory - Convergence-of-interests and entrenchment hypotheses, South Africa, Endogeneity

1. Introduction

In this paper, we examine the connection between shareholdings by different groups of corporate officers (insiders and outsiders) and market valuation in South Africa (SA). Prior studies examining the effect of corporate officer ownership on firm value have assumed that all corporate officers (insiders and outsiders) have similar shareholding motives (Demsetz and Lehn, 1985; Morck et al., 1988; Welch, 2003; McConnell and Servaes, 1990; Davies et al., 2005; Golbe and Nyman, 2013). For example, and using a sample of US listed corporations, Morck et al. (1988) report a non-linear association between common stocks held by all directors and corporate performance. However, and given that the objectives of corporate officers (insiders and outsiders), such as employees, chief executive officers (CEOs), chief financial officers (CFOs), and outside directors or non-executive directors (NEDs) are mostly conflicting (Agrawal and Knoeber, 1996; Beiner et al., 2006; Knyazeva et al., 2013; Zhou et al., 2013)[1], our conjecture is that the effect of ownership by different groups of corporate officers (insiders and outsiders) on firm valuation may differ. Therefore, and distinct from most previous studies, we examine the effect that shareholdings

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[1] As will be expatiated further in section 2, we note that the separation of ownership (shareholding) from control (management) in modern corporations creates two main agency conflicts (Jensen and Meckling, 1976). The first or primary (type I) agency problem refers to the possibility of conflict of interest between corporate shareholders and managers. A central assumption underlying the type I agency problem is that there is information asymmetry between owners and rational utility maximising managers, who may not always act in the best interests of owners. In particular, self-serving managers are more likely to expropriate corporate resources, for example, by awarding themselves overly generous compensation packages, and engaging in greater perquisite consumption. The second (type II) agency problem refers to the possibility of conflict of interest between a dominant (controlling or large) owner and minority (small) owners. The assumption here is that when an investor owns a large proportion of a company's shares, the investor has the capacity to influence critical decisions, including appointing or removing the board of directors. This implies that large shareholders can align the objectives of the corporation more closely with their own personal interests, but which may not necessarily be in the best interests of minority shareholders. Specifically, and mainly through related party transactions, larger owners can collude and connive with managers to expropriate corporate resources from minority shareholders. This may take the form of acquiring production inputs (usually at a price, which is above the current market price) from companies that are related to the controlling owner, and appointing close affiliates, family members, and friends of the dominant owner to the board. It is worthy to note that both type I and II agency problems are prevalent within the SA corporate context, and hence, our decision to focus on how and why ownership by different groups of corporate insiders and outsiders impact on market valuation. A major motivation is that different groups of corporate insiders and outsiders have different self-interests and responsibilities, and therefore, it is argued that the extent to which insider or outsider ownership influences market valuation may vary. For example, a relatively low ownership by corporate insiders, such as the CEO may help in aligning the interests of managers and owners. This may be received positively by the market, and as such, CEO ownership may have a positive effect on market valuation. By contrast, in firms where corporate insiders have relatively high ownership levels, divergence of interests from minority shareholders may be prevalent. This may be viewed negatively by the market, and thereby leading to insider ownership having a negative effect on market valuation.

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by employees, CEOs, CFOs, other executive directors, and outsider directors (NEDs) has on market valuation.

The organisation of modern large corporations is such that ownership is often distinct from control (Fama, 1980; Fama and Jensen, 1983a; Miguel et al., 2004; Ng, 2005), which inevitably leads to conflict of interests between managers and shareholders, as previously explained (Rossouw et al., 2002; West, 2006; Borisova et al., 2012; Connelly et al., 2012). Consequently, agency theory has suggested a set of corporate governance (CG) structures, consisting of incentive alignment (such as compensation, share options and ownership) and monitoring (such as corporate boards, board committees, auditing and disclosure) mechanisms (Jensen and Meckling, 1976; Fama and Jensen, 1983b; Chen and Steiner, 1999; Cui and Mak, 2002) that can be employed to minimise such agency conflicts. In the case of SA, about 20 years of CG reforms have been carried out, primarily in the shape of the 1994 and 2002 King Reports on CG (Rossouw, 2005; West, 2009). As a result, the main aim of the King Reports has been to align more closely the interests of managers and shareholders by improving CG standards in SA corporations in order to enhance market valuation (Rossouw, 2005; Armstrong et al., 2006; West, 2009).

A crucial measure for ascertaining the extent to which the interests of managers are aligned with those of shareholders is the level of shareholdings by various corporate insiders and outsiders, such as employees, CEOs, CFOs, other executive directors, and NEDs (Morck et al., 1988; McConnell and Servaes, 1990; Sciascia and Mazzola, 2008; Jelinek and Stuerke, 2009). However, and whereas there is a theoretical agreement that ownership by corporate insiders and outsiders can enhance market valuation by reducing agency conflicts (Jensen and Meckling, 1976; Fama, 1980; Fama and Jensen, 1983a, b; Jensen, 1993), the empirical evidence on the effect of insider and outsider ownership on firm valuation is mixed (Demsetz and Lehn, 1985; Davies et al., 2005; Sanchez-Ballesta and Garcia-Meca, 2007; Chen et al., 2008).

A number of reasons, however, have been provided that may explain the conflicting findings of past research. First, most of the past studies examining the link between corporate

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officers (insiders and outsiders) ownership and firm valuation have assumed that all corporate officers (insiders and outsiders) have common objectives for holding shares, and as such, have often attempted to connect shareholdings of all corporate officers (insiders and outsiders) to market valuation (Morck et al., 1988; McConnell and Servaes, 1990; Welch, 2003; Berger and Bouwman, 2013). However, and to the extent that corporate officers (insiders and outsiders), such as employees, executive directors, and outside directors or NEDs often have conflicting interests, as previously clarified (Agrawal and Knoeber, 1996; Beiner et al., 2006; Connelly et al., 2012; Zhou et al., 2013), it is reasonable to conjecture that the impact of shareholdings by different groups of corporate officers (insiders and outsiders) on market valuation might differ. Thus, investigating the impact of shareholdings of all corporate officers (insiders and outsiders) instead of shareholdings by individual groups of corporate insiders and outsiders on market valuation may result in misleading findings.

Second, most of the past studies have been criticised for potential methodological limitations (Yermack, 1996; Beiner et al., 2006; Al Farooque et al., 2007; Kapopoulos and Lazaretou, 2007), with a good number of them applying ordinary least squares (OLS) regressions, as well as not sufficiently controlling for potential endogeneities (Demsetz and Lehn, 1985; Himmelberg et al., 1999; Chenhall and Moers, 2007a and b; van Lent, 2007; Larcker and Rusticus, 2010), and thereby leading to spurious correlations. Third, it has been argued that the connection between corporate officer (insider and outsider) ownership and market valuation may not just differ by firm-level features (Cheung and Wei, 2006; Krivogorsky, 2006; Miguel et al., 2004; Ng, 2005), but also by differences in country-level regulatory, CG and institutional contexts (Short and Keasey, 1999; Kapopoulos and Lazaretou, 2007). This notwithstanding, past studies analysing the effect of corporate officer (insider and outsider) ownership on market valuation have focused mainly on a small number of industrialised economies, which displays relatively similar corporate, legal, and institutional settings (Hermalin and Weisbach, 1991; Laing and Weir, 1999; Weir and Laing, 2000; Demsetz and Villalonga, 2001; Jelinek and Stuerke, 2009).

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However (and as previously briefly explained and expanded on below), it is contended that in developing economies with different regulatory, CG and institutional environments, the effectiveness of ownership by corporate officers (insiders and outsiders) may vary, and therefore, the connection between corporate officer (insider and outsider) ownership and market valuation can be expected to vary from what has been found in the industrialised economies. Thus, an investigation of the effect of ownership by corporate officers (insiders and outsiders) on market valuation in a major emerging African economy, where there is lack of empirical evidence will be crucial in providing holistic insight on the impact of corporate officer (insider and outsider) ownership on market valuation (Cheung and Wei, 2006; Krivogorsky, 2006; Berger and Bouwman, 2013; Golbe and Nyman, 2013).

Therefore, in this paper, we examine the connection between the shareholdings of different groups of corporate officers (insiders and outsiders), and market valuation for a sample of SA listed corporations. SA provides an interesting context to investigate the effect of corporate officer (insider and outsider) ownership on market valuation. Similar to other Anglo-Saxon economies, SA has pursued CG reforms, primarily in the shape of the King Reports with a central aim of minimising agency conflicts among major corporate stakeholders, including managers and shareholders by improving the level of monitoring and compensation incentives (Malherbe & Segal, 2003; Rossouw, 2005). With specific reference to incentives and shareholdings by corporate officers (insiders and outsiders), the King Reports seek to encourage corporate officers in particular to hold shares of companies that they run in order to closely align their interests with those of shareholders (King Committee, 1994, 2002). More specifically, the King Reports suggest that the performance-related elements of the compensation packages of corporate officers (especially directors), such as vested shares and options should form a large part of the total compensation (King Committee, 2002; West, 2006, 2009). Thus, this creates a unique setting, whereby the association between corporate officer ownership (insider and outsider) ownership and market

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valuation can be directly investigated, and thereby making a number of new contributions to the prior literature.

First, using a sample of 169 SA listed corporations from 2002 to 2007, we provide evidence on the connection between shareholdings by different groups of corporate officers (insiders and outsiders) (i.e., employees, CEOS, CFOs, other executive directors, and NEDs), and market valuation. The current research attempts to specifically extend the findings of previous studies, which have examined the association between director common shareownership and corporate performance (Morck et al., 1988; McConnell and Servaes, 1990; Davies et al., 2005; Bouzgarrou and Navatte, 2013; Knyazeva et al., 2013; Zhou et al., 2013). Our contribution lies in using a much richer dataset that allows us to further analyse the valuation implications of shareholdings of a larger group of different corporate officers (insiders and outsiders). It also contributes to the largely advanced countries-based literature on the connection between shareholdings by corporate officers (insiders and outsiders), and firm valuation. Second, we examine the presence of non-linearities in the relationship between corporate officer (insider and outsider) ownership, and firm valuation. Finally, and distinct from most past studies, we employ econometric models that adequately control for different types of endogeneities[2] and market valuation proxies.

The remainder of the paper is organised as follows. The next section reviews the prior theoretical and empirical studies on corporate ownership and market valuation. The following sections present the research design, discuss empirical analyses and present brief concluding remarks.

2. Prior Theoretical Literature, Empirical Studies and the Development of Hypotheses

Previous studies examining the association between director shareholdings and firm valuation have relied primarily on agency theory in interpreting their empirical results (Mork et al., 1988; Bouzgarrou and Navatte, 2013; Knyazeva et al., 2013; Zhou et al., 2013). In this section, we

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[2]See Larcker and Rusticus (2010) for a comprehensive discussion of the different types of endogeneity problems that are prevalent within the positive empirical accounting literature, as well as ways by which they could be addressed.

discuss the theoretical and empirical literature on the link between director ownership and market valuation.

2.1 Theoretical literature review: The principal-agent conflict and agency theory

An agency relationship is defined as "*one in which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent*" (Jensen and Meckling, 1976: 308). Prior studies (e.g., Jensen and Meckling, 1976; Eisenhardt, 1989; Fama, 1980; Hill and Jones, 1992) demonstrate that this relationship is bedeviled with two major interdependent problems: (i) information asymmetry between the principal and the agent; and (ii) the possibility of conflicts or divergence of interests between the principal and the agent. In the main, these agency problems are underpinned by three major assumptions. First, it is assumed that the principal and the agent may have different attitudes towards risk-bearing (Eisenhardt, 1989). Second, the principal and the agent may intrinsically have different goals and interests (Eisenhardt, 1989). Finally, both parties to the relationship are assumed to be utility maximisers (opportunistic) to the extent that even if their goals or risk preferences were not to inherently differ, *ceteris paribus*, there will be a compelling reason to believe that a rational agent may not always act in the best interests of the principal (Jensen and Meckling, 1976).

Therefore, agency theory is generally concerned with aligning the conflicting interests of principals and agents (e.g., Jensen and Meckling, 1976; Fama, 1980). Specifically, it suggests that the principal can limit divergences from his/her interests by establishing appropriate incentive or control (governance) mechanisms to limit the incidence of opportunistic action by the agent (Jensen and Meckling, 1976).

Jensen and Meckling (1976) suggest, however, that establishing such incentive and control mechanisms unavoidably generates three major costs. First, the principal can expend resources to design a monitoring system (monitoring costs) aimed at reducing the aberrant activities of the agent.

This may include efforts on the part of the principal to control the behaviour of the agent through contractual agreements regarding budget restrictions, compensation policies, operating rules, and performance targets, amongst others. Second, the principal may require the agent to spend resources (bonding costs) to guarantee that he/she will not take certain actions that would harm the principal's interests. That is, the agent may *ex-ante* incur bonding costs in order to win the right to manage the resources of the principal (Hill and Jones, 1992). Finally, despite instituting monitoring and bonding mechanisms (governance structures), agency theory predicts that there will still be some divergence between the agent's decisions and those decisions which will maximise the welfare of the principal, defined as *residual loss*. In short, the sum of the principal's monitoring expenditures, the agent's bonding expenditures, and any remaining residual loss is known as *agency costs* (Jensen and Meckling, 1976).

In response, Jensen and Meckling (1976) formally developed agency theory aimed at bringing the interests of managers (agents) of modern corporations into alignment with those of shareholders (principals). In particular, they identify four major ways by which utility or self-interests maximising managers can incur costs that may minimise the wealth of shareholders. First, managers may expropriate corporate resources by awarding themselves overly generous compensation (pecuniary or financial) packages (Jensen and Meckling, 1976). Second, they may expropriate corporate wealth by electing to consume more perquisites (non-pecuniary or non-financial), which maximise their own utility (Jensen and Meckling, 1976). Third, managers may choose to invest excess cash flows (the free cash flow problem) over paying dividends even in the absence of profitable or positive net present value (NPV) investment opportunities (Jensen, 1986). Finally, managers may either choose to devote less time, effort, personal skill and/or ingenuity to value-maximising activities, such as looking for new profitable or positive NPV investment opportunities (Jensen and Meckling, 1976).

To limit divergence of managerial interests from shareholders and reduce the above agency costs, agency theory suggests the establishment of internal and external mechanisms through what

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is known recently as *CG* (Haniffa and Hudaib, 2006). Internally and by incurring monitoring costs, agency theory recommends the institution of several internal CG structures via a set of legal contracts by shareholders to monitor managers. These internal CG structures may either be behaviour-oriented (i.e., board and auditing structures) or outcome-oriented (i.e., pay, stock options, and shareholdings) (Eisenhardt, 1989).

First, shareholders can institute a set of hierarchical board structure variables (monitoring or behaviour-oriented CG mechanisms) to monitor the behaviour of managers (Fama, 1980). Second, shareholders can impose formal internal control systems (monitoring or behaviour-oriented CG mechanisms), like auditing and budget restrictions to control managerial misbehaviour (Jensen and Meckling, 1976). Third, shareholders can also design incentive compensation systems (incentive or outcome-oriented CG mechanisms) which serve to align more closely managers' interests with theirs, including rewarding managers on the basis of their performance (Jensen and Meckling, 1976).

Finally, by incurring *bonding costs*, managers can be urged to sign contractual guarantees that protect shareholders against malfeasance on their part (Jensen and Meckling, 1976). These may include: (i) having the financial accounts audited by independent public auditors; (ii) appointing independent NEDs or outside directors to monitor managers; and (iii) imposing minimum managerial shareholding to align interests with shareholders (Jensen and Meckling, 1976). For greater effectiveness, shareholders must achieve an optimal balance between instituting behaviour-oriented internal structures (i.e., board and auditing structures) and outcome-oriented contracts (i.e., director pay, stock options, and shareholdings) (Eisenhardt, 1989).

In effect, the agency conflict can be primarily resolved by either closely monitoring managers or providing appropriate managerial incentives in order to align the interests of managers and shareholders. In this paper, our focus is on the latter solution to the agency problem – investigating how corporate officers (directors and managers) can be appropriately incentivised such that their interests are inherently aligned with those of shareholders. Specifically, we seek to

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examine the extent to which shareholdings (outcome-oriented behaviour) by corporate officers (insiders and outsiders) serves as an effective incentive CG mechanism in minimising the agency costs or conflicts, and thereby enhancing firm value. Observably, and although shares are often held by a large group of different corporate insiders, such as employees, CEOs, CFOs, other executive directors, and outsiders, such as NEDs (outsider directors), much of the existing research has focused mainly on shareholdings by a limited group of corporate insiders, such as executive directors (Short and Keasey, 1999; Krivogorsky, 2006). Indeed, the past decades have witnessed relative explosion of management buy-outs and employee run public corporations, resulting in significant shareholdings by varied groups of corporate insiders and outsiders. Consequently, ownership by corporate insiders and outsiders is a crucial CG structure that the theoretical literature discussed above indicates can minimise agency costs by closely aligning the interests of the various corporate stakeholders, including managers and shareholders (Jensen and Meckling, 1976; Fama and Jensen, 1983a, b), and thereby improving market valuation.

There are, however, two main competing theoretical propositions, namely, alignment- or convergence-of-interests and entrenchment that we focus on. Notably, both theoretical positions are rooted in Jensen and Meckling's (1976) classic principal and agent conflict that have been expatiated above. The classic agency theory indicates that ownership by corporate insiders, such as employees, CEOs, CFOs, other executive directors, and outsiders, such as NEDs helps in minimising the conflicts of interests that exists between shareholders and managers (Jensen and Meckling, 1976; Fama, 1980; Jensen, 1993). More specifically, and in theory, as the percentage of shares held by corporate officers (executive and non-executive directors) rises, their interests and those of shareholders become more aligned and therefore, a reduced incentive by corporate officers to expropriate corporate resources at the expense of shareholders (Agrawal and Knoeber, 1996; Vafeas and Theodorou, 1998). This stems from the fact that as the financial stakes of corporate officers (insiders and outsiders) in the form of shareholding increases, the greater the extent of the loss they will incur for not maximising firm value for shareholders. As such, the alignment-of-

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interests hypothesis suggests that corporate officers who hold significant proportion of shares of their companies have extra motivation not only to pursue wealth maximising goals, but also to vigorously monitor the actions and inactions of other managers that can help in minimising agency costs and enhance market valuation.

Managerial entrenchment hypothesis is the alternative theory to the convergence-of-interests hypothesis (Morck et al., 1988; McConnell and Servaes, 1990; Short and Keasey, 1999). The entrenchment hypothesis suggests that at low levels of shareholdings, associated market discipline can help in aligning the interests of corporate officers (insiders and outsiders) with those of shareholders. However, it predicts that at high levels of shareholdings, corporate officers may have significant voting capacity to insulate themselves against market forces, and thus corporate officers (insiders and outsiders) will engage in activities that are more likely to maximise private benefits of control, including high levels of perquisite consumption. In such situations, the association between shareholding by corporate officers (insiders and outsiders), and market valuation can be expected to be negative.

In addition, the theoretical literature indicates that putting together the convergence-of-interests hypothesis with the entrenchment hypothesis leads to a curvilinear connection between ownership by corporate officers (insiders and outsiders), and market valuation (Morck et al., 1988; McConnell and Servaes, 1990). The implication of this is that at low levels of corporate officer ownership, interests' alignment may help enhance market valuation. However, at high levels of ownership by corporate officers (insiders and outsiders), managerial entrenchment may prevent value maximising takeovers, and thus impact negatively on market valuation.

A major issue within the extant literature is that most of the prior studies have tested these agency theoretic predictions by mainly using aggregate firm-level officer or director shareholdings (Morck et al., 1988; McConnell and Servaes, 1990; Welch, 2003; Miguel et al., 2004; Knyazeva et al., 2013; Zhou et al., 2013), with limited focus on shareholdings by individual groups of managers and directors. Consequently, current understanding of the extent to which shareholdings by

individual groups of managers and directors is theoretically effective in improving market valuation is limited. The current study, therefore, seeks to contribute to the literature by offering insights on the extent to which shareholdings by CEOs, CFOs, other executives, and NEDs drive market valuation.

2.2 Empirical literature review and hypotheses development

In line with the mixed theoretical literature, the empirical evidence on the association between corporate officer (insider and outsider) ownership, and market valuation is conflicting (Morck et al., 1988; Vafeas and Theodorou, 1998; Himmelberg et al., 1999; Davies et al., 2005; Bouzgarrou and Navatte, 2013). Specifically, a group of studies finds that ownership by corporate insiders and outsiders impacts positively on market valuation (Welch, 2003; Krivogorsky, 2006; Kapopoulos and Lazaretou, 2007; Connelly et al., 2012). A second group reports a negative link between corporate officer (insider and outsider) ownership, and market valuation (Laing and Weir, 1999; Demsetz and Villalonga, 2001; Andre, 2008), whereas a third group documents a curvilinear association between corporate officer (insider and outsider) ownership, and market valuation (Morck et al., 1988; Chen and Steiner, 1999; Davies et al., 2005).

Morck et al. (1988) examine the link between corporate officer (insider and outsider ownership), and market valuation by employing a cross-sectional sample of 371 *Fortune* 500 US firms in 1980. They find a non-linear link between corporate officer ownership, and market valuation, implying that market valuation first rises, then decreases, and finally rises, as insider ownership rises. Specifically, Morck et al. (1988) report a statistically significant and positive association between corporate officer ownership, and market valuation at lower levels (0% to 5% - *interests convergence*), a negative link at medium levels (5% to 25% - *entrenchment*), and additionally a positive connection at higher levels (above 25% - *interests convergence*) of corporate officer (insider and outsider) ownership. Morck et al.'s findings imply that at low levels of insider and outsider ownership, alignment of the interests of managers, and shareholders can enhance

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market valuation, whereas at high levels, insider entrenchment impacts adversely on market valuation. Subsequent US and UK studies by McConnell and Servaes (1990), Hermalin and Weisbach (1991), Chen and Steiner (1999), Short and Keasey (1999), Weir and Laing (2000), Cui and Mak (2002), Miguel et al. (2004), Davies et al. (2005), Ng (2005), Sciascia and Mazzola (2008), and Jelinek and Stuerke (2009) report similar non-monotonic relationship between corporate officer ownership and market valuation.

In contrast, and using 114 Australian listed firms from 1999 to 2000, Welch (2003) finds limited evidence of non-linear association between corporate officer ownership and firm value. Instead, Welch (2003) reports a positive effect of shareholdings by top management and directors on market valuation. Similarly, and employing samples of 87 and 175 Greek listed firms, Krivogorsky (2006), and Kapopoulos and Lazaretou (2007), respectively, find that corporate officer ownership is positively related to market valuation. Consistent with the alignment-of-interests hypothesis, and using a sample of 335 firms listed in Hong Kong from 1995 to 1998, Ng (2005) reports that listed companies with high levels of family (insider) ownership performs better than their non-family run counterparts. Ng's evidence also provides further support for the non-linear hypothesis, which suggests that at high levels of ownership by families, interests' alignment can lead to a reduction in agency costs and increased market valuation. The findings of recent studies by Andres (2008), Connelly et al. (2012), and Bouzgarrou and Navatte (2013) for German, Italian and French listed firms, respectively, are largely in line with the evidence that firms with high levels of insider or family ownership tend generate higher financial performance than their non-family owned counterparts. Furthermore, evidence of a positive association between corporate officer ownership and market valuation has been supported by the findings of Al Farooque et al. (2007), Sanchez-Ballesta and Garcia-Meca (2007), and Chen et al. (2008).

A final stream of empirical studies reports that corporate officer (insider and outsider) ownership has no significant effect on market valuation. For instance, Demsetz and Lehn (1985) find no significant cross-sectional connection between corporate officer (insider and outsider)

ownership and market valuation for 511 US listed firms from 1984 to 1989. Re-investigating past US findings using a sample of 600 listed firms from 1984 to 1992, Himmelberg et al. (1999) find a misleading link between corporate officer (insider and outsider) ownership and market valuation. Their results questioned the validity of past US evidence that suggests that corporate officer (insider and outsider) ownership is positively related to market valuation.

Notwithstanding the mixed empirical findings, and as has been previously stated, much of the existing literature has focused on examining the link between shareholdings of a small set of corporate officers, such as all directors and market valuation. For example, the findings of Welch (2003), Chen et al. (2008), Sciascia and Mazzola (2008), Jelinek and Stuerke (2009), Connelly et al. (2012), and Bouzgarrou and Navatte (2013) are based on an examination of the effect of shareholdings by all top management and directors on market valuation. However, there is a large and diverse group of corporate officers (insiders and outsiders) that own shares with mostly conflicting shareholding motives. This implies the effect of corporate officer (insider and outsider) ownership on market valuation may differ depending on the type of corporate officers (insiders and outsiders), with some potentially having strong links with market valuation, whilst others maintain weak connections with market valuation. Thus, examining how shareholdings by different groups of corporate officers, including insiders, such as employees, CEOs, CFOs, other executive directors, and outsiders, such as NEDs affect market valuation may help in explaining the mixed evidence of prior studies, as well as provide new insights on the link between corporate officer (insider and outsider) ownership, and market valuation. Additionally, the King Reports encourage corporate insiders, such as directors to own shares of companies that they run, in order to align their interests with those of shareholders. This suggests that the King Reports expect ownership by corporate officers (insiders and outsiders) to positively influence market valuation, and hence our hypotheses to be tested are as follows:

> H_1: There is a statistically significant and positive relationship between corporate officer (insider and outsider) ownership, and market valuation.

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H₂: Ownership by different groups of corporate insiders, namely employees, CEOs, CFOs, other executive directors, and outsiders (NEDs) has different effect on market valuation.

3. Research Design

3.1 Data

A total of 402 companies from ten industries were listed on the Johannesburg Stock Exchange (JSE) as at 31 December 2007. The industries included basic materials, consumer goods, consumer services, financials, health care, industrials, oil and gas, technology, telecoms, and utilities. We excluded 111 financials and utilities due to regulatory and capital structure reasons. This reduced our sample to 291 firms from eight non-financial industries. We use financial and CG variables to examine the connection between corporate officer (insider and outsider) ownership, and market valuation. The CG variables were collected from the sampled companies' annual reports. The annual reports were downloaded from the *Perfect Information Database*. The financial data was obtained from *DataStream*. We set two main criteria for the firms that were included in our final sample to meet: the availability of a firm's full five-year annual reports from 2002 to 2006; and the accessibility to a firm's corresponding financial data from 2003 to 2007.[3] Applying our sample selection criteria, the full data required for our regression analyses was obtained for a total of 169 firms over five-firm years and 8 industries.

3.2 Measure and variables

We employ three main types of variables to conduct our regression analyses. First, ownership by all corporate officers (insiders and outsiders) (*TIOWN*) is our main independent variable. Unlike most past studies, we collect ownership data for five different groups of corporate insiders and outsiders (*TIOWN*): Insiders - employees (*EOWN*), CEOs (*CEOWN*), CFOs (*CFOWN*),

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[3]Corporate board decisions take time to reflect in market valuation (Laing and Weir, 1999). Therefore, to avoid potential endogenous association between corporate officer (insider and outsider) ownership and market valuation (Chenhall and Moers, 2007a and b; Larcker and Rusticus, 2010; Wooldridge, 2010), we introduce a one year lag between corporate officer (insider and outsider) ownership and market valuation such that this year's market valuation depends on last year's CG mechanism, as specified in equation (1). The sample also starts from 2002 for two reasons. First, the second King Report became operational in 2002, and secondly, data coverage in *Perfect Information/DataStream* on SA listed firms was low until 2002. The sample ends in 2007 because it is the year for which data was available.

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other executive directors (*OOWN*), and outsiders - NEDs (*NOWN*). Second, Tobin's Q (*Q*) is our main dependent variable, but we use return on assets (*ROA*) and total share return (*TSR*), as a robustness check. Finally, and to control for omitted variables bias, we include several control variables, namely audit firm size (*BIG4*), capital expenditure (*CAPX*), the presence of a CG committee (*CGCO*), dual-listing (*DLIST*), firm size (*LNTA*), leverage (*LEV*), sales growth (*SGR*), industry dummies (*IND*), and year dummies (*YD*). For brevity, we do not develop specific hypotheses between these variables and market valuation, but there is an extensive theoretical and empirical literature that suggests that they do influence market valuation (DeAngelo, 1981; Jensen 1986; Morck et al., 1988; McConnell and Servaes, 1990; Yermack, 1996; Henry 2008; Beiner et al., 2006; Guest, 2009).

4. Empirical Analyses

4.1 Descriptive statistics

Table 1 presents full definitions and summary descriptive statistics of all variables that we use in conducting the empirical examination. Observably, all the figures generally suggest a wide variation. For instance, and similar to the findings of Beiner et al. (2006), Henry (2008) and Guest (2009), *Q* (*ROA*) ranges from a minimum of 0.58 (23.19%) and a maximum of 3.58 (36.55%) with an average of 1.52 (10.26%), showing wide variation. Consistent with the findings of previous studies (Morck et al., 1988; Welch, 2003; Miguel et al., 2004; Bouzgarrou and Navatte, 2013), *TIOWN* (*EOWN*) also shows wide variation, ranging from a minimum of 0% (0%) to a maximum of 100% (63.25%) with a median of 30.65% (12.43%). Additionally, we report shareholding levels for individual groups of corporate insiders and outsiders. For instance, *CEOWN* is between a minimum of 0% and a maximum of 36.87% with an average of 6.58%. Similarly, *NOWN,* the only corporate outsider group that we investigate ranges from a minimum of 0% to a maximum of 29.80% with the median firm having *NOWN* of 4.08%. Generally, the other corporate insider (i.e., *CFOWN,* and *OEOWN*) ownership proxies, *TSR*, and the control variables (i.e., *BIG4*, *CAPX*, *CGCO*, *DLIST*,

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LEV and *SGR*) show wide spread, suggesting that our sample has been adequately selected to achieve sufficient variation, and hence avoids any possibilities of sample selection bias.

Insert Table 1 about here

Although we use fixed-effects in conducting our regression analyses, we deem it to be appropriate to conduct a number of diagnostic tests, including those relating to multicollinearity, autocorrelation, normality, homoscedasticity, and linearity, in order to better understand the distributional properties of our dataset. We tested the multicollinearity assumption by implementing Spearman non-parametric and Pearson parametric bivariate correlation tests among the variables. The findings, which for brevity are not presented, but available upon request, indicated that no serious non-normalities and multicollinearities were present among the variables. Additonally, we investigated scatter, *P-P* and *Q-Q* plots, studentised residuals, Cook's distances, and Durbin-Watson statistics of the variables, and the tests also suggested that no serious violation of the linear regression assumptions of homoscedasticity, linearity, normality, and autocorrelation. This means that it is appropriate to conduct multivariate regression analyses.

4.2 Multivariate regression analyses

Corporations tend to vary in the difficulties and opportunities that they face over time (Henry, 2008; Guest, 2009). This can result in a situation whereby *TIOWN* (i.e., ownership by all five groups of corporate officers, including insiders and outsiders) and *Q* are jointly and dynamically influenced by firm-level differences, such as corporate complexity, culture and managerial talent (Henry, 2008; Guest, 2009), which simple OLS regressions may be unable to detect (Gujarati, 2003; Petersen, 2009; Wooldridge, 2010), and thereby resulting in spurious findings (Agrawal and Knoeber, 1996; Beiner et al., 2006; Larker and Rusticus, 2010). Therefore, and given the panel nature of our data, as well as following past studies (Henry, 2008; Guest, 2009), we conduct fixed-effects regressions in order to control for unobserved firm-level heterogeneities. We begin our analysis with basic fixed-effects regression specified as follows:

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$$Q_{it} = \alpha_0 + \beta_1 TIOWN_{it-1} + \sum_{i=1}^{n} \beta_i CONTROLS_{it-1} + \delta_{it-1} + \varepsilon_{it-1} \qquad (1)$$

where: Q is the dependent variable, $TIOWN$ is the main independent variable, $CONTROLS$ refers to the control variables, including $BIG4$, $CAPX$, $CGCO$, $DLIST$, $GEAR$, SGR, IND and YD, and δ refers to the company-level fixed-effects, consisting of a vector of 168 year dummies to represent the 169 sampled companies.

Table 2 contains fixed-effects regressions results of the impact of $TIOWN$ on Q. First, and since most of the existing studies have primarily examined the link between aggregate shareholdings by corporate officers, including insiders and outsiders (Morck et al., 1988; McConnell and Servaes, 1990; Welch, 2003; Ng, 2005; Zhou et al., 2013), we similarly run Q on the $TIOWN$ including the control variables using equation (1), in order to ascertain whether $TIOWN$ influences Q. The coefficient of $TIOWN$ on Q in Model 1 of Table 2 is statistically significant and positive. This evidence provides support for H_1, as well as the recommendations of the King Reports, which encourage corporate officers to hold shares in their companies in order to align their interests with those of shareholders.

Our evidence also provides support for the results of past studies (Krivogorsky, 2006; Kapopoulos and Lazaretou, 2007; Sciascia and Mazzola, 2008; Jelinek and Stuerke, 2009; Connelly et al., 2012) that report a positive connection between $TIOWN$ and market valuation, but inconsistent with those that report a negative effect of $TIOWN$ on market valuation (Laing and Weir, 1999; Demsetz and Villalonga, 2001; Miguel et al., 2004). Theoretically, our findings offer support for the convergence-of-interests (agency) hypothesis, which suggests that $TIOWN$ can minimise agency problems by aligning more closely the interests of shareholders and corporate officers (insiders and outsiders), and thereby enhancing market valuation.

Second, whilst much of the existing research has focused on aggregate ownership by all corporate insiders (McConnell and Servaes, 1990; Short and Keasey, 1999; Chen et al., 2008), we suggest that it is possible for different groups of insiders to have different effects on market

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valuation due to inherent differences in their self-interests and responsibilities. For example, increased shareholdings by lower-tier employees and trade unions can improve market valuation by linking the interests of employees and shareholders by engendering greater employee commitment, efficiency, and productivity. In contrast, at higher levels of shareholdings, top management (higher-tier employees) become entrenched, often resulting in increased expropriation of resources, which can impact negatively on market valuation. Therefore, to determine whether the effect of shareholdings by different groups of corporate insiders differ, we re-estimate equation (1) by replacing *TIOWN* with *CEOWN*, *CFOWN*, *EOWN*, and *OEOWN* in Models 2 to 5 of Table 2, respectively. Positive and statistically significant coefficient on *EOWN* in Model 4 of Table 2 is discernible, whilst the coefficients on *CEOWN* and *OEOWN* in Models 2 and 5 are noticeably negative and statistically significant. The coefficient on *CFOWN* in Model 3 of Table 2 is negative, but statistically insignificant.

Generally, the evidence of significant differences in the effect of shareholdings by different groups of corporate insiders provides support for *H2*. The positive effect of *EOWN* on *Q* provides support for the convergence-of-interests hypothesis, as well as a group of studies that reports that ownership by corporate insiders impacts positively on market valuation (Cui and Mak, 2002; Welch, 2003; Krivogorsky, 2006; Kapopoulos and Lazaretou, 2007). Intuitively, this is consistent with increased shareholdings by lower-tier employees helping to align the interests of ordinary employees and those of ordinary shareholders by intrinsically improving employee commitment, efficiency, productivity, and market valuation. By contrast, the negative effect of *CEOWN* and *OEOWN* on *Q* is in line with the insider entrenchment hypothesis, which predicts that at high levels of shareholdings, corporate insiders (top management) may prefer private benefits of control, such as high perquisite consumption over engaging in activities that may maximise value for shareholders. It also provides support for previous studies that report a negative link between insider ownership and market valuation (Laing and Weir, 1999; Demsetz and Villalonga, 2001; Ng, 2005; Andre, 2008). The negative and statistically insignificant effect of *CFOWN* on *Q* does not

provide support for *H2*, but is consistent with the findings of past studies that report no effect of insider ownership on market valuation (Demsetz and Lehn, 1985; Himmelberg et al., 1999). A further possible explanation for the observable negative, but statistically insignificant coefficient on the *CFOWN* is that unlike CEOs, CFOs may be less powerful in driving market valuation even at relatively high levels of shareholding because they may have: (i) relatively limited influence over critical decision-making; and (ii) comparatively limited opportunities to directly expropriate corporate resources.[4]

Third, one of the main functions of NEDs or outsider directors is to monitor and discipline managers in order to align managerial interests with those of shareholders. As outsiders, they are fairly independent, and therefore, they can criticise top management without the fear of being victimised. Their ability to effectively monitor the actions and inactions of senior management can, therefore, be enhanced by encouraging them to hold shares in the firms that they serve as directors, which can help further in aligning their interests with those of shareholders. Therefore, to ascertain whether shareholding by NEDs as outside corporate officers influence market valuation, we re-regress equation (1) by replacing *TIOWN* with *NOWN* in Model 6 of Table 2. Positive and statistically significant coefficient on *NOWN* in Model 6 of Table 2 is observable, and thereby providing support for *H2*, as well as the recommendations of the King Reports, which encourage directors to hold shares in firms that they serve as directors in order to align their interests with those of shareholders.

Insert Table 2 about here

Finally, the coefficients on the control variables in Models 1 to 6 of Table 2 are generally in line with our predictions. For example, and as expected, the coefficients on *CAPX*, *LEV* and *LNTA* are statistically significant and negatively connected to *Q*, whilst *BIG4*, *CGCO*, *DLIST*, and S*GR*

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[4]To test the hypothesis that CFOs on their own may be less powerful in driving market valuation, we re-estimated Model 2 of Table 2 by including an additional interaction variable (*INT_CFOWN*), which was created by interacting the *CEOWN* and *CFOWN* variables in addition to the *CFOWN* variable. The coefficient on *INT_CFOWN* was negative and statistically significant, and thereby providing support for the conjecture that CFOs may be less powerful on their own in influencing market valuation even at relatively high levels of shareholding, but strengthened by working together with their CEOs.

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are statistically significant and positively related to Q, in Models 1 to 6. Finally, the F-values in Models 1 to 6 of Table 2 consistently reject the null hypothesis that the coefficients on the main independent and the control variables are equal to zero. Similar to the results of past studies (Yermack, 1996; Beiner et al., 2006), the adjusted R^2 is between 26% and 36%, suggesting that our fixed-effects regressions can explain significant variations in our sampled corporations' Q.

4.3 Additional analyses

      We conduct a number of additional analyses to ascertain the robustness of our findings. First, and to explore possible curvilinear connection between *TIOWN* and Q, as suggested by Morck et al. (1988), we re-regress equation (1) by including $TIOWN^2$ in addition to the *TIOWN* variable. Positive, but statistically insignificant effect of $TIOWN^2$ on Q is discernible in Model 7 of Table 2 and thereby failing to provide support for H_1, as well as the findings of a large number of past studies that report significant curvilinear association between *TIOWN* and Q (McConnell and Servaes, 1990; Chen and Steiner, 1999; Cui and Mak, 2002; Welch, 2003; Miguel et al., 2004; Ng, 2005; Davies et al., 2005; Cheung and Wei, 2006; Connelly et al., 2012).[5]

      Second, and as previously noted, we examine the robustness of our findings to two alternative market valuation proxies: return on assets (*ROA* – an accounting based proxy) and total share returns (*TSR* – a market based measure). For brevity, we do not report the results here, but we find statistically significant and positive effect of *TIOWN* on *ROA* and *TSR*, and thereby suggesting that our findings are robust to the use of either an accounting (*ROA*) or a market (*TSR*) based valuation proxy, instead of Q.

      Finally, and to control for additional endogeneity problems that may arise as a result of omitted variables, we implement the widely applied two-stage least squares (*2SLS*) technique (Beiner et al., 2006; Chenhall and Moers, 2007a and b; van Lent, 2007; Henry, 2008; Larcker and Rusticus, 2010). However, to ensure that the *2SLS* methodology is appropriate, and following

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[5]As a further check, we examine additional non-monotonic link between *TIOWN* and Q by cubing ($TIOWN^3$) instead of squaring *TIOWN* with the results being similarly statistically insignificant.

Agrawal and Knoeber (1996) and Beiner et al. (2006), we first implement Durbin-Wu-Hausman exogeneity test (see Beiner et al., 2006: 267) to ascertain whether an endogenous association exists between *TIOWN* and *Q*. Applied to equation (1), the test rejects the null hypothesis of exogeneity, and hence we conclude that the *2SLS* technique may be appropriate and that our earlier findings based on the fixed-effects regressions may be spurious. In the first stage, we conjecture that *TIOWN* will be determined by the control variables specified in equation (1). In the second stage, we use the predicted portion of the *TIOWN* (*PRE_TIOWN*) as an instrument for the *TIOWN* and re-estimate equation (1) as specified below:

$$Q_{it} = \alpha_0 + \hat{\beta}_1 TIOWN_{it} + \sum_{i=1}^{n} \beta_i CONTROLS_{it} + \delta_{it} + \varepsilon_{it} \qquad (2)$$

whereby everything remains unchanged as specified in equation (1)[6] except that we employ the predicted *TIOWN* (*PRE_TIOWN*) from the first-stage regression as an instrument for the *TIOWN*. Statistically significant and positive effect of the *PRE_TIOWN* on *Q* is clearly observable in Model 8 of Table 2, and thereby suggesting that our evidence of a positive effect of *TIOWN* on *Q* is robust to endogeneity problems that may be caused by potential omitted variables. Overall, the robustness analyses indicate that our results are fairly robust to different types of potential endogeneity problems and alternative market valuation proxies.

5. Summary and Conclusion

This paper has investigated the association between shareholding by different groups of corporate officers (insiders and outsiders), and market valuation using a sample of 169 South African (SA) listed corporations from 2002 to 2007. This coincides with a period during which the SA authorities pursued incentive alignment and corporate governance (CG) reforms that focused on raising CG standards in SA corporations, mainly in the form of the 1994 and 2002 King Reports.

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[6]As estimating a lagged structure will invalidate the *Durbin-Wu-Hausman* test (Gujarati, 2003; Chenhall and Moers, 2007a and b; Larcker and Rusticus, 2010; Wooldridge, 2010), we estimate equation (2) as un-lagged structure. An additional advantage is that it allows us to ascertain the robustness of our results against estimating an un-lagged structure.

Consistent with past evidence, we find that total ownership by all corporate officers (insiders and outsiders) has a positive effect on market valuation. Distinct from most prior studies, however, we investigate whether ownership by different groups of corporate officers (insiders and outsiders) has different effect on market valuation. Specifically, we examine the extent to which ownership by individual groups of corporate officers: insiders – chief executive officers (CEOs), chief financial officers (CFOs), other executive directors, and employees; and outsiders – non-executive directors (NEDs), influence market valuation. Our results suggest that firms with higher ownership by CEOs and other executive directors have lower market valuation, but we do not find any evidence that ownership by CFOs alone has any significant effect on market valuation except when interacted with ownership by CEOs. This suggests that CFOs on their own may be less powerful in influencing market valuation, but may need to work in collaboration with their CEOs. In contrast, we find that ownership by employees and NEDs has a positive effect on market valuation. The central tenor of our evidence remains unchanged across a number of econometric models that sufficiently address different types of endogeneities and market valuation measures. Overall, our findings are largely consistent with the predictions of the *convergence-of-interests* and *entrenchment* hypotheses, which are rooted in the classic Jensen and Meckling (1976) agency theoretical framework.

Our findings also have crucial implications for practitioners, policy-makers and regulatory authorities. First, our evidence that high levels of shareholdings by employees and NEDs has a positive effect on market valuation offer support for the recommendations of the King Reports, which encourage directors, especially outside directors to hold shares in firms that they are directors of with the aim of aligning their interests with those of shareholders. Second, our evidence of a negative effect of greater shareholdings by top management (e.g., CEOs, CFOs, and other executives) also provide support for the recent policy of delisting firms with concentrated and pyramidical ownership structures by the JSE authorities with the aim of enhancing a wider distribution of shares, as well as improving corporate accountability, responsibility, and

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transparency. Third, whereas our evidence suggests that shareholdings by outside directors and employees have a positive effect on market valuation, ownership levels by outside directors in particular is relatively low among the sampled companies. Therefore, there is the need for compliance and enforcement to be strengthened further. Consequently, establishing a "compliance and enforcement committee" to regularly encourage and monitor the levels of compliance among listed companies may help in enhancing CG standards by improving incentive and monitoring mechanisms on the JSE.

Although our findings are robust and important, some caveats are in order. First, it would have been interesting to examine the extent to which ownership by founding families influences market valuation, which we are unable to do due to lack of data. Future studies can, therefore, extend the current study by examining how founding family ownership drive market valuation. Second, and as we do not include financial and utility companies, new insights may be obtained by investigating these types of firms. Third, although we have made serious effort at addressing different causes of endogenity problems, such as those that may be caused by simultaneity and omitted variables by estimating a lagged ownership-market valuation structure and two-stage least squares, respectively, we acknowledge that it is extremely difficult to completely eliminate all potential endogenous associations (Agrawal and Knoeber, 1996; Beiner et al., 2006; Chenhall and Moers, 2007a and b; van Lent, 2007; Larcker and Rusticus, 2010). Our findings should, therefore, be interpreted with caution. Finally, it should be noted that our structural measures may or may not capture the actual behaviour of shareholders and corporate officers (insiders and outsiders) in SA.

References

Agrawal, A., & Knoeber, C.R. (1996). Firm performance and mechanisms to control agency problems between managers and shareholders. *Journal of Financial and Quantitative Analysis,* 31, 377-389.

Al Farooque, O., van Zijl, T., Dunstan, K., & Karim, A.K.M.W. (2007). Corporate governance in Bangladesh: Link between ownership and financial performance. *Corporate Governance: An International Review*, 15(6), 1453-1468.

Andres, C. (2008). Large shareholders and firm performance – An empirical examination of founding-family ownership. *Journal of Corporate Finance*, 14, 431-445.

Armstrong, P., Segal, N., & Davis, B. (2006). Corporate Governance in South Africa, in Mallin, C.A. (Ed.), *Handbook on International Corporate Governance*. Edward Elgar Publishing, Cheltenham.

Beiner, S., Drobetz, W., Schmid, M.M., & Zimmermann, H. (2006). An integrated framework of corporate governance and firm valuation. *European Financial Management*, 2(2), 249-283.

Berger, A.N. & Bouwman, C.H.S. (2013). How does capital affect bank performance during financial crises? *Journal of Financial Economics*, Forthcoming.

Bouzgarrou, H., & Navatte, P. (2013). Ownership structure and acquirers performance: Family vs. non-family firms. *International Review of Financial Analysis*, Forthcoming.

Borisova, G., Brockman, P., Salas, J.M., & Zagorchev, A. (2012). Government ownership and corporate governance: Evidence from the EU. *Journal of Banking and Finance*, 36, 2917-2934.

Chenhall, R. & Moers, F. (2007b). Endogeneity: A reply to two different perspectives. *European Accounting Review*, 16(1) 217-221.

Chenhall, R.H. & Moers, F. (2007a). The issue of endogeneity within theory-based, quantitative management accounting research. *European Accounting Review*, 16(1), 173-195.

Chen, C.R., & Steiner, T.L. (1999). Managerial ownership and agency conflicts: A nonlinear simultaneous equation analysis of managerial ownership, risk taking, debt policy, and dividend policy. *Financial Review*, 34, 119-136.

Chen, Q., Goldstein, I., & Jiang, W. (2008). Directors' ownership in the U.S. mutual fund industry. *Journal of Finance,* 63(6), 2629-2677.

Cheung, W.K.A., & Wei, K.C.J. (2006). Insider ownership and corporate performance: Evidence from the adjustment cost approach. *Journal of Corporate Finance*, 12, 906-925.

Connelly, J.T., Limpaphayom, P., & Nagarajan, N.J. (2012). Form versus substance: The effect of ownership structure and corporate governance on firm value in Thailand. *Journal of Banking and Finance*, 36, 1722-1743.

Cui, H., & Mak, Y.T. (2002). The relationship between managerial ownership and firm performance in high R&D firms. *Journal of Corporate Finance*, 8, 313-336.

Davies, J.R., Hillier, D., & McColgan, P. (2005). Ownership structure, managerial behaviour and corporate value. *Journal of Corporate Finance*, 11, 645-660.

DeAngelo, L.E., (1981). Auditor size and auditor quality. *Journal of Accounting and Economics*, 3(3), 183-199.

Demsetz, H., & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of Political Economy*, 93(61), 1155-1177.

Demsetz, H., & Villalonga, B. (2001). Ownership and corporate performance. *Journal of Corporate Finance*, 7, 209-233.

Fama E.F., & Jensen, M.C. (1983a). Separation of ownership and control. *Journal of Law and Economics*, 26(2), 301-325.

Fama, E.F. (1980). Agency problems and the theory of the firm. *Journal of Political Economy*, 88(2), 288-307.

Fama, E.F., & Jensen, M.C. (1983b). Agency problems and residual claims. *Journal of Law and Economics*, 26(2), 327-349.

Golbe, D.L., & Nyman, I. (2013). How do share repurchases affect ownership concentration? *Journal of Corporate Finance*, 20, 22-40.

Guest, P.M. (2009). The impact of board size on firm performance: Evidence from the UK. *European Journal of Finance*, 15(4), 385-404.

Gujarati, D.N. (2003), *Basic econometrics*, McGraw-Hill, New York, NY.

Henry, D. (2008). Corporate governance structure and the valuation of Australian firms: Is there value in ticking the boxes. *Journal of Business Finance & Accounting*, 35(7-8), 912-942.

Hermalin B.E., & Weisbach M.S. (1991). The effect of board composition and direct incentives on firm performance. *Financial Management*, 21(4), 101-112.

Himmelberg, C.P., Hubbard, R.G., & Palia, D. (1999). Understanding the determinants of managerial ownership and the link between ownership and performance. *Journal of Financial Economics*, 53, 353-384.

Jelinek, K., & Stuerke, P.S. (2009). The nonlinear relation between agency costs and managerial equity ownership: Evidence of decreasing benefits of increasing ownerhip. *International Journal of Managerial Finance*, 5(2), 156-178.

Jensen, M.C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*, 76(2), 323-329.

Jensen, M.C., & Meckling, W.H. (1976). Theory of the firm: Managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.

Jensen, M.C., (1993). The modern industrial revolution, exit, and the failure of internal control systems. *Journal of Finance*, 48, 831-880.

Kapopoulos, P., & Lazaretou, S. (2007). Corporate ownership structure and firm performance: Evidence from Greek firms. *Corporate Governance: An International Review*, 15(2), 144-158.

King Committee (1994 & 2002). *King reports on corporate governance for South Africa*. Institute of Directors, Johannesburg.

Knyazeva, A., Knyazeva, D., & Stiglitz, J. (2013). Ownership change, institutional development and performance. *Journal of Banking and Finance*, Forthcoming.

Krivogorsky, V. (2006). Ownership, board structure, and performance in continental Europe. *International Journal of Accounting*, 14, 176-197.

Laing, D., & Weir, C.M. (1999). Governance structures, size and corporate performance in UK firms. *Management Decisions*, 37(5), 457-464.

Larcker, D.F. & Rusticus, T.O. (2010). On the use of instrumental variables in accounting research. *Journal of Accounting & Economics*, 49, 186-205.

Lipton, M., & Lorsch, J. (1992). A modest proposal for improved corporate governance. *Business Lawyer*, 48(1), 59-77.

Malherbe, S., & Segal, N. (2003). South Africa: After Apartheid in Oman, C.P. (Ed.), *Corporate Governance in Development, the Experiences of Brazil, Chile, India, and South Africa*. OECD Development Centre, Washington.

McConnell, J., & Servaes, H. (1990). Additional evidence on equity ownership and corporate value. *Journal of Financial Economics*, 27(1), 595-612.

Miguel, A., Pindado, J., & Torre, C. (2004). Ownership structure and firm value: New evidence from Spain. *Strategic Management Journal*, 25, 1199-1207.

Morck, R., Shleifer, A., & Vishny, R.W. (1988). Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics*, 20(1), 293-315.

Ng, C.Y.M. (2005). An empirical study on the relationship between ownership and performance in a family-based corporate environment. *Journal of Accounting, Auditing, and Finance*, 20, 121-146.

Petersen, M.A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *Review of Financial Studies*, 22(1), 435-480.

Rossouw, G.J. (2005). The philosophical premises of the second King report on corporate governance. *Koers*, 70(4), 745-748.

Rossouw, G.J., Watt, A.V., & Malan, D.P. (2002). Corporate Governance in South Africa. *Journal of Business Ethics,* 7(3), 289-302.

Sanchez-Ballesta, J.P., & Garcia-Meca, E. (2007). A meta-analytic vision of the effect of ownership structure on firm performance. *Corporate Governance: An International Review*, 15(5), 879-893.

Sciascia, S., & Mazzola, P. (2008). Family involvement in ownership and management: Exploring nonlinear effects on performance. *Family Business Review*, 21(4), 331-345.

Short, H., & Keasey, K. (1999). 'Managerial Ownership and the Performance of Firms: Evidence from the UK', *Journal of Corporate Finance*, 5, 79-101.

van Lent, L. (2007). Endogeneity in management accounting research: A comment. *European Accounting Review*, 16(1), 197-205.

Vafeas, N., & Theodorou, E. (1998). The relationship between board structure and firm performance in the UK. *British Accounting Review*, 30(4), 383-407.

Weir, C., & Laing, D. (2000). The performance-governance relationship: The effects of Cadbury compliance on UK quoted companies. *Journal of Management & Governance,* 4(4), 265-281.

Welch, E. (2003). The relationship between ownership structure and performance in listed Australian companies. *Australian Journal of Management*, 28(3), 287-305.

West, A. (2006). Theorising South Africa's corporate governance. *Journal of Business Ethics,* 68(4), 433-448.

West, A. (2009). The ethics of corporate governance: A South African perspective. *International Journal of Law and Management*, 51(1), 10-16.

Wooldridge, J.M. (2010). *Econometric Analysis of Cross Section and Panel Data*, MIT Press, Massachusetts.

Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics*, 40(2), 185-211.

Zhou, B., Guo, J., Hua, J., & Doukas, A.J. (2013). Does state ownership drive M&A performance? Evidence from China. *European Financial Management*, Forthcoming.

Table 1

Summary descriptive statistics of all variables for all 845 firm years

Variable	Mean	Median	S.D.	Maximum	Minimum
Panel A: Market valuation (Dependent) variables					
Q	1.52	1.33	0.69	3.58	0.58
ROA (%)	10.26	10.97	12.21	36.55	-23.19
TSR (%)	33.57	29.60	48.68	173.41	-55.20
Panel B: Corporate officer (insider) ownership (Independent) variables					
CEOWN (%)	6.58	5.76	3.24	36.87	0.00
CFOWN (%)	3.94	3.47	2.63	27.74	0.00
EOWN (%)	12.43	11.53	6.72	63.25	0.00
OEOWN (%)	8.46	7.86	5.94	42.60	0.00
TIOWN (%)	31.52	30.65	12.48	100.00	11.80
Panel C: Corporate officer (outsider) ownership (Independent) variable					
NOWN (%)	4.29	4.08	2.95	29.80	0.00
Panel D: Control variables					
BIG4 (%)	73.25	100.00	44.29	100.00	0.00
CAPX (%)	11.08	6.28	13.86	64.46	0.00
CGCO (%)	35.80	0.00	48.00	100.00	0.00
DLIST (%)	21.66	0.00	41.21	100.00	0.00
LEV (%)	34.78	14.63	55.02	270.65	0.00
SGR (%)	14.40	12.60	24.94	88.26	-41.88
LNTA	5.95	5.97	0.89	7.60	4.08

Notes: Variables are defined as follows: Tobin's Q (*Q*), measured as the ratio of total assets minus book value of equity plus market value of equity to total assets. Return on assets (*ROA*), defined as the ratio of operating profit to total assets. Total shareholder returns (*TSR*), calculated as annualised total share returns made up of share price and dividends. Total corporate officer (insider and outsider) ownership (*TIOWN*), measured as the percentage of common shares held by all corporate officers, including insiders and outsiders, which is split further into those held by: *insiders* - CEOs (*CEOWN*), CFOs (*CFOWN*), employees (*EOWN*), and other executive directors (*OEWN*); and *outsider*s - non-executive directors (*NOWN*). Audit firm size (*BIG4*), measured as a dummy variable that takes the value of 1, if a firm is audited by a big four audit firm (PricewaterhouseCoopers, Deloitte & Touché, Ernst & Young, and KPMG), 0 otherwise. Capital expenditure (*CAPX*), calculated as the ratio of total capital expenditure to total assets. Cross-listing (*DLIST*), measured as a dummy variable that takes the value of 1, if a firm is cross-listed to a foreign stock market, 0 otherwise. The presence of a corporate governance committee (*CGCO*), defined as a dummy variable that takes the value of 1, if a firm has set up a corporate governance committee, 0 otherwise. Gearing (*LEV*), calculated as the ratio of total debts to market value of equity. Sales growth (*SGR*), calculated as the current year's sales minus last year's sales to last year's sales. Firm size (*LNTA*), measured as the natural log of total assets.

Table 2

The effect of ownership by different groups of corporate officers (insiders and outsiders) on market valuation using fixed-effects regressions

Dependent variables	Q	Q	Q	Q	Q	Q	Q	2SLS (Q)
Adjusted R^2	0.348	0.324	0.260	0.330	0.340	0.290	0.316	0.364
F-value	8.03***	7.860***	6.763***	7.876***	7.965***	6.929***	7.784***	8.710***
(N)	(845)	(845)	(845)	(845)	(845)	(845)	(845)	(845)
Constant	1.572***	1.479***	1.318***	1.473***	1.594***	1.310***	1.376***	1.820***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Independent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TIOWN	0.093***	-	-	-	-	-	0.088***	-
	(0.000)	-	-	-	-	-	(0.000)	-
CEOWN	-	-0.064***	-	-	-	-	-	-
	-	(0.000)	-	-	-	-	-	-
CFOWN	-	-	-0.005	-	-	-	-	-
	-	-	(0.486)	-	-	-	-	-
EOWN	-	-	-	0.070***	-	-	-	-
	-	-	-	(0.000)	-	-	-	-
OEWN	-	-	-	-	-0.078**	-	-	-
	-	-	-	-	(0.000)	-	-	-
NOWN	-	-	-	-	-	0.048***	-	-
	-	-	-	-	-	(0.013)	-	-
$TIOWN^2$	-	-	-	-	-	-	0.005	-
	-	-	-	-	-	-	(0.490)	-
PRE_TIOWN	-	-	-	-	-	-	-	0.120***
	-	-	-	-	-	-	-	(0.000)
Control variables								
BIG4	0.170***	0.149**	0.146**	0.165***	0.169***	0.160***	0.172***	0.194***
	(0.000)	(0.012)	(0.018)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CAPX	-0.019***	-0.016***	-0.014***	-0.017***	-0.020***	-0.016***	-0.020***	-0.025***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CGCO	0.210****	0.206***	0.198***	0.260***	0.239***	0.243***	0.238***	0.270***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
DLIST	0.118*	0.114*	0.110*	0.112*	0.115*	0.116*	0.123**	0.135***
	(0.053)	(0.057)	(0.065)	(0.063)	(0.063)	(0.067)	(0.050)	(0.000)
LEV	-0.030***	-0.026***	-0.023***	-0.028***	-0.030***	-0.029***	-0.036***	-0.036***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SGR	0.132**	0.125**	0.120**	0.129**	0.131**	0.130***	0.138***	0.148***
	(0.014)	(0.017)	(0.019)	(0.016)	(0.013)	(0.015)	(0.000)	(0.000)
LNTA	-0.138**	-0.141**	-0.134**	-0.175***	-0.180***	-0.170***	-0.186***	-0.193***
	(0.017)	(0.015)	(0.022)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Notes: Coefficients are on top of *p*-values in parenthesis. ***, ** and * indicate that *p*-value is significant at the 1%, 5% and 10% level, respectively. Following Petersen (2009), coefficients are estimated by using the robust clustered standard errors technique. Variables are defined as follows: Tobin's (*Q*), return on assets (*ROA*), total share return (*TSR*), the percentage of ownership held by: all corporate officers, including insiders and outsiders (*TIOWN*), shareholdings by corporate officers who are insiders - CEOs (*CEOWN*), CFOs (*CFOWN*), employees (*EOWN*), other executive directors (*OEOWN*); and those who are outsiders - non-executive directors (*NOWN*), squared *TIOWN* (*TIOWN²*), predicted *TIOWN* (*PRE_TIOWN*) – obtained by regressing *TIOWN* on the control variables and used as an instrument for the *TIOWN* in model 8, audit firm size (*BIG4*), capital expenditure (*CAPX*), the presence of a corporate governance committee (*CGCO*), dual-listing (*DLIST*), leverage (*LEV*), and firm size (*LNTA*). We also include industry dummies (*IND*) and year dummies (*YD*), but for brevity, are not reported. Table 1 fully defines all the variables used.