The impact of corporate governance & corporate social responsibility on SA-REITs performance

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Abstract

This paper employs a CGI Index formulated from KING III and IV report to examine the link between corporate performance and quality of corporate governance (CG) and corporate social responsibility (CSR) of SA-REITs listed on the Johannesburg Stock Exchange (JSE). The CGI index is created from King III and IV. The empirical investigation using multiple correspondence analysis (MCA) reveals that corporate governance (CG) practices have a positive influence on firm performances measured by (such as total share return and return on assets). The results imply CG influences the firm performance of SA-REITs. The CSR index is created from the King reports, also the MCA was used, and CSR will likely improve SA-REITs performance by 13%.

Key words: Corporate governance, Corporate social responsibility, REITs, Performance

Introduction

In the early 1900s corporate governance (CG) was introduced by ElGabasi (1900); Low (1920); and Berle and Means (1932); to better understand the functioning of the firms and corporates. Later, Shleifer and Vishny (1997) defined CG as the ways in which investors of corporations assure themselves of getting a return on their investment. It is clear the primary intent of an organisation is to increase its returns.

CG is one of the sort after areas of research globally, a recent review reported by Simons et. al. (2023). In emerging economies, several studies investigated CG and performance, some of these in Asia, for instance Cheung et. al. (2007); Cheng (2008) found that unitary board members consist of executive officers that have a set of rules on how to govern corporations, incorporating good CG is linked to firm financial performance, they found positive impact of CG on firm performance. In an African context, Ntim et. al. (2013) using South Africa (SA) as a laboratory, found that better governed corporations improved the performance of SA corporations significantly. These were CG and firm performance in general not industry specific and or mainly in finance.

This study investigates CG and corporate social responsibility (CSR) impact on SA Real Estate Investment Trusts (REITs) performance. Previously Ntim, (2013), Ntim et. al. (2012) stated that SA corporates are expected to be responsible citizens by giving back as per the Kings reports, they focused on King II. The present study investigates Kings III and IV reports. All SA corporates are expected to submit annual reports based on the latest King report that has more emphasis on disclosure policies annually since 2016. Previous work by Ali et. al. (2020) determined that CSR impacts performance of organisations positively, they adopted the agency theory. This paper

further complements past work in this area of research, there is no research that has investigated CG in this manner, considering the King reports focusing only on REITs.

Research on REITs and CG increased globally focusing on its relation to firm performance, these include studies by Bianco et. al. (2007) and Bauer et. al. (2010) and Lecomte and Ooi (2013). REITs are corporations that own, operate, or finance income-generating real estate. REITs own many types of commercial real estate, ranging from office and apartment buildings to warehouses, hospitals, shopping centres, hotels, and commercial buildings (Han and Liang,1995; Chan, Erickson, and Wang, 2003; Block, 2011). Before the creation of REITs investors could only purchase real estate from real properties only not from stock (Armstrong, 1962, Dockser, 1962, Chan, Erickson, and Wang, 2003, Rackham, 2020). REITs has been a top performing class in SA since 2013 till 2017, it came tops to equities and bonds (Ntuli and Akinsomi, 2017).

SA-REITs is the prominent real-estate investment in an emerging market like SA and is the only nation in the African region on FTSE /EPRA NAREIT (WFE, 2018). Foreign and local investors require more studies on SA REITs (Carten and Ferboyte, 2018) On average, SA REITs have around 30% of their investments offshore and approximately 30% to 40% of their earnings come from outside SA (JSE, 2019). In addition, REITs are important to the investor globally, as nearly 40 countries have Real Estate Investment Trusts (REITs) with a market capitalisation of approximately 1.7trillion US dollars in 2020, then in 2021 it was 1.6 trillion and on the 1st of February 2023 it went up to 2.5 trillion (FTSE EPRA/ NAREIT, 2023).

The evolution CG and SA framework

The SA CG framework is built in an arrangement of King reports that adopted the Anglo-American Toms and Wright (2005); Letza, Sun and Kirkbride (2004) and the United Kingdom (UK) Cadbury report Jones and Pollitt, 2004; Dahya and McConnell, 2007).

Table 1: King reports

Item	KING I	KING II	KING III	KING IV
Inception	1994	2002	2010	2016
Changes	After the end of apartheid, SA adopted the American and UK Corporate Governance framework	After the execution of the Employment Act of 1998, the King report was revised. This new report included new listing rules for listed corporations	After the changes made to the US and UK framework after the 2008 recession; After the birth of the new Companies Act of 1998, the changes to the report were made	Disclosure policies became compulsory for all corporate to report. Corporate social responsibility

The SA model was first introduced in 1994 as King I, later modified to King II in 2002 after the execution of the employment Act. After changes with Companies Act, the King III was introduced in 2010 and finally in December 2016 the last King IV was introduced when disclosure policy became compulsory.

The provisions unique to SA

The SA CG model is made up of 17 principles from the King-IV and 75 principles from the King III reports.

The effects of both *sequence of discrete data* and *cross-sectional* changes in CG index on corporate performance are considered, like Ntim (2013); Ntim and Soobaroyen (2013), Hussain, Rigoni and Orij (2018), Elamer, Ntim and Abdou (2020), however this study adopts a new approach where the indices are created for compliance on King III and IV reports for all REITs.

CSR

In 2017 all organisation listed on JSE had to comply with King IV that required all listed corporations to report on CSR and these reports had to be audited.

Adapted from the King IV these are the recommended practices each corporation should report on, there are four areas (i) Workplace, (ii) Economy, (ii) Society and (iv) environment. All organisations in SA are expected to comply with these to deliver citizens from social, economic, and environmental welfares (King IV, 2016).

SA-REITs

SA REITs now encompass of 5,8% of (JSE), the SA REITs market is liquid as of January 2023, the market capitalisation of 27 listed REITs as of the 1st of February 2023 is R549,22 billion (JSE, 2023).

Table 2 shows the top 5 listed REITs by market capitalisation. A REIT that is varied is essentially diversified, whereby it could be different sectors, for example residential combined with retail and many more. REITs are either internally (in house) or externally (outsourced) managed, all the top 5 REITs are managed internally. Outsourcing management is costly, this was proven by Sigrid (2017).

Table 2: Top 5 REITs as of January 2023

REITs	Focus	Size of Portfolio
Forttress-Income-FundLtd	Diversified	R16,6 bn

Growthpoint-Property-Fund	Diversified	R48,4 bn
Redefine-Properties-Ltd	Diversified: without residential	R27,6 bn
Resilient-Property-Income Fund	Retail	R18,06 bn
Vukile-Property-Fund	Diversified: without residential	R13.8 bn

Sourced: Wall Street, 2023; Centre for Affordable Housing Finance in Africa, 2017; Real-estate Investment Trust (website), 2023

Research problem

Agency problems may be experienced when it comes to managers and shareholders, when applying solely the agency theory without considering the other CG theories. To mitigate for agency costs and to avoid disloyalty issues and to note that managers will not always be good stewards. Previous work determined the relationship between CG and firm performance, in the US Larker et. al. (2017), Guest (2009), Yermack (1999) Gompers et. al. (2003), Cremers and Nair (2005), in Europe, Bauer, Guenster and Otten (2004); Brounen, De Jong and Koedijk (2004), Drobetz and Momtaz (2020) and in SA (Ntim et. al. (2012); Ntim, (2013); Pamburai et. al. (2015), Rehman and Khan (2016) Maroun and Cerbone (2020). The association between CG and operating performance of REITs has been extensively researched in other parts of the world, but not in SA, even though REITs account for 10% of the top 100 corporations listed on the Johannesburg Stock Exchange. Some of the REIT's literatures proves that there is no significant relation between CG and firm performance, in the US, Bianco et. al. (2007) and Bauer et. al. (2010) and in Asia Lecomte and Ooi (2013). However, others, found a positive link between CG and performance in Asia Cheung et. al. (2007), Cheng (2008). The first issue is that CG theoretical approach study in SA does not exist focusing on REITs.

The CSR is the second independent variable. As Advantage (2020) determined that CSR could generate brand perception and thus improve revenue. Ali et. al. (2020) adopted the agency theory and determined that CSR improves firm's valuation, the agency problems were also highlight in this study. Ntim et. al. (2012) reported on CSR using SA as a laboratory, at that time there were no revision of King Reports III and IV, the study was not industry specific, like a REIT study and CSR was a control variable. The gap in the literature is with regards to the African stock markets.

Research questions

Does the level of CG principles in King III and IV reports influence the performance of SA-REITs?

Objectives

To assess the evolution of CG and uncover the performance of REITs over time.

Hypothesis formulation

There are three key CG theories namely agency, stewardship and resource dependency, application of one is not sufficient to understand the multifaceted CG Shleifer and Vishny (1997); The literature proved the relationship between performance and CG in SA (Pamburai et. al. 2015, Ntim et. al.

2012), even though there are other studies that have proven otherwise. In line with the theories, we therefore come to the below hypothesis.

As one of the disclosures polices CSR is also linked to firm performance by Ali, Sial, Brugni, Hwang, Khuong and Khanh (2020) adopted the agency theory and CSR, this policy has also been linked to firm performance by Ntim, (2013), Ntim et. al. (2012). This study will try to understand, the CG mechanism, the different types of management, the influence of CSR policy on performance of SA-REITs. There are two hypotheses from this study, the main independent variable CGI, second variable CSR.

H1: The performance of SA-REITs is positively influenced by the all-inclusive CG and CGI-indice(s).

H1.2: The performance of SA-REITs is positively influenced by CSR.

Literature Review

CG issues date back to the 1900s ElGabasi (1900) when performance of listed firms was emerging (Georgen, 2006). Berle and Means (1932) explained that the purpose of CG is to reduce agency costs that arise from separation of ownership and control. CG theories essentially decreases agency cost. One review by Simons et. al. (2023) determined that CG is one of the most sort after ares of research globally.

Prior empirical evidence

CG on REIT performance

Positive link between CG and performance

The impact of CG on REITs has been studied globally, we review some of the past work that focused on CG and REITs performance. Chong et. al. (2016) found a positive relation between the CG index with ROA, and on excess returns, which helps to address agency problems. A study by Campbell et. al. (2011) found that corporation with experienced CEOs had higher performance, also Chong et. al. (2018) applied a CG index that proved that not only it helps to improve return on assets (ROA) but also helps to gauge excess returns of REITs. Ramachandran et. al. (2018) also concluded similar results, that all three performance measures were positively correlated, however, also to note highly indebted REITs are risky to investors. Experienced managers of REITs show improved performance and positive correlation to CGs impact. Contradictory to above here the ROA is positively linked to CG.

Negative link between CG and performance

Bianco et. al. (2007) explored the CG index modified by Gompers in 2003, they found a negative impact of CG and protective barriers on performance of REITs in 2004, and that there was little

effect of external governance on performance in 2006. Even with slight improvement in 2006 on performance, their study was inconclusive whether in 2006 REITs were managed more by management companies or these were managed internally. Assets also depreciates and ROA could also affect influence negative results. Bauer et. al. (2010) found that REITs CG Index was not related to value, they used Tobin's Q and performance variables ROA, ROE and funds from operations (FFO), this means that REITs do not appear to be driven by assets they invest in and also REITs with experienced managers experienced improved performance.

SAs literature on CG is mainly on other industries Ntim (2013) Pamburai et al. (2015); Hornmark (2015), Rehman and Khan (2016) and Kemp and Erasmus and Viviers (2017) even though SA-REITs account for 10% of the top 100 companies listed on Johannesburg Stock Exchange (JSE), the African world class exchange (JSE, 2020)

Impact of CSR (ESG) on REIT performance

As one of the agency problems, empire building, Jensen (1986) managers are more concerned about a free cash flow problem than focusing growth of an organisation. Cheng et. al. (2014) found that firms with superior CSR have better access to capital because of reduced agency costs, with greater stakeholder engagement. Harjoto and Jo (2011) found that by providing support, firms use CSR and CG between managers and non-investing stakeholders.

Positive link between CSR and firm performance

Ali et. al. (2020) adopted the agency theory and CSR, this policy has also been linked to firm performance by Ntim, (2013), Ntim et. al. (2012) in SA corporates are expected responsible citizens by giving back. CSR influences SA-REITs performance from above previous studies.

Barnear et. al. (2009) reports that in the US CSR reporting has some form of influence stock performance. Cohen, Holder-Webb and Khalilwe (2017) found that governance influence only seems to be important when CSR is practised or reported by corporations. Whereas Ali et. al. (2016) found that one accounting measure, ROA to have a significant relationship with CG and CSR, this measure was not applied on REITs. Whereas other CG principles like corporate panel and attendance of review commission have no significance with any of the accounting measures.

Literature gap

The gap in the literature is with regards to the African stock markets are as follows. First there is no evidence of previous work on REITS and CG performance. Second the comprehensive CG adopted with localised attributes like employment equity, HIV/AIDS included on the CSR index and the 75 CG provisions extracted from the King-III report and 17 principles from King IV. Third, the previous sampled work includes the top five performing JSE industries an REITs are mostly excluded in these studies, even though with promising growth since inception.

Previous studies had inconclusive evidence whether findings were positively link to performance or otherwise, globally the indices adopted in these studies were different and reporting was also dissimilar.

Conclusion: Review

This research endeavours to overcome short comings in SA prior studies in numerous ways. First 27 REITs are analysed over the period of 2013 to 2022. Dissimilar from prior studies, the influence of both cross-sectional and sequence of discrete time data variations in CG index on company performance, as well as on the 75 CG principles of King-III and 17 principles from King IV. Unlike previous work that focus on certain industries of listed corporation on JSE, the current study expands from existing literature. The study creates a CG and CSR Indices from Kings III and IV. Lastly, to develop the steadfastness of the outcomes, complications that may be posed by the presence of endogeneity, with corporate-level fixed effects, are openly addressed.

Data and Methodology

Data

The study investigates the impact of CG and CSR on the firm's performance for SA-REITs listed on the Johannesburg Stock Exchange (JSE). The datasets are sourced from the company's annual report and Bloomberg for the period between 2013 and 2022.

The sample is drawn from 27 SA-REITs listed on the JSE as of the end of December 2022. To observe the relationship between CG and SA-REITs returns, CG financial data is taken from the *Annual Reports*. The accounting variables are extracted from *Datastream*.

Identification of key variables

CGI

There are various restructuring methods; these include principal component analysis (PCA), and multiple correspondence analysis (MCA) among others. Measurement or nature of the variables always informs the preferred an appropriate method to use. The commonly used method is PCA, and it is appropriate for the restructuring of continuous variables only (Adediran et. al. 2020). Whereas MCA is appropriate for the restructuring of categorical variables (Greenacre and Blasius 2006). We constructed a CG index using MCA. MCA[4] is a dataset to formulate application, this will allow the exploration of association with a set of variables by transforming the whole data sets into dummy variables to form an indicator matrix cross tabulation among variables, we adopt the

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[4] MCA (Multiple Correspondence Analysis) is a data set analysis used for categorical data, and it detects underlying structures in a data set. This was first introduced by a Mathematician Benzéri in the 1960s and 1970s in France, this analysis is an improvement from PCA (Principal component analysis) and CA (Correspondence analysis). PCA is used for large data sets containing high number of dimensions and the CA is a multivariate statical technique like PCA applies to categorical rather than continuous.

use of singular value decomposition on stata we use catvar1 and columns catvar2. MCA is its use of a singular decomposition and weighted least squares techniques to find low-dimensional best fitting subspaces with minimal inertia and information loss (LeRoux and Rouants, 2010). When the firm is identified with these criteria, it is allotted yes that is one (1), and otherwise zero (0).

In SA, all companies are required to comply with CG provisions after the King IV report in year 2017 all companies must show compliance in their income statements. King IV has 17 principles, and King III has 75 principles that are made up of 9 broad principles and REITs must comply with these from 2013 till 2016.

These results are analysed in the next chapter.

CSR

Since the Ntim et. al. (2012) paper where the CSR variable was tested using word count. Much has changed since then as they proxied King II and thereafter the King III report made it mandatory that all listed corporation should report CSR, and in 2017 the King report IV provided a list of compliance areas that each corporation should report on. Ackers and Stuart (2015) conducted a review on CSR reporting and compliance, and they found that SA is among the first country to make provision of CSR disclosure mandatory for listed corporations and that companies should use their auditor assurance like the big 5, the top five auditing firms to assist in reporting.

Adapted from the King IV these are the recommended practices each corporation should report on, CSR index is formulated using MCA, exploration of association is applied with a set of variables, the data sets are transformed into dummy variables to form an indicator matrix cross tabulation among variables.

CSR variable is taken from the annual reports and the companies' financial statements. We hypothised a positive relationship with SA-REITs performance.

Performance variables

Our measure of corporate financial performance is commonly used Tobin's Q, nevertheless, to monitor the robustness of our outcomes, and total share returns (TSR), as an alternative and market-based accounting measure, it is total share returns made up of share price and dividends.

Model Specification

The current study draws from the work of Liu and Wu (2016) for a panel analysis with slight modification to obtain a specification as follows:

$$TSR_{it} = \alpha_i + \beta_{i1}CGI_{it} + \beta_{i2}CSR_{it} + \beta_{i3}X_{it} + \varepsilon_i, \qquad t = 1, 2, 3..T \qquad (1)$$

Where TSR_{it} denote the firm's performance, CGI_{it} represents the CG index, CSR_{it} is the Corporate social responsibility, X_{it} represents covariates (such as Total assets, Debt ratio, Audited by the big

4, and cross listing). α_i is constant or intercept, $\beta_{i1,}, \beta_{i2}, , \beta_{i3}$ are the vectors of explanatory variables, i is individual firm and t is time variable, and ε_i is the error term.

Cross listing- is measured on foreign stock markets tend to have better CG structures (Black *et. al.* 2006; Ntim et. al. 2013) a positive relationship with CG is hypnotised, it will take the value of 1 is a REIT is cross listed on foreign stock or 0 otherwise.

Big 5- corporation audited by large corporations are reputable (De Angelo, 1981), we predict the value of 1 if the firm is audited by the five big audit firms in SA or 0 otherwise.

Debt ratio-it means the ratio of debt to equity.

Reliability and Validity

This study has adopted the proven phenomena to measure CG, the creation of index to measure CG has been used in previous studies globally, by Bianco et. al. (2007); Bauer et. al. (2010). In SA, Ntim et.al. (2013) formulated and index that was used to measure the compliance of firms using King II report to create the index. This study creates an indice(s) from king III and IV reports, which is unique in nature as it captures all SA attributes.

The indices are created in such a way that they are standardized are used as a measurement instrument to capture REITs CG compliance.

Empirical Results

Estimation procedures

The study employs ordinary least squares (OLS) with standard error robust check and fixed effects estimator in a panel data analysis to control for time-invariant component in the model. The study creates indices for the CSR and joint Kings III and IV. To separate the kings III from IV, the study uses the count of compliance for each year and for each firm.

The study computed the CSR index using MCA, which is the one of the key independent variables. The MCA result shows that CSR and joint kings III and IV mean is zero (0) and the standard deviation is one (1). The next paragraph shows descriptive statistics results.

Descriptive Statistics

The study focuses on SA REITS for the reason of availability of the data and paucity of study in this area. The study covers the scope of 2013 to 2022, which presented enough information to investigate the impact of the CG index on the performance of the selected firms. Interpolation is applied to generate value of some missing variables, otherwise, the study could have a limitation of a limited dataset as a reason for missing. The study has a strongly balanced panel.

Table 4.1 presents summary statistics of key variables for the selected SA REITs. The study generates performance by subtract opening price from the closing price added it to the dividends and divided by the opening price, as earlier mentioned when describing the variables. The

dependent variable is the firm performance (total stock returns) with a minimum of -42.162 and a maximum of 42.16.

Table 3 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Dividend	220	15.637	34.676	-27.76	313.43
Opening Price (log)	220	6.796	0.976	3.091	9.37
Closing Price (log)	220	6.794	0.971	3.091	9.341
Opening Price	220	1332.559	1606.754	22	11401
Closing Price	220	1336.073	1613.531	22	11731
Firm Performance(dif.)	220	0.74	5.652	-42.162	42.16
Tobins Q	220	-3.287	33.993	-451.97	2
CSR index	230	0	1.002	-1.087	1.199
Kings III & IV	230	0	1.002	-0.535	4.066
Equity ratio	230	18.445	141.879	-0.27	1459.92
Total Asset	230	0.948	4.554	-34.11	30.49

CSR index denote corporate social responsibility index; Kings III & IV implies joint Kings III & IV index;

The compliance of CG from king III and IV over the time were added together. All the other variables are continuous. CSR ranges from -1.09 and 1.20. Tobins Q is the proxy by market to book ratio with a minimum of -451.97 and a maximum of 2.

Unit root tests

The unit root test at the level and first difference for the stationarity of total stock return and covariates using Levin– Lin–Chu (2002); Breitung (2005); Breitung and Das (2005). At the level of investment and savings, the panel unit root is not statistically significant. While the variables are significant at first difference. The results are consistent with the Breitung unit root test except for Tobins Q and kings III and IV compliance. The findings show that it is not all the variables that are stationary at level, others are stationary at first difference.

Table 4 Unit root tests

	LLC unit-root test (With trend)		Breitung unit-root (With trend)	
	Level Adjusted t*	1st difference Adjusted t*	Level (lambda)	1st difference (Lambda)
Firm Performance	-0.810	-6.919***	6.081	-3.072***
Tobins Q	58.459	-1.6e+03***	2.624	2.737
Corporate social responsibility	-1.945**	-7.146***	-2.993***	-0.541
Kings III&IV	7.554	-7.146***	-0.087	-0.541
Total asset	-91.876***	-19.274***	-91.876***	-19.274***
Equity ratio	-2.6e+02***	-18.688***	-2.6e+02***	-18.688***

Note: The test statistics of Levin–Lin–Chu (LLC) test unit-root test are shown as Adjusted t* are reported. The trend was included. *, **, *** implies series stationary significant level at 10%, 5%, 1% respectively. The test statistics of Breitung unit-root test included trend. LLC and Breitung unit-root tests are applicable to balanced panel. Total asset, equity ratio, corporate social responsibility are stationary at level, so, they were used in the analysis at level.

Correlations analysis

The correlation suggests that firm performance and CSR index (r=0.13) are positively correlated. This implies that CSR index is likely to increase the firm performance by 13%. Also, joint kings III and IV and firm performance are positively (r=-0.12). At least, compliance of kings III and IV is likely to improve the firm performance. The analysis is not likely to suffer multicollinearity in the estimation. See below table

Table 5 Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) Total stock return	1.000						
(2) CSR index	0.129	1.000					
(3) kings III & IV	0.012	-0.355	1.000				
(4) Total Asset	-0.115	-0.105	0.076	1.000			
(5) Equity ratio	0.010	-0.139	0.020	-0.024	1.000		
(6) Big 5 Audit firm	-0.092	0.045	0.021	-0.028	0.114	1.000	
(7) Cross-listing	-0.140	-0.034	-0.156	0.117	0.077	-0.056	1.000

CSR index denote corporate social responsibility.

Empirical Results

The result for estimation of CSR and the firm performance. CSR has a significant positive relationship with the firm's performance (Khan et. al. 2023). This implies that CSR is likely to improve firm performance with higher magnitude. Kings III CG compliance has an insignificant relationship with firm performance. Similarly, cross-listing has a significant positive relationship with the firm's performance. While the CSR and equity ratio have a significant positive association with the firm's performance.

Using fixed effects to measure compliance on CSR and Kings (III and IV) and firm relation shows that CSR has a significant positive impact on firm performance.

Table 6 Firm performance and corporate social responsibility

Variables	(1) OLS TSR	(2) OLS TSR	(3) OLS TSR
CSR	0.830**	8.714	2.870***
	(0.412)	(12.28)	(0.837)
CG compliance	0.291		
	(0.403)		
Total Asset	-0.110	-0.255	0.0136
	(0.0820)	(0.234)	(0.0478)
Equity ratio	0.00193	0.000959	4.122***
	(0.00265)	(0.00389)	(0.766)
Big 5 Audit firm	-1.298*	-0.607	-0.259
	(0.761)	(1.758)	(0.508)
Cross-listing	-1.599*	-0.521	-2.315***
	(0.866)	(1.929)	(0.541)
King III		0.121	
		(0.216)	
King IV			-0.720***
			(0.212)
Constant	2.574***	9.521	8.616***

	(0.818)	(13.23)	(2.837)
Observations	220	90	132
R-squared	0.059	0.026	0.425

Standard errors in parentheses: *** $p<0.01$, ** $p<0.05$, * $p<0.1$; TSR denoted total stock return that measures the performance; CSR denote corporate social responsibility index

Using dynamic effects estimator (DFE) CSR has an influence on firm performance. The joint Kings III and IV CG has an insignificant effect on firm performance in the short run. The total assets have a significant positive influence on firm performance. Kings' III compliance has a positive effect on firm performance, but it is not statically significant.

Robustness

For estimation of CSR and Tobin's Q we use ordinary least squares (OLS). CSR has a significant positive relationship with Tobin's Q. Kings III and IV CG compliance has an association with Tobin's Q. Total asset has a significant positive relationship with Tobin's Q. All SA-REITs audited by one of the big five auditing firms has a significant positive relationship with Tobin's Q.

Table 7 Corporate social responsibility and Tobin's Q: OLS

	(1)	(2)	(3)
	With Kings	Kings III	Kings IV
Variables	Tobins Q	Tobins Q	Tobins Q
CSR	4.330*	4.628	0.177*
	(2.520)	(84.26)	(0.103)
CG compliance	2.834		
	(2.462)		
Total Asset	0.241	0.429	0.0159***
	(0.502)	(1.606)	(0.00592)
Equity ratio	-0.000781	0.00236	0.00983
	(0.0162)	(0.0267)	(0.0948)
Big 5	5.209	11.71	0.154**
	(4.658)	(12.07)	(0.0628)
Crosslisting	-2.868	-9.679	-0.0497

	(1)	(2)	(3)
	(5.301)	(13.24)	(0.0669)
Kings III		-1.193	
		(1.484)	
Kings IV			-0.0595**
			(0.0262)
Constant	-3.747	5.088	0.483
	(5.005)	(90.79)	(0.351)
Observations	220	90	132
R-squared	0.026	0.034	0.133

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1; CG compliance addition of kings III and kings IV; CSI denote corporate social responsibility index; Tobins Q measure firm performance

we estimate that CSR and kings (III and IV) CG compliance have insignificant positive impact on Tobins Q. While the equity ratio has a significant positive impact on Tobins Q.

Table 8. Estimation with various selection of variables: King III

	(1)	(2)	(3)	(4)	(5)	(6)
Outcome variable TSR	Fixed effect					
CSR index	0.765*	0.0423	-5.786	-5.786	-5.786	-5.786
	(0.402)	(11.86)	(16.13)	(16.26)	(16.26)	(16.26)
King III		0.129**	0.129**	0.129**	0.129**	0.129**
		(0.0564)	(0.0568)	(0.0572)	(0.0572)	(0.0572)
Total Asset			0.211	0.211	0.211	0.211
			(0.394)	(0.398)	(0.398)	(0.398)
Equity ratio				5.84e-05	5.84e-05	5.84e-05
				(0.00735)	(0.00735)	(0.00735)
o. Big 5 Audit					-	-
o. Cross-listing						-
Constant	0.750**	-8.022	-14.54	-14.54	-14.54	-14.54
	(0.374)	(13.24)	(18.03)	(18.17)	(18.17)	(18.17)
Observations	220	90	90	90	90	90
R-squared	0.018	0.073	0.077	0.077	0.077	0.077
Number of ID	22	22	22	22	22	22

Standard errors in parentheses:*** p<0.01, ** p<0.05, * p<0.1

Table 8 presents the effect of different variables the total stock returns. Column (1) shows that corporate social responsibility has a significant positive impact on the firm performance. However, inclusion of Kings III in column (2), reveal that while corporate social responsibility has an insignificant positive impact of the firm performance. Compliance with Kings III improve the firm performance significantly. Column (3) to (6) shows that kings III has a significant positive contribution to the firm performance. The impact are same (they are not different) even with the various inclusion of different variables.

Table 9. Estimation with various selection of variables: King IV

Outcome variable TSR	(1) Fixed effect	(2)	(3)	(4)	(5)
CSR index	0.267	0.266	0.489	0.489	0.489
	(1.451)	(1.449)	(1.436)	(1.436)	(1.436)
King IV	-0.0185	0.0379	0.377	0.377	0.377
	(0.264)	(1.555)	(1.546)	(1.546)	(1.546)
Total Asset		-0.0565	-0.0152	-0.0152	-0.0152
		(0.0507)	(0.0544)	(0.0544)	(0.0544)
Equity ratio			1.964*	1.964*	1.964*
			(1.014)	(1.014)	(1.014)
o. Big 5 Audit				-	-
o. Cross-listing					-
Constant	2.691	0.630	-5.848	-5.848	-5.848
	(22.46)	(22.51)	(22.48)	(22.48)	(22.48)
Observations	132	132	132	132	132
R-squared	0.000	0.012	0.046	0.046	0.046
Number of coycode	22	22	22	22	22

Standard errors in parentheses:*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 9 presents the effect of Kings IV with different variables on the total stock returns. Column (1) shows that corporate social responsibility has an insignificant positive impact on the firm performance. While kings IV has an insignificant negative impact on the measure of firm performance. With the inclusion of Kings IV and total asset in column (2), the findings show that corporate social responsibility and Kings IV have an insignificant positive impact of the firm performance. The compliance with Kings IV present an inconclusive increase in the firm performance (see column (3) to (5)). However, the impact of Kings IV are not different even with the various inclusion of different variables.

Conclusion

Chen et. al. (2007) dividend paying firms have higher earnings than no dividend paying firms, this mitigates the agency costs, from our results we proved that REITs that have remuneration policies

and systems in on dividend payment were likely to mitigate this agency cost. Like Campbell et. al. (2011) we find that managers with experienced boards have a higher performance, CG leadership will likely improve performance note that this is not statistically significant. In addition, Chong et. al. (2018) explained that this helps to reduce excess return. The CGI index results with striking results on board, remuneration and audit committees, to manage excess cash flows corporations that have audit and remuneration committees in place will likely reduce this agency problem significantly. Also, similar to Benabou and Triole (2010) and Eccles et. al. (2012) these committees will assist deterring managers in their interest with projects that lower the initial investment outlay.

The stewardship theory fails to account where managers do not become good stewards Bathula and Singh (2015), and Ali et. al. (2020) mentioned that monitoring management performance by making use of committees alone does not guarantee management performance. When the firms are audited by the big 5 the significance levels of performance improve. It can be concluded that CG has a positive correlation to SA-REITs, but this is not significant, as each principle behaves differently, but SA-REITs that are also cross listed will likely influence performance.

Our findings on CSR and SA-REITs performance close the gap in the literature that currently exist, not much work was conducted after Westermann (2018) conducted a review and found that there is limited literature on CSR and firm performance. Our index shows a positive relationship with the firm's performance (Khan et. al. 2023). This implies that CSR is likely to improve firm performance by 13%. CSR and equity ratio have a significant positive association with the firm performance. Cheng et. al. (2014) firms with superior CSR have better access to capital because of reduced agency costs, with greater stakeholder engagement.

References

Adediran O.A., Fakoya M., Sikhweni N.P. (2020) The Causal Effect of Education Policy on Female's Decision-Making in sub-Saharan Africa: Evidence from Nigeria. In: Adeyemo K.S. (eds) The Education Systems of Africa. Global Education Systems. Springer, Cham. https://doi.org/10.1007/978-3-030-43042-9_36-1

Bauer, R., Eichholtz, P., & Kok, N. (2010). Corporate governance and performance: the REIT effect. *Real-estate Economics*, 38(1), pp.1–29.

Black, B., Love, I. and Rachinsky, A. (2006a). Corporate governance indices and firm's market values: Time series evidence from Russia. *Emerging Markets Review*, 7(4), pp.361-379.

Breitung, J. (2005). A parametric approach to the estimation of cointegration vectors in panel data. *Econometric Reviews*, *24*(2), pp.151-173.

Breitung, J., & Das, S. (2005). Panel unit root tests under cross-sectional dependence. *Statistica Neerlandica*, *59*(4), pp.414-433.

Campbell, D., Moore, G., & Shrives, P. (2006). Cross-sectional effects in community disclosure. Accounting, Auditing & Accountability Journal, 19(1), pp.96–114.

Chong, W. L., Ting. K.H., and Cheng. F. F., (2016), The Impacts of Corporate Governance on the Performance of REITs in Singapore, *Journal of Real-estate Literature*, 24(2), pp.317-344.

Chong. W. L, Ting. K. H, and Cheng. F. F,, (2017), The performance of externally managed REITs in Asia: Further evidence from free cash flow and agency costs, *Journal of Property Investment & Finance*, 35 (2), pp.200-227.

Chong. W. L., Ting. H. K., and Cheng. F. F., (2017), Impacts of corporate governance on Asian REITs performance, *Pacific Rim Property Research Journal*, 23(1), pp.75-99.

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

Hörnmark, P. (2015), Responsible investment: Should investors incorporate ESG principles when investing in emerging markets. Master's thesis. Jönköping International Business School, Jönköping, Sweden.

Kemp. N. M., Erasmus. P. D and Viviers. S., (2017), Does investing in sound corporate governance pay? A South African study, *South African Journal of Business Management*, 48(2).

Lecomte. P & Ooi. J.T.L., (2013), Corporate Governance and Performance of Externally Managed Singapore REITs, *Real-estate Finance Eco*,46, pp.664–684.

Levin, A., Lin, C. F., & Chu, C. S. J. (2002). Unit root tests in panel data: asymptotic and finite-sample properties. *Journal of econometrics*, *108*(1), pp.1-24.

Ntim, C. G., (2013), An Integrated Corporate Governance Framework and Financial Performance in South African-Listed Corporations. South African Journal of Economics, 81(3), pp. 373-392.

Ntim, C. G., K. K. Opong, J. Danbolt, & D. A. Thomas. (2012a) Voluntary Corporate Governance Disclosures by post-Apartheid South African Corporations, *Journal of Applied Accounting Research* (in press).

Ntim. C. and Soobaroyen. T., (2013), Black Economic Empowerment Disclosures by South African Listed Corporations: The influence of Ownership and Board Characteristics, *Journal of Business Ethics*, 116, pp.121-138.

Ntuli, M., & Akinsomi, (2017), O. An Overview of the Initial Performance of the South African REIT Market. Journal of Real-estate Literature, 25(2), pp.365-388.

Ooi, J. T. L. (2009). The compensation structure of REIT managers: Impact on stock valuation and performance, *Journal of Property Research*, 26(4), pp.309–328.

Pamburai, H.H., Chamisa, E., Abdulla, C. & Smith, C. 2015. 'An analysis of corporate governance and company performance: A South African perspective', *South African Journal of Accounting Research*, 29(2), pp.115-131.

Simons, R., Karam, A., Xiao, Y. and Caldwell, A.S., 2023. Research and Citation Trends in Sustainable Real Estate. *Journal of Real Estate Literature*, *31*(1), pp.48-66.

Solomon, J. (2007). *Corporate governance and accountability*. John Wiley & Sons.

Westermann, S., Niblock, S. J., & Kortt, M. A. (2018). A Review of Corporate Social Responsibility and Real-estate Investment Trust Studies: An Australian Perspective. *Economic Papers: A journal of applied economics and policy*, *37*(1), pp.92-110.

Yermack, D., (1996), Higher market valuation of companies with a small board of directors. *Journal of Financial Economics*, 40(1), pp.185-211.

Other Sources

Real-estate Investment Trust Association, 2017. [online] 20 July. Available at <<www.sareit.com- >> [Accessed 22 August 2017 and 25 August 2020].

European Public Real-estate Association, 2018. [online] 29 April. Available at <www.epra.com>[Accessed 29 May 2018, 25 August 2020 and 12 May 2023]

Johannesburg Stock Exchange, 2019. [online]30 November. Available at <www.jse.com[Accessed 20 May 2023].