https://doi.org/10.54483/sajaar.2023.25.1.2

Corporate governance and the value relevance of accounting information: Empirical evidence from South Africa[i]

Nabeelah Daniels
https://orcid.org/0000-0001-6341-3281
College of Accounting, University of Cape Town, Cape Town, South Africa

Anna-Retha Smit
https://orcid.org/0000-0002-5568-7351
Department of Accounting, University of Pretoria, Pretoria, South Africa

ABSTRACT

Purpose: The importance of corporate governance has grown dramatically over the last 20 years, owing to corporate fraud and management misconduct. Corporate governance reforms indicate that Regulators regard governance as an important means of establishing credible financial reporting. The purpose of this study was to determine whether internal corporate governance attributes and accounting information affect the value relevance—as proxied by the share price—of large profitable companies listed on the Johannesburg Stock Exchange (JSE).

Originality/Value: To the best of the authors' knowledge, this was the first study to examine the value relevance of accounting information by considering the impact of internal corporate governance attributes, since the commissioning of the King IV Report on Corporate Governance for South Africa.

Design/Methodology/Approach: To determine the impact of corporate governance attributes on the value relevance of accounting information, the Generalised Linear Mixed Effects model was used to test the study hypothesis. The study sample consisted of 62 firms listed on the JSE between 1 January 2015 and 31 December 2018. Six variables were used to measure internal corporate governance attributes, namely board size, board independence, staggered board, internal board committees, board activity and board gender diversity.

Findings: The findings indicated that the size of the board is value relevant and negatively affects share price. It could also be posited that net asset value per share (NAVPS) and earnings per share (EPS) assist in explaining the share price of JSE-listed firms.

Research limitations: Three limitations have been identified. Firstly, the generalisability of the results may be limited on account of the small sample size and the unique setting of South Africa—a developing country. Secondly, the findings are confined to a distinct time-period, as they were generated from a sample taken over a four-year period. Lastly, the study examined the relationship between six internal corporate governance attributes. Alternative proxies may provide different results.

Key words

Value relevance, corporate governance, board size, board independence, board gender diversity, staggered board, internal board committees, board activity, King IV, firm performance

1 INTRODUCTION

"Relevance" is one of the fundamental qualitative characteristics of financial reporting (Outa, Ozili & Eisenberg 2017). It denotes the usefulness of financial accounting information for decision-making by assisting users to evaluate past, present and future events. According to this definition, value relevance is one of the most important aspects of information quality (Al-Akra & Ali 2012). It provides robust analyses concerning the way that the market views accounting information (Dunham & Grandstaff 2022). According to Barth, Beaver and Landsman (2001), value relevance tests can be used to determine the relevance and the reliability of accounting information, as echoed in equity market values. This has been emphasised by Barth, Li and McClure (2023), who recently found that equity values have become significantly more relevant, over time. The value relevance of accounting information has been studied for many decades, and is a research area that is particularly relevant today (Dunham & Grandstaff 2022).

The value relevance of accounting information is inherently linked with corporate governance, which enforces compliance with appropriate standards. Despite the lack of a universally accepted definition of "corporate governance", it is generally defined as the

set of private and public laws, regulations and endorsed business practices that administer the relationship between corporate managers and those who invest resources in organisations (Fiador 2013).

In the 21st century, the expectations placed on organisations have increased significantly. Concurrently, there has been a general decline in the level of trust in organisations, ascribed to the prevalence of corporate scandals in recent years (Kosovic & Patel 2013). Thus, the importance of corporate governance has grown dramatically over the last 20 years, owing to corporate fraud, negligence and management misconduct, resulting in substantial losses of shareholder wealth (Krechovská & Procházková 2014). Key corporate governance reforms, around the world, indicate that regulators and policymakers regard corporate governance as an important means of establishing reliable financial reporting (Tshipa, Brummer, Wolmarans & du Toit 2018). As a result, a proliferation of corporate governance reforms have ensued in many developing African economies, over the last two decades (Areneke & Kimani 2019). Regulators have introduced new rules to enhance the quality of corporate governance, that should—ultimately—improve reporting practice (Byard, Li & Weintrop 2006).

However, globally, there is mixed evidence in the governance literature as to whether corporate governance leads to higher-quality accounting information. On the one hand, research shows that good corporate governance decreases information asymmetry between managers and shareholders, resulting in higher firm valuations (Kanagaretnam, Lobo & Whalen 2007; Larcker & Rusticus 2010). In addition, studies have shown that organisations that comply with corporate governance practices improve its market value (Alfraih & Alanezi 2015; Ararat, Black & Yurtoglu 2017; Jonty & Mokoaleli-Mokoteli 2015; Malik & Shah 2013). On the other hand, it is not explicitly clear whether or not better governance is associated with higher firm valuation, as the costs of governance structures may outweigh its benefits (Bruno & Claessens 2010; Chhaochharia & Grinstein 2007). This raises the question of whether corporate governance has any impact, whatsoever, on the value relevance of accounting information.

From a South African perspective, research in this area appears limited, with only a handful of studies exploring corporate governance, in depth. Furthermore, these studies focused on the previous King Reports on Corporate Governance—King II and King III (Mans-Kemp, Erasmus & Viviers 2016; Mans-Kemp, Erasmus & Viviers 2017; Mans-Kemp & Viviers 2015; Ntim, Lindop, Osei & Thomas 2015; Ntim, Lindop & Thomas 2013; Ntim, Opong & Danbolt 2012; Ntim, Opong, Danbolt & Thomas 2011; Ntim & Soobaroyen 2013; Tshipa *et al.* 2018). Unlike many African countries, South Africa has kept up to date with international standards, by consistently analysing and revising its corporate governance practices. The latest such effort was the King IV Report on Corporate Governance, commissioned in 2016 (IoDSA 2016). The Johannesburg Stock Exchange (JSE) is currently ranked the nineteenth largest stock exchange in the world and is also the largest securities exchange on the African continent (Sustainable Stock Exchanges initiative 2019).

Against this background, South Africa offers an exciting research context in which the corporate governance and value relevance nexus can be empirically examined. This study expands on the current South African literature on the topic, by using more recent data—from 2015 to 2018. It also addresses three developments that may have influenced corporate governance in South Africa as well as the value relevance of accounting information for JSE-listed firms. The first development occurred in 2015, when South Africa became one of the first African countries to instruct public companies regarding compliance with the International Financial Reporting Standards (IFRS). This instruction was enacted by the JSE, in January 2015 (JSE n.d.). The second development occurred in 2016, when King IV was introduced. Up until 2016, one of the main issues relating to corporate governance was that “best practice” structures and processes were merely being implemented as a mindless compliance exercise, irrespective of whether this resulted in improved firm value, or not. When King IV was drafted, the new changes intended to clearly emphasise the contribution of corporate governance to firm value. This was based on the realisation that, firstly, a corporate governance code needs to be separate from the law, as the law simply emphasises compliance (Natesan 2020) and, secondly, that a code of governance should be outcome-based and not input-focused (Ramalho 2020). Mervyn King—the former chair (now chair *emeritus*) of the King Committee—declared that, despite King III being a JSE listing requirement, many firms simply regarded it as an obstacle to overcome, and nothing more. They also affirmed that the most distinctive attribute of King IV was that it steered firmly away from a mindless, checklist approach (Natesan 2020). The final development occurred in 2017, when the JSE amended its listing requirements relating to the King Code. All King Code principles and certain King Code recommended practices became compulsory for JSE-listed firms. Therefore, this study explored whether internal corporate governance attributes, namely board size, board independence, board activity, staggered board, internal board committees and board gender diversity, affect the value relevance of accounting information for firms listed on the JSE between 2015 and 2018. It also investigated the individual effect of these six internal corporate governance attributes on firm value. Lastly, the study investigated whether the introduction of King IV in South Africa had any impact on firm performance, for the sample of JSE-listed firms.

This study will be useful to academic researchers, as it confirms whether corporate governance attributes are associated with the information set that investors use to value a company’s equity. The study will also be of interest to firm managers, as the results can be used to identify the link between corporate governance attributes and earnings properties.

2 LITERATURE REVIEW

2.1 Value relevance

The principal objective of value relevance research is to determine whether the financial statements produced by firms provide investors with valuable information, allowing them to make informed decisions (Alfraih & Alanezi 2015). An accounting amount is

considered to be "value relevant" if it has an association with equity market values (Barth *et al*. 2001). Barth *et al.* (2001) defined "value relevance" as the degree to which investors respond to the announcement of accounting information that is vital to decision-making. Barth, Landsman and Lang (2008) explained that the higher the value relevance, the higher the quality of the accounting information.

2.2 Shift from King III to King IV

In 2016, the current King Report on Corporate Governance (King IV) was commissioned (Institute of Directors in Southern Africa [IoDSA] 2016). One of the perceived disadvantages of corporate governance is that it is often considered a mindless compliance exercise (Ramalho 2020). For this reason, King IV changed King III's "apply or explain" approach to an "apply and explain" approach. This approach presumes that firms are already applying the principles, and expects it to explain how this is being achieved. The reason behind this was to move away from a simple "tick box" approach, towards illustrating how the implemented practices accomplish the principles and validate the outcomes. When King IV was being drafted, the King Committee elected to pursue a broader understanding of "governance", shifting away from simply being a system and moving towards "the exercise of ethical and effective leadership by the governing body" (IoDSA 2016:20).

The change from King III's "apply or explain" approach to King IV's "apply and explain" approach may have caused a shift in the value relevance of accounting information, on account of several developments. Firstly, one of the main reasons why JSE-listed firms were applying King III was purely because it was a listing requirement. However, public-sector firms, non-profit organisations and private companies were having trouble interpreting and applying King III to its circumstances. As a result, it was considered necessary to render King IV more accessible to all firms, across all sectors in South Africa. Secondly, it was evident that the "apply or explain" approach did not provide stakeholders with a complete and overall picture, as firms only provided an explanation when a certain practice had *not* been applied. Thirdly, the risk attached to the "apply or explain" approach was that it would result in an unthinking compliance mindset—one where principles and practices were merely adhered to for the sake of ticking the boxes. This would ultimately result in firms creating a façade behind which it could proceed with business as usual, not realising the value of corporate governance. Lastly, whilst King IV's "apply and explain" approach emphasises the importance of proportionate application, King III's "apply or explain" approach was a binary approach, that left little room for different degrees of application based on a firm's circumstances (Natesan 2020). Simply put, the change from King III to King IV intended to lead boards to look beyond compliance, and to focus—instead—on the benefits or outcomes that each principle could potentially deliver.

2.3 Prior research on value relevance and corporate governance

Despite the significant corporate governance developments around the globe, and specifically in South Africa since 1994, the impact of corporate governance on the value relevance of accounting information remains largely unexplored, both globally and in South Africa.

- *International research on the value relevance of corporate governance*

Several international studies on the association between firm-level corporate governance and firm valuation have yielded mixed results. These studies were conducted in Greece (Kalantonis, Delegkos, Sotirchou & Papagrigoriou 2022), Pakistan (Khidmat, Wang & Awan 2018), Australia (Habib & Azim 2008), Brazil (Miralles-Quirós, Miralles-Quirós & Gonçalves 2018), Ghana (Fiador 2013), Indonesia (Firmansyah & Yusuf 2020; Krismiaji & Surifah 2020), Malaysia (Iatridis 2015; Morris, Pham & Gray 2011), and the United States (Cohen, Holder-Webb & Khalil 2017). A cross-country study, that included 22 developed countries, evidenced a strong and positive relation between firm-level corporate governance and firm valuation (Ammann, Oesch & Schmid 2011). Fiador (2013) suggested that this positive relation is stronger when board size is small and when the CEO also acts as the board chairperson. Morris *et al.* (2011) concluded that corporate governance attributes were value relevant in 2001, but not in 1996, implying that investors placed greater emphasis on corporate governance attributes following the Asian financial crisis. Cimini (2022) investigated the ability of female presence to affect value relevance, in listed firms in 18 European countries. The findings suggest that female board members impact the quality of financial reporting and value relevance.

- *Research on value relevance in South Africa*

Cross-country research includes a study on the value relevance of accrual accounting in 21 countries, including South Africa (Hung 2000). Another study examined the value relevance of IFRS adoption in seven countries, including South Africa (Chebaane & Othman 2014). A third study considered the value relevance of conditional conservatism in 20 countries, including South Africa (Brown, He & Teitel 2006). A fourth study investigated the value relevance of IFRS on accounting in 347 firms across various countries, including South Africa (Hillier, Hodgson & Ngole 2016).

There is also a handful of studies that examined value relevance, solely in South Africa. The topics researched included IFRS 1 (Putsai & Mkhize 2021), sustainability reporting (Thompson, Ashimwe, Buertey & Kim 2022), book values and earnings before interest and taxes (Sixpence & Adeyeye 2019), integrated reporting (Baboukardos & Rimmel 2016), corporate social responsibility (Marcia, Callaghan & Maroun 2015), interim financial statements (Zulu, De Klerk & Oberholster 2017), mandatory non-GAAP earnings (Venter, Emanuel & Cahan 2014), intellectual capital (Swartz, Swartz & Firer 2006) and goodwill (Eloff & De Villiers 2015).

Dzingai and Fakoya (2017) argued that the various corporate scandals in South Africa, such as MacMed in 1999, Regal Treasury Bank in 2001 and LeisureNet in 2002, prompted further research to determine the effect of corporate governance on firm value. However,

despite the significant corporate governance developments in the country since 1994, the impact of corporate governance on the value relevance of accounting information remains largely unexplored.

- *Research on corporate governance in South Africa*

From a South African perspective, research in this area appears limited, with only a small number of researchers who have explored corporate governance, in depth. Mans-Kemp and Viviers (2015) used content analysis to compute a comprehensive corporate governance score for a sample of JSE-listed firms, between 2002 and 2010. The mean annual corporate governance scores were examined against the dividend payout ratios for those firms and it was found that there was a positive and significant relationship between board composition and dividend payout ratios. Mans-Kemp *et al.* (2016) examined the corporate governance practices of 230 JSE-listed firms, between 2002 and 2010. Again, content analysis was used to compute annual corporate governance scores for the sample firms. It was shown that there was an increasing compliance trend towards 2010. Mans-Kemp *et al.* (2017) investigated the relationship between the risk-adjusted performance of selected South African firms and a comprehensive measure of corporate governance. The capital asset pricing model and the Fama–French three-factor model were used. Ntim *et al.* (2012) considered the value relevance of disclosing good corporate governance practices on stakeholders, versus shareholders for 169 JSE-listed firms between 2002 and 2007, in a study based on 50 King II provisions. The results revealed that good corporate governance disclosure practices had a positive effect on firm value (measured by total share return and Tobin's Q). Ntim *et al.* (2011) investigated the level of voluntary compliance and disclosure of recommended good corporate governance practices in post-Apartheid South African listed firms, as well as the major factors contributing to such voluntary corporate governance disclosure behaviour. Ntim and Soobaroyen (2013) explored the relationship between corporate governance and corporate social responsibility. Ntim *et al.* (2013) examined South African firms prior and subsequent to the 2007/08 global financial crisis, to determine whether the quality of its corporate governance had any impact on the quality of its corporate risk disclosures. Ntim *et al.* (2015) used a set of corporate governance mechanisms in a three-stage least squares Simultaneous Equation framework to examine the relationship between executive compensation and performance. Tshipa *et al.* (2018) applied Panel Study methodology to explore whether better-governed firms yielded better financial performance, in 137 JSE-listed firms between 2002 and 2014.

2.4 Hypothesis formulation

Corporate governance has become a topical issue in recent years. The definition of good governance has evolved, becoming more objective in nature, as a result of numerous regulations, professionalisation and practices. Numerous studies have examined the core features of corporate governance, including board diversity, frequency of board meetings, board independence, board staggering, board size and board committees. This study examined the effect of six internal corporate governance attributes, namely board size, board independence, board activity, staggered board, internal board committees and board gender diversity.

- *Board size*

Board size represents the sum of directors, including executive and non-executive directors, on the board of directors, at the date of the annual meeting in each financial year. Varied and inconclusive evidence have been reported concerning the nexus between board size and firm performance. Monks and Minow (1995) and Uadiale (2010) believed that larger boards tend to have more time and experience, resulting in the more effective monitoring of firms. It is also evident that larger boards result in a lower level of earnings management (Peasnell, Pope & Young 2000). However, other researchers argue that smaller boards allow for more effective communication and interaction between directors (Ozkan 2011; Yermack 1996). Guest (2009) found that larger boards result in low firm performance and high earnings management.

- *Board independence*

The central aim of the King Reports has been to improve corporate governance standards in South African firms (Ntim *et al.* 2012). Specifically, one of the primary objectives has been to enhance firm valuation by improving the independence and monitoring capacity of South African boards of directors (Ntim *et al.* 2012). King IV has departed from "boxing" independence into set criteria and, instead, contains factors to be considered when evaluating independence. The overarching general assessment for independence is whether or not "there is no interest, position, association or relationship which, when judged from the perspective of a reasonable and informed third party, is likely to influence unduly or cause bias in decision-making in the best interests of the organisation" (Cliffe Dekker Hofmeyr 2023:9). Many studies have empirically investigated the association between corporate board independence and firm valuation. The results of these studies are mixed, showing either a positive or a negative relationship, or no relationship at all. Abdullah (2004) examined 412 companies listed on the Main Board of the Kuala Lumpur Stock Exchange. They concluded that the percentage of independent directors may contribute significantly to the performance of a firm, following their finding of a positive and significant relationship between board independence and return on assets, profit margin and earnings per share. Another study, investigating 277 non-financial listed Malaysian companies, also found a significant and positive correlation between higher levels of board independence and firm performance (Ameer, Ramli & Zakaria 2010). However, Garg (2007) concluded that board independence in Indian firms did not result in improved firm performance—attributable to poor monitoring by independent directors. Fauzi and Locke (2012) also concluded that companies listed on the New Zealand Stock Exchange exhibited a significant negative relationship between the number of outside directors and firm performance. Furthermore, Hermalin and Weisbach (1991) and Leung, Richardson and

Jaggi (2014) reported no relation between firm performance and board independence. Rahman and Ali (2006) also showed that there is an insignificant relationship between board independence and earnings management in Malaysian companies.

- *Board activity*

Numerous researchers have debated whether the frequency of board meetings can be used to effectively assess the efficiency of board members' monitoring (Jensen 1993). Board meetings are a vital tool of the supervisory function by board members, as it allows the discussion of pending issues and possible solutions (Vafeas 1999). Thus, certain studies concluded that frequent board meetings have a significant influence on firm performance (Ji, Talavera & Yin 2019) and shareholder value (Jiang, Wan & Zhao 2016; Liu, Wang & Wu 2016). However, other studies showed that more frequent board meetings are not associated with higher firm performance (Lipton & Lorsch 1992), as directors spend their time on numerous ineffective routine activities—simply to satisfy company regulations—that results in the usefulness of board meetings being reduced (Jensen 1993). Al-Daoud, Saidin and Abidin (2016) contended that board meeting time is a key resource in enhancing the effectiveness of a firm. For this reason, a number of scholars argue that board meeting quality—and not frequency—is directly associated with firm performance (Ntim & Osei 2011).

- *Staggered board*

King IV suggests the periodic, staggered rotation of board members (IoDSA 2016). A minimum of one-third of the non-executive directors of JSE-listed public companies are expected to retire at the annual general meeting. These directors may be re-elected if they qualify for re-election. To qualify for re-election, a director would require nominations from the board, that is dependent on the director's past performance and contributions (JSE 2019).

A staggered board may protect the board from selfish shareholder pressure (Cremers, Litov & Sepe 2017). Jiraporn and Liu (2008) maintained that staggered boards can safeguard board stability and enhance long-term commitment to value creation. In a non-staggered board, all directors stand for election each year, as they serve for a term that does not vary in length (Cremers *et al.* 2017). Convincing empirical evidence suggests that staggered boards have a much greater effect than any other corporate governance provision (Duru, Wang & Zhao 2013). Bebchuk and Cohen (2005) concluded that staggered boards have a significant negative impact on firm value. However, more recent studies revealed that firms with strong stakeholder relationships could potentially benefit from a staggered board (Cen, Dasgupta & Sen 2016; Johnson, Karpoff & Yi 2015).

- *Internal board committees*

The various King Codes have issued disparate recommendations on board committees. In contrast to the later King Codes, King I advised against the formation of a nominations committee. King II recommended the establishment of, at a minimum, an audit- and a remuneration committee. King III expanded on King II, by recommending the formation of risk-, nomination- and IT steering committees, in addition to the audit- and remuneration committees (Maroun & Cerbone 2020). Principle 8 in King IV deals with the issue of board committees, leaving the decision up to the governing body, as to whether any internal committees should be established, or the number of such committees. It does, however, recommend that establishment of audit-, nominations-, risk remuneration- and social- and ethics committees, be contemplated (IoDSA 2016).

The formation of board committees has been touted as an effective tool for enhancing corporate governance, by assigning certain duties from the primary board to smaller bodies and limiting the inputs of non-executive directors (Kosovic & Patel 2013). A number of studies have shown a positive relationship between independent audit committees and reliable financial reporting (McMullen 1996). This positive relationship arises from the audit committee reducing modified audit opinions (Carcello & Neal 2000), errors, financial restatements, irregularities and illegal acts (Abbott, Parker & Peters 2004). Huang, Lobo and Zhou (2009) showed that the assignment of certain corporate governance duties to a governance committee, could result in more effective board monitoring. Klein (1998) investigated American companies and found no relationship between key internal board committees and firm performance, except for finance- and investment committees. Dulewicz and Herbert (2004) and Vafeas and Theodorou (1998) examined British companies, and also found no significant relationship between key internal board committees and firm performance, whilst Mak and Kusnadi (2005) could not detect any such relationship for Singaporean companies.

- *Board gender diversity*

The Global Gender Gap Report (World Economic Forum 2015) emphasised the importance of women in leadership roles. The report added that there has been resistance from firms in transforming into more gender-equal organisations (Landel 2016). It was noted, in a recent review of the literature, that women comprise 10.3% of board members across 67 countries (Conyon & He 2017).

The literature reflects conflicting views on board diversity. Proponents cite various advantages to gender diversity in the boardroom, such as enhanced decision-making, more efficient strategic control, stricter monitoring (Tulung & Ramdani 2018) and improved financial performance (Conyon & He 2017; Li & Chen 2018). Opposing results suggest a negative relationship between gender diversity and firm performance (Matsa & Miller 2013) or no association between gender diversity and firm performance (Jurkus, Park & Woodard 2011).

The empirical data provide evidence that, despite the pivotal role of corporate governance in the value relevance of accounting information, the effect of specific governance variables on firm value differs across various settings. On account of compulsory corporate governance practices for JSE-listed firms in South Africa, the study hypothesis was formulated as follows:

H1. Corporate governance attributes are associated with the value relevance of accounting information.

3 METHOD

3.1 Sample

This study involved the period following the JSE's enactment of the IFRS on public companies (in 2015) and subsequent to the JSE's amendment of its listing requirements (in 2017), stipulating that all King Code principles and certain King Code recommended practices would be compulsory for listed companies. The study used a balanced sample[ii] of 62 firms, drawn from a population of 248 JSE-listed firms. These firms had to meet the following criteria:

- available data for the period 2015–2018;
- available data for all the variables included in the regression model; and
- positive earnings per share figures.[iii]

3.2 Data collection

Corporate governance data from each firm's annual report, was included. This data is available on the Refinitiv database (previously the Thompson Reuters DataStream database). Data on earnings, stock price and net asset value, for all firms included in the sample, was also obtained from the Refinitiv database.

3.3 Measurement instrument

To ensure comparability with the leading research in this area, this study used an adjusted Ohlson model to identify which internal governance attributes affect the value relevance of large, profitable, JSE-listed companies. The Ohlson (1995) valuation model asserts that firm value is a linear function of the book values of owners' equity and earnings. The appeal of the Ohlson model to empirical researchers is that it provides a testable pricing equation that identifies the roles of accounting and non-accounting information (Lo & Lys 2000). A Generalised Linear Mixed Effects model [GLMM] (Lo & Andrews 2015) was used. Since the response variable (firm value) was continuous and repeated over a four-year period (2015–2018) for each company, a subject-specific random effect was added to account for the in-subject correlation due to repeated measures.

The relationship between share price and accounting information was ascertained by regressing stock price on earnings and equity book values, which were used as proxies for firm value. In so doing, it was possible to determine whether accounting variables included information that was used to price shares, over the specified period.

Descriptive statistics were used to summarise the variables of interest. Bivariate analysis was conducted to investigate the individual effect of internal corporate governance attributes on firm value, for firms listed on the JSE between 2015 and 2018. This was accomplished by using Spearman's rho correlation analysis for continuous variables (board size, board independence, board activity and board gender diversity), and the Mann–Whitney U test (staggered board) and the Kruskal–Wallis test (internal board committees) for categorical variables with two levels or more than three levels, respectively.

The Mann–Whitney U test is normally used to test for differences between two independent groups on a continuous measure. In this study, we sought to test whether firm values varied when board members were rotated every three years, versus when they were not rotated. This test is the non-parametric alternative to the *t*-test for independent samples. Instead of comparing the means of the two groups, as in the case of the *t*-test, the Mann–Whitney U test compares medians.

The Kruskal–Wallis test is the non-parametric alternative to a one-way between-groups analysis of variance. It allows comparison of the scores on a continuous variable, for three or more groups. It is similar in nature to the Mann–Whitney U test, however, it allows comparison of more than just two groups. In this study, the Kruskal–Wallis test was used to determine whether there was a difference in firm value across three board committee levels.

- *Dependent variable*

Since the sample of firms in this study consisted of listed firms, these were firms that would be closely observed by analysts during any given financial year. It would therefore be expected that the public would become aware of any relevant information pertaining to the firm, prior to the official release of the financial statements following the end of the fiscal year. In addition, estimations of the annual numbers would be calculated as soon as the half-yearly results were released (Tshipa *et al.* 2018). Although it is common in value relevance research to use a three-month lagged stock price following the financial year-end, post-year-end events could interfere with the measurement process (Tshipa *et al.* 2018). For these reasons, the present study used stock price at the end of the fiscal year as the dependent variable.

- *Independent variables*

The independent variables comprised six internal corporate governance attributes and three financial performance variables that are often used in value relevance studies, namely earnings per share, net asset value per share and cash flow of operating activities per share. KING is also included as an independent variable to investigate whether the introduction of King IV in South Africa had any impact on the performance of the JSE-listed firms in the study sample.

- *Control variables*

In this model, total assets were included as a control for size *(lnSIZE)*. This is due to larger firms being subject to greater public and regulatory scrutiny, which may cause these firms to implement a greater level of corporate governance practices. Larger firms may also implement a higher level of corporate governance as a result of the legitimacy theory.

Table 1 summarises the variables used in this study. Column 1 presents the abbreviation used in the equations, column 2 shows the variables in full and column 3 defines the variables.

Table 1: Description of study variables

Abbreviation	Variable	Definition
lnP	Stock price	The natural logarithm of the stock price at the end of the fiscal year.
lnEPS	Earnings per share	The natural log of the net profit after tax per share (before taking abnormal items into account).
lnNAVPS	Net asset value per share	The natural logarithm of the reported net asset value per share, which is equal to total assets minus total liabilities divided by the number of outstanding shares.
lnCFOPS	Cash flow from operations per share	The natural log of cash flow from operations per share.
BS	Board size	The total number of directors sitting on the board at the end of the fiscal year. It is squared to capture its posited non-linear behaviour.
BI	Board independence (%)	The percentage of independent non-executive directors at the end of the fiscal year.
BD	Board diversity (%)	The percentage of females on the board of directors at the end of the fiscal year.
SB	Staggered board	The rotation of board members every three years. SB is coded '1' if the board members rotate every three years, and '0' otherwise.
BA	Board activity	The number of times the board of directors meets during the year.
BC	Board committees	The presence of an audit committee, corporate governance committee, nomination committee or a remuneration committee. BC is coded '4' if all four board committees are present, '3' if there are only three of the four board committees present, '2' if there are only two of the four board committees present, '1' if only one of the four board committees is present, and '0' otherwise.
KING	King III or King IV	KING is coded '1' for 2017 and 2018 (after King IV was commissioned), and '0' for 2015 and 2016 (before King IV was commissioned).
lnSIZE	Size of the firm	Measured as the natural logarithm of total assets.
i		Firm subscript.
t		Year subscript.

Note: Table 1 summarises the variables used in this study.

- *Model*

We specified the following price equation, using a GLMM:

$$lnP_{it} = \beta_0 + \beta_1 lnEPS_{it} + \beta_2 lnNAVPS_{it} + \beta_3 lnCFOPS_{it} + \beta_4 BS_{it} + \beta_5 BI_{it} + \beta_6 BD_{it} + \beta_7 BA_{it} + \beta_8 BC_{it} + \beta_9 SB_{it} + \beta_{10} KING_{it} + \beta_{11} lnSIZE_{it} + \varepsilon_{it} \quad \textbf{(1)}$$

4 RESULTS

4.1 Descriptive statistics and frequency distribution

Table 2 sets out the descriptive statistics for the continuous variables used in the analysis. Table 3 denotes the frequency distribution of the categorical variables used in the study.

Table 2: Descriptive statistics of continuous variables

	Min.	Max.	Mean	Median	Std. Dev.
lnP	−0.20	9.86	4.22	4.39	1.72
lnEPS	−4.19	5.43	1.49	1.72	1.32
lnNAVPS	0.31	6.35	3.43	3.50	1.11
lnCFOPS	−2.10	6.13	1.76	1.72	1.43
BS	6.00	20.00	11.27	11.00	2.76
BD	0.00	0.50	0.24	0.23	0.11
BI	0.27	0.83	0.58	0.60	0.13
BA	1.00	20.00	5.54	5.00	2.37
BC	1.00	4.00	3.03	3.00	0.55

Note: Table 2 sets out descriptive statistics for all the variables used in the regression analysis. The sample consisted of 62 large firms listed on the JSE for the 2015–2018 reporting periods.

The average board size (BS) for the sampled firms was 11 members. Approximately 58% of the members were independent non-executive directors, which is in line with best practice, whilst around 24% of the board members were female. This echoed the results released in the Global Gender Gap Report, emphasising that there has been resistance from firms to transform into more gender-equal organisations (Landel 2016). The standard deviations of 13% and 11% for the board independence (BI) and board diversity (BD) variables, respectively, indicated that the sampled firms exhibit substantial variation in the

independence and gender of the board members. The number of board meetings (BA) per year ranged between 1 and 20, with an average of approximately five meetings per year across the sampled firms.

Table 3: Frequency distribution of categorical variables

Variable	Frequency (n)	Percentage (%)
King		
King III	124	50
King IV	124	50
Staggered board (SB)		
No	25	10.1
Yes	223	89.9
Board committees (BC)		
One to two of the four	33	13.3
Three of the four	175	70.6
All four	40	16.1

Note: Table 3 sets out the frequency distribution for all the categorical variables used in the regression analysis. The sample consisted of 62 large firms listed on the JSE for the 2015–2018 reporting periods.

4.2 Bivariate analysis: Association between firm value and internal governance attributes

- *Correlation between firm value and internal governance attributes measured on a numerical scale*

Figure 1 shows Spearman's correlation coefficients in respect of the continuous variables included in the model. Spearman's correlation coefficients were constructed using the raw values of the observations to assess the strength, direction and statistical significance of the linear association between two skewed continuous variables.

There was a very weak, positive but statistically significant correlation between firm value (lnP) and some of the internal governance attributes, namely BA, BS and BI. This was indicated by the correlation coefficients, that ranged between 0 and 0.2, and the *p*-values, that were below 5% significance level. These correlations suggested that an increase in the number of board meetings per year, an increase in the number of board members, as well as an increase in the number of independent non-executive directors would result in an increase in share price. No linear association was found between firm value and BD, as its *p*-value was higher than 5%.

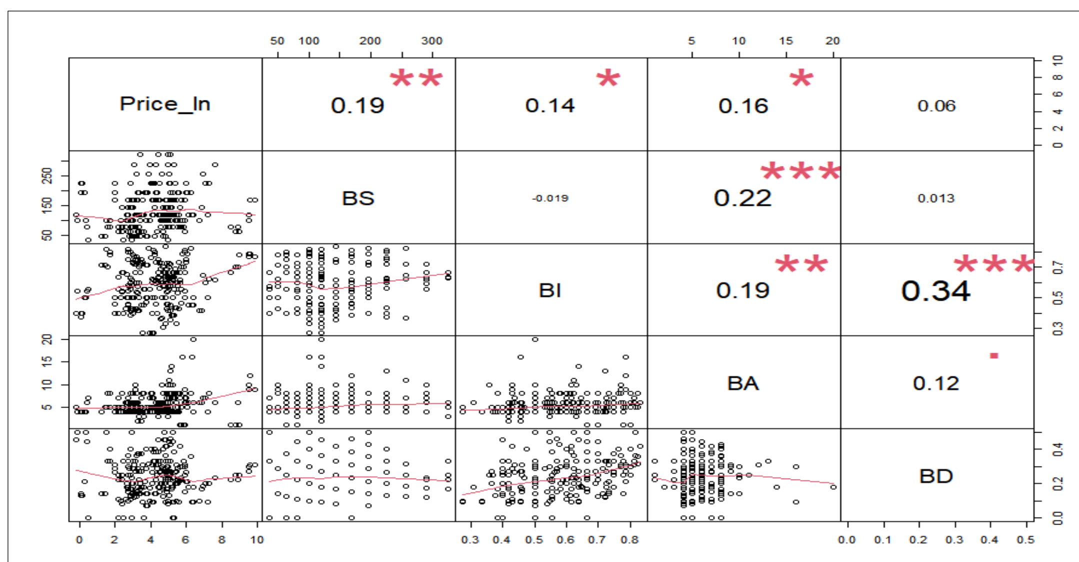

Figure 1: Correlation between internal corporate governance attributes and firm value (lnP) for firms listed on the JSE between 2015 and 2018.

- *Association between firm value and internal governance attributes measured on a categorical scale*

Figure 2 shows the distribution of firm value by SB and BC. The results indicated that there was a statistically significant difference in median firm values when board members were rotated every three years, compared with when they were not. This was confirmed by statistically significant results (*p*-value < 0.05) of the Mann–Whitney U test. The distribution of firm value by BC is also illustrated in Figure 2. As indicated, the median firm values across the three levels of BC were similar. This was confirmed by the Kruskal–Wallis test results, that showed no statistically significant difference in firm values across the three different levels of BC (*p*-value < 0.05).

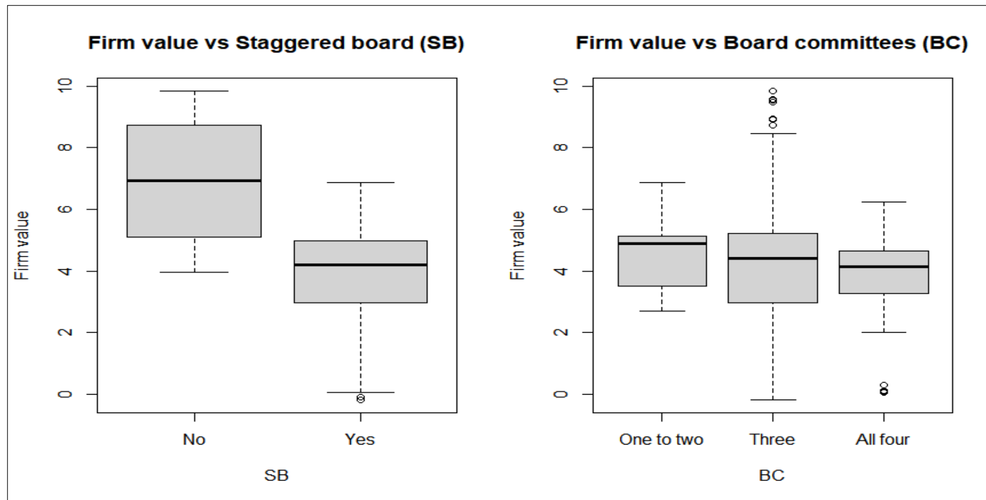

Figure 2: Distribution of firm value by SB and BC

4.3 Multivariate analysis

Bivariate analysis demonstrated how firm value was associated with each individual internal corporate governance attribute, i.e., how firm value was related to each of these variables individually, without considering the effect of any other variable.

Table 4 denotes the results of firm value taken as a function of all independent variables, and the analysis of the association between firm value and internal corporate governance variables, controlling for firm size (lnSIZE). Corporate governance attributes were incorporated into the regression model, with the expectation that a firm's implementation of these attributes would, ultimately, result in a greater market valuation of shares (Tshipa *et al.* 2018). The estimates of the GLMM regression coefficients, confidence intervals and *p*-values are shown in Table 4. The results revealed that the only value-relevant internal governance attribute is board size (BS) (p-value < 0.05). Variables, such as earnings per share (lnEPS), net asset value per share (lnNAVPS), and the size of the firm (lnSIZE) were also statistically significant (p-values < 0.05). It can be seen that earnings per share (lnEPS) and net asset value per share (lnNAVPS) both had a positive impact on firm value. This confirms the assumption that these figures are value relevant to market participants, as an increase in lnEPS and lnNAVPS resulted in an increase in share prices.

Table 4: Estimates of the generalised linear mixed effects model (GLMM) regression coefficients, confidence intervals, and p-values

Predictors	Estimates	Lower limit	95% CI	
			Upper limit	P-values
(Intercept)	-3,7556	-7,5870	0,0757	0,055
lnEPS	0,1144	0,0114	0,2175	**0,03**
lnNAVPS	0,3595	0,1186	0,6003	**0,003**
lnCFOPS	0,0651	-0,0335	0,1636	0,196
BS	-0,0020	-0,0039	-0,0002	**0,034**
BI	0,0579	-0,8738	0,9895	0,903
BA	-0,0151	-0,0439	0,0138	0,306
BC				
One to two of BC present				
Three of BC present	0,1993	-0,3766	0,7752	0,498
Four of BC present	-0,4097	-1,2953	0,4759	0,365
SB				
No				
Yes	-0,4072	-0,8685	0,0541	0,084
BD	0,7614	-0,1713	1,6941	0,110
lagSIZE_ln	0,2868	0,1191	0,4545	**0,001**
KING				
King III				
King IV	-0,0724	-0,1743	0,0294	0,163

Note: Table 4 sets out the estimates of the Generalised Linear Mixed Effects model (GLMM) regression coefficients, confidence intervals, and p-values. The sample consisted of 62 large firms listed on the JSE for the 2015–2018 reporting periods.

The effect of these variables is illustrated in Figure 3. Figure 3 also illustrates that firm size (lnSIZE) had a positive impact on firm value, whereas the size of the board (BS) affected the firm value negatively. The remaining corporate governance variables were not significant and relevant to share price. Consequently, there was no association between these variables and share price. Untabulated findings revealed that separating the four key board committees into four separate variables, had no effect on the inferences.

Furthermore, the results indicated no statistically significant difference in firm value before and after King IV was commissioned in South Africa, signifying that the introduction of King IV did not affect the share price of the sampled JSE-listed firms.

The results provided evidence concerning the value relevance of accounting information in favour of net asset value and earnings per share, i.e., each contains information that is important for the valuation of shares. From these results, it appeared that investors' valuation of shares on the South African market is hugely conditional on the earnings reported by listed firms.

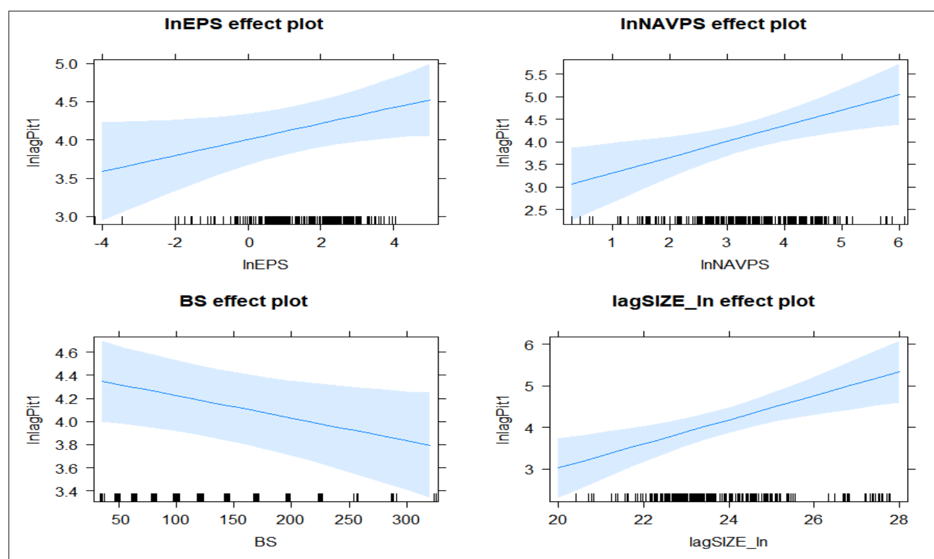

Figure 3: Individual effects of internal governance attributes that affect firm value

4.4 Discussion of findings

From the findings, it can be concluded that the accounting proxies of value (EPS and NAVPS) are important for explaining the share prices of JSE-listed firms. BS was found to be negatively and significantly associated with share price. This suggested that the market is in favour of smaller boards and supported the argument that smaller boards allow for more effective communication and interaction between directors. Essentially, the number of board members yields changes in market valuation. The remaining corporate governance attributes, namely board independence, board gender diversity, board activity, staggered board and the presence of internal board committees, were found to have no association with share price.

5 CONCLUSION

One hypothesis was considered in this study, namely, that internal corporate governance attributes affect the value relevance of accounting information for JSE-listed firms. The findings suggested that board size is the only corporate governance attribute that is value relevant in a South African context. No association was found between share price and board gender diversity, staggered board, board independence, board activity and internal board committees.

It could also be posited that firm value—specifically net asset value per share (NAVPS) and earnings per share (EPS)—assist in explaining the share price of JSE-listed firms. This finding was expected, as NAVPS and EPS are both frequently used to measure profit in South Africa.

This study involved the period following the enactment of the IFRS on public companies by the JSE (in 2015) as well as the JSE's amendment of its listing requirements (in 2017), that rendered all King Code principles and certain King Code recommended practices compulsory for listed companies. Whilst the findings suggested that the size of a board affects the value relevance of JSE-listed firms, it also indicated that the introduction of King IV did not have any effect on the share price of JSE-listed firms.

The results highlighted the value of creating and maintaining adequate supervisory and enforcement techniques, to ensure adherence to accounting standards and corporate governance. Essentially, compliance with corporate governance generates changes in market valuation, as it is key in *inter alia* ensuring reliable financial reporting.

6 LIMITATIONS AND OPPORTUNITIES FOR FUTURE RESEARCH

This study presented a number of limitations, that offer opportunities for future research. Firstly, the generalisability of the results may be limited on account of the small sample size and the unique

setting of South Africa—a developing country. A possible consideration for future research is conducting similar studies in developed countries with an augmented sample.

Secondly, the results were generated from a sample taken over a four-year period. The findings are therefore confined to a distinct time period. Consequently, future research opportunities exist in conducting a similar analysis over a longer time period, that may generate different results.

Lastly, the study examined the relationship between internal corporate governance attributes, such as board size, board independence, staggering of boards, board activity, internal board committees and board gender diversity, on the value relevance of accounting information. Although these measures have been widely used as a proxy for corporate governance in the literature, alternative proxies may provide different results. In addition, a follow-up study could be conducted using external—as opposed to internal—corporate governance attributes.

Endnotes:

[i] This manuscript was derived from a Master's dissertation.
[ii] A balanced sample was constructed, as lagged variables and change variables were used in the regression analysis.
[iii] Firm-years that include negative EPS figures were excluded from the results of prior studies, as it may have been influenced by observations with negative EPS values (Sarumpaet, Nelwan & Dewi 2017).

REFERENCES

Abbott, L.J., Parker, S. & Peters, G.F. 2004. Audit committee characteristics and restatements. *Auditing: A Journal of Practice & Theory*, *23*(1):69-87. https://doi.org/10.2308/aud.2004.23.1.69

Abdullah, S.N. 2004. Board composition, CEO duality and performance among Malaysian listed companies. *Corporate Governance*, *4*(4):47-61. https://doi.org/10.1108/14720700410558871

Al-Akra, M. & Ali, M.J. 2012. The value relevance of corporate voluntary disclosure in the Middle East: The case of Jordan. *Journal of Accounting and Public Policy*, *31*(5):533-549. https://doi.org/10.1016/j.jaccpubpol.2011.10.007

Al-Daoud, K.I., Saidin, S.Z. & Abidin, S. 2016. Board meeting and firm performance: Evidence from the Amman stock exchange. *Corporate Board: Role, Duties and Composition*, *12*(2):6-11. https://doi.org/10.22495/cbv12i2art1

Alfraih, M. & Alanezi, F. 2015. The value relevance of mandatory corporate disclosures: Evidence from Kuwait. *International Journal of Business and Financial Research*, *9(3):*1-18.

Ameer, R., Ramli, F. & Zakaria, H. 2010. A new perspective on board composition and firm performance in an emerging market. *Corporate Governance*, *10*(5):647-661. https://doi.org/10.1108/14720701011085607

Ammann, M., Oesch, D. & Schmid, M.M. 2011. Corporate governance and firm value: International evidence. *Journal of Empirical Finance*, *18*(1):36-55. https://doi.org/10.1016/j.jempfin.2010.10.003

Ararat, M., Black, B.S. & Yurtoglu, B.B. 2017. The effect of corporate governance on firm value and profitability: Time-series evidence from Turkey. *Emerging Markets Review*, *30* (1):113-132. https://doi.org/10.1016/j.ememar.2016.10.001

Areneke, G. & Kimani, D. 2019. Value relevance of multinational directorship and cross-listing on MNEs national governance disclosure practices in Sub-Saharan Africa: Evidence from Nigeria. *Journal of World Business*, *54*(4):285-306. https://doi.org/10.1016/j.jwb.2018.10.003

Baboukardos, D. & Rimmel, G. 2016. Value relevance of accounting information under an integrated reporting approach: A research note. *Journal of Accounting and Public Policy*, *35*(4):437-452. https://doi.org/10.1016/j.jaccpubpol.2016.04.004

Barth, M.E., Beaver, W.H. & Landsman, W.R. 2001. The relevance of the value relevance literature for financial accounting standard setting: Another view. *Journal of Accounting and Economics*, *31*(1-3):77-104. https://doi.org/10.1016/S0165-4101(01)00019-2

Barth, M.E., Landsman, W.R. & Lang, M.H. 2008. International accounting standards and accounting quality. *Journal of Accounting Research*, *46*(3):467-498. https://doi.org/10.1111/j.1475-679X.2008.00287.x

Barth, M.E., Li, K. & McClure, C.G. 2023. Evolution in value relevance of accounting information. *The Accounting Review*, *98*(1):1-28. https://doi.org/10.2308/TAR-2019-0521

Bebchuk, L.A. & Cohen, A. 2005. The costs of entrenched boards. *Journal of Financial Economics*, *78*(2):409-433. https://doi.org/10.1016/j.jfineco.2004.12.006

Brown, W.D., He, H. & Teitel, K. 2006. Conditional conservatism and the value relevance of accounting earnings: An international study. *European Accounting Review*, *15*(4):605-626. https://doi.org/10.1080/09638180601102198

Bruno, V. & Claessens, S. 2010. Corporate governance and regulation: Can there be too much of a good thing? *Journal of Financial Intermediation*, *19*(4):461-482. https://doi.org/10.1016/j.jfi.2009.10.001

Byard, D., Li, Y. & Weintrop, J. 2006. Corporate governance and the quality of financial analysts' information. *Journal of Accounting and Public Policy*, *25*(5):609-625. https://doi.org/10.1016/j.jaccpubpol.2006.07.003

Carcello, J.V. & Neal, T.L. 2000. Audit committee composition and audit reporting. *The Accounting Review*, *75*(4):453-467. https://doi.org/10.2308/accr.2000.75.4.453

Cen, L., Dasgupta, S. & Sen, R. 2016. Discipline or disruption? Stakeholder relationships and the effect of takeover threat. *Management Science*, *62*(10):2765-3084. https://doi.org/10.1287/mnsc.2015.2252

Chebaane, S. & Othman, H.B. 2014. The impact of IFRS adoption on value relevance of earnings and book value of equity: The case of emerging markets in African and Asian regions. *Procedia - Social and Behavioral Sciences*, *145*:70-80. https://doi.org/10.1016/j.sbspro.2014.06.012

Chhaochharia, V. & Grinstein, Y. 2007. Corporate governance and firm value: The impact of the 2002 governance rules. *The Journal of Finance*, *62*(4):1789-1825. https://doi.org/10.1111/j.1540-6261.2007.01257.x

Cimini, R. 2022. The effect of female presence on corporate boards of directors on the value relevance of accounting amounts: empirical evidence from the European Union. *Journal of International Financial Management & Accounting*, *33*(1):134-153. https://doi.org/10.1111/jifm.12138

Cliffe Dekker Hofmeyr. 2023. *King IV. An overview*. [Online]. CDH Cliffe Dekker Hofmeyr. https://www.cliffedekkerhofmeyr.com/export/sites/cdh/en/practice-areas/downloads/King-IV-Information-Brochure.pdf (Accessed: 2 June 2020).

Cohen, J., Holder-Webb, L. & Khalil, S. 2017. A further examination of the impact of corporate social responsibility and governance on investment decisions. *Journal of Business Ethics*, *146*:203-218. https://doi.org/10.1007/s10551-015-2933-5

Conyon, M.J. & He, L. 2017. Firm performance and boardroom gender diversity: A quantile regression approach. *Journal of Business Research*, *79*:198-211. https://doi.org/10.1016/j.jbusres.2017.02.006

Cremers, K.J.M., Litov, L.P. & Sepe, S.M. 2017. Staggered boards and long-term firm value, revisited. *Journal of Financial Economics*, *126*(2):422-444. https://doi.org/10.1016/j.jfineco.2017.08.003

Dulewicz, V. & Herbert, P. 2004. Does the composition and practice of boards of directors bear any relationship to the performance of their companies? *Corporate Governance: An International Review*, *12*(3):263-280. https://doi.org/10.1111/j.1467-8683.2004.00368.x

Dunham, L.M. & Grandstaff, J.L. 2022. The value relevance of earnings, book values and other accounting information and the role of economic conditions in value relevance: a literature review. *Accounting Perspectives*, *21*(2):237-272. https://doi.org/10.1111/1911-3838.12280

Duru, A., Wang, D. & Zhao, Y. 2013. Staggered boards, corporate opacity and firm value. *Journal of Banking & Finance*, *37*(2):341-360. https://doi.org/10.1016/j.jbankfin.2012.09.002

Dzingai, I. & Fakoya, M.B. 2017. Effect of corporate governance structure on the financial performance of Johannesburg Stock Exchange (JSE)-listed mining firms. *Sustainability*, *9*(6):867. https://doi.org/10.3390/su9060867

Eloff, A. & De Villiers, C. 2015. The value-relevance of goodwill reported under IFRS 3 versus IAS 22. *South African Journal of Accounting Research*, *29*(2):162-176. https://doi.org/10.1080/10291954.2015.1006485

Fauzi, F. & Locke, S. 2012. Board structure, ownership structure and firm performance: A study of New Zealand listed-firms. *Asian Academy of Management Journal of Accounting of Finance*, *8*(2):43-67.

Fiador, V.O. 2013. Corporate governance and value relevance of financial information: Evidence from the Ghana Stock Exchange. *Corporate Governance*, *13*(2):208-217. https://doi.org/10.1108/14720701311316689

Firmansyah, A. & Yusuf, Y. 2020. The value relevance of corporate disclosures: Social responsibility, intellectual capital, corporate governance. *Assets*, *9*(1):61. https://doi.org/10.25273/jap.v9i1.5128

Garg, A.K. 2007. Influence of board size and independence on firm performance: A study of Indian companies, *Vikalpa*, *32*(3):39-60. https://doi.org/10.1177/0256090920070304

Guest, P.M. 2009. The impact of board size on firm performance: Evidence from the UK. *The European Journal of Finance*, *15*(4):385-404. https://doi.org/10.1080/13518470802466121

Habib, A. & Azim, I. 2008. Corporate governance and the value-relevance of accounting information: Evidence from Australia. *Accounting Research Journal*, *21*(2):167-194. https://doi.org/10.1108/10309610810905944

Hermalin, B.E. & Weisbach, M.S. 1991. The effects of board composition and direct incentives on firm performance. *Financial Management*, *20*(4):101-112. https://doi.org/10.2307/3665716

Hillier, D., Hodgson, A. & Ngole, S. 2016. IFRS and secrecy: Assessing accounting value relevance across Africa. *Journal of International Financial Management and Accounting*, *27*(3):237-268. https://doi.org/10.1111/jifm.12043

Huang, H., Lobo, G.J. & Zhou, J. 2009. Determinants and accounting consequences of forming a governance committee: Evidence from the United States. *Corporate Governance: An International Review*, *17*(6):710-727. https://doi.org/10.1111/j.1467-8683.2009.00769.x

Hung, M. 2000. Accounting standards and value relevance of financial statements: An international analysis. *Journal of Accounting and Economics*, *30*(3):401-420. https://doi.org/10.1016/S0165-4101(01)00011-8

Iatridis, G.E. 2015. Corporate philanthropy in the US stock market: Evidence on corporate governance, value relevance and earnings manipulation. *International Review of Financial Analysis*, *39*:113-126. https://doi.org/10.1016/j.irfa.2015.03.004

IoDSA, see Institute of Directors in Southern Africa. 2016. *King IV report on corporate governance for South Africa 2016*. [Online]. Institute of Directors in Southern Africa. https://cdn.ymaws.com/www.iodsa.co.za/resource/collection/684B68A7-B768-465C-8214-E3A007F15A5A/IoDSA_King_IV_Report_-_WebVersion.pdf (Accessed: 29 May 2020).

Jensen, M.C. 1993. The modern industrial revolution, exit and the failure of internal control systems. *The Journal of Finance*, *48*(3):831-880. https://doi.org/10.1111/j.1540-6261.1993.tb04022.x

Ji, J., Talavera, O. & Yin, S. 2019. Frequencies of board meetings on various topics and corporate governance: Evidence from China. *Review of Quantitative Finance and Accounting*, *54*:69-110. https://doi.org/10.1007/s11156-018-00784-2

Jiang, W., Wan, H. & Zhao, S. 2016. Reputation concerns of independent directors: Evidence from individual director voting. *The Review of Financial Studies*, *29*(3):655-696. https://doi.org/10.1093/rfs/hhv125

Jiraporn, P. & Liu, Y. 2008. Capital structure, staggered boards, and firm value. *Financial Analysts Journal*, *64*(1):49-61. https://doi.org/10.2469/faj.v64.n1.7

Johnson, W.C., Karpoff, J.M. & Yi, S. 2015. The bonding hypothesis of takeover defenses: Evidence from IPO firms. *Journal of Financial Economics*, *117*(1):307-332. https://doi.org/10.1016/j.jfineco.2015.03.008

Jonty, T. & Mokoaleli-Mokoteli, T. 2015. The impact of gender diversity in the boardroom on firm performance: A South African perspective. *Corporate Board: Role, Duties and Composition*, *11*(1):71-79. https://doi.org/10.22495/cbv11i1art7

JSE, see Johannesburg Stock Exchange. n.d. *History and Company Overview*. [Online]. JSE. https://www.jse.co.za/about/history-company-overview (Accessed: 29 June 2020).

JSE, see Johannesburg Stock Exchange. 2019. *JSE limited listing requirements.* [Online]. JSE. https://www.jse.co.za/sites/default/files/media/documents/2019-04/JSE%20Listings%20Requirements.pdf (Accessed: 13 February 2023).

Jurkus, A.F., Park, J.C. & Woodard, L.S. 2011. Women in top management and agency costs. *Journal of Business Research*, *64*(2):180-186. https://doi.org/10.1016/j.jbusres.2009.12.010

Kalantonis, P., Delegkos, A.E., Sotirchou, E. & Papagrigoriou, A. 2022. Modern business development and financial reporting: Exploring the effect of corporate governance on the value relevance of accounting information—evidence from the Greek listed firms. *Operational Research, 22*:2879-2897. https://doi.org/10.1007/s12351-021-00637-2

Kanagaretnam, K., Lobo, G.J. & Whalen, D.J. 2007. Does good corporate governance reduce information asymmetry around quarterly earnings announcements? *Journal of Accounting and Public Policy*, *26*(4):497-522. https://doi.org/10.1016/j.jaccpubpol.2007.05.003

Khidmat, W.B., Wang, M. & Awan, S. 2018. Corporate governance, earnings management and the value-relevance of accounting information: Evidence from Pakistan. *International Journal of Financial Engineering*, *5*(3):1-31. https://doi.org/10.1142/S2424786318500251

Klein, A. 1998. Firm performance and board committee structure. *Journal of Law and Economics*, *41*(1):275-303. https://doi.org/10.1086/467391

Kosovic, K. & Patel, P. 2013. *Integrated reporting - Is it value relevant? A quantitative study on Johannesburg Stock Exchange*. Master's dissertation. Jönköping University, Jönköping. [Online]. https://www.diva-portal.org/smash/get/diva2:624126/FULLTEXT02.pdf (Accessed: 25 June 2020).

Krechovská, M. & Procházková, P.T. 2014. Sustainability and its integration into corporate governance focusing on corporate performance management and reporting. *Procedia Engineering*, *69*:1144-1151. https://doi.org/10.1016/j.proeng.2014.03.103

Krismiaji, K. & Surifah, S. 2020. Corporate governance, compliance level of IFRS disclosure and value relevance of accounting information: Indonesian evidence. *Journal of International Studies*, *13*(2):191-211. https://doi.org/10.14254/2071-8330.2020/13-2/14

Landel, M. 2016. *Why gender balance can't wait*. [Online]. Harvard Business Review. https://hbr.org/2016/03/why-gender-balance-cant-wait (Accessed: 29 June 2020).

Larcker, D.F. & Rusticus, T.O. 2010. On the use of instrumental variables in accounting research. *Journal of Accounting and Economics*, *49*(3):186-205. https://doi.org/10.1016/j.jacceco.2009.11.004

Leung, S., Richardson, G. & Jaggi, B. 2014. Corporate board and board committee independence, firm performance, and family ownership concentration: An analysis based on Hong Kong firms. *Journal of Contemporary Accounting and Economics*, *10*(1):16-31. https://doi.org/10.1016/j.jcae.2013.11.002

Li, H. & Chen, P. 2018. Board gender diversity and firm performance: The moderating role of firm size. *Business Ethics*, *27*(4):294-308. https://doi.org/10.1111/beer.12188

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

Liu, H., Wang, H. & Wu, L. 2016. Removing vacant chairs: Does independent directors' attendance at board meetings matter? *Journal of Business Ethics*, *133*:375-393. https://doi.org/10.1007/s10551-014-2402-6

Lo, K. & Lys, T. 2000. The Ohlson model: Contribution to valuation theory, limitations and empirical applications. *Journal of Accounting, Auditing & Finance*, *15*(3):337-367. https://doi.org/10.1177/0148558X0001500311

Lo, S. & Andrews, S. 2015. To transform or not to transform: Using generalized linear mixed models to analyse reaction time data. *Frontiers in Psychology*, *6*:1171. https://doi.org/10.3389/fpsyg.2015.01171

Mak, Y.T. & Kusnadi, Y. 2005. Size really matters: Further evidence on the negative relationship between board size and firm value. *Pacific-Basin Finance Journal*, *13*(3):301-318. https://doi.org/10.1016/j.pacfin.2004.09.002

Malik, M. & Shah, S. 2013. Value relevance of firm specific corporate governance and macroeconomic variables: Evidence from Karachi Stock Exchange. *Pakistan Journal of Commerce and Social Sciences*, *7*(2):276-297.

Mans-Kemp, N. & Viviers, S. 2015. The relationship between corporate governance and dividend payout ratios: A South African study. *Management Dynamics: Journal of the Southern African Institute for Management Scientists*, *24*(2):20-35.

Mans-Kemp, N., Erasmus, P. & Viviers, S. 2016. Advances in the corporate governance practices of Johannesburg Stock Exchange companies. *Southern African Business Review*, *20*:71-93. https://doi.org/10.25159/1998-8125/6044

Mans-Kemp, N., Erasmus, P. & Viviers, S. 2017. Does investing in sound corporate governance pay? A South African study. *South African Journal of Business Management*, *48*(2):33-43. https://doi.org/10.4102/sajbm.v48i2.26

Marcia, A., Callaghan, C. & Maroun, W. 2015. Value relevance and corporate responsibility reporting in the South African context: An alternate view post King-III. *South African Journal of Economic and Management Sciences*, *18*(4):500-518. https://doi.org/10.4102/sajems.v18i4.1192

Maroun, W. & Cerbone, D. 2020. *Corporate governance in South Africa*. Berlin: De Gruyter Oldenbourg. https://doi.org/10.1515/9783110621266

Matsa, D.A. & Miller, A.R. 2013. A female style in corporate leadership? Evidence from quotas. *American Economic Journal: Applied Economics*, *5*(3):136-169. https://doi.org/10.1257/app.5.3.136

McMullen, D.A. 1996. Audit committee performance: An investigation of consequences associated with audit committees. *Auditing: A Journal of Practice and Theory*, *15*(1):87-103.

Miralles-Quirós, M.M., Miralles-Quirós, J.L. & Gonçalves, L.M.V. 2018. The value relevance of environmental, social and governance performance: The Brazilian case. *Sustainability*, *10*(3):574. https://doi.org/10.3390/su10030574

Monks, R.A.G. & Minow, N. 1995. *Corporate governance*. Malden: Blackwell Publishers.

Morris, R.D., Pham, T. & Gray, S.J. 2011. The value relevance of transparency and corporate governance in Malaysia before and after the Asian financial crisis. *Abacus*, *47*(2):205-233. https://doi.org/10.1111/j.1467-6281.2011.00339.x

Natesan, P. 2020. The evolution and significance of the "apply and explain" regime in King IV. *Journal of Global Responsibility*, *11*(2):155-160. https://doi.org/10.1108/JGR-10-2019-0091

Ntim, C.G., Lindop, S., Osei, K.A. & Thomas, D.A. 2015. Executive compensation, corporate governance and corporate performance: A simultaneous equation approach. *Managerial and Decision Economics*, *36*(2):67-96. https://doi.org/10.1002/mde.2653

Ntim, C.G., Lindop, S. & Thomas, D.A. 2013. Corporate governance and risk reporting in South Africa: A study of corporate risk disclosures in the pre- and post-2007/2008 global financial crisis periods. *International Review of Financial Analysis*, *30*:363-383. https://doi.org/10.1016/j.irfa.2013.07.001

Ntim, C.G., Opong, K.K. & Danbolt, J. 2012. The relative value relevance of shareholder versus stakeholder corporate governance disclosure policy reforms in South Africa, *Corporate Governance: An International Review*, *20*(1):84-105. https://doi.org/10.1111/j.1467-8683.2011.00891.x

Ntim, C.G., Opong, K.K., Danbolt, J. & Thomas, D.A. 2011. Voluntary corporate governance disclosures by post-apartheid South African corporations. *Journal of Applied Accounting Research*, *13*(2):122-144. https://doi.org/10.1108/09675421211254830

Ntim, C.G. & Osei, K.A. 2011. The impact of corporate board meetings on corporate performance in South Africa. *African Review of Economics and Finance*, *2*(2):83-103.

Ntim, C.G. & Soobaroyen, T. 2013. Corporate governance and performance in socially responsible corporations: New empirical insights from a neo-institutional framework. *Corporate Governance: An International Review*, *21*(5):468-494. https://doi.org/10.1111/corg.12026

Ohlson, J.A. 1995. Earnings, book values, and dividends in equity valuation. *Contemporary Accounting Research*, *11*(2):661-687. https://doi.org/10.1111/j.1911-3846.1995.tb00461.x

Outa, E.R., Ozili, P. & Eisenberg, P. 2017. IFRS convergence and revisions: Value relevance of accounting information from East Africa. *Journal of Accounting in Emerging Economies*, *7*(3):352-368. https://doi.org/10.1108/JAEE-11-2014-0062

Ozkan, N. 2011. CEO compensation and firm performance: An empirical investigation of UK panel data. *European Financial Management*, *17*(2):260-285. https://doi.org/10.1111/j.1468-036X.2009.00511.x

Peasnell, K.V., Pope, P.F. & Young, S. 2000. Accrual management to meet earnings targets: UK evidence pre- and post-Cadbury. *The British Accounting Review*, *32*(4):415-445. https://doi.org/10.1006/bare.2000.0134

Putsai, U.M. & Mkhize, M. 2021. Compliance with international financial reporting standards and value relevance of accounting information in South Africa. *International Journal of Financial Research*, *12*(4):277-293. https://doi.org/10.5430/ijfr.v12n4p277

Rahman, R.A. & Ali, F.H.M. 2006. Board, audit committee, culture and earnings management: Malaysian evidence. *Managerial Auditing Journal*, *21*(7):783-804. https://doi.org/10.1108/02686900610680549

Ramalho, A. 2020. The distinctive stance of the King Reports on corporate governance from a global perspective. *Journal of Global Responsibility*, *11*(2):173-185. https://doi.org/10.1108/JGR-10-2019-0094

Sarumpaet, S., Nelwan, M.L. & Dewi, D.N. 2017. The value relevance of environmental performance: Evidence from Indonesia, *Social Responsibility Journal*, *13*(4):817-827. https://doi.org/10.1108/SRJ-01-2017-0003

Sixpence, A. & Adeyeye, O.P. 2019. Value relevance of book values and earnings of listed non-financial firms in South Africa: A dynamic panel analysis. *International Journal of Monetary Economics and Finance*, *12*(4):290-308. https://doi.org/10.1504/IJMEF.2019.101941

Sustainable Stock Exchanges initiative. 2019. *Johannesburg Stock Exchange (JSE)*. [Online]. SSE. https://sseinitiative.org/stock-exchange/jse/#:~:text=The%20JSE%20is%20currently%20ranked,first%20South%20African%20gold%20rush (Accessed: 14 October 2023).

Swartz, G.E., Swartz, N. & Firer, S. 2006. An empirical examination of the value relevance of intellectual capital using the Ohlson (1995) valuation model. *Meditari Accountancy Research*, *14*(2):67-81. https://doi.org/10.1108/10222529200600013

Thompson, E.K., Ashimwe, O., Buertey, S. & Kim, S. 2022. The value relevance of sustainability reporting: Does assurance and the type of assurer matter? *Sustainability Accounting, Management and Policy Journal*, *13*(4):858-877. https://doi.org/10.1108/SAMPJ-08-2021-0329

Tshipa, J., Brummer, L., Wolmarans, H. & du Toit, E. 2018. The impact of flexible corporate governance disclosures on value relevance. Empirical evidence from South Africa. *Corporate Governance*, *18*(3):369-385. https://doi.org/10.1108/CG-05-2017-0106

Tulung, J.E. & Ramdani, D. 2018. Independence, size and performance of the board: An emerging market research. *Corporate Ownership and Control*, *15*(2-1):201-208. https://doi.org/10.22495/cocv15i2c1p6

Uadiale, O.M. 2010. The impact of board structure on corporate financial performance in Nigeria. *International Journal of Business and Management*, *5*(10):155-166. https://doi.org/10.5539/ijbm.v5n10p155

Vafeas, N. 1999. Board meeting frequency and firm performance. *Journal of Financial Economics*, *53*(1): 113-142. https://doi.org/10.1016/S0304-405X(99)00018-5

Vafeas, N. & Theodorou, E. 1998. The relationship between board structure and firm performance in the UK. *The British Accounting Review*, *30*(4):383-407. https://doi.org/10.1006/bare.1998.0075

Venter, E.R., Emanuel, D. & Cahan, S.F. 2014. The value relevance of mandatory non-GAAP earnings. *Abacus*, *50*(1):1-24. https://doi.org/10.1111/abac.12020

World Economic Forum. 2015. *The Global Gender Gap Report 2015*. [Online]. World Economic Forum. https://www3.weforum.org/docs/GGGR2015/cover.pdf (Accessed: 30 June 2020).

Yermack, D. 1996. Higher market valuation of companies with a small board of directors. *Journal of Financial Economics*, *40*(2):185-211. https://doi.org/10.1016/0304-405X(95)00844-5

Zulu, M., De Klerk, M. & Oberholster, J.G.I. 2017. A comparison of the value relevance of interim and annual financial statements. *South African Journal of Economic and Management Sciences*, *20*(1):1-11. https://doi.org/10.4102/sajems.v20i1.1498