

# **DO BOARD-LEVEL CONTROLS MATTER? – An agency perspective on Socially Responsible Investment (SRI) company boards in South Africa**

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## **ABSTRACT**

If board-level controls matter, the introduction of the 2008 Companies Act with its enhanced legislative requirements, should have a positive impact on firm performance. To assess board-level controls this study developed two unique control indexes to assess the boards of 84 companies over three years. The study focuses on companies on the SRI index as they have a greater focus on sustainability and transparent disclosure of board-level controls including separation of duties, monitoring, goal-aligned remuneration and oversight. The first index uses 25 board-level control indicators (CI) and the second 23 board-level direction indicators (DI). The two indexes were assessed using fixed effects estimation methods against current and negatively lagged firm performance proxies. Results show that board-level controls matter as both indexes were significant and positively related to return on assets. However, DI was found to be highly significant and negatively related to next year's return on assets, suggesting a timing and information asymmetry problem. CI was significant and positively related to enterprise value and next year's enterprise value, but not DI, suggesting that the controlling and not the directional role of the board is valued as an alternative to shareholder monitoring.

**KEY WORDS:** Board-level controls, agency theory, directors, directing, internal control

## INTRODUCTION

Fama (1980) highlighted the dual focus of the board as the ultimate controller and direction-giver in a company, decades ago. This control and direction have many layers (Von Solms & Von Solms, 2006) enabling the board to direct and control the business of a company through strategy (Pugliese, Bezemer, Zattoni, Huse, Van den Bosch, & Volberda, 2009), policies and procedures to action and performance (Pearce II & Patel, 2018). At the top of the control environment, the board also has the duty to control and direct themselves by using separation of duties, monitoring, goal aligned remuneration and oversight as control measures. Heier, Dugan, and Sayers (2005) highlight the importance of a strong control environment. In addition, board-level controls at the top of the control environment are an important alternative to shareholder monitoring (Bebchuk & Weisbach, 2010).

The purpose of this study is to assess the relationship between how the board controls and directs the activities of the board, and firm performance, including negatively lagged firm performance<sup>2</sup>, to determine if board-level controls matter in the short- and medium-term. To assess board-level controls this study developed two unique indexes assessing the boards of 84 companies over a three-year period. The study focused on companies on the SRI index as they have a greater focus on sustainability. Companies on the SRI index also use transparent disclosure practices that include board-level controls regarding separation of duties, monitoring, using goal aligned remuneration and oversight. The first index consolidates 25 board-level control indicators (CI) and the second 23 board-level direction indicators (DI)<sup>3</sup>, to ensure the indexes encapsulate the complexity of board-level controls.

This study starts in 2012 as this is the first year in which the more stringent requirements of the 2008 Companies Act were applicable and ends in 2014 as the SRI index changed in 2015. The 2008 Companies Act contains more stringent legislative requirements governing directors, resulting in an increased likelihood that boards will strengthen board-level controls to align to the Companies Act and reduce the board's increased liability risk. This re-balancing of controls can be costly and should be assessed to determine the 'new' relationship between board-level controls and firm performance.

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<sup>2</sup> A negative lag is a difference in time to the future, for example where return on assets for the current year represent  $t=0$ , negatively lagged return on assets represent  $t+1$ , or next year's return on assets.

<sup>3</sup> The definitions of the 48 indicators used in the CI and DI indexes are discussed in more detail in the literature review sections under the headings Control and Direction and summarised in Appendix 1.

## **Board-level controls**

Board-level controls, encapsulated in the CI index, are the oversight of activities of the board using, *inter alia*, separation of duties and monitoring by the independent directors and the chair over the activities of the executive directors and the Chief Executive Officer (CEO). Directing is how the board's remuneration is aligned (or directed) to specifically remunerate their efforts linked to the different board roles coupled with oversight and monitoring, encapsulated in the DI index. In essence, board-level controls are control orientated internal governance mechanisms that operate at board-level to control and direct the board.

Another differentiating factor between board-level controls and operational internal controls are the speed of operation. The impact of operational internal controls may be nearly immediate, for example, when a transaction is approved or not approved, the approval control decision is generally granted close to the request. In contrast, board-level controls enable independent directors to monitor or oversee the work of the executive directors. However, as they only meet a limited number of times per year the opportunity to use separation of duties and monitoring is limited resulting in a slower control. For example, Miller and Wilhelm (2015) noted that a year can be too soon to judge the impact of a new CEO, highlighting a negative lag to firm performance. In support of a negative lag Vander Bauwhede (2009) found a positive relationship between the board structures and functions that followed international best practices and next year's return on assets.

## **Contribution**

This study moves away from the traditional use of board studies that centred on identifying better or 'best' board structures or characteristics to maximise firm performance (Chiranga & Chiwira, 2014; Meyer & De Wet, 2013; Muchemwa, Padia, & Callaghan, 2016; Muniandy & Hillier, 2015) by focusing on the less studied board-level controls. Better understanding the relationship between board-level controls and firm performance can be valuable in South Africa to prevent over reliance on board-level controls by other governance mechanisms such as institutional shareholders. In addition, a focus on board-level controls is important to managers, internal and external auditors as it influences the general control environment (Gray & Manson, 2005; Penning et al., 2018).

Shareholders need to consider the way the board control and direct firm performance, especially as they vote on board appointments and remuneration decisions as prescribed in

sections 66 and 68 of the Companies Act, issued by the Republic of South Africa (RSA, 2008). Despite the stakeholder centric view held by South African corporate governance guidelines, this study uses an agency theory perspective as the directors are the agents of the shareholders who approve their appointment and directors' remuneration. The continued use of agency theory in recent studies (Engelen, 2015; Muniandy & Hillier, 2015; Pepper & Gore, 2015; Rashid, 2015; Rispel, De Jager, & Fonn, 2015) shows the continued relevance of the theory to describe the complex measures used to address divergent goals between the board and shareholders<sup>4</sup>.

Shareholder oversight is complicated as board level controls are a complex and difficult to observe phenomenon (Adams, Hermalin, & Weisbach, 2010), supporting the development of indexes to consolidate a larger number of indicators in order to contribute to the continuous debate on board-level controls especially directors' remuneration. Given that the board has a duty to act in the best interest of the company (RSA, 2008: section 76), strong board-level controls should result in improved firm performance in the short- and medium-term.

### **Index construction**

Constructing indexes to consolidate a large number of indicators to better assess a complex phenomenon, such as board-level controls, is in line with prior South African studies in the broader corporate governance field that developed their own corporate governance indexes (Abdo & Fisher, 2007; Mans-Kemp, 2014; Ntim, 2009). The indexes used by this study consolidates board-level controls which could overlap with some of the indicators used in prior corporate governance studies, as a focus on board-level controls is a smaller subsection within the corporate governance field.

Abdo and Fisher (2007) used 29 corporate governance indicators and only two overlapped with indicators used in this study. Mans-Kemp (2014) used 39 corporate governance indicators focusing on a disclosure and acceptability dimensions; however, her index was not disclosed as it was based on the Public Investment Corporation's evaluation instrument. Ntim (2009) built a compliance index based on 50 corporate governance indicators aligned to King II. There were 11 indicators in this current study that overlapped with Ntim's compliance index. In

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<sup>4</sup> A more detailed explanation of agency problems stemming from goal divergence is discussed in the literature review under the heading Agency relationship.

contrast to the above corporate governance studies, this study uses a control focus on the controlling and directional nature of board-level controls.

### **Structure of the study**

The remainder of this article is structured as follows. The following literature review discusses influencers of board-level controls by considering the legislative and regulatory environment as well as the guidance of the agency theory. The latter part of the literature review centres on the literature supporting the identification of the indicators linked to the controlling (CI) and directional (DI) indexes. The research design and research methods section describe the research, design, method leading to the analysis of data, result discussion and interpretation using an agency theory perspective. The article ends with a conclusion, which summarises the key findings and highlights areas for future research.

## **LITERATURE REVIEW**

To encourage improved governance practices, South Africa has frequently been issuing and updating corporate governance guidelines starting with King I in 1994 and ending in King IV in 2016 issued by the Institute of Directors Southern Africa (IoDSA, 1994, 2002, 2009, 2016)<sup>5</sup>. These guidelines were initially aimed at the private sector and highlighted the “importance of a properly functioning board as a key ingredient” (Armstrong, Segal, & Davis, 2005). In addition, the legal environment in South Africa focused on establishing markets with a level of protection against market abuse, such as the prevention from insider trading and legislating the responsibilities of boards (Chitimira, 2014; RSA, 2004, 2008), including updating the Companies Act to 21st century thinking (Barac & Moloji, 2010).

The literature review starts by first discussing the changed legislative or legal environment that led to the 2008 Companies Act, followed by the changed corporate governance environment that influenced board-level controls, and a brief discussion on the agency relationship. The last two sections of the literature review discuss the indicators used to construct the two indexes.

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<sup>5</sup> The various King reports on corporate governance were issued by the Institute of Directors Southern Africa (IoDSA) in 1994, 2002, 2009 and 2016 and are commonly referred to as King I, King II, King III and King IV.

## **South African legal environment**

In 2003 the Department of Trade and Industry (DTI) launched a broad legislative reform to update the Companies Act (DTI, 2004), leading to the promulgation of the 2008 Companies Act (RSA, 2008). However, the Act had to be amended before it could be put into operation (RSA, 2011), resulting in 2012 as the first year in which companies had to comply with the Act. The 2008 Companies Act with its more stringent requirements created a knowledge gap on how the agency relationship between the board and shareholders was re-balanced to ensure legislative compliance, and goal alignment to reduce agency cost<sup>6</sup>. The more stringent requirements of the Companies Act can also result in the need to implement increased controls, that can be costly, reducing firm performance.

The 2008 Companies Act includes sections aimed at improving transparency, accountability and the integrity of companies (sections 23-34 and Chapter 3), and sections on the governance of companies that include provisions relating to the responsibilities of directors (sections 57-78) (RSA, 2008). For example, the approval of directors' remuneration and the appointment of an audit committee are now the responsibility of the shareholders as per sections 66, 68 and 94 (RSA, 2008). To encourage rigour, the 2008 Companies Act (RSA, 2008) is more prescriptive regarding directors' conduct (section 76) and directors' liability (section 77) and in so doing bonds<sup>7</sup> the board to the prescriptions of the Act and increases the risk of legal action against directors. Carciumaru (2010) found an increase in director liability and increased pressure towards more accountability in South Africa.

Although legislation is a method of bonding or limiting the options of boards using legal obligations requiring the board to act or refrain from acting in a prescribed manner, legislative bonding can be costly. Zhang (2007) found negative abnormal returns linked to Sarbanes-Oxley (SOX) events, highlighting the costly consequence of legislative bonding. A more regulated legislative environment, coupled with updated governance recommendations and improved controls can, however, be valuable if it results in more competitive business practices (Aguilera & Cuervo-Cazurra, 2004), or reduces agency cost.

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<sup>6</sup> Agency cost is the cost incurred to align the goals of the board and shareholders and limit the maximisation of self-interest.

<sup>7</sup> Bonding or bond refers to the limitations and obligations placed on the board and shareholders by the Companies Act that glue or bond them to the requirements of the Act.

## **South African regulatory environment**

To encourage competitive business practices, South Africa became the first developing country to issue a code of corporate governance (Aguilera & Cuervo-Cazurra, 2009), with the *King Report on Corporate Governance* (King I) issued in 1994 (IoDSA, 1994). South Africa used regulatory guidance, that included board-level controls, to encourage the adoption of best practices towards improved competitive practices. Subsequently the governance guidelines have been updated in 2002, 2009 and 2016 to remain relevant (IoDSA, 2002, 2009, 2016). Prior South African governance studies found that governance practices applied by companies did improve over time to better align to the corporate governance recommendations (Abdo & Fisher, 2007; Mans-Kemp, Erasmus, & Viviers, 2016; Ntim, Opong, Danbolt, & Thomas, 2012). The widespread adoption of board-level governance recommendations could, however, result in best practices changing to common practices, eroding the initial competitive advantages to become costly control measures.

Corporate governance guidelines include recommendations on board-level controls using separation of duties between non-executive including independent directors and executive directors, between the CEO and CFO<sup>8</sup> and between the chair and the CEO (IoDSA, 2009: Chapter 2)<sup>9</sup>. Separation of duties enables non-executive directors to oversee or monitor executive directors, with the chair monitoring the CEO. As different board members have different duties, with the executive directors responsible for managing the business of the company, and the non-executive directors responsible to monitor, oversee and direct the executives, their remuneration should be structured to fit their different roles (IoDSA, 2009). Non-executive directors could be representatives of a shareholder that are not involved in the management of the business. However, they could be very influential when they represent a controlling shareholder, necessitating the use of independent directors to enable unbiased oversight and a balance of power on the board (IoDSA, 2009).

Adams et al. (2010) state that the complexity of the composition and the difficulty of observing the actions of boards are interlinked, which complicates a study of boards. This explains why, despite the extant literature on some board-related variables, there are few studies on boards that comprehensively study board-level controls. Studies using boards tend to focus on the relationship between limited board-related variables, such as board size, structure, activity,

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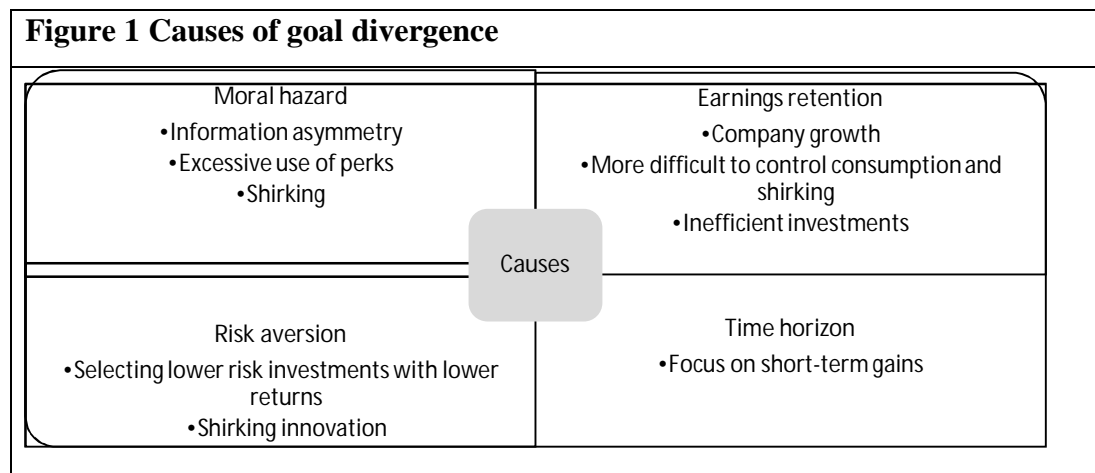
<sup>8</sup> CFO is the Chief Financial Officer

<sup>9</sup> The study references the recommendations of King III as the document applied to the study's period, these principles remain valid as King IV does not "represent a significant departure from the philosophical underpinnings of King III" (IoDSA, 2016).

CEO duality and firm performance measures. Tshipa (2017) used six board-related variables, Muchemwa et al. (2016) centred on board size and composition, Taljaard, Ward, and Muller (2015) focused on board diversity, and Tarus and Ayabei (2016) used board composition, to list a few more recent South African studies. In addition to extending the work of these studies by focusing on board-level controls, the controls are contextualised using an agency theory perspective.

### Agency relationship

An agency relationship is based on the separation of ownership and control in companies (Berle & Means, 1933). Public companies can sell their shares widely to attract funding while specialist managers or executive directors manage the business stemming from the generated funds on behalf of the shareholders or owners resulting in an agency relationship with the directors as the agents of the shareholders (Berle & Means, 1933; Jensen & Meckling, 1976). Goal divergence can occur in an agency relationship when the goals of one party are not to maximise the interest of the other party, but to put his or her own interest first (Dowd, 2009). Causes of goal divergence include moral hazards, earnings retention, risk aversion and different time horizons, summarised in Figure 1.



The controlling and directional role of the board needs to consider the various causes of goal divergence towards the development of sustainable business practices in the best interest of the company. Moral hazards include problems caused by withholding information (also referred to as information asymmetry, where the board has better information on their activities than the shareholders), a lack of effort (also referred to as shirking), or the excessive use of perks



(Hoque, 2014; Hope & Thomas, 2008; McColgan, 2001). Earnings retention can be used by a board as a less risky source of funding (Koussis, Martzoukos, & Trigeoris, 2017) to fund the growth of the company by reducing payments (dividends) to shareholders. It is, however, important that the retained funds should be invested efficiently to lead to growth. Alternatively, increased leverage can be used to fund growth. Growth can be for selfish reasons as executive directors of larger companies receive more remuneration (Deschenes, Boubacar, Rojas, & Moris, 2015). Information asymmetry can include different risk perspectives as executive directors can be more risk averse as their reputation and earnings are linked to the company whereas shareholders can reduce their risk by investing in a balanced portfolio (Crocì, Del Giudice, & Jankensgård, 2017; Jensen, 1972). Risk-averse boards can be associated with lower levels of firm performance (Michelberger, 2016). Time horizon problems can be caused by a short-term focus of executive directors to maximise their remuneration in the current period to the detriment of the medium-term well-being of the company and shareholders (McColgan, 2001; Yao, 2018).

Separation of duties of the board into two levels of specialisation can help to encourage improved board-level control and direction. The board's specialisations include *expert monitoring* (Wang, Xie, & Zhu, 2015) by non-executive directors, including independent directors, and *specialist management* by executive directors (Steyn & Stainbank, 2013). The two levels of specialisation result in separation of duties, with monitoring including oversight by the non-executive directors over executive directors, which is in line with the division of labour described by Fama (1980) and separation of duties a key component in control systems (Little & Best, 2003). Board-level controls, taking the different board roles into account, were specifically considered in the development of the CI and DI indexes to ensure a comprehensive or in-depth inclusion of board-level controls is captured by the indexes. The indexes were constructed following the method used in the seminal index construction work of Gompers, Ishii, and Metrick (2003). The following sections discuss the literature used to define the indicators for the CI and the DI indexes and links the discussion of the index by cross-referencing the indicator number. Appendix 1 provides a summary of the index indicators.

## **Control**

The control section focuses on board-level control indicators that centre on separation of duties with monitoring and oversight (Cullen & Brennan, 2017) and are within the direct control of

the board. Monitoring by the board can be used to help reduce information asymmetry and agency cost to complement shareholder monitoring (Bebchuk & Weisbach, 2010). Board-level controls can monitor against moral hazard, especially slacking, to reduce task avoidance or a focus on selfish interests like career building or the excessive use of perks or resource misappropriation to the detriment of the company and its shareholders (Millson & Ward, 2005). Board-level controls should enable the board to focus on achieving its business objectives and to ensure that executive directors as specialist managers are not slacking or engaging in the excessive use of perquisites, and that their actions are to the benefit of the company and not the director. This also requires non-executive directors not to slack in their oversight duties.

Separation of duties is a form of preventative control (Kobelsky, 2014) that separates the people who monitor and ratify decisions from the people who initiate and implement the decisions, while monitoring is both a preventative and a detective control (Penning et al., 2018). The existence of monitoring as a preventative control can influence behaviour in line with the Hawthorn effect (McCambridge, Witton, & Elbourne, 2014), while as a detective control it focuses on identifying existing problems for further corrective action (Cram, Brohman, Chan, & Gallupe, 2016; Veliyath, Hermanson, & Hermanson, 1997).

Monitoring at board level as a detective control will have a lagged effect as it takes time for a problem in an organisation to become prominent enough to be identified by monitoring at board- or board-committee level, which influences the efficiency of high-level monitoring as a control. Jensen (1994) highlights the slow response time of monitoring as he found that CEOs were only removed after huge losses had been reported, indicating a reliance on accounting performance measures in the monitoring process. In South Africa, African Bank's share price tumbled from R40 a share to below R3 in 18 months, leading to the resignation of the CEO, followed by warnings of a R7.3 billion loss mere months after a R5.5 billion capital injection (Whitfield, 2014).

### ***Separation of duties***

Separation of duties can be achieved using independent directors to oversee the executives (Fama, 1980), with the chair overseeing the CEO (CI<sub>1</sub>) (Bakar, 2012; Donaldson & Davis, 1991). Given that the chairperson's role is also that of a monitor, it may be expected that the chairperson will be an independent director, or supported by a lead independent director

(IoDSA, 2009) (CI<sub>2</sub>), as independent directors are considered to be a “hallmark of effective corporate governance” (Geletkanycz & Boyd, 2011).

Separation of duties includes having a balance of power on the board with most of the board being non-executive directors and the majority of the non-executive directors being independent, to control against domination by one person (IoDSA, 2009) (CI<sub>3</sub>). A minimum of two executive directors should be on board namely the CEO and CFO (IoDSA, 2009) (CI<sub>4</sub>). In addition, board diversity is encouraged with the inclusion of demographic diversity (race, age and gender), diversity of skills (qualifications), with a variety of expertise and experience (IoDSA, 2009). Using diversity as a form of separation enables the board to have access to a greater variety of views and expertise (Ntim, 2015) that can help to limit information asymmetry problems (Chen, 2014). A diverse board includes diverse knowledge and skills (CI<sub>5</sub>), with board members from at least three different areas of expertise (i.e. accounting, legal and industry expertise), coupled with a variety of experience as proxied by a 25-year age gap between the youngest and oldest director (CI<sub>6</sub>). A 25-year age gap represent a generational gap (Lissitsa & Kol, 2016). A large age gap can couple the wisdom of older experienced directors with the technology innovation of younger directors. Kang, Cheng, and Gray (2007) noted that age diversity can help to encourage different perspectives. A diverse board also needs to include gender and ethnic diversity, prior studies by Swartz and Firer (2005), Mans-Kemp and Viviers (2015) and Taljaard, Ward, and Muller (2015) considered gender and racial diversity. To determine gender and ethnic diversity, this study extends the definition of one person from another gender or race (using only white and non-white for ethnic diversity) used by Ntim, (2009) to two people (CI<sub>7</sub>).

The use of board-level control structures to enable monitoring by separating roles are extended to board committees, as independent board members are also used to provide oversight to board and statutory committees, including the risk, nomination, remuneration, audit and social and ethics (S&E) committees<sup>10</sup> (IoDSA, 2009; RSA, 2008). To ensure there is separation of duties, board committees should be chaired by an independent director, and consist of a majority of independent directors (IoDSA, 2009) (CI<sub>16</sub>, CI<sub>17</sub>, CI<sub>18</sub>, CI<sub>19</sub>, CI<sub>21</sub>, CI<sub>22</sub>, & CI<sub>24</sub>). For optimal alignment, a member of the remuneration committee must also serve on the audit committee to help ensure reasonable executive remuneration practices aligned to the firm’s performance is applied (Peter & Steyn, 2015) (CI<sub>20</sub>). As the risk committee needs insight into business risk,

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<sup>10</sup> The audit and S&E committees are statutory committees required by the Companies Act.

the risk committee should consist of a mix of executive and non-executive board members and should be separate from the audit committee (Yatim, 2010), as the audit committee should only consist of independent directors (IoDSA, 2009) (CI<sub>23</sub> & CI<sub>25</sub>). Separation of duties enables monitoring by directors.

### ***Monitoring***

Monitoring by the board helps to ensure that the board composition is appropriate for the business operations of the company, including that executive directors are competent. The competence of executive directors could be proxied by their tenure as poorly performing executive directors are more likely to be pushed to resign<sup>11</sup>. The link between the tenure of executive directors and firm performance is supported by Kyereboah-Coleman (2008). Thus, the tenure of the CEO (CI<sub>8</sub>) and the average tenure of executive directors (CI<sub>9</sub>), are indicators that proxy for executive director competence (Bebchuk, Fried, & Walker, 2002; Vafeas, 2003). Whereas long tenures represent competence for executive directors, independent directors could lose their objectivity and independence during long tenures as they develop closer relationships with executive directors and become less independent (Vafeas, 2003), with tenures of more than nine years suggesting possible non-independent relationships (IoDSA, 2009), a negative attribute<sup>12</sup> (CI<sub>12</sub>).

Monitoring includes ensuring that the directors have the capacity to perform their respective duties in a manner that reduces moral hazard. Thus, executive directors with outside directorships can be seen as slacking in their primary duties as other directorships reduce their available time (Ferris, Jagannathan, & Pritchard, 2003) (CI<sub>10</sub>), a negative attribute. With the increased demand for independent directors, some directors became specialist independent directors, at times also referred to as 'Directors of Companies'. Care should, however, be taken to ensure outside directorships are monitored to prevent slacking, to ensure that the independent board members have the capacity or availability to execute their monitoring function with due care and diligence, as serving on too many other boards could influence their monitoring capacity (Falato, Kadyrzhanova, & LeI, 2014; Fink, 2006; Wright, 2012). Companies with a majority of busy independent directors, holding three or more outside directorships (Core, Holthausen, & Larker, 1999) are a negative attribute (CI<sub>11</sub>). Directors who state they are

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<sup>11</sup> South Africa tends to encourage non-performing executives to resign before steps to fire them are taken.

<sup>12</sup> Negative attributes could increase goal divergence and are coded as 1 for the absence of the negative attribute.

'Directors of Companies' without disclosing their outside directorships are viewed as a negative attribute especially as they did not apply transparent disclosure practices and there is a risk that they engage in rubberstamping (Fink, 2006) (CI<sub>13</sub>).

Board monitoring is mostly done via meetings, and as such the number of board and board committee meetings is an indication of how diligent or active the board monitors (Brick & Chidambaran, 2010; Ntim & Oseit, 2011). Wijethilake, Ekanayake, and Perera (2015) noted that the number of board meetings is an indicator of board activity and performance. Thus companies with more board and board committee meetings than the industry average<sup>13</sup> are seen as having diligent monitoring boards (CI<sub>14</sub> & CI<sub>15</sub>).

The 25 indicators that form the CI index are summarised in Appendix 1. Meeting the definition criteria resulted in a score of 1, which was converted to a percentage to quantify the index.

## **Direction**

Ethical leadership is a cornerstone of South African governance and is especially important as honesty and integrity cannot be legislated (IoDSA, 2009, 2016; Rossouw, Van der Watt, & Malan, 2002) (DI<sub>1</sub>)<sup>14</sup>. The link between enterprise and integrity is part of the corporate governance foundations established in King I (IoDSA, 1994). Thus, a unique point of differentiation is an African ethical focus linked to *ubuntu*<sup>15</sup> (Ifejika, 2006), which differentiates the South African corporate governance model (Andreasson, 2011) by providing an ethical leadership grounding to direct the board (IoDSA, 2002, 2009, 2016). Claassen (2015) highlights the expectation that virtuous behaviour can prevent crises.

## **Monitoring**

In the direction of the activities of the board, it is important to ensure that oversight and monitoring controls centre on the expertise of the board members in connection to their board

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<sup>13</sup> Two industry groupings are used a primary industry group (Basic materials, Industrials, Technology, Oil and gas) and consumer industry group (Consumer services, Financials, Telecommunication, Health care and Consumer goods).

<sup>14</sup> Ethical leadership was calculated by assessing ethical terms using Leximancer, an automated content analysis tool, to analyse the integrated reports of all the companies for all periods. More information on the terms and process used can be obtained from the corresponding author.

<sup>15</sup> *Ubuntu* comes from a Zulu phrase, "*Umuntu ngumuntu ngabantu*", which means "a person is a person through other people" (Ifejika, 2006).

roles. Tenure and age are used to proxy for expertise of executive directors, as specialist managers tend to gain experience over time and could leverage that expertise to better direct the company where longer tenure suggests better expertise. Fields, Fraser, and Subrahmanyam (2012) found that executive directors with longer tenures, borrow more cheaply. It is therefore possible that executive directors are retained because of their superior performance over time (Ayogu, 2001). In addition to tenure age is seen as a proxy for experience. Kang et al. (2007) note that the experience of older directors might be more desirable than the new ideas of a younger generation as more than 80% of the directors in their study were over 50 years of age. In support, Salas (2010) found that older executives perform better on average than their younger counterparts. Thus, executive expertise is the product of tenure and age for the CEO and for executive directors (DI<sub>2</sub> & DI<sub>3</sub>).

Direction provided by executive directors supports the business of the company, thus a change in the composition of the executive directors can result in a loss of tacit knowledge (Droege & Hoobler, 2003) (DI<sub>4</sub>), a negative attribute. In contrast, non-executive directors are encouraged to be more independent using shorter tenures to ensure optimal monitoring and oversight over the executive directors without the risk of long-term relationships compromising their monitoring (Tarus & Ayabei, 2016). Thus, their ages are used as a proxy for their expertise (for the chair and non-executive directors) (DI<sub>5</sub> & DI<sub>6</sub>).

The ultimate level of performance monitoring is a performance evaluation as it operates as a preventative control by encouraging strong performance as well as a detective control to uncover inferior performance. King III recommends an annual evaluation of the board, its committees and the individual directors (IoDSA, 2009, 2016)<sup>16</sup>. Evaluating the labour of directors through a performance evaluation is a method of addressing the problem of managing labour in a team production situation (Alchian & Demsetz, 1972; Scholtz & Engelbrecht, 2015), and can strengthen the control over the individual performance of each board member (DI<sub>7</sub>). As the board delegates important responsibilities to board committees such as the risk, nomination, remuneration and S&E committee, performance evaluations of the work performed by board committees should therefore also be carried out to give the board assurance that the delegated duties have been performed in an acceptable manner (DI<sub>8</sub>) aligned to the performance evaluation recommendations of King III (IoDSA, 2009). In addition to the performance evaluation, it is important for the board to monitor meeting attendance. Brown

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<sup>16</sup> King III recommended annual performance evaluations whereas King IV recommend evaluations every second year to allow the board more time to respond to the previous results (IoDSA, 2016).

and Caylor (2006) found that when all directors attend at least 75% of the meetings, there is a positive influence on firm performance. Meeting attendance can be used as an indication that directors are actively involved. Thus, tracking meeting attendance for the board and board committee meetings are used to proxy for effort (DI<sub>9</sub>, DI<sub>10</sub>, DI<sub>11</sub>, DI<sub>12</sub>, & DI<sub>13</sub>). Kiel and Nicholson (2006) emphasise that meeting attendance should be considered together with the board evaluation.

### ***Performance directing and oversight***

Governance guidance requires shareholders to approve both the remuneration of non-executive directors and the remuneration policy that guides the remuneration of executive directors (IoDSA, 2009). In addition, the Companies Act requires in section 66 that directors' remuneration for their duties as directors be pre-approved by the shareholders via a special resolution (RSA, 2008), with King IV recommending the use of an annual non-binding vote on the remuneration policy by the shareholders (IoDSA, 2016), to encourage transparency and oversight.

Directors' remuneration should be adapted to align to their different roles separating between executive and non-executive directors to maximise goal alignment in relation to their board roles (DI<sub>14</sub>). Non-executive directors only receiving a fixed and meeting attendance fee, that is not linked to firm performance (IoDSA, 2009) (DI<sub>16</sub>). Thus, companies with above average non-executive remuneration should have above average monitors (DI<sub>17</sub> & DI<sub>18</sub>) and above average firm performance.

Governance guidelines recommend that executive remuneration should include a fixed and a performance-based component (DI<sub>15</sub>) aligned to firm performance in the short-, medium- and long-term with a share-based component to align their goals to that of the shareholders and a conditionally delayed component to reduce information asymmetry (IoDSA, 2009) (DI<sub>22</sub> & DI<sub>23</sub>). Using an equity-based component for executive directors' remuneration to encourage goal alignment is already well established in South Africa (Abor & Biekpe, 2006; Anderson & Muslu, 2010; Malherbe & Segal, 2001; Millson & Ward, 2005). However, Ayogu (2001) warns that huge remuneration incentives could encourage moral hazard when the incentive options do not achieve goal alignment. Thus, when executive directors' remuneration, including their performance-based component, is above average the performance of the firm is also expected to be above average (DI<sub>19</sub>, DI<sub>20</sub> & DI<sub>21</sub>). In addition, their performance-based component

includes a share-based component as well as a component that is conditionally delayed for more than two years to ensure alignment to firm performance goals in the short- and medium-term (IoDSA, 2009) (DI<sub>22</sub> & DI<sub>23</sub>), to help reduce information asymmetry.

Despite the alignment of executive remuneration packages to governance guidelines, directors' remuneration has increased dramatically over the last decade (Sengupta & Zhang, 2015) and remains a controversial topic (Scholtz, 2009; Viviers, 2015), attracting social discontent on the gap between the lowest paid employees and the CEO remuneration levels (Viviers, 2015). Mans-Kemp and Viviers (2018) recommend that remuneration committees use "a wider range of performance criteria and re-assess their focus on short-term performance", to help ensure fair performance-based remuneration. There is a risk that directors' remuneration could encourage short-term profit-seeking, which can be detrimental to the long-term sustainability of the firm (time horizon problem). This highlights the importance of oversight to ensure remuneration is fair and performance-based.

The 23 indicators that form the DI index are summarised in Appendix 1. Meeting the indicator definition resulted in the allocation of a score of 1, which was converted to a percentage to quantify the index. The following section discuss the research design and methods used.

## **RESEARCH DESIGN AND METHODS**

The study applied a quantitative methodology with fixed effects panel estimation to test the hypothesis that there is a positive relationship between board-level controls (CI and DI) and firm performance, in the short- and medium-term. In line with the quantitative methodology, a post-positivistic world view was adopted that focuses on applying an objective view to guide the research process within a non-experimental research design to enable the evaluation of the relationship between board-level controls and firm performance.

The population used in the study consisted of the boards of companies on the SRI index over the period of the study. The JSE evaluates companies for inclusion in the SRI index annually, resulting in a mix of constituents (2011 – 74, 2012 – 76, 2013 – 72, 2014 – 82) over the period (JSE, 2012, 2014). A total of 90 companies were included in the SRI index over the period of the study. However, as the study aimed to evaluate board-level controls using a balanced panel, only companies which operated over the period, retained their listing status and did not experience material shareholder changes, mergers or takeovers were included, which brought



the number down to 84 participating companies (the list of companies is shown in Appendix 2). The period of the study started in 2012, when the requirements of the Companies Act came into force, ending in 2014, as the JSE partnered with FTSE Russel, adopting the FTSE ESG ratings in 2015 (JSE, 2015).

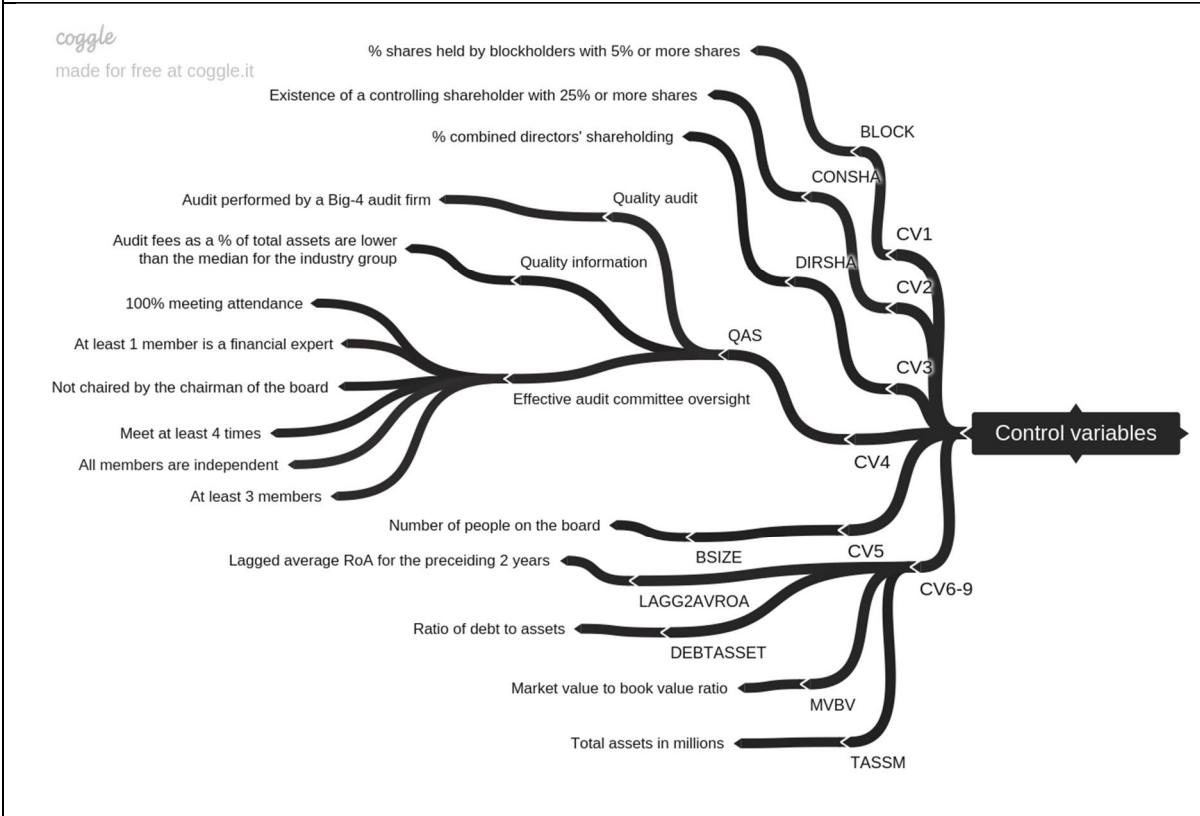
To enable the study to isolate its analysis on the CI and DI indexes<sup>17</sup>, control variables were added in the panel analysis, starting with different shareholder groupings. The following control variables represent various shareholder groupings. BLOCK is the sum of the percentage share ownership held by blockholders or institutional shareholders with at least 5% and less than 25% of the company's ordinary shares (Muniandy & Hillier, 2015; Steyn & Stainbank, 2013). CONSHA is a dichotomous variable where 1 represents the existence of a controlling shareholder with an ordinary shareholding of 25% or more (Steyn & Stainbank, 2013). Directors' shareholding can be an important mechanism to achieve goal alignment resulting in DIRSHA representing the combined percentage shareholdings by the board (Ntim, Lindop, Thomas, Abdou, & Opong, 2017). In addition, current performance in a company is influenced by its past performance, leverage, growth and asset base available to the board. To control for the influence of leverage on firm performance the debt-to-asset ratio is a control variable used (DEBTASSET) (Millson & Ward, 2005). The market-to-book value is added as a control variable (MVBV) to control for the influence of growth on firm performance (Muniandy & Hillier, 2015), with the average prior two year's return on assets (LAGG2AVROA) added to control for prior performance (Fosu, 2013), with total assets in millions added to control for firm size (TASSM) (Swartz & Firer, 2005). As the board is appointed by the shareholders, the board size (BOARDS) is a control variable. Muchemwa et al. (2016) found a relationship between board size and RoA.

A commonly used method to reduce information asymmetry risk, possibly caused by accounting manipulation (Miko & Kamardin, 2015), is to include an audit committee coupled with quality audit. One of the changes in the 2008 Companies Act was the establishment of a statutory audit committee of independent directors that report to the shareholders to oversee the assurance processes to ensure a quality audit (RSA, 2008). Given the complexity linked to quality assurance, this study developed a unique quality assurance score (QAS) as a control variable. Figure 2 summarises the control variables used by this study.

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<sup>17</sup> Brief definitions of the control variables are included in Figure 2; however, the focus is on the relationship of the CI and DI indexes as independent variables, on the dependent variables.

**Figure 2 Control variables**



QAS was constructed to represent a quality audit score. QAS represents a percentage score based on the following three aspects extracted from the Integrated reports. A score of 1 is allocated if the external auditors are part of the Big 4 (Mangena & Chamisa, 2008). The second 1 is allocated if the audit fees as a percentage of total assets are lower than the median grouping for the industry as cheaper audit fees suggest a reduced level of information asymmetry (Waveru, 2014). The last 1 represent an effective audit committee and the score is allocated if the audit committee consist of at least 3 members, all the members are independent directors (RSA, 2008), the committee is diligent by meeting at least four times a year and attending all the meetings (Brick & Chidambaran, 2010), with one member a financial expert (Woidtke & Yeh, 2013).

The use of control variables enabled the study to develop the following model to test the hypothesis:

$$\text{Firm performance}_{i(t+1)} \text{ or Firm performance}_{it} = \beta_0 + \beta_1 \text{BLOCK}_{it} + \beta_2 \text{CONSHA}_{it} + \beta_3 \text{DIRSHA}_{it} + \beta_4 \text{BOARDS}_{it} + \beta_5 \text{MVBV}_{it} + \beta_6 \text{TASSM}_{it} + \beta_7 \text{DEBTASSET}_{it} + \beta_8 \text{LAGG2AVROA}_{it} + \beta_9 \text{QAS}_{it} + \beta_{10} \text{CI}_{it} + \beta_{11} \text{DI}_{it} + \varepsilon_{it}$$

The CI and DI indexes consolidate 48 indicators of board-level controls enabling the study to assess their relationship to firm performance by testing the stated hypothesis.

Using different proxies for firm performance (the dependent variable) enabled the study to consider different perspectives on or interpretations of firm performance. Firm performance is represented by return on assets (RoA), an accounting measure that indicates the effective use of assets, enterprise value per share (EV), a more market-focused ratio, and Tobin's Q, a ratio that uses a mix of accounting and market-focused elements. By including the next year's (NY) values for the firm performance proxies, the study was also able to assess the negative lagged effect of board-level controls. Given the non-experimental design, econometric methods were used to isolate the relationship between a specific variable while keeping the effect of other variables constant to enable the study to quantify the relationship between board-level controls in the CI and DI indexes and firm performance. A summary of the dependent variables and their formulas are shown in Table 1.

<b>Table 1 Dependent variables</b>	
Return on Assets (RoA)	South African studies - Ashwin, 2015; Mans-Kemp, 2014; Ntim, 2009; Tshipa, 2017; Waweru, 2014.
$RoA = \frac{(\text{Profit Before Interest And Tax}) - (\text{Total Profit Extraordinary Nature})}{\text{Total Assets}} \times 100$	
Enterprise value per share (EV)	South African study - Meyer & De Wet, 2013
$EV = \frac{(\text{Market capitalisation at year-end in Rand} + \text{debt} + \text{preference shares}) - \text{cash}}{\text{Number of ordinary shares in issue at year-end}}$	
Tobin's Q	South African studies - Ashwin, 2015; Fosu, 2013; Muchemwa et al., 2016; Ntim, 2009; Tshipa, 2017.
$\text{Tobin's Q} = \frac{\text{Market value of equity} + \text{book debt}}{\text{assets (valued at replacement cost)}}$	
The dependent variables were downloaded from IRESS	

To gather the required data, a content analysis of the integrated annual reports and company websites as well as extracting data from databases like IRESS and Who owns Who was used to populate the 48 pre-defined indicators encapsulated in the CI and DI indexes and the remaining variables. A content analysis is an unobtrusive data collection method that uses a

systematic process to collect data in a reliable manner (Stemler, 2001). Using pre-defined indicators helped to ensure validity of the indicators while reliability was ensured by replicating the data extraction process<sup>18</sup>. Hand collecting data linked to around 1000 directors representing 84 boards per year resulted to a very time-consuming and costly data collection process to ensure reliable data were extracted to populate the index indicators.

Consolidating the indexes by adding the allocated dummy variables placed an equal weighting on each indicator in line with the indicator definition. The index total was calculated as a percentage to quantify the index. Prior South African corporate governance studies also allocated dummy variables to the indicators used in their indexes using equal weightings (Abdo & Fisher, 2007; Ntim, 2009; Ntim, 2013).

The use of a data set that “consists of a time series for each cross-sectional member in the data set” (Wooldridge, 2014) has advantages as multiple observations linked to the same board-level controls enable the study to control for unobserved characteristics, thereby reducing the risk of omitted variables while increasing the number of observations (Studenmund, 2011). Panel data can thus help control for individual heterogeneity and the data set includes more informative data with greater variability, and less collinearity with more degrees of freedom resulting in an increased efficiency by identifying effects not detectable in cross-sectional or time series studies, to detect unobserved effects, minimising bias (Baltagi, 2005).

## **FINDINGS AND DISCUSSION**

This study argues that there is a positive relationship between increased board-level controls that help to reduce agency cost and firm performance due to improved goal alignment. The positive association with firm performance is linked to the use of monitoring and bonding to reduce the excessive use of perquisites and slacking and thereby reducing agency cost. For example, improved monitoring and bonding using oversight, separation of duties and performance-based incentives can reduce inefficiencies, wastage, slacking and rent extraction, resulting in an increase in firm performance. The labour-directing role can help to reduce agency cost through improved goal alignment between the remuneration of the different roles

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<sup>18</sup> As this study used a re-extraction process to ensure the data extracted was correct, a statistical reliability test was not used. Cronbach alpha is frequently used as a reliability measure for survey instruments that tests the perceptions of people to assess the level of consistency in their answers.

of the board and oversight, resulting in reduced rent extraction and wastage to improve firm performance.

Descriptive statistics on the panel data helped to provide a brief overview of the underlying variables used in the analysis. The descriptive statistics were based on the combined observations of 84 companies over three years, which resulted in 252 board-related observations. The number of boards under a controlling shareholder over the period was 85, with 167 boards not under the control of a controlling shareholder. In line with a prior study on the separation of ownership and control by Steyn and Stainbank (2013), controlling shareholders are defined as shareholders with 25% or more ordinary shares. The limited level of controlling shareholders (around a third) supports the use of agency theory as the separation of duties between the shareholders and the board is more prevalent. Table 2 summarises the descriptive statistics for the dependent variables and Table 3 for the independent and control variables.

<b>Table 2 Descriptive statistics for the dependent variables</b>						
	RoA	NYRoA	Tobin's Q	NY Tobin's Q	EV	NYEV
Mean	9.825	8.362	1.558	1.501	190.918	204.192
Median	8.533	8.105	1.12	1.08	103.399	109.555
Standard Deviation	13.127	13.428	1.301	1.31	260.213	282.199
Observations	252	252	252	252	252	252
<ul style="list-style-type: none"> <li>• RoA is return on assets (extracted from IRESS).</li> <li>• NYRoA is next year's return on assets (extracted from IRESS).</li> <li>• EV is enterprise value per share (extracted from IRESS).</li> <li>• NYEV is next year's enterprise value per share (extracted from IRESS).</li> <li>• NYTobin's Q is next year's Tobin's Q (extracted from IRESS).</li> </ul>						

**Table 3 Descriptive statistics for the control and independent variables**

	<b>CI</b>	<b>DI</b>	<b>BLOCK</b>	<b>DIRSHA</b>	<b>BOARDS</b>	<b>MVBV</b>	<b>TASSM</b>	<b>DEBTASSET</b>	<b>LAGG2AVROA</b>	<b>QAS</b>
Mean	59.825	64.913	20.378	3.581	12.266	3.963	202158.8	0.4977	11.519	50.397
Median	60.0	65.0	19.09	0.24	12.0	1.804	28664.	0.5075	9.268	66.67
Standard Deviation	14.288	13.113	12.43702	9.284	2.995	14.63	704290.	0.2557	13.795	22.1655
Observations	252	252	252	252	252	252	252	252	252	252

- CI is the control indicator index constructed by this study.
- DI is the direction indicators index constructed by this study.
- BLOCK is the sum of the percentage share ownership held by blockholders with at least 5% but less than 25% of the company's ordinary shares (extracted from IRESS).
- CONSHA is the existence of a controlling shareholder with an ordinary shareholding of 25% or more (extracted from IRESS).
- DIRSHA is the combined percentage shareholdings by the board (extracted from IRESS).
- BOARDS is the number of people on the board at year end (extracted from the Integrated report).
- MVBV is the market-to-book value (extracted from IRESS).
- TASSM is the total assets in millions of Rands (extracted from IRESS and confirmed against the Integrated report).
- DEBTASSET is the debt-to-asset ratio (extracted from IRESS).
- LAGGAVROA is the average prior two year's return on assets (extracted from IRESS).
- QAS is the quality audit score constructed by this study.

Given the agency relationship, shareholdings can influence board-level controls. As the average shareholding by blockholders was 20.4% less than the 25% quorum requirement in the Companies Act, their combined block shareholding would, on average, not be enough to change the voting result but exceed the 10% required for initiating a shareholders meeting (RSA, 2008). On average the directors' percentage shareholding of 3.58% was very small, with a median of 0.24% indicating that boards did not have enough votes from their own shares to override even the blockholder vote. Thus, the directors should be motivated to reduce goal divergence to improve firm performance as they rely on the shareholders for their re-appointment and the approval of their remuneration. The central tendencies of the CI and DI indexes show that both the median and averages were close together with the average for CI at 59.8% and the median at 60%, while the average for DI was slightly higher at 64.9% with the median at 65%.

A correlation analysis between the variables did not highlight any multicollinearity concerns between the independent and control variables. The correlation considered a point-biserial correlation as the test included measuring the strength of the linear relationship between an interval or ratio variable and a dummy variable given that the dummy variables are coded as 0 and 1 (Field, 2009), as was the case in this study. The correlation results are summarised in Table 4 with the significant relationships indicated. The only significant relationship between the independent variables and a dependent variable was a positive relationship coefficient of 0.223 ( $p < 0.001$ ) between DI and EV and NYEV of 0.235 ( $p < 0.01$ ).

To assess the principle that better controls are related to improved firm performance, the observations were divided between profit- and loss-making firms and an independent sample t-test analysis was performed for the two indexes measured against their profit/loss grouping. The analysis included 53 loss making and 199 profitable companies with the CI averages for loss making companies at 57.5% slightly less than the CI averages for profitable companies at 60.4%, while the DI averages for loss making companies was 66.45% slightly more than the DI averages for profitable companies at 64.5%. For both indexes equal variances can be assumed (CI –  $F=1.14$ ;  $p < 0.225$ ; DI –  $F=0.225$ ;  $p < 0.636$ ), but the differences between averages were not significant.

One of the disadvantages of analysing the data together as a pool is that the analysis ignores the effect of the different time periods. Serial correlation over time could influence the results.

**Table 4 Correlation analysis**

	RoA	NYRoA	EV	NYEV	Tobin's Q	NYTobin's Q	CI	DI	BLOCK	CONSHA	DIRSHA	QAS	DEBTASSET	MVBV	LAGG 2AVROA	TASSM	BOARDS
RoA	1																
NYRoA	.703**	1															
EV	-0.043	-0.051	1														
NYEV	-0.039	-0.025	.979**	1													
Tobin's Q	.754**	.689**	0.028	0.054	1												
NYTobin's Q	.673**	.682**	0.006	0.057	.942**	1											
CI	0.079	0.069	0.013	-0.014	-0.079	-0.071	1										
DI	0.006	-0.076	.223**	.235**	0.014	0.031	-0.061	1									
BLOCK	0.046	0.000	-.154*	-.144*	0.118	0.083	-0.109	-0.006	1								
CONSHA	-0.101	-.130*	0.091	0.058	-0.083	-0.100	-0.041	-.275**	-.335**	1							
DIRSHA	-0.054	-0.042	-0.098	-0.092	-0.012	0.011	0.005	0.086	0.039	-0.118	1						
QAS	-.221**	-.295**	.267**	.225**	-.238**	-.254**	0.073	0.064	-0.074	.234**	-0.057	1					
DEBTASSET	0.076	.227**	.346**	.390**	.202**	.228**	-0.077	0.046	-0.100	-.138*	0.080	-.254**	1				
MVBV	0.076	0.118	-0.040	-0.041	.148*	0.111	-0.075	-0.067	0.049	-0.062	-0.008	0.001	.201**	1			
LAGG2AVROA	.789**	.684**	-0.011	-0.033	.718**	.622**	0.039	-0.033	0.027	-0.075	-0.020	-0.089	0.046	0.088	1		
TASSM	-0.109	-0.073	.254**	.260**	-0.104	-0.096	0.058	.127*	0.008	-0.056	-0.073	.209**	0.040	-0.034	-0.053	1	
BOARDS	-.165**	-.161*	.293**	.295**	-.173**	-.137*	0.056	.144*	0.044	0.012	.137*	.199**	.127*	0.055	-.163**	.163**	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

- RoA is return on assets (extracted from IRESS).
- NYRoA is next year's return on assets (extracted from IRESS).
- EV is enterprise value per share (extracted from IRESS).
- NYEV is next year's enterprise value per share (extracted from IRESS).
- NYTobin's Q is next year's Tobin's Q (extracted from IRESS).



- CI is the control indicator index constructed by this study.
- DI is the direction indicators index constructed by this study.
- BLOCK is the sum of the percentage share ownership held by blockholders with at least 5% but less than 25% of the company's ordinary shares (extracted from IRESS).
- CONSHA is the existence of a controlling shareholder with an ordinary shareholding of 25% or more (extracted from IRESS).
- DIRSHA is the combined percentage shareholdings by the board (extracted from IRESS).
- BOARDS is the number of people on the board at year end (extracted from the Integrated report).
- MVBV is the market-to-book value (extracted from IRESS).
- TASSM is the total assets in millions of Rands (extracted from IRESS and confirmed against the Integrated report).
- DEBTASSET is the debt-to-asset ratio (extracted from IRESS).
- LAGGAVROA is the average prior two year's return on assets (extracted from IRESS).
- QAS is the quality audit score constructed by this study.

However, given the limited timespan of three years, serial correlation was not expected. Using econometrics with the aid of a regression analysis can help to estimate economic relationships to “predict the *direction* of change”, by predicting the amount of change (Studenmund, 2011). As the sample was as close to a census as possible given the constraints of a balanced panel, fixed effects estimation was preferred to random effects (Gujarati & Porter, 2009).

The above independent t-test found a slight increase in the CI index for profitable companies and a worrying slight increase in the DI index for loss making companies; however, as the results were not significant it was important to use more robust estimation methods. Fixed effects estimation can help to avoid time-invariant omitted variable bias by using time demeaned data (Gujarati & Porter, 2009). This study used a one-way fixed effect in a feasible general least squares (FGLS) estimation with cross-section weights and White period to add robust standard errors for the main analysis of the panel data in EViews. Using a more robust method enabled the estimation to hold the impact of the other variables constant to uncover the coefficients linked to the controlling (CI) and directing (DI) roles of the board. The results are summarised in Table 5 and discussed below.

	<b>RoA</b>	<b>NYRoA</b>	<b>EV</b>	<b>NYEV</b>	<b>Tobin's Q</b>	<b>NYTobin's Q</b>
<b>Constant</b>	13.073**	23.89**	26.855	96.398**	1.578**	1.333**
<b>CI</b>	0.0519*	-0.0014	1.227**	1.625**	0.0031**	0.0022**
<b>DI</b>	0.0638**	-0.195**	0.176	0.0524	-0.002**	-0.0011**
<b>BLOCK</b>	0.0286	0.0186	-0.052	-0.0838	0.0073**	-0.0052*
<b>CONSHA</b>	3.136**	-0.479	-6.925	13.871**	0.206**	-0.142**
<b>DIRSHA</b>	-0.033	-0.0009	0.264	0.435	-0.006**	0.0029
<b>BOARDS</b>	0.295*	-0.394**	-0.328	-4.461**	-0.015**	0.0099**
<b>MVBV</b>	0.036*	0.024	-0.065	-0.195**	0.004**	-0.0008
<b>TASSM</b>	-1.62E-06**	-5.17E-07	-6.15E-07	1.26E-07	-9.67E-08**	-7.67E-09
<b>DEBTASSET</b>	-22.367**	1.762	105.753**	94.592**	-0.463**	-0.07192
<b>LAGG2AVROA</b>	-0.278**	0.0355	2.1229**	2.9852**	0.016**	0.012**
<b>QAS</b>	-0.022	0.0114	0.1787	-0.463*	1.578	0.00069
<b>R<sup>2</sup></b>	0.989	0.995	0.989	0.996	0.997	0.998
<b>Adjusted R<sup>2</sup></b>	0.983	0.992	0.982	0.994	0.995	0.997
<b>Probability (F)</b>	0.000	0.000	0.000	0.000	0.000	0.000
** significant at the 0.01 level						
* significant at the 0.05 level						

As both CI and DI were significant and positively related to RoA, the study supports the hypothesis that there is a positive relationship between board-level controls and firm performance (CI – 0.0519,  $p < 0.035$ ; DI – 0.0638,  $p < 0.004$ ). The effect size is small, as expected. However, the association between the different roles of the board and firm performance is complex and seems to support the agency theory assumption of maximising self-interest as the relationship changed to a highly significant negative relationship between DI and NYRoA (-0.195,  $p < 0.001$ ) and a negative but not significant relationship between CI and NYRoA (-0.0014,  $p < 0.965$ ). DI was also highly significant and negatively related to Tobin's Q (-0.002,  $p < 0.007$ ) and NYTobin's Q (-0.0011,  $p < 0.0034$ ), with very small effect sizes. CI retained a highly significant positive relationship with Tobin's Q (0.0031,  $p < 0.0001$ ) and NYTobin's Q (0.0022,  $p < 0.0042$ ) albeit with small effect. The positive relationship suggests that despite the fact that board-level controls are becoming more commonplace they are still valuable.

A negative relationship suggests that DI as a directing mechanism is costly, which could be caused by excessive levels of remuneration for directors. The change from a positive relationship between DI and RoA to a negative relationship to NYRoA also suggests that the directing role might be short-term focused, in line with concerns raised by Mans-Kemp and Viviers (2018). It could be possible that directors' remuneration increased at higher levels as a response to regulatory changes given the increased liability risk for board members stemming from the 2008 Companies Act together with the increased risk of legal action against board members found by Carciunary (2010). The changed sign (from positive to negative) may also suggest the existence of information asymmetry stemming from a possible time horizon and moral hazard problem, i.e. simply that board members aim to maximise RoA in the short-term using information asymmetry to maximise their remuneration. The existence of a possible moral hazard problem suggests that further research is needed on ethical leadership to assess if ethical leadership can help through improved direction to reduce moral hazard risks through encouraging virtuous behaviour as suggested by Claassen (2015). The changed relationship suggests that despite the regulatory guidance on aligning executive directors' remuneration to longer term firm performance measures towards sustainability, goal divergence problems have not yet been fully addressed.

In addition to the significant positive association to RoA, the CI index was highly significant and positively related to EV (1.227,  $p < 0.0001$ ) and NYEV (1.625,  $p < 0.0001$ ). The coefficients of CI for EV and NYEV were larger than for RoA and CI increased in size between EV and

NYEV, suggesting that the market values the board's controlling role. Given the increased size of the coefficient, the value of control extends beyond the current period. It seems that the controlling role of the board has a level of success through improved oversight and separation of duties that has a positive relationship with EV and NYEV. EV is a more market-based performance measure and as most of the boards in this current study were not controlled by a dominant shareholder, the market clearly values the controlling role of the board as an alternative to shareholder monitoring.

In summary, the analysis resulted in mixed findings where board-level controls were significant and positively associated to RoA, supporting the study's hypothesis. However, DI was highly significant and negatively related to NYRoA, suggesting a time horizon problem coupled with information asymmetry. The latter indicates that the directing role of the board can be costly over the medium-term which is further supported by the negative relationship between DI and Tobins'Q and NYTobins'Q. The controlling role of the board, in line with the hypothesised direction, was highly significant and positively associated with EV and NYEV, with an increased coefficient size for NYEV, suggesting that the market value the board's controlling role in the medium-term as an alternative to shareholder monitoring.

## **CONCLUSION**

The purpose of the study was to evaluate the relationship between board-level controls, given the board's controlling and directing roles, and firm performance. The study centred on the boards of 84 companies on the SRI index between 2012 and 2014, in order to address the knowledge gap on the board's controlling roles after the introduction of the 2008 Companies Act. The study constructed unique CI and DI indexes to measure the board-level controls in order to test the hypothesis that board-level controls, given the board's controlling and directing roles, are positively related to firm performance in the short- and medium-term.

The indexes were developed using dummy variables to score the 48 indicators to enable an evaluation of the relationship between board-level controls (CI and DI) and firm performance. The results show that board-level controls do matter. CI and DI were found to be significant and positively related to RoA. However, the DI relationship changed to a highly significant negative coefficient in relation to NYRoA, thereby highlighting the existence of moral hazards such as time horizon problems coupled with information asymmetry. CI was highly significant and positively related to EV and NYEV, both of which are more market-focused measures of

firm performance. The market clearly values the controlling role of the board as an alternative to shareholder monitoring in the short- and medium-term. The small effect size of the coefficients was not unexpected, as board-level controls are preventative measures.

As this study focused on a limited time scale and on the boards of companies on the SRI index, the applicability of its results may be limited to boards of larger listed companies. In addition, consolidating the indexes using dummy variables allocated equal weighting to all the indicators used in the indexes. The equal weighting assumption should be tested to determine whether some indicators are not more powerful than others. Thus, an area for future study would be to assess the relative importance of the indicators used to construct the CI and DI indexes, possibly using a correspondence analysis. Given the emphasis on ethical leadership in the King reports, a more in-depth study could be undertaken to assess the relationship between ethical leadership and firm performance to uncover if ethical leadership can help to improve firm performance by directing ethical values. Lastly developing indexes to benchmark board-level controls can be valuable to external auditors and various shareholder groups, especially institutional shareholders, as poor performance of board-level controls can be early warnings of the existence of moral hazards that could lead to future poor firm performance.

Better understanding the relationship between board-level controls and firm performance can be valuable in South Africa to prevent over reliance on board-level controls by the other governance mechanisms such as institutional shareholders as well as other stakeholders. The development and assessment of the two indexes helps to contribute to the continuous debate on board-level controls especially directors' remuneration. In addition, a focus on board-level controls is important to managers, shareholders and also to internal and external auditors. With the advent of data analytics more complex analytical procedures can help auditors to identify early red flags indicating possible control weaknesses. Indexes can also be used to benchmark board-level controls. Shareholders need to consider the manner in which the board control and direct firm performance in order to ensure that board-level controls complement shareholder monitoring in a manner that is to the benefit of the company in the longer term. In addition, executive board members should be sensitive to the ongoing debate on excessive directors' remuneration and consider improved measures to better align board-level remuneration to sustainable firm performance in South Africa given the negative relationship between the directing role of the board and various firm performance measures.

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## APPENDIX 1 CI AND DI INDICATORS

The indicators describe the criteria for a 1 score. A score of 0 was used to code the dummy variable when the specific definition or criteria for the indicator was not met. Data linked to the indicators was extracted from the Integrated reports, in some cases personal data linked to specific directors i.e. their gender, age and race were extracted from Who owns Who when it was not disclosed in the Integrated report. The indicators are in line with the requirements of King III regarding directors (IoDSA, 2009: Chapter 2).

<b>CI index indicators</b>	<b>DI index indicators</b>
<p>CI<sub>1</sub> = Separation between the roles of the CEO and chair.</p> <p>CI<sub>2</sub> = The existence of an independent chair or lead independent director.</p> <p>CI<sub>3</sub> = A balance of power requiring a balance between the power of the executive directors and a majority of the board as independent directors (independent directors are directors whose only relationship with the company is as an independent director, they don't have any shareholding or any business relationship).</p> <p>CI<sub>4</sub> = Separation between the roles of the CEO and the CFO.</p> <p>CI<sub>5</sub> = Diverse knowledge and skills, requiring the board to have a variety of qualifications and skills, with at least one director from three different areas of expertise (i.e. accounting, law and industry expertise).</p>	<p>DI<sub>1</sub> = Ethical leadership as represented by an ethical leadership score developed using Leximancer, an automated content analysis tool, that used machine learning linked to ethical seed words to analyse the integrated report of all the companies for all three periods to develop an ethical leadership score. Strong ethical leadership is equal to or above the median score for the industry grouping.</p> <p>DI<sub>2</sub> = Executive experience is represented by multiplying the age and tenure of executive directors and averaging the result per company to obtain an average executive expertise score. Companies with high average executive expertise (1) are companies with an average expertise score equal to or above the median for the industry group.</p>

<p>CI<sub>6</sub> = A variety of experience on the board where age is a proxy for experience, indicating an age gap of 25 years (to represent a generational gap) or more between the youngest and oldest director on the board.</p> <p>CI<sub>7</sub> = A diverse board is a board that represent a mix between gender and race/ethnicity. A mix between gender and race requires at least two people from a different gender as well as at least two people from a different race to be members of the board.</p> <p>CI<sub>8</sub> = CEO tenure equal to or above the median CEO tenure for the industry grouping.</p> <p>CI<sub>9</sub> = Average executive director tenure equal to or above the median executive director tenure for the industry grouping.</p> <p>CI<sub>10</sub> = Companies without an executive director who holds an outside directorship that could erode the director's diligence.</p> <p>CI<sub>11</sub> = Companies without a majority of busy independent directors. Where a busy independent director holds three or more other directorships (outside the group), and a busy board has a majority of busy independent directors.</p> <p>CI<sub>12</sub> = Companies without an independent director who has served on the board for more than nine years.</p>	<p>DI<sub>3</sub> = CEO expertise is represented by multiplying the age and tenure of the CEO to obtain a CEO expertise score. Companies with high CEO expertise (1) are companies where the CEO expertise score is equal to or above the median for the industry group.</p> <p>DI<sub>4</sub> = Companies without a change in the incumbents of executive director's posts during the year.</p> <p>DI<sub>5</sub> = Companies where the average non-executive directors' age is equal to or above the median of the average non-executive directors' age for the industry group.</p> <p>DI<sub>6</sub> = Companies where the age of the chair is equal to or above the median for the industry group.</p> <p>DI<sub>7</sub> = The existence of an annual performance evaluation for the board and its members.</p> <p>DI<sub>8</sub> = The existence of an annual performance evaluation for the risk, nomination, remuneration and social and ethics committee (board committees).</p> <p>DI<sub>9</sub> = Companies where the average attendance of board meetings is equal to or above the median for the industry group.</p>
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<p>CI<sub>13</sub> = Companies without an independent director who describes his or her position as a “<i>Director of Companies</i>” but does not disclose the number of outside companies he/she serves on as a director.</p> <p>CI<sub>14</sub> = Companies where the number of board meetings are equal to or exceed the median of the industry grouping, thereby showing diligent board monitoring.</p> <p>CI<sub>15</sub> = Companies where the sum of all the board committee meetings are equal to or above the median of the industry grouping, thereby showing diligent board committee monitoring.</p> <p>CI<sub>16</sub> = Nomination committee staffed by a majority of independent directors.</p> <p>CI<sub>17</sub> = Nomination committee chaired by an independent director.</p> <p>CI<sub>18</sub> = Remuneration committee staffed by a majority of independent directors.</p> <p>CI<sub>19</sub> = Remuneration committee chaired by an independent director who is not the chairman of the board.</p>	<p>DI<sub>10</sub> = Companies where the average attendance of the risk committee meetings is equal to or above the median for the industry group.</p> <p>DI<sub>11</sub> = Companies where the average attendance of the nomination committee meetings is equal to or above the median for the industry group.</p> <p>DI<sub>12</sub> = Companies where the average attendance of the remuneration committee meetings is equal to or above the median for the industry group.</p> <p>DI<sub>13</sub> = Companies where the average attendance of the social and ethics committee meetings is equal to or above the median for the industry group.</p> <p>DI<sub>14</sub> = Companies that apply different remuneration practices for executive versus non-executive directors in line with their different roles.</p> <p>DI<sub>15</sub> = Companies where the remuneration of executive directors consists of a fixed and variable component that includes short-, medium- and long-term incentive considerations.</p> <p>DI<sub>16</sub> = Non-executive directors do not receive a performance-based incentive.</p>
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<p>CI<sub>20</sub> = One of the members of the remuneration committee is also a member of the audit committee (to allow the remuneration committee insight into the actual reported performance of the company in their assessment of the fairness of executive director remuneration).</p> <p>CI<sub>21</sub> = S&amp;E committee staffed by a majority of independent directors.</p> <p>CI<sub>22</sub> = S&amp;E committee chaired by an independent director.</p> <p>CI<sub>23</sub> = Risk committee staffed by a mix of executive and non-executive directors with a majority of independent directors.</p> <p>CI<sub>24</sub> = Risk committee chaired by an independent director who is not the chairman of the board.</p> <p>CI<sub>25</sub> = Risk committee separate from the audit committee.</p>	<p>DI<sub>17</sub> = Companies with an average total remuneration paid to non-executive directors (in Rand) that is equal to or above the median for the industry group.</p> <p>DI<sub>18</sub> = Companies where the total remuneration paid to the chairman of the board (in Rand) is equal to or above the median for the industry group.</p> <p>DI<sub>19</sub> = Companies where the average total remuneration<sup>19</sup> paid to executive directors (in Rand) is equal to or above the median for the industry group.</p> <p>DI<sub>20</sub> = Companies where the total remuneration paid to the CEO (in Rand), is equal to or above the median for the industry group.</p> <p>DI<sub>21</sub> = Companies where the average percentage total pay as a percentage of the average base pay for executive directors is equal to or above the median for the industry group.</p> <p>DI<sub>22</sub> = The existence of a share-based incentive for executive directors.</p> <p>DI<sub>23</sub> = The existence of remuneration for executive directors that is conditionally delayed for more than two years.</p>
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<sup>19</sup> Total remuneration consists of base pay that includes benefit contributions, bonuses received, and share options exercised.





## APPENDIX 2 LIST OF SRI COMPANIES

AdvTech Ltd (ADH)	Howden Africa Holdings Ltd (HWN)	Optimum Coal Holdings <sup>20</sup>
AECI Ltd (AFE)	Hulamin Ltd (HLM)	Palabora Mining Company Ltd <sup>21</sup>
African Bank Investments Ltd <sup>22</sup>	Hyprop Investments Ltd (HYP)	Pick n Pay Stores Ltd (PIK)
African Oxygen Ltd (AFX)	Illovo Sugar Ltd (ILV)	PPC Ltd <sup>23</sup> (PPC)
African Rainbow Minerals Ltd (ARI)	Impala Platinum Holdings Ltd (IMP)	RCL Foods Ltd <sup>24</sup> (RCL)
Allied Electronics Corporation Ltd (AEL)	Imperial Holdings Ltd (IPL)	Redefine Properties Ltd (RDF)
Allied Technologies Ltd <sup>25</sup>	Intu Properties Plc <sup>26</sup> (ITU)	Remgro Ltd (REM)
Anglo American Plc (AGL)	Investec Ltd (INL)	Reunert Ltd (RLO)
Anglo American Platinum Ltd (AMS)	JSE Limited (JSE)	RMB Holdings Ltd (RMH)
AngloGold Ashanti Ltd (ANG)	Kap Industrial Holdings Ltd (KAP)	Royal Bafokeng Platinum Ltd (RBP)
Aquarius Platinum Ltd (AQP)	Kumba Iron Ore Ltd (KIO)	SAB Miller Plc (SAB)
Arcelor Mittal South Africa Ltd (ACL)	Lewis Group Ltd (LEW)	Sanlam Ltd (SLM)
Aspen Pharmacare Holdings Ltd (APN)	Liberty Holdings Ltd (LBH)	Santam Ltd (SNT)
Aveng Ltd (AEG)	Life Healthcare Group Holdings Ltd (LHC)	Sappi Ltd (SAP)
Barclays Africa Group Ltd <sup>27</sup> (BGA)	Lonmin Plc (LON)	Sasol Ltd (SOL)
Barloworld Ltd (BAW)	Massmart Holdings Ltd (MSM)	Sibanye Gold Ltd <sup>28</sup>
BHP Billiton Plc (BIL)	Merafe Resources (MRF)	Standard Bank Group Ltd (SBK)
British American Tobacco Plc (BIT)	Mediclinic International Ltd (MDC)	Steinhoff International Holdings Ltd (SNH)
Business Connexion Group Ltd (BCX)	MMI Holdings Ltd (MMI)	Sun International Ltd (SUI)
Capevin Ltd <sup>29</sup>	Mondi Ltd (MND) <sup>30</sup>	Super Group Ltd (SPG)
Clicks Group Ltd (CLS)	Mpact Ltd (MPT)	Telkom SA SOC Ltd <sup>31</sup> (TKG)
Discovery Holdings Ltd (DSY)	Mr Price Group Ltd (MRP)	The Bidvest Group Ltd (BVT)
DRDGOLD Ltd (DRD)	MTN Group (MTN)	The Foschini Group Ltd (TFG)
Exxaro Resources Ltd (EXX)	Murray & Roberts Holdings Ltd (MUR)	The Spar Group Ltd (SPP)
FirstRand Ltd (FSR)	Nampak Ltd (NPK)	Tiger Brands Ltd (TBS)
Gold Fields Ltd (GFI)	Nedbank Group Ltd (NED)	Tongaat Hulett Ltd (TON)
Grindrod Ltd (GND)	Netcare Ltd (NTC)	Truworths International Ltd (TRU)
Group Five Ltd (GRF)	Northam Platinum Ltd (NHM)	Vodacom Group Ltd (VOD)
Growthpoint Properties Ltd (GRT)	Oceana Group Ltd (OCE)	Wilson Bayly Holmes-Ovcon Ltd (WBO)
Harmony Gold Mining Company Ltd (HAR)	Old Mutual Plc (OML)	Woolworths Holdings Ltd (WHL)

<sup>20</sup> Excluded as the company was delisted in July 2012.

<sup>21</sup> Excluded as the company was sold in 2013 to a private consortium and changed to a private company.

<sup>22</sup> Excluded as the company was placed under curatorship 10 August 2014.

<sup>23</sup> Changed the companies name from Pretoria Portland Cement Company Ltd to PPC Ltd in 2012.

<sup>24</sup> Name changed from Rainbow Chicken Limited to RCL foods in 2013.

<sup>25</sup> Excluded as the company became a wholly owned subsidiary of Allied Electronics Corporation Limited in 2013.

<sup>26</sup> Name changed from Capital Shopping Centres Group Plc to Intu Properties Plc in 2013.

<sup>27</sup> Name changed from ABSA Group Limited to Barclays Africa Group Limited in 2013.

<sup>28</sup> Excluded as Sibanye Gold Ltd originated from a split from Gold Fields Ltd in 2013.

<sup>29</sup> Excluded as Capevin is a passive holding company that only listed in August 2012 and was previously known as KWV Ltd.

<sup>30</sup> Mondi and Investec have a UK based Plc and a Local Ltd company, as the boards and integrated reports are the same this study only used the Ltd.

<sup>31</sup> Telkom SA SOC is a State-Owned Company as the South African government is the controlling shareholder.