

**CORPORATE GOVERNANCE AND FINANCIAL  
PERFORMANCE: A STUDY OF COMPANIES LISTED ON THE  
JOHANNESBURG STOCK EXCHANGE**

by

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## ABSTRACT

In the past two decades, corporate governance has received much attention from academics, investors and managers as well as from policymakers. This is mainly because of scandals and failures that have led to companies in a number of markets closing down. Even though fertile literature on corporate governance performance now exists, there has not been any consensus on the relationship between internal corporate governance and financial performance. In the main, the lack of congruence has been credited to inadequate estimation methods, endogeneity inherent in corporate governance studies, economic periods, industry nuances and country differences. Notwithstanding, the recent global financial crisis in 2007 to 2008 also heightened the interest in corporate governance. Proponents of corporate governance argue that the financial crisis was an exogenous shock that hit poorly governed companies more than their counterparts. On the other hand, critics of corporate governance attribute the global financial crisis squarely to corporate governance. Therefore, the main objective of the study was to understand the relationship between internal corporate governance and company performance from the perspective of three distinct economic periods as well as industry nuances, cognisant of endogeneity issues.

Taking a cue from previous studies, the corporate governance attributes were board size, board independence, board committees, board diversity (in terms of race and gender), board activity and leadership structure. The dependent variable of the company was assessed by accounting-based measure (ROA) and market-based measure (Tobin's Q). The study used corporate governance fundamentals theories such as agency, resource dependence and stewardship to investigate the relationship between corporate governance and company performance. To this end, a sample of 90 companies from the five largest South African industries, namely basic materials, consumer goods, consumer services, financials and industrials covering a 13-year period from 2002 to 2014 (1 170 firm-year observations) were examined through the use of three estimation approaches, namely two-stage least squares (2SLS), generalised method of moments (GMM) and generalised least squares (GLS).

Two important points emerged from the study. First, corporate governance structures operated differently in crisis and non-crisis periods. By and large, some corporate governance attributes had a positive impact on company performance during steady-state periods and provided a hedging mechanism during crisis periods. The results pointed to an important issue, which was the need to re-evaluate corporate governance not only in stable periods but also during turbulent times, and to evaluate its ability to perform effectively in such different conditions. Thus, crafting a robust corporate governance structure well in advance of the crisis could be helpful.

Secondly, accounting returns appeared to be in favour of the stewardship theory, while market returns seemed to favour agency and resource dependence theories. This indicated that accounting returns viewed independent boards as adding no value while the market returns viewed independent boards as a means of bringing adequate resources to the company. Further, the market perceived larger boards, board activity, board committees and leadership structure to be structures that could provide adequate monitoring and reduce agency costs. The market presumed that managers were disingenuous and would embark on malpractices of personal embezzlement. This finding corroborated the empirical evidence of Black, Jang and Kim (2006:366), namely that insiders (managers) and outsiders (investors) valued corporate governance differently.

Similar to most studies in corporate governance that recorded mixed results for accounting and market-based measures (Arora & Sharma, 2016:427; Gherghina, 2015:97; Meyer & De Wet, 2013:19), this study posited that it was not surprising that in some instances accounting-based and market-based performance measures provided contrasting results as the two indicators measured performance from different perspectives (Rebeiz, 2015:753).

In respect of industry dynamics, findings from the regression results concluded that the relationship between corporate governance and company performance differed from industry to industry as well as from period to period and should not be replicated. For instance, in line with the stewardship theory and during the pre-crisis period, board

independence had an inverse relationship to performance for the financials industry, which could imply that due to the nature and complexity of the financials industry, independent non-executives added no value as they did not understand the business better than executive management. These findings are important given the increasing trend towards boardroom independence around the globe. In this case, and contrary to King III, it would make sense to have more executive management members than independent board members. In the same vein, board independence had no impact whatsoever on the basic materials industry.

Recently, a large body of empirical literature has raised questions about endogeneity making the findings of the relationship between corporate governance and performance spurious (Afrifa & Tauringana, 2015:730; Larcker & Rusticus, 2010:186; Nguyen, Locke & Reddy, 2014:2; Schultz, Tan & Walsh, 2010:146). The findings from a series of the sensitivity analyses indicated that the empirical evidence reported in this study was robust to potential endogeneity issues.

The findings in the study have important implications for putting into practice good corporate governance. The outcomes of the analyses imply that South African companies may possibly enhance their performance by implementing good corporate governance practices based on their unique circumstances. However, the findings on the association between several governance indicators and company performance measures indicated that not all corporate governance attributes significantly affected company performance.

## DECLARATION AND COPYRIGHT

I, **Johannes Tshipa**, declare that the research work reported in this thesis is my own, except where otherwise indicated and acknowledged. It is submitted for PhD (Financial Management Sciences) at the University of Pretoria, Gauteng. This thesis has not, either in whole or in part, been submitted for a degree or diploma to any other university. I further declare that all sources cited or quoted are indicated and acknowledged by means of a comprehensive list of references.

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**Johannes Tshipa**

Signed at-----

On this----- day of-----2017

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## DEDICATION

This thesis is dedicated to my beautiful wife, Pauline Refilwe Tshipa, and two wonderful daughters, Keamogetswe Tshipa and Onthatile Tshipa, for their encouragement and unconditional support. Thank you for bearing with me during the last 10 years when I have often been absent from home, working on the degree in Master of Business Administration (MBA), the degree in Master of Management Finance and Investment (MMFI) and now the PhD. It's my turn to support you now.

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# CONTENTS

<b>ABSTRACT</b> .....	<b>i</b>
<b>DECLARATION AND COPYRIGHT</b> .....	<b>iv</b>
<b>DEDICATION</b> .....	<b>v</b>
<b>ACKNOWLEDGEMENTS</b> .....	<b>vi</b>
<b>CHAPTER 1</b> .....	<b>1</b>
<b>INTRODUCTION, BACKGROUND AND MOTIVATION</b> .....	<b>1</b>
1.1 INTRODUCTION .....	1
1.2 BACKGROUND TO THE STUDY .....	2
1.3 CONTEXT OF THE STUDY .....	5
1.4 RESEARCH PROBLEM .....	6
1.4.1 Problem statement.....	9
1.4.2 Research objectives.....	9
1.5 MOTIVATION FOR THE STUDY .....	10
1.6 SIGNIFICANCE OF THE STUDY .....	14
1.7 KEY CONCEPTS .....	19
1.8 ORGANISATION OF THE STUDY .....	20
1.9 CHAPTER SUMMARY .....	23
<b>CHAPTER 2</b> .....	<b>24</b>
<b>CORPORATE GOVERNANCE MODELS</b> .....	<b>24</b>
2.1 INTRODUCTION.....	24
2.2 DEFINING CORPORATE GOVERNANCE .....	24
2.3 GLOBAL CORPORATE GOVERNANCE REFORMS .....	28
2.4 MAIN CORPORATE GOVERNANCE MODELS .....	31
2.5 SHAREHOLDER MODEL OF CORPORATE GOVERNANCE .....	32
2.5.1 Major criticisms of the shareholder model.....	33
2.6 THE STAKEHOLDER MODEL OF CORPORATE GOVERNANCE .....	36
2.6.1 Major criticisms of the stakeholder model .....	40
2.7 CONVERGENCE IN CORPORATE GOVERNANCE MODELS.....	41
2.8 CHAPTER SUMMARY .....	42
<b>CHAPTER 3</b> .....	<b>44</b>
<b>CORPORATE GOVERNANCE IN SOUTH AFRICA</b> .....	<b>44</b>



3.1 INTRODUCTION .....	44
3.2 THE SOUTH AFRICAN EXTERNAL CORPORATE GOVERNANCE LANDSCAPE .....	44
3.2.1 Overview of the external corporate governance system.....	45
3.3 THE SOUTH AFRICAN INTERNAL CORPORATE GOVERNANCE LANDSCAPE .....	48
3.4 THE SOUTH AFRICAN COMPANIES ACT, INSIDER TRADING ACT, JSE'S LISTINGS REQUIREMENTS AND INTERNAL CORPORATE GOVERNANCE STRUCTURES ....	48
3.4.1 The Companies Act and internal corporate governance structures .....	49
3.4.2 The JSE's Listings Requirements, Insider Trading Act and internal corporate governance structures .....	51
3.5 THE 1994 KING REPORT ON CORPORATE GOVERNANCE FOR SOUTH AFRICA (KING I).....	54
3.5.1 Background to King I.....	54
3.5.2 Corporate governance structures imposed on companies by King I.....	56
3.5.3 Evaluation of King I.....	62
3.6 THE 2002 KING REPORT ON CORPORATE GOVERNANCE FOR SOUTH AFRICA (KING II) .....	64
3.6.1 Background to King II.....	64
3.6.2 Corporate governance structures imposed on companies by King II.....	72
3.6.3 Evaluation of King II .....	79
3.7 THE 2009 KING REPORT ON CORPORATE GOVERNANCE FOR SOUTH AFRICA (KING III) .....	81
3.7.1 Background to King III.....	81
3.7.2 Corporate governance structures imposed on companies by King III.....	83
3.7.3 Evaluation of King III .....	86
3.8 CHAPTER SUMMARY .....	87
<b>CHAPTER 4.....</b>	<b>89</b>
<b>LITERATURE REVIEW AND RESEARCH HYPOTHESES ON THE CORPORATE     GOVERNANCE AND FINANCIAL PERFORMANCE NEXUS .....</b>	<b>89</b>
4.1 INTRODUCTION .....	89
4.2 REVIEW OF THE LITERATURE ON INTERNAL CORPORATE GOVERNANCE AND COMPANY PERFORMANCE .....	89
4.3 AGENCY THEORY .....	90
4.3.1 Agency theory and corporate governance.....	91
4.4 STEWARDSHIP THEORY .....	92

4.4.1 Stewardship theory and corporate governance .....	93
4.5 RESOURCE DEPENDENCE THEORY .....	94
4.5.1 Resource dependence theory and corporate governance .....	94
4.6 REVIEW OF EMPIRICAL LITERATURE ON INTERNAL CORPORATE GOVERNANCE AND HYPOTHESES DEVELOPMENT .....	95
4.6.1 Board size and financial performance .....	96
4.6.2 Board independence and financial performance .....	99
4.6.3 Presence of board committees and financial performance .....	103
4.6.4 Board activity and financial performance.....	106
4.6.5 Board diversity and financial performance .....	107
4.6.6 Leadership structure and financial performance.....	113
4.7 CHAPTER SUMMARY .....	114
<b>CHAPTER 5.....</b>	<b>116</b>
<b>RESEARCH METHODOLOGY.....</b>	<b>116</b>
5.1 INTRODUCTION .....	116
5.2 CORPORATE GOVERNANCE PROXIES .....	117
5.3 PARADIGMS OF RESEARCH .....	117
5.4 RESEARCH OBJECTIVES.....	118
5.5 SECONDARY DATA COLLECTION.....	119
5.6 DATA AND SOURCES .....	120
5.7 CRITERIA FOR SELECTING THE FINAL SAMPLE .....	121
5.8 DATA FRAMEWORK .....	123
5.9 CONTROLLING FOR SAMPLING BIAS .....	124
5.10 DATA COLLECTION .....	124
5.10.1 Independent corporate governance variables .....	124
5.10.2 Control variables: company characteristics .....	125
5.10.3 Other control variables: company characteristics .....	126
5.10.4 Dependent variables: performance measures.....	126
5.11 PANEL DATA .....	137
5.12 MODEL SPECIFICATION.....	137
5.13 SPECIFICATION TESTS.....	139
5.13.1 Testing for the presence of outliers .....	139
5.13.2 Panel data unit root test .....	141
5.13.3 Heteroscedasticity.....	141

5.13.4 Serial correlation.....	141
5.13.5 Endogeneity.....	141
5.13.6 Multicollinearity .....	142
5.13.7 Normality .....	142
5.14 ESTIMATION METHODS.....	142
5.15 CHAPTER SUMMARY .....	144
<b>CHAPTER 6.....</b>	<b>145</b>
<b>EMPIRICAL EVIDENCE OF CORPORATE GOVERNANCE STRUCTURES AND FINANCIAL PERFORMANCE IN SOUTH AFRICA .....</b>	<b>145</b>
6.1 INTRODUCTION.....	145
6.2 PRELIMINARY DATA ANALYSIS.....	146
6.2.1. Selection of the appropriate estimation method for the study .....	146
6.2.2 Assumption of autocorrelation.....	147
6.2.3 Panel data unit root test.....	147
6.2.4 Selection of the requisite performance measures for the study .....	149
6.2.5 Assumption of normality.....	150
6.2.6 Endogeneity tests .....	152
6.2.7 Assumption of outliers.....	154
6.2.8 Assumption of multicollinearity .....	155
6.2.9 Descriptive statistics .....	156
6.3 REGRESSION RESULTS OF CORPORATE GOVERNANCE AND FINANCIAL PERFORMANCE.....	165
6.3.1 Tobin's Q and corporate governance: Model 1.....	167
6.3.2 ROA and corporate governance: Model 2 .....	172
6.4 IMPACT OF INDUSTRY DYNAMICS ON THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE AND FINANCIAL PERFORMANCE.....	179
6.4.1 Corporate governance and financial performance nexus in the financials industry.....	179
6.4.2 Corporate governance and financial performance nexus in the basic materials industry.....	183
6.4.3 Corporate governance and financial performance nexus in the consumer services industry.....	186
6.4.4 Corporate governance and financial performance nexus in the consumer goods industry.....	188

6.4.5 Corporate governance and financial performance nexus in the industrials industry.....	190
6.5 TESTING FOR ROBUSTNESS .....	193
6.5.1 Potential endogeneity problems.....	194
6.5.2 Sensitivity analyses.....	195
6.6 CHAPTER SUMMARY .....	197
<b>CHAPTER 7.....</b>	<b>198</b>
<b>CONCLUSIONS, IMPLICATIONS AND LIMITATIONS.....</b>	<b>198</b>
7.1 INTRODUCTION.....	198
7.2 RESEARCH FINDINGS.....	198
7.2.1 Board size and financial performance .....	201
7.2.2 Board independence and financial performance .....	202
7.2.3 Board committees and financial performance .....	204
7.2.4 Board diversity and financial performance .....	205
7.2.5 Board activity and financial performance.....	207
7.2.6 Leadership structure and financial performance.....	208
7.3 CORPORATE GOVERNANCE IN PRE-CRISIS CONDITIONS.....	210
7.4 CORPORATE GOVERNANCE IN POST-CRISIS CONDITIONS.....	210
7.5 CORPORATE GOVERNANCE IN CRISIS CONDITIONS .....	211
7.6 FINDINGS BASED ON INDUSTRY AND PERIOD DYNAMICS .....	212
7.6.1 Findings specific to the financials industry .....	212
7.6.2 Findings specific to the basic materials industry.....	213
7.6.3 Findings specific to the consumer services industry.....	213
7.6.4 Findings specific to the consumer goods industry .....	214
7.6.5 Findings specific to the industrials industry .....	214
7.7 FINDINGS BASED ON THE ROBUSTNESS ANALYSES .....	214
7.8 POLICY IMPLICATIONS .....	216
7.9 RESEARCH CONTRIBUTIONS .....	219
7.10 LIMITATIONS.....	220
7.11 AVENUES FOR FURTHER STUDIES.....	221
7.12 CHAPTER SUMMARY .....	223
<b>REFERENCES.....</b>	<b>226</b>

## LIST OF ABBREVIATIONS

BCCI	Bank of Credit and Commerce International
CEO	chief executive officer
CG	corporate governance
EVA	economic valued added
FRC	Financial Reporting Council
GLS	generalised least squares
GMM	generalised method of moments
IoDSA	Institute of Directors in Southern Africa
JSE	Johannesburg Stock Exchange
OECD	Organisation for Economic Co-operation and Development
OLS	ordinary least squares
ROA	return on assets
ROE	return on equity
SA	South Africa
SOX	Sarbanes-Oxley Act
US	United States
UK	United Kingdom
VIF	variance inflation factors
WEF	World Economic Forum
2SLS	two-stage least squares

## LIST OF TABLES

Table 3.1:	Comparison of internal corporate governance provisions of the Cadbury, King I, King II, King III and King IV reports .....	53
Table 3.2:	Major domestic Acts influencing corporate governance since 1994.....	69
Table 4.1:	Summary of the six research hypotheses for the relationship between corporate governance structures and company performance .....	115
Table 5.1:	Summary of the sample selection procedure .....	122
Table 5.2:	Description of variables used in the study.....	140
Table 6.1:	Selection of the appropriate estimation method .....	148
Table 6.2:	Descriptive statistics of the variables .....	151
Table 6.3:	Effect of past performance on the GLS estimator .....	153
Table 6.4:	Pearson correlation matrix for variables used in the study.....	158
Table 6.5:	Regression results of the impact of corporate governance attributes on Tobin's Q and ROA.....	166
Table 6.6:	Summary of all hypotheses as measured by Tobin's Q based on the entire period, pre-crisis, during crisis and post-crisis periods for all companies.....	168
Table 6.7:	Summary of all hypotheses as measured by ROA based on the entire period, pre-crisis, during crisis and post-crisis periods for all companies.....	173
Table 6.8:	Summary of all hypotheses as measured by Tobin's Q and ROA based on the entire period, pre-crisis, during crisis and post-crisis periods for the financials industry.....	181
Table 6.9:	Summary of all hypotheses as measured by Tobin's Q and ROA based on the entire period, pre-crisis, during crisis and post-crisis periods for the basic materials industry.....	184
Table 6.10:	Summary of all hypotheses as measured by Tobin's Q and ROA based on the entire period, pre-crisis, during crisis and post-crisis periods for the consumer services industry.....	187

Table 6.11:	Summary of all hypotheses as measured by Tobin’s Q and ROA based on the entire period, pre-crisis, during crisis and post-crisis periods for the consumer goods industry .....	189
Table 6.12:	Summary of all hypotheses as measured by Tobin’s Q and ROA based on the entire period, pre-crisis, during crisis and post-crisis periods for the industrials industry .....	192
Table 6.13:	Segmented regression results for both profitable and unprofitable companies for all firm-year observations.....	194
Table 6.14:	Effect of lagged independent variables on current company performance for the entire period.....	195
Table 6.15:	Effect of removing or adding of control variables.....	196

## LIST OF FIGURES

Figure 3.1: The South African external corporate governance framework ..... 46



## LIST OF APPENDICES

Appendix 1: Regression results of the impact of corporate governance attributes on Tobin's Q and ROA .....	257
Appendix 2: Panel data unit root test .....	259
Appendix 3: Effect of past performance on estimation models .....	261
Appendix 4: Identification of outliers using a box-plot .....	262
Appendix 5: Corporate governance models for each economic period per industry	269
Appendix 6: Descriptive statistics for the financials industry .....	270
Appendix 7: Descriptive statistics for the consumer services industry .....	271
Appendix 8: Descriptive statistics for the consumer goods industry.....	272
Appendix 9: Descriptive statistics for the industrials industry .....	273
Appendix 10: Descriptive statistics for the basic materials industry .....	274
Appendix 11: Summary of the hypotheses tests for the entire period, pre-crisis period, crisis period and post-crisis period .....	275
Appendix 12: A list of the names and industries of the 90 sampled companies.....	277
Appendix 13: Industrial composition of all JSE listed firms on 26/02/2015 .....	280

## CHAPTER 1

### INTRODUCTION, BACKGROUND AND MOTIVATION

#### 1.1 INTRODUCTION

The study seeks to explore the relationship between internal corporate governance structures and financial performance for South African companies listed on the Johannesburg Stock Exchange (JSE), cognisant of the industry dynamics as well as different economic periods. Corporate governance has been a topical subject for researchers, investors, policymakers and academics. While some have seen corporate governance as an ultimate solution for companies, others have attributed the 2007 to 2008 global financial crisis to the inadequacies in the corporate governance of financial companies (Kirkpatrick, 2009:1). Essentially, this underscores the importance of corporate governance to the performance of a company.

Internal corporate governance attributes are expected to enhance company performance during normal economic times by effectively monitoring directors and ensuring that their interests and those of shareholders are in tandem (Afrifa & Tauringana, 2015:729). However, the cogency of such claims in abnormal economic times such as a financial crisis and for different types of industries has been questioned (Van Essen, Engelen & Carney, 2013:220).

The literature review indicates that research to date has an inconclusive record regarding good corporate governance and financial performance nexus. Such findings may be due to differences in definitions, measurements and periods of time as well as variables associated with companies such as size and complexity (Shank, Hill & Stang, 2013:391).

To this end, using an unbalanced panel data regression analysis on a sample of 90 JSE-listed companies (1 170 firm-year observations) over the period 2002 to 2014, the study contributes to the understanding of the importance of compliance with the prescribed King

III Code of Corporate Governance on the performance of South African listed companies, before, during and after the global financial crisis. In addition, the study also investigates the impact of the industry nuances on the relationship between corporate governance and performance across the five major South African industries during the three distinct economic periods.

The period of this study is also unique, because it covers a relatively stable economic period before the financial crisis, a challenging and unstable period of time when the financial crisis materialised and the aftermath of the financial crisis. In addition, the examination period of the study also covers the two corporate governance reforms in South Africa, King II in 2002 and King III in 2009 as well as the new Companies Act No. 71 of 2008.

The chapter is structured as follows: after the introduction, Section 1.2 provides a summary of the recent corporate governance reforms in South Africa as a background to the study. Section 1.3 sets out the context of the study. Section 1.4 presents the main motivation for the study. The significance of the study is noted in Section 1.5. The research problem is presented in Section 1.6. Key concepts are provided in Section 1.7. The organisation of the thesis is introduced in Section 1.8 and the conclusion to the chapter is in Section 1.9.

## **1.2 BACKGROUND TO THE STUDY**

Interest in corporate governance has grown tremendously in the last two decades. Corporate scandals, environmental concerns, globalisation and the recent global financial crisis have all played their part in raising renewed shareholder and public awareness of the governance of companies. The international disasters in financial reporting including WorldCom Incorporated (Inc) in the United States (US), Parmalat in Italy, the Maxwell saga in the United Kingdom (UK), Daewoo in Korea, Macmed, Regal Treasury Bank, Saambou, Leisurennet, JCI, Sentula Mining and Fidentia in South Africa, demonstrate the

growing need for robustness and transparency in the governing of companies. These kinds of events have raised considerable public demand for governance reforms globally.

Indeed, almost all major developed countries have made efforts to reconsider how companies should be organised by developing codes of good corporate governance (Macey & O'Hara, 2003:98). In theory, compliance with the relevant code of corporate governance should reduce agency costs and improve corporate performance (Garanina & Kaikova, 2016:347). Durnev and Kim (2005:1461), Giannetti and Simonov (2006:1507), Klapper and Love (2004:703) and Shank *et al.* (2013:384), provide empirical evidence of good corporate governance being positively related to growth opportunities of companies and countries alike and investors benefitting from good corporate governance. Hence it is not surprising that countries have elevated corporate governance as a policy agenda. The pressure emanates from institutional investors who regard corporate governance as a primary consideration when selecting shares for investment (Abdioglu, Khurshed & Stathopoulos, 2013:916; Giannetti & Koskinen, 2010:160).

With the implementation of South Africa's National Development Plan (NDP), which aims to eliminate poverty and reduce inequality by 2030 (African Corporate Governance Network, 2016:101), the country needs to increase mobilisation of both domestic and foreign capital. Foreign capital is the key to creating the 11 million jobs that the NDP envisages by 2030.

Corporate governance is particularly relevant in developing economies, where the injection of foreign investment is essential to economic growth (Vaughn & Ryan, 2006:504). According to Chen, Chen and Wei (2009:273), institutional investors from around the world are willing to pay a price premium for shares in companies with good corporate governance, especially when the companies are in countries with weak legal protection of investors. Consequently, corporate governance increasingly contributes to the economy of any country. To this end, South Africa has to take stock of its corporate governance culture in order to attract inward investment because corporate governance

impacts both the stability and growth prospects of companies and therefore of the country (Malherbe & Segal, 2001:3).

Due to the positive externalities of corporate governance, policymakers grapple with the idea of enacting voluntary or mandatory corporate governance. After all, some mandatory minimum disclosure rules could increase firm market values (Ararat, Black & Yurtoglu, 2017:129). South Africa, like the United Kingdom, Australia, Romania and Canada, has a voluntary approach to corporate governance, where South African listed companies are required by King III to apply or explain non-compliance, while in the United States (US) and Sri Lanka, corporate governance is mandatory (Cuomo, Mallin & Zattoni, 2016:223; Tshipa & Mokoaleli-Mokoteli, 2015b:149).

Subsequently, in recent years, more and more countries have introduced corporate governance codes to guide the establishment of good governance practices in public companies. The UK, through its Cadbury Code, took the lead in this respect (Cuomo *et al.*, 2016:225). As early as 1993, public companies were required to comply or explain the reasons for non-compliance with the Cadbury Committee recommendations (Cadbury Report, 1992:Section 3.7). These recommendations were later incorporated into the Code of Corporate Governance (henceforth called the Code). Though the Code does not have the force of law behind it (with companies still required to comply or give reasons for non-compliance), it forms part of the listing requirements of the London Stock Exchange. From 1992 to 1998, four other European Union countries followed the UK by issuing their first national code; France with the Vienot Report in 1995, the Netherlands with the Peters Report in 1997, Belgium with the Cardon Report in 1998 and Spain with the Olivencia Code in 1998 (Cuomo *et al.*, 2016:225). In Africa, South Africa was the first country to issue such a code in 1994, namely the King I Code (African Corporate Governance Network, 2016:70).

Following the implementation of the Code, South Africa followed by implementing several innovative and comprehensive corporate governance reform initiatives. These initiatives

such as King Report on Corporate Governance, Insider Trading and Revised Listings Requirements are discussed in Chapter 3.

### **1.3 CONTEXT OF THE STUDY**

Armstrong, Segal and Davis (2005:3) argue that it may be premature to talk about corporate governance regulations in much of Africa, where the private sector is relatively very small and capital markets are poorly developed. South Africa, though, as already explained, has kept abreast with international best standards by constantly reviewing its corporate governance practices. As a result, South Africa, as an African emerging market, offers an interesting research context in which the corporate governance and financial performance nexus can be empirically examined.

Unlike many African countries, South Africa is ahead of most African emerging markets in the implementation and enforcement of corporate governance standards (African Corporate Governance Network, 2016:69). With regard to the stock exchange, the Johannesburg Stock Exchange (JSE) continues to dominate the sub-Saharan Africa (SSA) region, representing 38% of all listed companies and 83% of total market capitalisation in the region in 2012 (World Bank, 2013b:67). In fact, 68 of sub-Saharan Africa's 100 largest companies in terms of market capitalisation are listed on the JSE, including the five largest companies in Africa (African Business Magazine, 2013:1). Apart from being the most advanced stock exchange in the region, the JSE is also among the global top 20 of exchanges in terms of market capitalisation and turnover. With a market capitalisation of 159% of GDP in 2012, South Africa also has one of the largest equity markets in the world relative to the size of its economy (African Corporate Governance Network, 2016:69). As a result, South Africa, and therefore the JSE, is the natural choice for this study.

## 1.4 RESEARCH PROBLEM

Despite the substantial development of corporate governance codes since 1978 and the empirical findings of a correspondingly large stream of research, good governance failed to prevent the recent global financial crisis (Siddiqui, 2015:218). Therefore, the question arises: does good governance benefit companies or is it just another cost of doing business in today's global marketplace?

The economic crisis on the South East Asian stock market in 1997, which saw a number of corporate failures, was purported to have emerged as a result of poor corporate governance mechanisms (Haniffa & Hudaib, 2006:1037). In the same vein, some partly attribute the collapse of big companies in developed countries such as Enron Corporation (Corp.), WorldCom Incorporated (Inc.) and Global Crossing Limited (Ltd) to weak corporate governance practices (Ntim, Opong, Danbolt & Thomas, 2012:126; Vinten, 2002:4). According to Petra (2006:107), the actual board governance structure of the above three companies was as follows:

- Enron Corp. – maintained a board with the proportion of outside independent directors ranging from 50% to 55%;
- WorldCom Inc. – maintained a board with the proportion of outside independent directors ranging from 40% to 50%;
- Global Crossing Ltd – maintained a board with the proportion of outside independent directors ranging from 25% to 45%.

It is interesting to note that while only Enron Corp. had a majority of outside independent directors, in all three companies representation by outside independent directors was evident. Despite the presence of these directors, all three companies suffered breakdowns in their corporate governance systems as a result of the failure of the outside independent directors, and indeed the entire board, to fulfil their oversight functions.

South Africa has also had its fair share of scandals, which include Macmed (in 1999), Regal Treasury Bank (in 2001), Saambou (in 2002), Leisurennet (in 2002), JCI (in 2005), Sentula Mining (in 2006) and Fidentia (in 2007). These corporate failures and scandals are related to weak corporate governance (Abdo & Fisher, 2007:43). More recently, the debacle at one of South Africa's IT companies, Pinnacle Holdings, put the spotlight solely on the problems with corporate governance in South Africa.

As a result of these scandals, which supposedly were a result of lapses in corporate governance, investors demanded reforms in both corporate structures and practices in exchange for their infusion of capital (Kakabadse & Korac-Kakabadse, 2002:305). In Africa, South Africa was the first to develop a corporate governance code of best practices in 1994 (Mangena & Chamisa, 2008:28). Given the importance of corporate reforms, codes of corporate governance have attracted much attention from policy-makers and academics (Aguilera & Cuervo-Cazurra, 2009:385; Tshipa & Mokoaleli-Mokoteli, 2015b:164).

As the interest in corporate governance heightens, a number of studies have attempted to establish an empirical association between corporate governance and company performance. Research in the stream of corporate governance and company performance was initiated by Jensen and Meckling (1976:305), who found that despite the intrinsic agency costs, creditors and investors benefited from good corporate governance.

Similarly, and in separate studies, Amman, Oesch and Schmid (2011:36), Balasubramanian, Black and Khanna (2010:319), Bhagat and Bolton (2008:257), Sami, Wang and Zhou (2011:106) and Waweru (2014:468) found that corporate governance had a positive relation to the performance of a company. However, Yammeesri and Herath (2010:279) found no significant relationship between corporate governance and company value. Other studies reported inconclusive evidence of the nature of the relationship between corporate governance and performance (Abdo & Fisher, 2007:43; Babatunde & Olaniran, 2009:330; Klapper & Love, 2004:724).



Given the importance of the subject and the level of research activities, it would seem reasonable to expect that a clear and demonstrable link between corporate governance and company performance has been established. Despite a sustained effort, however, researchers have so far failed to identify a clear nexus (Nicholson & Kiel, 2007:585). Unfortunately, most of the evidence to date reveals a plethora of mixed-bag findings. Nonetheless, logic suggests that the relationship between corporate governance and financial performance should be positive.

Notably, and as already mentioned, most previous studies seem to suffer from two deficiencies, which is ignoring the impact of industry-specific factors as well as different economic periods. For instance, it was empirically proven that optimal corporate governance not only varied from country to country (Bebchuk & Hamdani, 2009:1263) but also between different industries within a country (Bruno & Claessens, 2010:461) and in different economic periods (Desender, Aguilera, Crespi & Garcia-Cestona, 2013:834; Dowell, Shackell & Stuart, 2011:1025; Van Essen *et al.*, 2013:201), but previous studies still did not take heed of these findings. Related studies show that apart from corporate governance structures evolving over time and across industries, they are also an endogenous response to the company's stage of development or industry conditions (Gillan, 2006:395).

Clearly, by now, there is substantial evidence that one size does not always fit all companies in all countries across all industries. The preface to the OECD principles states: "there is no single model of good corporate governance" (OECD, 1999:8). Instead, the principles are intended as a "reference point" for policymakers to use as they develop their own legal and regulatory corporate governance framework (OECD, 1999:13). In spite of this precursor, relatively little is known about the extent to which broad corporate governance principles can be applied across countries and across industries within a country, mindful of different economic periods. In fact, studies on whether compliance to good corporate governance practices leads to financial performance are few and far between and those studies that take heed of the nuances between industries and periods of time are almost non-existent.

Therefore, the current study is undertaken to investigate the relationship between corporate governance and the financial performance of selected JSE industries for the period 2002 to 2014. The culmination of the study is a model for corporate governance and financial performance for JSE industries, having taken into consideration industry-specific characteristics and varying economic periods. The study is well timed as a comparison between the mandatory and flexible approach to corporate governance has reached concerning levels.

#### **1.4.1 Problem statement**

Although there is a growing interest in the examination of the relationship between corporate governance and company performance, there have been diverse findings from these studies. In the main, the mixed results are a consequence of studies comparing their findings based on different periods of time. Dalton, Daily, Johnson and Ellstrand (1998:274) comment that most governance studies are marred with a variety of limitations, including proxies for company performance, differing governance standards worldwide and the additional impact of contextual environmental factors. This study uses a combination of both accounting-based and market-based proxies of performance and a longer company observation to develop a model for corporate governance for all South African industries. Based on the foregoing, the problem statement for the study is whether the investigation of corporate governance variables can determine the company's performance, in three different economic periods. In attempting to solve the identified problem, the following research objectives are pursued.

#### **1.4.2 Research objectives**

Many previous studies examined the association between corporate governance and financial performance (Bozec, Dia & Bozec, 2010:684; Li, Chen & French, 2012:465; Rani, Yadav & Jain, 2014:371; Sami *et al.*, 2011:106; Tariq & Abbas, 2013:565; Veprauskaite & Adams, 2013:229; Wang, Lu & Lin, 2012:751). However, their findings are either inconclusive or contradictory.

This study seeks to clarify the conflicting findings in corporate governance studies (Chen *et al.*, 2009:273; Durnev & Kim, 2005:1472; Klapper & Love, 2004:708; Meyer & De Wet, 2013:26; Ntim, 2013:307; Tshipa & Mokoaleli-Mokoteli, 2015b:149; Waweru, 2014:555).

To this end, the thesis seeks to achieve seven main objectives:

- First, the thesis attempts to assess compliance levels with the corporate governance provisions of the 2002 King Report on Corporate Governance for South Africa (King II) among South African listed companies, in particular among the five major industries;
- Secondly, the study seeks to ascertain whether three different economic periods, namely the pre-recession period (2005-2007), recession period (2008-2010) and post-recession period (2011-2013), had a bearing on the relationship between corporate governance and company performance;
- Thirdly, the study introduces the industry nuances to compare the corporate governance and performance nexus in the five major industries;
- Fourthly, the study intends to examine whether various estimation techniques can potentially influence research findings;
- Fifthly, the study seeks to assess the impact of the dynamic nature on the relation between corporate governance mechanisms and company performance;
- Sixthly, the study investigates the reverse causality by examining whether the influence of corporate governance on company performance will differ between the case of a company making a profit and the case of a company not making a profit; and
- Finally, the thesis seeks to assess the impact of the potential presence of endogeneity and simultaneity problems on the research findings.

## 1.5 MOTIVATION FOR THE STUDY

Whereas many of the corporate governance studies have been conducted in developed countries of Europe (Joshi & Wakil, 2004:832), only a few studies have been completed in developing countries of Africa (Uddin & Choudhury, 2008:1026). According to

Euromoney (2007:12), developing countries differ widely among themselves, hence the need to study corporate governance at the individual country level (Dahawy, 2009:3).

In a study investigating the antecedents of effective corporate governance in Nigeria, Adegbite (2012:257) provides some evidence to support the view that a country's peculiar institutional arrangements influence its predominant model and style of corporate governance regulation. Thus paucity of rigorous empirical corporate governance studies in Africa as a whole, and particularly South Africa, offers opportunities to make contributions to the existing literature.

There are very few studies in Africa and South Africa on the corporate governance and company performance nexus. In fact, scanning the journal articles on the subject of corporate governance and company performance conducted on South African listed companies only retrieved studies by Abdo and Fisher (2007:43), Chen *et al.* (2009:273), Durnev and Kim (2005:1472), Klapper and Love (2004:708), Mans-Kemp and Viviers (2015b:20), Mans-Kemp and Viviers (2015a:392), Meyer and De Wet (2013:26), Muchemwa, Padia and Callaghan (2016:497), Ntim (2013:307); Pamburai, Chamisa, Abdulla and Smith (2015:115), Tshipa and Mokoaleli-Mokoteli (2015b:149), Tshipa and Mokoaleli-Mokoteli (2015a:74) and Waweru (2014:455).

Other studies conducted in South Africa only examine the impact of individual corporate governance variables on company performance. For instance, Taljaard, Ward and Muller (2015:425) and Tshipa and Mokoaleli-Mokoteli (2015a:74) investigated the impact of board diversity on company performance while Ntim and Osei (2013:83) examined the relationship between corporate board meetings and performance. Exacerbating the issue, the little research in South Africa and globally on the impact of corporate governance on company performance is contrasting.

The conflicting evidence may partly be explained by the fact that prior studies suffer from methodology problems, small unrepresentative sample sizes, unjustifiable choices for the proxy of company performance, irrelevant time frames or shorter observation time spans.

As a result, the findings of prior studies are fraught with limitations, which make it impossible to generalise results. Hence a need for further research that could lead to new contributions to the scant body of knowledge of corporate governance.

Klapper and Love (2004:703) investigated the relationship between good governance practices and company value using a sample of 374 listed companies from 14 emerging markets, including South Africa, from 1998 to 1999. They found that corporate governance as measured by the Credit Lyonnais Securities Asia's (CLSA) index was closely related to company value, as proxied by Tobin's Q. Similarly, Durnev and Kim (2005:1461) used the CLSA index to examine the impact of corporate governance on company performance in 27 emerging countries, including South Africa, from 1999 to 2000. They report that companies with higher corporate governance rankings yield higher market valuation than their counterparts.

Additionally, Munisi and Randoy (2013:92) investigated the relationship between good corporate governance practices and company performance using data from sub-Saharan African countries from 2005 to 2009. They also found that corporate governance had a positive impact on company performance. Chen *et al.* (2009:273) used the same CLSA subjective analysts' corporate governance rankings to investigate the relationship between corporate governance and the cost of equity capital.

Even though the preceding studies of Chen *et al.* (2009:273), Durnev and Kim (2005:1461), Klapper and Love (2004:703) and Munisi and Randoy (2013:92), all posit a positive relationship between corporate governance and company performance, their findings cannot be generalised for the following reasons: first, all four prior studies employed a CLSA rating, which had previously been questioned for the fact that it could have been influenced by the subjectivity of the analysts evaluating the corporate governance disclosure (Ammann, Oesch & Schmid, 2013:467; Bozec, Dia & Bozec, 2010:684).

Secondly, the CLSA, which includes a number of Asian countries, may not be feasible to adopt in South Africa because of cultural and institutional differences (Adegbite, 2012:257). Thirdly, the sample size in all four preceding studies (Chen *et al.*, 2009:273; Durnev & Kim, 2005:1461; Klapper & Love, 2004:703; Munisi & Randoy, 2013:92) was significantly small. Arguably, this makes the findings to be less representative of South African listed companies.

Ntim (2013:307) investigated the effect of internal corporate governance structures and company performance using a sample of 100 South African listed companies from 2002 to 2006 (a total of 500 firm-year observations). In an effort to mitigate the CLSA's subjective nature and small sample size of prior research as evident in the studies of Chen *et al.* (2009:273), Durnev and Kim (2005:1461), Klapper and Love (2004:703) and Munisi and Randoy (2013:92), Ntim (2013:315) collected data directly from company annual reports. However, his study was conducted on data from 2002 to 2006, which reflected outdated corporate governance practices due to the implementation of the new Companies Act No. 71 of 2008 and the latest publication of the King Report (2009) on Corporate Governance (King III). Secondly, the study was conducted prior to the global financial crisis and would not have taken into consideration the effect of the crisis period on the impact of the relationship between corporate governance and company performance.

While Meyer and De Wet's (2013:19) study took care of the above shortcomings of Ntim (2013:315), it fell short of including other governance variables such as CEO duality, frequency of board meetings, presence of key board committees and board diversity as stipulated by the latest King Report (2009) on Corporate Governance (King III) and JSE Listings Requirements. In addition, the study of Meyer and De Wet (2013:19) covered the period 2010 to 2012, which is a relatively short time span for a corporate governance study. Further, the study was conducted after the global financial crisis and ignored other economic periods.

Plagued with the same defects as other prior studies, Waweru (2014:464) investigated factors influencing quality corporate governance in South Africa. Despite using a shorter time observation of a five-year period, the study sample consisted of only the 50 largest companies listed on the JSE from 2006 to 2010. Thus, his study cannot be generalised to smaller companies operating in South Africa. Further, the study also ignored other economic periods.

Tshipa and Mokoaleli-Mokoteli (2015b:149) attempted to resolve the deficiencies of all previous studies such as small sample size and shorter time span. However, as with other previous research, their study also failed to acknowledge the following:

- industry dynamics;
- nuances between accounting-based and market-based performance proxies; and
- an estimation method that was robust to endogeneity.

Similarly, the recent studies of Mans-Kemp and Viviers (2015b:20), Muchemwa *et al.* (2016:497) and Pamburai *et al.* (2015:115) were also not mindful of the effect of different economic periods on the relationship between corporate governance and company performance, the industry nuances as well as the lagged effects of past performance on the relationship between corporate governance and company performance.

As a result, the motivation for this study is to fill the aforementioned literature gap. The next section illustrates the contribution of the study to the body of knowledge.

## **1.6 SIGNIFICANCE OF THE STUDY**

Against the preceding backdrop, this study adds to the previous literature and tries to fill the identified gap in the literature by studying the association between corporate governance and financial performance over the period 2002 to 2014, pre-crisis, during crisis and post-crisis periods using a sample of South African listed companies. In doing so, the study adds several novelties to the existing literature. First, in order to make the data set a representative sample of South African companies, the empirical analysis

focuses on five major industries constituting 93% of the market capitalisation. Secondly, the study departs from the conventional system of prior studies of related literature and instead of focusing on a single-measure framework, the study uses a range of measures of corporate governance including board size, board independence, board activity, presence of key board committees, CEO duality and board diversity (in terms of race and gender). In addition, the performance metrics are represented by a range of variables such as ROA and ROE for accounting-based and Tobin's Q and EVA as market-based measures. This is important for checking the robustness of results in order to explore the interlinkage between corporate governance and company performance.

Literature attributes the mixed results of corporate governance studies to potential endogeneity problems, which can significantly affect empirical corporate governance findings (Afrifa & Tauringana, 2015:730). Generally, endogeneity problems arise in three different ways:

- correlation with the error term (Wooldridge, 2002:50);
- omitted variable bias; and
- simultaneity (Larcker & Rusticus, 2010:186).

In order to overcome the problem of endogeneity, this study employs several robust alternative specifications and estimation techniques for the analysis purposes, which include generalised methods of moments (GMM), two-stage least square (2SLS) and generalised least square (GLS) - the latter being the preferred estimator for this study. In addition, to reduce the potential endogeneity problem of simultaneity, which is found to be the most common endogeneity problem in corporate governance research (Lacker & Rusticus, 2010:186), the study lags all independent variables and investigates the association between changes in the independent variables and the dependent variable, taking a leaf from studies of Afrifa and Tauringana (2015:730) and Mina, Lahr and Hughes (2013:2).

Another big challenge in corporate governance empirical studies is the consideration of the dynamic nature of corporate governance, which is also considered as another source



of endogeneity, namely dynamic endogeneity (Wintoki, Linck & Netter, 2012:604). To obviate this problem and similar to the studies of Ayadi, Ojo, Ayadi and Adetula (2015:742) and Schultz *et al.* (2010:145), the effect of historical performance on current governance is considered when running the estimation models.

Distinct from other studies, both domestically and globally, a unique contribution of this study is the introduction of the industry-specific characteristics in the corporate governance and company performance relationship. This is because the one-size-fits-all approach may not capture the pertinent nuances in corporate governance across different industries (Ammann *et al.*, 2013:463; Bruno & Claessens, 2010:461). Board characteristics should vary systematically across industries, either because of systematic differences in costs and benefits or because of some other commonality.

For instance, in South Africa and globally, the size of the board in banks is twice as large as in other industries. This could be because the benefits reaped by banks from having a larger board may outweigh the increased communication and co-ordination costs, as highlighted in the study by Guest (2009:391). Therefore, by inference, it is expected that a larger board size as practised in banks should have a positive impact on company performance, irrespective of whether the proxy for company performance is accounting-based or market-based.

As reported by Abzari, Fathi and Torosian (2012:395), the industry in which a company operates is likely to have a significant effect on the choice of the capital structure and the market value of industries that are more equity inclined should be higher when there is presence of independent non-executive directors. Thus the culmination of this study is the unique models for the association of corporate governance and company performance across all major South African industries. Comparing corporate governance among industries may lead to a more complete understanding of the subtleties that characterise the pervasive relationship between corporate governance and company performance across industries.

In developing models for all industries, the study separates accounting-based (ROA and ROE) and market-based performance (Tobin's Q and EVA) proxies. There are four main reasons for the separation. First, prior evidence suggests that insiders and outsiders value corporate governance differently (Black *et al.*, 2006:366). As such, the accounting-based measure of performance attempts to capture the wealth effects of corporate governance mechanisms from the perspective of company management (insiders), while the market-based measure represents financial valuation of corporate governance structures by investors (outsiders). Secondly, each measure has its own strengths and weaknesses with no consensus in the literature on a particular measure as being the 'best' proxy for financial performance (Haniffa & Hudaib, 2006:1034).

Thirdly, while accounting-based measures such as ROA and ROE, among others, are independently audited and reflect historical performance, they could easily be manipulated by disingenuous managers (Rebeiz, 2015:753). Fourthly and conversely to accounting-based measures, market-based metrics, which presumably are objective assessments and immune to accounting standards, are significantly affected by macro-environment variables, which are outside the purview of managers. As a result, both performance indicators have their merits and their shortcomings. Hence researchers should endeavour to use a myriad of performance measures (O'Connell & Cramer, 2010:396; Stiglbauer, 2010:164). Distinct from other studies, and consistent with the recent study of Pamburai *et al.* (2015:118), one of the market-based performance measures used in this study is economic value added (EVA), though it will be proved not to be linear with corporate governance variables.

Another contribution of the study to the existing literature is the use of three renowned corporate governance theories in understanding the dynamics of the subject. As previously stated, the empirical evidence provided by prior studies is mixed at best. Zattoni, Douglas and Judge (2013:119) suggest that the mixed findings of previous studies could be attributed to adopting only the agency theory and ignoring alternative or complementary theories. This study uses a number of corporate governance theories,

such as the agency, resource dependence and stewardship theories, to explain the findings of the research as recommended by Gartenberg and Pierce (2017:317).

The corporate governance and performance relationship is not an instantaneous phenomenon (Rebeiz, 2015:753). For instance, a company with poor financial performance may currently have an ineffective board. Conversely, a company with good financial performance may have a dysfunctional boardroom. Put differently, the current financial performance indicators are not necessarily indicative of the quality of its current corporate governance system. It is in this light that the 13-year panel study covering the period from 2002 to 2014 has three major advantages.

First, the firm-year observations of 1 170 are relatively larger than most other South African studies such as those of Meyer and De Wet (2013:24), Pamburai *et al.* (2015:122), and Taljaard *et al.* (2015:425), and comparable with the study of Mans-Kemp and Viviers (2015b:26), who used 1 247 firm-year observations. Secondly, the longer time series provides an opportunity to better investigate the dynamics of the relation between corporate governance and company performance and thereby accounts for the endogeneity of corporate governance. Thirdly, the study distinctly investigates the performance of companies in three economically different periods, namely before the global financial crisis, during the crisis period and after the global financial crisis. In addition, the period between 2002 and 2014 permits the analysis of corporate governance compliance levels after King II, after King III and after the promulgation of the Companies Act No. 71 of 2008.

As already mentioned, traditional empirical corporate governance research is increasingly under attack from critics due to endogeneity and omitted variables biases (Gillan, 2006:396). Therefore, in addition to taking care of endogeneity through estimation models, this study follows the recommendations of Gillan (2006:396), namely that corporate governance studies should consider events such as economic shocks and reforms such as the Sarbanes-Oxley Act. This study considered three economic periods,

the Companies Act No. 71 of 2008 and King III in order to further mitigate endogeneity and omitted variables biases.

Consequently, the findings of the study may have the following implications:

- Implication to the regulators: Does the “flexible system”, as recommended by the King II and III Reports and the JSE, increase compliance, or should the regulator consider the “rules-based system”?
- Instead of applying all provisions of the King Code, JSE-listed companies could be required to take into account the environment in which they operate (industry-specific) as well as economic periods and only apply those aspects of corporate governance that have a positive impact on company performance.

## 1.7 KEY CONCEPTS

The key concepts of the study are as follows:

- *Accounting-based performance measures*: measures such as ROE and ROA, which reflect a company’s past performance, with a general focus on profitability (Rebeiz, 2015:753).
- *Annual report*: a formal account of the proceedings of a company or group throughout the preceding year with the intention of giving information to stakeholders regarding the financial performance and non-financial activities of the company (Collier, 2009:23).
- *Compliance*: The notion of compliance is based on the “comply or explain” approach, as discussed in the King II Code. Compliance in this study involves alignment to JSE Listings Requirements.
- *Global financial crisis*: a disruption of financial markets, which can affect the entire economic environment (Portes, 1999:471).
- *Market-based performance measures*: measures such as EVA and Tobin’s Q, which reflect the company’s future expectations of the marketplace (Pamburai *et al.*, 2015:118; Rebeiz, 2015:753).

## 1.8 ORGANISATION OF THE STUDY

The rest of the thesis is divided into seven chapters and organised as follows:

### **Chapter 2: Corporate governance models**

Corporate governance has become a topic of considerable interest in management studies (Aguilera & Jackson, 2010:485). In the quest for improving the comprehension of the topic, scholars have developed a plethora of definitions for corporate governance. Literature attributes one of the reasons for conflicting findings to the understanding and definition of *corporate governance* (Shank *et al.*, 2013:391). This chapter seeks to offer a working definition of *corporate governance*.

To facilitate a better appreciation of the South African corporate governance landscape, the chapter also explores the nuances between stakeholder (Continental European-Asian) and shareholder (Anglo-American) models of corporate governance. The convergence of the two models are discussed.

### **Chapter 3: Corporate governance in South Africa**

Corporation is a complex economic, legal and social system that influences the external environment and is also, in turn, influenced by the external environment (Rebeiz, 2015:751). To this end, this chapter contains an overview of the South African corporate governance environment. Specifically, the external corporate governance environment and some of the challenges facing the regulatory system are first presented. The internal corporate governance landscape is then described in detail. This includes the South African Companies Act No. 71 of 2008, the Insider Trading Act No. 135 of 1998, the JSE's 2007 Listings Requirements, as well as the 1994 (King I), 2002 (King II), 2009 (King III) and 2016 (King IV) King Reports on Corporate Governance for South Africa.

## Chapter 4: Literature review and research hypotheses on the corporate governance and financial performance nexus

The literature is reviewed in this chapter. The chapter is divided into two main parts. In the first part, existing theories that attempt to link internal corporate governance structures to financial performance are discussed. Recognising the often complex and multidisciplinary nature of corporate governance (Filatotchev & Boyd, 2009:259), a multiple theoretical perspective is adopted in constructing and explaining the complex relationship between internal corporate governance structures and financial performance.

The second part of Chapter 4 contains a discussion of the extant empirical literature that seeks to link internal corporate governance structures with financial performance. In developing internal corporate governance structures, a cue is taken from Clause 3.84 of the JSE Listings Requirements, which specifies that listed companies should disclose compliance of corporate governance in their annual reports. The variables are:

- board size;
- board independence;
- presence of board committees;
- board activity;
- board diversity; and
- leadership structure.

Based on the literature review, the chapter culminates in the following hypotheses:

*H<sub>1A</sub>: There is a statistically significant positive relationship between board size and financial performance;*

*H<sub>2A</sub>: There is a statistically significant positive relationship between board independence and financial performance;*

*H<sub>3A</sub>: There is a statistically significant positive relationship between the presence of key internal board committees and financial performance;*

*H<sub>4A</sub>: There is a statistically significant positive relationship between board activity and financial performance;*

*H<sub>5A</sub>: There is a statistically significant positive relationship between board diversity and financial performance;*

*H<sub>6A</sub>: There is a statistically significant positive relationship between leadership structure and financial performance.*

## **Chapter 5: Research methodology**

*Research methodology* is defined as the general approach of the study in carrying out the research (Leedy & Ormrod, 2001:14). To this end, the chapter describes the research framework, the measures for all variables (dependent, independent and control variables), data and data sources, preliminary tests as well as model specifications for the empirical analysis of the study.

## **Chapter 6: Empirical evidence of corporate governance structures and financial performance in South Africa**

The relationship between corporate governance attributes and financial performance of South African listed companies is examined in this chapter. Testing of multicollinearity, autocorrelation, normality, homoscedasticity and linearity is done. A further preliminary test is conducted to justify the selection of an appropriate estimation method as well as performance indicators for the study. In addition, the hypotheses are tested. Finally, robustness tests are conducted to check the sensitivity of the empirical findings.

## **Chapter 7: Conclusions, implications and limitations**

Chapter 8 contains the conclusion of the study. In this chapter, the research objectives are reconsidered and a summary of the key research findings and a discussion of the policy implications, recommendations, contributions to the body of knowledge, limitations, as well as potential avenues for future research and improvements are presented.

## 1.9 CHAPTER SUMMARY

The chapter highlighted the importance of corporate governance as well as attempts by academics to reach a consensus on the impact of corporate governance and financial performance. Despite results being inconclusive, the focus of many studies has been to examine the relationship between corporate governance and financial performance during non-crisis periods.

The relationship between corporate governance and financial performance during turbulent periods has not received much attention. There is little research about the crisis period and the role of corporate governance in affecting performance during this turbulent period. Therefore, the study adds to the previous literature and attempts to fill this gap in the literature by studying the association between corporate governance and financial performance in the period 2002 to 2014 using a sample of South African listed companies. The study provides new evidence of the relationship between corporate governance and financial performance in three distinct periods, before the global financial crisis, during the crisis and after the global financial crisis in the South African context. In addition, the industry nuances are taken into consideration. The next chapter attempts to define corporate governance, which forms the basis for the thesis.



## CHAPTER 2

# CORPORATE GOVERNANCE MODELS

### 2.1 INTRODUCTION

Globalisation of the market and the integration of capital markets have brought the traditional corporate governance models to a crossroads. Practitioners, academics and policymakers are uncertain of whether there should be a convergence of corporate governance models or not. This discourse has led to too many definitions of corporate governance. This chapter seeks to define corporate governance to identify the premise which the study is based on. In addition, the different and contrasting corporate governance models found within the extant global corporate governance literature are discussed.

The remainder of the chapter proceeds as follows: Section 2.2 offers a working definition of *corporate governance*. Section 2.3 reviews the global corporate governance reforms. The main corporate governance models as found in the international literature and context are discussed in Section 2.4. Sections 2.5 and 2.6 review the shareholder and stakeholder models respectively. The convergence of the two models, shareholder and stakeholder, is discussed in Section 2.7. Section 2.8 concludes the chapter.

### 2.2 DEFINING CORPORATE GOVERNANCE

The overwhelming interest in corporate governance developed as a result of the agency problem (Daily, Dalton & Cannella, 2003:371). In the last three decades, the term *corporate governance* emerged as a mainstream concern in boardrooms, academic conferences and policy circles around the globe. This heightened interest can be attributed to several events. During the upsurge of financial crises in 1998 in Russia, Asia and Brazil, the behaviour of the corporate sector affected entire economies, and

deficiencies in corporate governance endangered global financial stability (Claessens & Yurtoglu, 2013:3).

As already mentioned in Chapter 1, just a few years later, confidence in the corporate sector was shattered by corporate governance scandals in the United States and Europe, which triggered some of the largest insolvencies in history. Then in the years 2007 to 2008, the most recent financial crisis has seen its share of corporate governance failures in financial institutions and corporations, leading to systemic consequences (Kirkpatrick, 2009:1).

In the aftermath of these events, not only has the term *corporate governance* become topical again, but academics, the corporate world and policymakers across the globe also recognise the potential macroeconomic and long-term repercussions of weak corporate governance mechanisms and its association with the prosperity of a company. Notwithstanding, one of the reasons for inconclusive findings on the relationship between corporate governance and company performance is how the former is defined (Shank *et al.*, 2013:391).

The intensified interest by different disciplines, such as accounting, organisational behaviour, management, politics, legal, economics, business ethics and finance, has widened the scope of corporate governance. On the one hand, the financial cohort defines *corporate governance* as ways in which suppliers of finance assure themselves of getting a return on their investment (Shleifer & Vishny, 1997:737).

On the other hand, some academics define it as the determination of the broad uses to which the company's resources are deployed and the resolution of conflicts among a host of participants in the organisation (Daily *et al.*, 2003:371). The Organisation for Economic Co-operation and Development (OECD, 2004:11) defines *corporate governance* as a set of relationships between a company's management, board, shareholders and other stakeholders. According to the latter definition, the focus should be on the wider stakeholders and not just the shareholders.

Similar to the definition by the Organisation for Economic Co-operation and Development (OECD, 2004:11), the South African King Reports also define *corporate governance* as a set of relationships between a company's management, board, shareholders and other stakeholders. Interestingly, according to King IV, corporate governance is about the exercise of ethical and effective leadership by the governing body in order to achieve ethical culture, good performance, effective control and legitimacy (KPMG, 2016:2). Accordingly, the focus is also beyond the shareholders.

Others describe *corporate governance* as the system through which companies are directed and controlled (Cadbury Report, 1992:14). Monks and Minow (2001:1) define *corporate governance* as the relationship between various participants in determining the direction and performance of corporations. They describe participants as the shareholders, management and the board of directors.

According to L' Huillier (2014:301), the use of the term *corporate governance* intensified during the economic and political changes, which originated in the OECD countries from the mid-1980s. Due to the elevated interest in corporate governance and the fact that it includes many other disciplines, there is no universally accepted definition of *corporate governance* (Mallin, 2007:11; Solomon, 2007:12) and there are many definitions of *corporate governance* (Khan, 2011:2). The many definitions of *corporate governance* reflect the divergent nature of the organisation with the requisite society.

Considering this, the extant literature has mainly theorised corporate governance in the two contrasting models of corporate governance, namely: "narrow" and "broad" (Feizizadeh, 2012:3353). A "narrow" corporate governance model is usually referred to as "shareholding". A "narrow" model dictates that a company's objective is to maximise profits and enhance performance to the satisfaction of its shareholders. According to Claessens and Yurtoglu (2013:4), the narrow collection of definitions mainly focuses on the role of key internal governance mechanisms, such as board attributes and ownership structure, in determining the performance of companies and maximising the shareholder

value. They posit that for studies of single countries or companies within a country, a narrow definition is the most logical choice

Contrastingly, a “broad” corporate governance model, which is referred to as “stakeholding”, perceives companies to be responsible and accountable to a wider constituency of stakeholders other than just the shareholders. The two models are at opposite ends of the spectrum, with “shareholding” (external control exercised by the stockholders in the company) and “stakeholding” (internal control exercised by the various stakeholders such as creditors, bankers and employees) being the two extremes (Chhillar & Lellapalli, 2015:695).

Notably, the two corporate governance models have country and legal origins. This is so because governance practices vary across countries, and companies and industry sectors (Maher & Andersson, 2000:4). One of the most striking differences between countries’ corporate governance systems is the difference in the ownership and control of the company.

Some systems are characterised by wide dispersed ownership (also called market-outsider systems or stock-market capitalism) and others tend to be characterised by concentrated ownership (also called relational-insider systems or welfare capitalism). The outsider systems of corporate governance are prevalent in Anglo-American countries, such as the United States (US), the United Kingdom (UK), Canada, Australia and South Africa (SA), while the insider systems of corporate governance are practised in Continental Europe, Japan, South America and Germany (Aguilera & Cuervo-Cazurra, 2009:379; Mallin, 2007:2).

The fundamental conflict of interest in outsider systems is between strong managers and widely dispersed weak shareholders. On the contrary, the basic fundamental conflict in insider systems is between the controlling shareholders (or blockholders) and weak minority shareholders.

South Africa offers a unique corporate governance framework because it has been part of the Anglo-American countries that embrace the “shareholding” corporate governance model (Armstrong, Segal & Davis, 2006:210; La Porta, Lopez-De-Silanes, Shleifer & Vishny, 1998:1130; Mallin, 2007:249; West, 2009:11). However, recent corporate governance reforms in South Africa (the 1994, 2002 and 2010 King Reports) attempt to formally superimpose a number of other stakeholder demands, such as affirmative action and community investments on South African listed companies. This has obligated South African listed companies to adopt a wider conception of stakeholder interests (Spisto, 2005:92). In fact, the recently released King IV reaffirms the stakeholder model of corporate governance.

### **2.3 GLOBAL CORPORATE GOVERNANCE REFORMS**

Three decades ago, the term *corporate governance* meant little to all but a handful of academics. Today, it is a mainstream concern. Several events are responsible for the keen interest in corporate governance. International attempts at reforming corporate governance have been preceded by well-publicised cases of major corporate collapse in a number of developed economies in the 1980s, especially in the UK and US (Barrier, 2003:73; Mallin, 2007:2). The consensus was that poor corporate governance practices played a pivotal role in causing these corporate failures (Cadbury Report, 1992:13; Jones & Pollitt, 2004:162).

The UK is a pioneer in corporate governance regulation. In an effort to circumvent corporate scandals such as Enron Corp., WorldCom Inc. and Global Crossing Ltd, the UK was the first to respond through the establishment of the Cadbury Committee. The UK’s reaction to corporate governance failures in the 1980s such as Maxwell Communications, Polly Peck, and the Bank of Credit and Commerce International (BCCI) was not prescriptive and legislative like the Sarbanes-Oxley Act (SOX), and led the way to a new form of regulation known as the “comply or explain approach”, which was later adopted by King II Report in 2002.

The “comply or explain” approach was an innovation in corporate governance regulation introduced for the first time in 1992 by the Cadbury Report. The crucial aspect of this approach was the introduction of a voluntary code of best practice characterised by shareholder pressure for its adoption. Since 1992, the recommendations set out in the Cadbury Report have been added to at regular intervals. In 1995, a separate report set out recommendations for the remuneration of directors. In 1998, the two reports were joined in a single code.

This code was initially known as the Combined Code on Corporate Governance, but it is now known as the UK Corporate Governance Code (UK CG Code). The Financial Reporting Council (FRC) has updated the UK CG Code at regular intervals.

The UK CG Code was substantially revised in 2010, and in 2012, a new edition of the UK CG Code was published to reflect changes relating to audit committees and boardroom diversity, following public consultations in 2011 and 2012. In July 2010, following a request from the government, the FRC published the Stewardship Code.

The origins of the Stewardship Code can be traced back to the *Responsibilities of Institutional Shareholders and Agents: Statement of Principles*, which was published in 2005 by the Institutional Shareholders Committee (ISC) and converted into a code in 2009. The Stewardship Code aims to enhance the quality of engagement between institutional investors and companies to help improve long-term returns to shareholders and the efficient exercise of governance responsibilities.

Since 2011, the FRC has published an annual report on the implementation of the UK Corporate Governance and Stewardship Codes and related developments. In addition, the FRC also publishes guidance to boards to assist them in considering how to apply the code to their particular circumstances.

In contrast to statutory law, which imposes minimum standards, the UK Code aims to improve corporate behaviour by raising standards through best practice. In particular, it

is mandatory for companies to state in their annual reports whether they comply with the Code, and to identify and give reasons for any areas of non-compliance considering their own circumstances. As neither the form nor content of this part of the statement is prescribed, companies can explain their governance policies considering the principles. It is expected of shareholders to evaluate this part of the company statement.

The Code has since been modified several times but has retained the original principle of the “comply or explain” approach. This concept of principles, which originated in the UK from the Cadbury Code in 1992, has been recommended internationally in the OECD Principles of Corporate Governance.

The OECD Principles were agreed upon in 1999 and revised in 2004, and formed the basis for corporate governance initiatives in both OECD and non-OECD countries. Like the Cadbury Code, the OECD Principles do not advocate a one-size-fits-all approach to governance. With the exception of the US, most OECD countries and a great number of non-OECD countries have adopted corporate governance codes that work on the “comply or explain principle”, with South Africa being one such country.

Not to be outdone and following global reforms in corporate governance, the King Committee, headed by former High Court Judge Mervyn King S.C., published the first King Report on Corporate Governance for South Africa in 1994. This followed the first version of the UK Code, which was produced in 1992 by the Cadbury Committee. Hence, most aspects of the Cadbury report are reflected in the King Report.

Contrary to the UK and South Africa, and in the wake of a series of corporate and accounting scandals involving major US corporations such as Enron Corp., Tyco, WorldCom Inc., Adelphia and Peregrine Systems, the US government enacted SOX in 2002 to improve corporate governance practices. In order to attempt to curb the spate of scandals, the 2002 SOX Act was aimed particularly at public accounting companies participating in audits of corporations.

There were mixed results from the Act. Some of the positive add-on effects include the following: restoring the integrity of financial statements by removing a large conflict of interest that existed in the 1990s; ending self-regulation of the public accounting industry; removing the relationships between auditors and the audited company's CEO and CFO and replacing them with the audit committee; improving investor confidence; and ensuring more accurate, reliable financial statements by prohibiting auditors from having consulting agreements with the companies they audit. On the other hand, the negative effects include reduction in stock value of companies; increase in audit fees; inflexible rules coupled with managerial fear from greater opportunities for prosecution and stiffer penalties negatively affecting companies' profitability; high monitoring costs; and fewer benefits from outside monitoring.

## **2.4 MAIN CORPORATE GOVERNANCE MODELS**

The previous chapter highlighted that observers, scholars, policymakers and investors expect corporate governance to play a pivotal role in improving company performance. However, when implementing various corporate governance mechanisms, there are two pertinent questions that should be considered and be dealt with: for instance, should the internal corporate governance focus on protecting the interests of only the shareholders or should corporate governance expand its reach to consider the interests of a bigger audience, beyond just the shareholders?

The two preceding perspectives are in stark contrast to each other. While the agency theory emphasises that the exclusive focus of corporate governance is to solely satisfy the interests of shareholders, the stakeholder theory proposes that companies should serve all groups or individuals who have a stake in the corporation.

Sections 2.5 and 2.6 discuss the two contrasting corporate governance models, namely the "shareholder" and "stakeholder" models. Specifically the general theoretical assumptions and criticisms of each model are discussed.



## 2.5 SHAREHOLDER MODEL OF CORPORATE GOVERNANCE

The criteria by which performance is judged in this model can simply be taken as the market value (i.e. shareholder value) of the company (Zu, 2008:67). Therefore, managers and the board have an implicit obligation to ensure that the organisations are run in the interests of shareholders. The underlying problem of corporate governance in this model stems from the principal-agent relationship arising from the separation of beneficial ownership and executive decision-making (Chen, Lu & Sougiannis, 2012:253). The authors argue that it is this separation that causes the company's behaviour to diverge from the profit maximising ideal. This happens because the interests and objectives of the principal (the investors) and the agent (the managers) differ when there is a separation of ownership and control. Because the managers are not the owners of the company they do not bear the full costs or reap the full benefits of their actions. Therefore, although investors are interested in maximising shareholder value, managers may have other objectives such as maximising their salaries, growth in market share, or an attachment to particular investment projects.

The shareholding corporate governance model is usually practised in Anglo-American and other Commonwealth countries. Central to the shareholding corporate governance model is the principle of shareholder value and primacy (Schwartz, 1983:53). It takes a "narrow" view of the company and recommends that it must be run to maximise shareholders' wealth.

The model is based on the fundamental assumption that ownership is separate from control. To this end, managers and boards of directors have an implicit obligation to ensure that companies are run in the interests of the owners (shareholders).

According to Maher and Andersson (2000:9), there are three types of mechanisms that can be used to align the interests and objectives of investors (shareholders) and managers to overcome management entrenchment and monitoring problems. The first mechanism attempts to induce managers to carry out efficient management by directly

aligning managers' interests with those of shareholders, such as executive compensation plans, stock options and direct monitoring by boards. King II and III recommend that performance-related elements of executive directors' remuneration, such as stock options, should constitute a substantial portion of management's total remuneration package to align their interest with those of shareholders.

Another mechanism involves the strengthening of shareholders' rights such that shareholders have both a greater incentive and ability to monitor management. This approach enhances the investors' rights through legal protection from expropriation by managers, such as protection and enforcement of shareholder rights and prohibitions against insider dealing. The third mechanism is to use indirect means of corporate control, such as those provided by capital markets, managerial labour markets and markets for corporate control (e.g. takeovers).

### **2.5.1 Major criticisms of the shareholder model**

Despite its dominance as a major corporate model worldwide (Keasey, Thompson & Wright, 1997:3; O'Sullivan, 2000:393), there is no universal basis for arguing that the shareholder model is the objective model, which is suited to the governance of a modern company (Gamble & Kelly, 2001:110). The stakeholder theory is incompatible with all substantive objectives and undermines both private property and accountability (Sternberg, 1997:3).

First, critics of the shareholder approach argue that the analytical focus on how to solve the corporate governance problem is too narrow (Zu, 2008:68). The shareholder approach to corporate governance is primarily concerned with the alignments of directors' interests with those of shareholders. However, shareholders are not the only ones who make investments in the corporation.

The competitiveness and ultimate success of a corporation is the result of a concerted effort by a host of different resource providers including investors, employees, creditors,

suppliers, unions, distributors and customers. Corporate governance and company performance may be affected by the relationships among the various stakeholders in the company.

Secondly, it has been suggested that shareholders lack sufficient power to control management and prevent the misuse of corporate resources as purported by the shareholding model (Blair, 1995:vi). Central to this model is the axiom of shareholder primacy, which presupposes that companies should be managed for the interests of shareholders.

Arising out of such a presupposition is that shareholders have substantial residual power and discretion to delegate operational power (Schwartz, 1983:53). They also have residual rights to participate in major corporate decisions, including hiring or firing the board of directors, usually at an annual general meeting (AGM).

However, it has been contended that shareholders' ability to meaningfully exercise such control over the direction of their company has been impaired by the procedures which govern such meetings (AGM) and corporate officers' elections (Sternberg, 1997:8). For example, it is the executive directors rather than the shareholders who set the agenda of an AGM and, by inference, executive directors determine the issues that come up for voting. Contrastingly, it has been shown that it could often be difficult for shareholders to get their own binding resolutions on the agenda (Sternberg, 2004:82).

Thirdly and closely associated with the lack of real shareholder power is the fact that the board of directors, who are expected to be the official first line of defence against managers, contrary to shareholders' interests, also suffer from many deficiencies (Denis & McConnell, 2003:7). Non-executive directors' accountability to shareholders is also usually impaired by the ways in which they are nominated, officially appointed and remunerated (Sternberg, 2004:83).

Historically, in an Anglo-American model, the appointment of non-executive directors is fulfilled by the CEO or the board itself (Vinten, 2001:46). This makes them insufficiently independent of management, and insufficiently accountable to shareholders. However, it is acknowledged that with the recent increase in the proliferation of codes of good corporate governance, especially among Anglo-American countries (Aguilera & Cuervo-Cazurra, 2009:378), the procedures for board appointments are gradually improving. A case in point is South Africa's King Report, which requires Johannesburg Stock Exchange (JSE)-listed companies to establish a nomination committee which fulfils the appointment of non-executive directors.

The King Report also requires nomination committees to be constituted and chaired by an independent non-executive director. These requirements, which are imposed by codes of good governance on companies, have generally improved board accountability, independence and monitoring of corporate executives and senior management (Filatotchev & Boyd, 2009:262).

A fourth criticism levelled against the Anglo-American corporate governance model is short-termism. Opponents of the shareholding corporate governance model contend that the Anglo-American model is flawed by its excessive fixation on short-termism. Consequently, it has been contested that the Anglo-American model's exclusive emphasis on the powers and rights of shareholders results in the negligence of other legitimate stakeholders' interests (Blair, 1995:vi). It must be pointed out that, like their counterparts operating in stakeholding countries, companies that operate in Anglo-American countries also contribute to corporate social investment.

For example, and in practice, companies that operate in shareholder-oriented countries pay corporate taxes and offer employment opportunities to local communities, just like their stakeholding counterparts. According to West (2009:15), there has been a substantial increase in corporate social responsibilities, especially responsibilities towards employees, customers, local communities and the environment in Anglo-American countries over the last decade.

A popular, but sometimes controversial ethical and moral criticism is that the Anglo-American governance model encourages excessive executive remuneration (Sternberg, 2004:68). For example, it is reported that the average CEO of a medium-sized US company earns 531 times as much in pay, bonuses and stock options as the average factory worker (Kakabadse & Korac-Kakabadse, 2002:314).

In this case, the shareholding governance model is criticised for “unethically” strengthening the already rich and powerful societal segments (such as shareholders and managers), and ignoring the impoverished section of the economy. Due to this criticism, stakeholder governance theorists purport to offer a better alternative to the shareholding governance model. However, it has been argued that good corporate governance is expected to empower the weaker sections of society (Kakabadse & Korac-Kakabadse, 2002:305).

The stakeholder model of corporate governance is supported by Spisto (2005:84), who asserts that if South Africa hopes to improve corporate productivity levels with its re-entry into international markets, a new two-tier German-based system of corporate governance must be adopted. This would assist in improving management and labour relations, and ultimately, the productivity of the company. Therefore, the next subsection discusses the stakeholder corporate governance concept.

## **2.6 THE STAKEHOLDER MODEL OF CORPORATE GOVERNANCE**

Stakeholder theorists trace their origins to the management theory, politics and law (Cooper & Owen, 2007:650). The stakeholder model of corporate governance is often found in countries in Continental Europe such as France and Germany and in Japan and other Asian countries. Contrary to the shareholder model, the stakeholder model takes a broader view of the company. According to the traditional stakeholder model, the corporation is responsible to a wider constituency of stakeholders than just shareholders.

This view holds that corporations should be “socially responsible” institutions, managed in the public interest. According to this model, performance is judged by a wider constituency interested in employment, market share and growth in trading relations with suppliers and purchasers, as well as financial performance. A central underlying assumption of the stakeholder corporate governance model is that a company’s purpose is to maximise the welfare of a wider constituency of stakeholders of a company than just shareholders (Idowu & Louche, 2011:247).

Other stakeholders may include contractual partners, such as employees, suppliers, customers and creditors, and social constituents, such as members of the community in which the company is located, environmental interests, local and national governments, and society at large (Maher & Andersson, 2000:8). In South Africa, the Companies Act provides a clear framework for the empowerment of stakeholders, and includes a directive that companies operate to enhance shareholder profits and societal welfare. The recently published King IV explains that the governing body, which is the board, should adopt a stakeholder-inclusive approach, which balances the needs, interests and expectations of material stakeholders in the best interests of the organisation over time (King IV:17).

Unlike the shareholder model, which encourages companies to “exclusively” advance the interests of shareholders, the stakeholder model recommends that companies should “inclusively” pursue the interests of a group of identifiable stakeholders who may directly or indirectly be affected by, or who can affect, the success of the company. Stakeholder theorists have offered a classical exposition of the “inclusive” governance concept. They state that a company consists of social groups in which each group can be seen as supplying the company with important resources (contributions) and, in return, expects its interests to be promoted (inducements).

For example, employees may be reluctant to invest in company-specific human capital if they are unable to share in the returns from their investment, but have to bear the opportunity costs associated with making those investments. Alternatively, companies may also be unwilling to expend resources in training employees if, once they have

incurred the costs, they are unable to reap the benefits if employees, once endowed and enriched, choose to leave the company. Similarly, suppliers and distributors can also underinvest in company-specific investments, such as customised components and distribution networks. Therefore, it is only by taking account of stakeholder as well as shareholder interests that companies can achieve long-term profit maximisation, and ultimately, shareholder wealth maximisation (Feizizadeh, 2012:3360).

Jamail, Safieddine and Rabbath (2008:446) posit that the stakeholder perspective of corporate governance is strongly linked to corporate social responsibility (CSR). This is because in as much as the stakeholder theory goes beyond only satisfying the shareholders, CSR also aims to maximise the creation of shared value for the owners, other stakeholders and the society at large (European Commission, 2011:5). Therefore, CSR contributes to the goal of corporate governance under the stakeholder perspective.

Unlike the shareholder model, the stakeholder governance model presupposes the governance problem when directors as trustees serve the financial interest of shareholders alone without promoting the broader interests of the company (Letza, Sun & Kirkbride, 2004:252). It also concurs with the shareholding model's assumption that the resulting agency's conflicts may be reduced by the company through a nexus of contracts between the various stakeholders of the company, and that the company should be run rationally in economic terms to broadly maximise its wealth (Hill & Jones, 1992:131).

The stakeholder model offers several solutions. It proposes a two-tier corporate board structure as a way of including a wider range of stakeholder representation (Schilling, 2001:148). The two-tier board system constantly attempts to enhance the independence and strength of the supervisory board (Spisto, 2005:87). In a typical two-tier governance framework, like in Germany, companies will normally have a dual-board structure: a supervisory board and a management board. The supervisory board is usually constituted by many stakeholders, including investors (shareholders and creditors/banks), employees (union groups), suppliers, customers and government appointees representing broader segments of society (Schilling, 2001:149).

The supervisory board is selected by and composed of shareholders and employees. The supervisory board supervises the management of the corporation, while the management board manages the company. German legislation strictly separates the functions of the two boards to allow for optimum effectiveness. In this way, the supervisory board closely scrutinises the management board's performance so that employees' interests are not neglected. In this case, it mandates the managing board to run the company in the best interests of various stakeholders.

Board effectiveness can be asserted to promote the protection of the interests of all the stakeholders of a company, within which the shareholders conform to a particular group (Garcia-Torea, Fernandez-Feijoo & De la Cuesta, 2016:257). As Money and Schepers (2007:8) claim: "there is an increasing awareness that there cannot be shareholder value without stakeholder value."

The stakeholder theory also proposes representation of the various interest groups on the company's board to ensure consensus building and avoid conflicts. Therefore, the board serves as arbitration over the conflicting interests of the stakeholders and brings about the cohesion needed for the achievement of the company's objectives (Donaldson & Preston, 1995:65). Despite the theory's good intentions, it has been criticised for being a burden to managers by making them accountable to too many stakeholders.

The primary focus of corporate governance, as stated by stakeholder theorists, rests with the board of directors and other stakeholders within the external environment to whom the company is accountable (Donaldson & Preston, 1995:65; Hung, 1998:106). The board of directors alleviates the potential conflict of interests among different stakeholder groups (Hung, 1998:106). Thus corporate governance connotes a synchronising forum. Therefore, it could be inferred that corporate governance, under the stakeholder theory model, is to provide a "balancing act" to avoid conflict of interests and ensure that all stakeholders are considered.



As discussed further in the next chapter, rather than having a loose definition of *stakeholders*, King II and King III, for instance, require every company to explicitly identify their stakeholders. The Companies Act No. 71 of 2008 is silent in this regard.

### **2.6.1 Major criticisms of the stakeholder model**

The stakeholder governance model has also received its fair share of criticisms. The possible defects in the stakeholder theory have been identified (Corfield, 1998:215). The stakeholder model may result in abuse of the directors' discretion. For instance, if there are no limits placed on the stakeholder group, self-serving managers may always claim that they are acting in the interest of a stakeholder, when they are actually acting to further their own interests and increase their own powers.

This is echoed by Maher and Andersson (2000:10), who conclude that managers or directors may use "stakeholder" reasons to justify poor company performance. The 2002 King II Report states that an organisation that is accountable to everyone is actually accountable to none. Thus, accountability that is diffuse is effectively non-existent and unworkable in governance terms.

Another potential defect is that, while putting shareholders first harms other stakeholders, making managers accountable to an undefined group of stakeholders will in effect make them accountable to none as there is no benchmark by which to measure their performance. Finally, the stakeholder theory allegedly undermines property rights by denying owners (shareholders) the right to determine how their property will be used.

According to Pande and Ansani (2014:66), the stakeholder theory is flawed. On the one hand, it fails to determine the difference between means and ends, while on the other hand, it fails at a practical level, because when everything (the different objectives of the various stakeholders, which at times may even be contradictory) is a goal, then nothing really is the goal. The authors argue that in assessing the strategic value of the company, while the good of all stakeholders such as shareholders, employees, customers and

suppliers may well be taken into consideration, those factors should be considered only as the means for achieving a higher purpose, which is increasing the longevity of the organisation and ensuring its growth.

Bezemer, Peij, De Kruijs and Maassen (2014:27) recommend additional research on the comparative advantages and disadvantages of one-tier and two-tier board models. This recommendation follows the recent introduction of the one-tier board in Dutch Company Law.

## **2.7 CONVERGENCE IN CORPORATE GOVERNANCE MODELS**

The trend of convergence has developed quietly (Ping & Andy, 2011:12); first, because the increasing globalisation of capital markets and liberalising of international trade and stock market integration through cross-listing seem to have fostered an environment in which differences in corporate governance theories are becoming less stark (Filatotchev & Boyd, 2009:259). Secondly, the emergence of powerful international institutional investors, and greater investor activism, appear to have also accelerated the convergence of corporate governance systems, especially towards the Anglo-American model (Aguilera & Cuervo-Cazurra, 2009:381).

Thirdly, the proliferation of national (e.g. the Cadbury and King Reports) and transnational (e.g. the OECD, Latin American countries, the World Bank and the Global Reporting Initiative) codes of corporate governance appears to have improved convergence in corporate governance practices (Aguilera & Cuervo-Cazurra, 2009:381; Filatotchev & Boyd, 2009:262). For example, in reviewing 196 distinct codes of governance from 64 countries, Aguilera and Cuervo-Cazurra (2009:377) identify six recommendations that are common in all countries, regardless of their shareholding or stakeholding origins. These are the following:

- balancing of executive and non-executive directors;
- splitting of the positions of chairman and CEO;
- providing quality and timely information to board members;

- following transparent procedures for appointing new directors;
- financial reporting that is objective and comprehensible; and
- keeping an effective system of internal controls.

As noted, increasing similarities and improving convergence of governance practices imply that the criticisms of the shareholding and stakeholder models described earlier may not be limited to the shareholding model or the stakeholding model respectively alone. As already alluded to, the benefit of the shareholder model is that it provides clear guidance to help managers prioritise and establish a mechanism to measure the efficiency of the company's management team regarding profitability. In the same vein, the benefit of the stakeholder model is its emphasis on overcoming problems of underinvestment associated with opportunistic behaviour and in encouraging active co-operation among stakeholders to ensure the company's long-term profitability.

Nevertheless, Carrillo (2007:96) asserts that shareholders' and stakeholders' interests are compatible and contribute to a company's long-term efficiency and prosperity. In a recent study, Chhillar and Lellapalli (2015:702) found that the conflicts between the two models will result in a hybrid model inculcating the best of both models. However, blending the two models continue to create some problems for academics and policymakers (Tse, 2011:60).

## **2.8 CHAPTER SUMMARY**

The chapter highlighted two approaches towards corporate governance, namely a 'narrow view' and 'broad view'. In a narrow view which is also referred to as 'shareholder theory', corporate governance is restricted to the relationship between a company and its shareholders. This is the traditional finance paradigm, expressed in 'agency theory'. At the other end of the spectrum, corporate governance may be seen as a web of relationships, not only between a company and its owners (shareholders) but also a wide range of stakeholders such as unions, government, employees, customers, suppliers and bondholders. Such a view tends to be expressed in 'stakeholder theory' and is often

referred to as a 'broad view' and one which is gradually attracting greater attention, as issues of accountability and corporate social responsibility are brought to the forefront of policy and practice (King IV:40).

Claessens and Yurtoglu (2013:13) assert that for studies of single countries or companies within a country, the narrow definition of *corporate governance* is suitable, while for comparative studies, the broad type of definition is the more logical one. Therefore, this study adopts a narrow definition of *corporate governance* for analysis purposes.

The next chapter considers the South African corporate governance framework focusing on the major legal frameworks, their origins and their internal/narrow and external/broad governance structures. It also discusses the nature of the major governance reforms pursued so far.

## CHAPTER 3

# CORPORATE GOVERNANCE IN SOUTH AFRICA

### 3.1 INTRODUCTION

This chapter discusses corporate governance in South Africa (SA). It starts by appreciating global corporate governance reforms, which inform the establishment of the King Reports. Specifically, it examines the internal corporate governance structures in South Africa. Following the two major corporate governance models described in Chapter 2, the current South African corporate governance landscape can be classified similarly into two major groups: broad/external and narrow/internal. Section 3.2 describes the external corporate governance landscape, and Section 3.3 introduces the South African internal corporate governance structures. Section 3.4 discusses the relationship between corporate governance and Companies Act, JSE Listings Requirements and Insider Trading. Sections 3.5, 3.6 and 3.7 examine the origins and the internal corporate governance structures imposed by the 1994, 2002 and 2009 King Reports on Corporate Governance for South Africa, respectively. The chapter is summarised in Section 3.8.

### 3.2 THE SOUTH AFRICAN EXTERNAL CORPORATE GOVERNANCE LANDSCAPE

In order to ensure a return on their investment, shareholders may rely on at least two broad structures, namely the external and internal mechanisms (Heugens, Van Essen & Van Oosterhout, 2009:482). The external governance mechanisms such as the legal system of the country or takeover markets play an enforcement role in monitoring managerial behaviour to mitigate agency issues and thus help to improve performance (Gillan, 2006:385). This section describes the South African external corporate governance environment. Specifically, it describes the key external stakeholders responsible for formulating and implementing policies, as well as supervising and regulating the broad corporate governance in South Africa. A key stakeholder is a party

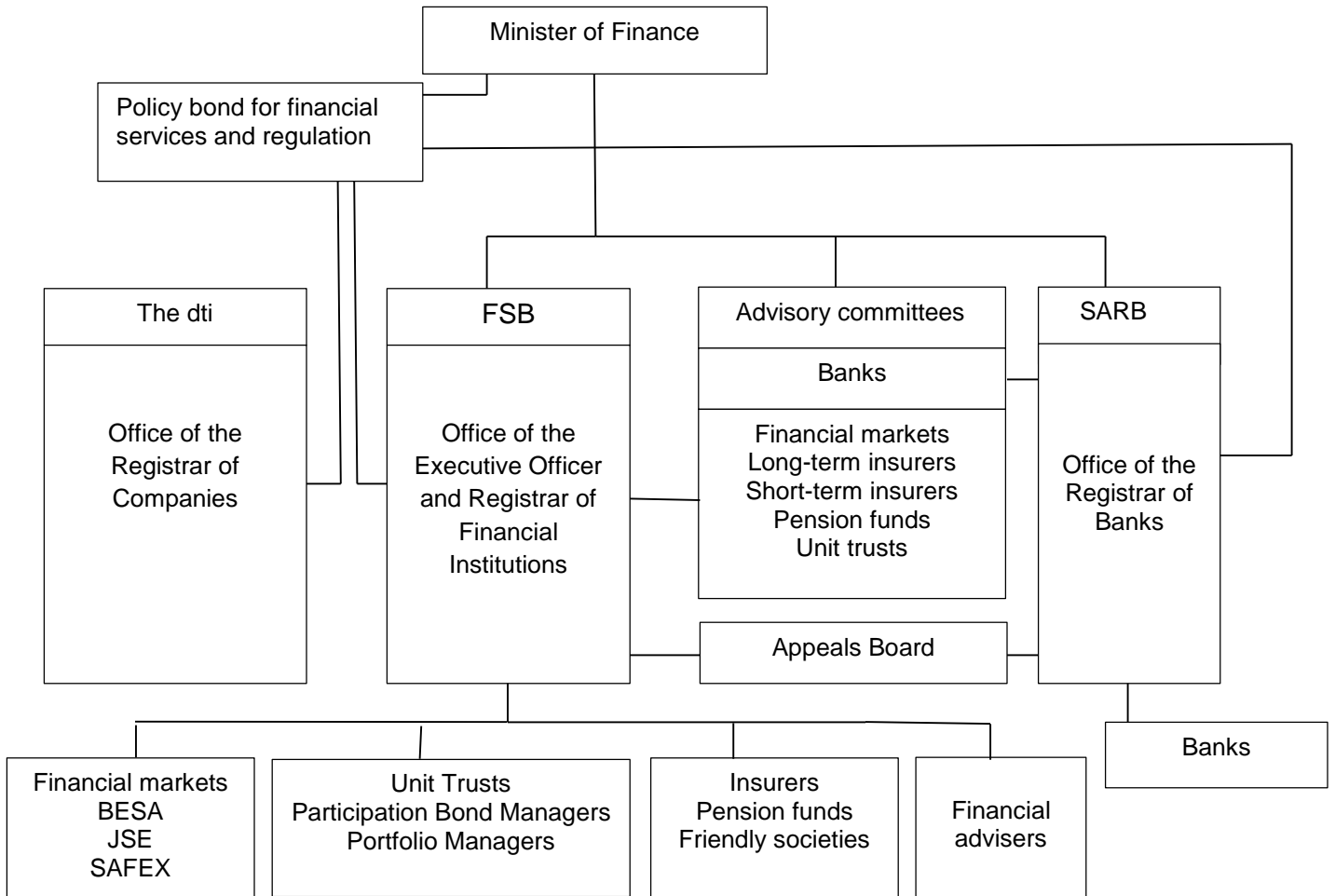
that has a big influence on and interest in the company's existence or operations. This section also identifies some of the challenges that the system faces.

### **3.2.1 Overview of the external corporate governance system**

*External corporate governance* refers to the control exercised over companies from the outside, through regulations, legal systems and market disciplinary forces (Rebeiz, 2015:752). The major role players in South Africa exercising control over companies on behalf of the state and the judiciary are the Minister of Finance, the South African Reserve Bank (SARB), the Registrar of Banks, the Johannesburg Stock Exchange (JSE), the Department of Trade and Industry (dti), the Financial Services Board (FSB) and the Registrar of Companies. These role players are charged with the design, enactment and administration of statutory, as well as voluntary corporate policies and laws. According to Rossouw, Van der Watt and Rossouw (2002:294), the most important function of these regulating authorities is the protection of the public and other stakeholders at large.

Figure 3.1 shows that the South African Ministry of Finance is at the apex of the broad corporate governance regulatory structure. It oversees the statutory regulation of all financial intermediaries and advisers in South Africa. The Ministry is responsible for developing, implementing and supervising the corporate and financial governance superstructure in South Africa (Bamber, Falkena, Llewellyn & Store, 2001:161; Rossouw *et al.*, 2002:294). It carries out its functions through the FSB, SARB, Registrar of Companies and the Department of Trade and Industry (Rossouw *et al.*, 2002:294). The latter is responsible for the Companies Act and Regulations, including the enforcement of the legislation together with the Companies and Intellectual Property Commission (CIPC).

**Figure 3.1: The South African external corporate governance framework**



Source: Rossouw *et al.* (2002:295)

The FSB has regulatory powers over all non-bank financial institutions and advises the Minister of Finance (Financial Services Board Act No. 97, 1990:3a). The FSB is also assisted by the Insider Trading Directorate (ITD), the advisory board on financial markets, and the advisory committees on long- and short-term financial instruments (Rossouw *et al.*, 2002:294). In contrast, the Appeals Board serves as the official adjudicator of all conflicts emanating from the whole financial system: the FSB, the advisory committees and the SARB.

The FSB's functions are further delegated to four subordinated statutory bodies: financial markets, unit trusts, insurers and financial advisers' boards (Rossouw *et al.*, 2002:294). The Financial Markets Board is responsible for the supervision and issuance of licences for the operation of securities markets, such as stock, bond and financial futures markets.

The Financial Markets Board has supervisory powers over the JSE, the Bond Exchange of South Africa (BESA, 2008) and the South African Futures Exchange (SAFEX, 2008). Of these, the JSE is directly relevant to this study. The JSE is the only licensed securities exchange in South Africa. It is the frontline regulator for entities with securities listed on the exchange, and is responsible for setting and enforcing listing and membership requirements and trading rules. It provides a platform for the listing and trading of all corporate shares. The JSE regulates issuers and investors as a licensed exchange under the Financial Markets Act 2012, and is supervised by the FSB in performance of its regulatory duties. More importantly, it appends the provisions of the 1994, 2002 and 2009 King Reports on Corporate Governance to its Listings Requirements. It expects all listed companies to apply the provisions of the King III Report, or explain in case(s) of non-compliance.

Notwithstanding, the South African financial regulatory system faces numerous challenges (Rossouw *et al.*, 2002:294). A major regulatory challenge is that the FSB is financed by the financial services industry through levies and fees, with no contributions from central government (Financial Services Board Annual Report, 2013:193; Rossouw *et al.*, 2002:294). This raises the question of whether the FSB, as the main financial services industry regulator, can be truly independent of the market participants that it is expected to regulate. The public continues to question the FSB's independence. As recently as 2016, a newspaper article on *Business Day (2016)* reported that financial giants, such as Liberty and Alexander Forbes, are accused of colluding with the FSB to close thousands of pension funds illegally to the detriment of savers and their families.



### **3.3 THE SOUTH AFRICAN INTERNAL CORPORATE GOVERNANCE LANDSCAPE**

Section 3.4 deliberates on the South African internal corporate governance environment, which is founded by various statutory and voluntary corporate laws, and codes of conduct, which attempt to regulate the internal control of companies. The internal corporate governance mechanisms are the board structures, such as committees, leadership, board activity, board independence and board diversity, perceived to have an influence on company performance (Rebeiz, 2015:752). The statutory laws are the South African Companies Act No. 71 of 2008 and the Insider Trading Act No. 135 of 1998, while the voluntary codes of conduct are the JSE's Listings Requirements and the 1994, 2002 and 2009 King Reports on Corporate Governance for South Africa.

The next sections discuss the South African Companies Act, Insider Trading and the JSE Listings Requirements. They represent the main code of conduct on which this study is based.

### **3.4 THE SOUTH AFRICAN COMPANIES ACT, INSIDER TRADING ACT, JSE'S LISTINGS REQUIREMENTS AND INTERNAL CORPORATE GOVERNANCE STRUCTURES**

Section 3.2 discussed the external corporate governance mechanisms. The external structures are regulations, legal systems and market disciplinary forces believed to have an impact on corporate performance (Rebeiz, 2015:752). However, as already mentioned in Section 2.5, at a minimum, shareholders put their trust in the internal corporate governance mechanisms. This is because shareholders may also use the internal corporate governance structures to mitigate agency problems, which are a consequence of the separation of ownership and control (Jensen & Meckling, 1976:310).

This study follows the studies of Aduda, Chogii and Magutu (2013:107), Afrifa and Tauringana (2015:728), Arora and Sharma (2016:428), Orazalin, Mahmood and Lee (2016:809) and Rodriguez-Fernandez, Fernandez-Alonso and Fernandez-Rodriguez

(2014:493), among others, and considers board size, board independence, gender diversity, board activity, leadership structure and presence of board committees to be the most critical internal corporate governance attributes that may potentially assist in mitigating agency problems.

The next subsection discusses the pertinent internal corporate governance structures that are instituted by the South African Companies Act, the JSE Listings Requirements and the Insider Trading Act. Subsection 3.4.1 discusses the internal corporate governance structures that are established by the Companies Act, while Subsection 3.4.2 describes those instituted by the JSE Listings Requirements and the Insider Trading Act.

### **3.4.1 The Companies Act and internal corporate governance structures**

The South African Companies Act No. 71 of 2008, which replaced the Companies Act No. 61 of 1973 on 1 May 2011, is the main statutory commercial law that controls internal operations of companies in South Africa. It is administered and supervised by the Department of Trade and Industry through the Registrar of Companies. The goal of the Department of Trade and Industry in repealing the previous Companies Act was to ensure that the regulatory framework for enterprises of all types and sizes such as good corporate governance, investor confidence and international competitiveness is promoted. The Act sets out several structures that govern the internal relationships between the company, directors and shareholders.

Focusing first on the company, the Act under Schedule 3 stipulates that a company has the right to appoint or control the appointment of qualified directors, auditor(s) and a company secretary. The company should organise and send notification of all meetings, including the annual general meeting (AGM) and extraordinary meetings, to board members. It must also keep accurate and complete accounting records to ensure the preparation of annual financial statements.

Finally, the company should prepare and present its annual report to members and file all annual returns with the Registrar of Companies. As discussed in Chapter 5, the study relies on the company's annual reports as the main source of data for the internal corporate governance variables. The mandatory or statutory nature of annual reports in South Africa makes them a more credible and reliable source of data compared with other sources.

Concerning directors, the Act under Schedule 66 stipulates that every public company should have a unitary board consisting of at least three directors. Schedule 2 of the Act grants board of directors the following powers: direction and control, management, voting, and representing the company.

Under Section 122 of the Act, executive and non-executive directors are duty bound to disclose in the annual report any direct or indirect beneficial interest in the company's securities. Concerning auditing, Section 94 of the Act stipulates that every company must appoint an audit committee at its AGM. The committee should consist of at least three non-executive directors. The presence of an audit committee and its independence is used as one of the independent variables to determine its impact on company performance.

Finally, shareholders are required to provide capital to the company in return for shares or equity stake. As risk bearers of the company, the Act grants shareholders several rights and powers, such as removal of directors from office before effluxion of time. These sections of the Act are crucial and underscore distinguishing features that underlie any typical "shareholding" or the Anglo-American corporate governance model, which was discussed in Chapter 2. They demonstrate further that the interests of shareholders within this model are backed by extensive legal rights and powers. Similarly, it is expected that the extensive control powers granted to shareholders will ensure that voluntary or self-regulation operates effectively without state or external intervention. Notably, the Act does not explicitly recognise the interests or rights of any group of stakeholders, such as employees.

By contrast, the “stakeholder” corporate governance model tends to formally recognise the rights of other stakeholders. For example, the right of employees to be represented on the supervisory board of German companies is enshrined in German company law (Mallin, 2007:16).

### **3.4.2 The JSE’s Listings Requirements, Insider Trading Act and internal corporate governance structures**

In addition to the Companies Act, the revised JSE’s 2014 Listings Requirements and the Insider Trading Act No 135 of 1998 are the other corporate governance reforms that regulate internal corporate governance in South Africa. The JSE’s 2014 Listings Requirements are important because they append the requisite internal governance elements of the Companies Act, the Insider Trading Act and the 2009 King Report to its Listings Requirements. Specifically, the Listings Requirements are specified in a vast document consisting of a practice note, 27 schedules and 22 sections dealing with various issues from the authority of the JSE to the accreditation of auditors.

Therefore, the following subsection briefly highlights the relevant internal governance provisions that are not covered by the Companies Act or the King Reports. This is crucial as the premise for this study is based on the JSE Listings Requirements. This study seeks to, among others, examine whether companies that comply with the JSE Listings Requirements exhibit higher company performance.

The number of JSE-listed companies has declined from 668 companies in 1998, for instance, to 426 in January 2004, 383 in July 2014, and 337 in February 2015. Armstrong *et al.* (2006:221) attribute the shrinkage of JSE-listed companies to the more rigorous Listings Requirements, as there is a cost associated with adherence to the rules. Whether there are benefits concerning financial performance which outweigh the costs is one of the objectives of this study.

The relevant sections of the Insider Trading Act 1998 and the recommendations of the 2002 King Report are discussed below. However, there are three areas where the JSE Listings Requirements differ from the King Report and the Companies Act. First, in Section 10.16(a), the Listings Requirements state that every JSE-listed company's board should have a minimum of four directors. The Companies Act requires a minimum of three directors, while the 2009 King Report does not specify a number.

Secondly, Subsection 10.16(k) prohibits life directorships and directorship for an indefinite period, while the King Report and Companies Act permit a staggered rotation of board members to ensure board continuity. Finally, under Subsections 7.F.5(a) and 8.63(a), every listed company is expected to provide two statements, as follows:

- a narrative statement on how it has applied the principles set out in the 2009 King Code, providing an explanation that enables shareholders and potential investors to evaluate how the principles have been applied; and
- a statement explaining the extent of its application of the principles of the King Code and the reasons for each and every instance of non-application during the accounting period.

The Insider Trading Act of 1998 prohibits individuals from dealing in such securities or financial instruments based on inside information. Section 5 of the Act stipulates that any individual convicted of insider trading is liable to a criminal fine not exceeding R2 million, imprisonment for a period not exceeding 10 years, or both. Finally, and more importantly, the Act grants the FSB a wide range of statutory powers, including the power to investigate, summon, institute, interrogate and prosecute offenders.

The next sections discuss recent corporate governance reforms that have been pursued in South Africa. Table 3.1 presents the main recommendations of the King Reports, King I, II and III. To facilitate comparison, the recommendations of the influential 1992 Cadbury Report are also presented, and will be referred to throughout the next sections. The recently published King IV is not included as it has not been commissioned yet.

**Table 3.1: Comparison of internal corporate governance provisions of the Cadbury, King I, II and III Reports**

Table 3.1 presents a comparison of internal corporate governance provisions of the Cadbury, King I, King II and King III Reports.				
Internal corporate governance provisions	1992 Cadbury Report	1994 King Report (King I)	2002 King Report (King II)	2009 King Report (King III)
<i>Board and non-executive directors:</i>				
Board composition	Unitary board	Unitary board	Unitary board	Unitary board
Non-executive director	At least three	At least two	Majority of non-executive directors	Majority of independent non-executive directors
Independent non-executive director	At least two	Not specified	Majority of non-executive directors	Majority of independent non-executive directors
Board diversity	Encouraged	Encouraged	Encouraged	Encouraged
Role duality	Split chairman and CEO	Split chairman and CEO	Split chairman and CEO	Split chairman and CEO
Staggered boards	No longer than three years on board	Not specified	No longer than three years on board	No longer than nine years on board
Board meetings	Regularly	At least once every quarter	At least once every quarter	At least once every quarter
Board committees	Audit, remuneration and nominations	Audit and remuneration	Audit, remuneration and nominations	Audit, remuneration and nominations
Share ownership	Encouraged	Encouraged	Encouraged	Encouraged
Board diversity	Adequately diversified	Adequately diversified	Adequately diversified	Adequately diversified
Board size	Not specified	Not specified	Not specified	Not specified
Insider trading	Not specified	Not specified	Prohibits insider trading	Prohibits insider trading
<i>Risk management, internal audit and control:</i>				
Risk management	Not covered	Not covered	Risk management/committee	Risk management/committee
Internal audit	Establish internal audit function	Establish internal audit function	Establish internal audit function	Establish internal audit function
Internal control system	Establish internal control system	Establish internal control system	Establish internal control system	Establish internal control system
<i>Accounting and Auditing:</i>				
Auditing	Audit committee/auditors	Audit committee/auditors	Audit committee/internal auditors	Audit committee/internal auditors
Accounting/financial reporting	Accounting standards (generally accepted accounting practice - GAAP)	Accounting standards (GAAP)	Accounting standards/International Financial Reporting Standards (IFRS)	Accounting standards/IFRS
<i>Compliance and enforcement:</i>	Comply or explain	Comply or explain	Comply or explain	Apply or explain
<i>Code principles:</i>	Openness, integrity and accountability	Fairness, responsibility, transparency and accountability	Fairness, responsibility, transparency, accountability, discipline, independence and social responsibility	Fairness, responsibility, transparency, accountability, discipline, independence and social responsibility
<i>Type of corporate governance:</i>	Financial aspects of corporate governance	Integrated corporate governance	Inclusive corporate governance	Inclusive corporate governance
<i>Compliance or regulation</i>	Voluntary or self-regulation	Voluntary or self-regulation	Voluntary or self-regulation	Voluntary or self-regulation

Sources: Compiled from the 1992 Cadbury Report; 1994, 2002 and 2009 King Reports

### **3.5 THE 1994 KING REPORT ON CORPORATE GOVERNANCE FOR SOUTH AFRICA (KING I)**

The King Committee was formed in 1992 under the auspices of the Institute of Directors in Southern Africa (IoDSA) to consider corporate governance in the context of South Africa. The following subsections examine the origin and the internal corporate governance structures imposed by the 1994 King Report on Corporate Governance for South Africa.

#### **3.5.1 Background to King I**

Company law in the form of the Companies Act has existed in South Africa since 1861 (Department of Trade and Industry, 2004:13). The legislation was introduced to regulate the behaviour of companies, their directors and officers. However, there is a consensus that corporate governance in South Africa was formally institutionalised by the publication of the first King Report on Corporate Governance (King I) in November 1994 (African Corporate Governance Network, 2016:70). The purpose of the King Report in 1994 was to promote the highest standard of corporate governance in South Africa. According to Visser (2005:33), the 1994 King I Report on Corporate Governance for South Africa was the first governance code in the world to stress the importance of wider stakeholder interests beyond narrow shareholder demands.

The publication of King I, drew substantial inspiration from the 1992 Cadbury Committee study in the United Kingdom (Sarraj, 2004:29) and coincided with South Africa's post-apartheid reintegration into the global economy and marketplace. Internationally, corporate governance had become an issue of great concern, foregoing well-publicised cases regarding the collapse of major international corporations, such as the Bank of Credit and Commerce International (BCCI) and the Maxwell Communications Corporation in the UK and elsewhere (Barrier, 2003:68).

There were widespread suspicions that poor corporate governance practices played a central role in causing these corporate failures (Cadbury Report, 1992:12; Jones & Pollitt, 2004:162). This ignited major reforms that influenced the way corporations were governed worldwide. The UK, for example, responded by establishing a Corporate

Governance Committee in 1991 to prepare a Code of Best Corporate Practice for UK-listed companies.

In 1992, the recommendations of the UK Cadbury Report on the Financial Aspects of Corporate Governance were published. The recommendations focused on the control and division of responsibilities among top management, and on the role of auditors.

With increasing domestic and international interest in corporate governance, the King Committee on Corporate Governance was formed in 1992 as a voluntary and private initiative at the instigation of the IoDSA (Rossouw *et al.*, 2002:299). The main purpose of the King Committee (named after its chairman, Mervyn King) was to consider how to promote the highest standards of corporate governance in South Africa (King II Report on Corporate Governance for South Africa, 2002:5). The King Committee was requested to make recommendations on a code of practice concerning the financial, ethical and environmental aspects of corporate governance in South Africa (Institute of Directors in Southern Africa, 1994:43).

After extensive deliberations, the committee published its final report in November 1994. King I adopted many of the corporate governance standards and principles that had already been advocated in many existing national and international codes (Aguilera & Cuervo-Cazurra, 2009:379). Like many other Commonwealth countries, South African corporate governance structures resemble those of the UK's Cadbury Report of 1992, especially regarding its recommendations on internal corporate governance structures (West, 2009:11).

However, unlike Cadbury, the King Committee advocated an “integrated” approach to corporate governance. It also went beyond Cadbury's main principles of accountability, integrity and openness to include fairness and responsibility. This means that companies should go beyond the financial and regulatory aspects of corporate governance to consider the interests of a wide range of stakeholders (King II Report on Corporate Governance for South Africa, 2002:para. 5). This gives King I a stakeholder rather than shareholder orientation (West, 2009:9). The approach emphasises companies' responsibilities to various stakeholders, and encourages stakeholder engagement as an integral element of company strategy (West, 2009:10).



The code made South African companies consider the conditions that existed in the country. It urged companies to examine corporate governance strategies in the light of the HIV/AIDS pandemic and economic stability to resolve unique socio-economic and political challenges (Vaughn & Ryan, 2006:506).

### **3.5.2 Corporate governance structures imposed on companies by King I**

This subsection describes the internal corporate governance structures imposed by the 1994 King Report on Corporate Governance for South Africa (hereafter also called King I). The structures are divided into six main parts: board and directors, risk management, internal audit and control, accounting and auditing, integrated sustainability reporting/non-financial information, and compliance and enforcement. These structures are evaluated in Section 3.5.3.

#### **i) Board and directors**

Consistent with the 1992 Cadbury Report (hereafter also called Cadbury), King I recommended that every South African company be headed by an effective unitary board, consisting of executive and non-executive directors, who were primarily responsible for directing and controlling the company (King I Report on Corporate Governance for South Africa, 1994:para. 2.1). These directors were individually and mutually accountable to the shareholders through the following: the maximisation of long-term benefits to its shareholders in terms of profits, cash flows and minimising risks; the maximisation of wealth to other stakeholders, and ensuring the business's prosperity.

King I recognised the key role that the chairman of the company played in fortifying good corporate governance, which included ensuring that non-performing directors were not re-elected and had their services terminated (King I Report on Corporate Governance for South Africa, 1994:para. 4.3). Due to their massive role and in line with Cadbury, King I recommended that the positions of chairman and CEO of South African companies should be held by different persons (Table 3.1; Kakabadse & Korac-Kakabadse, 2002:311). It argued that such a separation was essential to fulfil

duties. It was also said to result in a substantial reduction in the concentration of power and authority vested in one person.

Like Cadbury, it underscored the special importance of non-executive directors in setting and upholding high standards of corporate governance. In particular, it noted the independence and requisite skills and experience that non-executive directors brought to the company concerning issues of strategy, performance, resources, major appointments and standards of conduct (King I Report on Corporate Governance for South Africa, 1994:para. 4.1).

Unlike Cadbury, but in line with the South African Companies Act, King I recommended that boards had to have at least two rather than three competent and independent non-executive directors. This was a way to ensure that their opinions were influential in board decisions (Table 3.1; King I Report on Corporate Governance for South Africa, 1994:para. 2.2).

However, like Cadbury, it also did not specify whether the chairman should be an independent non-executive director or not. The report recognised the essential role that subcommittees played in achieving efficient and effective corporate boards. Similar to the Cadbury Report, King I recommended that every board should have remuneration and audit committees (Table 3.1; King I Report on Corporate Governance for South Africa, 1994:para. 6.1). In line with the South African Companies Act, it also recommended that the audit and remuneration committees consisted of at least two non-executive directors, with the majority of its members, including the chairman of the committees, being non-executive directors.

Unlike Cadbury, however, it recommended that the selection and appointment of directors should be dealt with by the entire board. As such, King I did not recommend the establishment of nomination committees (Table 3.1; King Report, 1994:para. 5.1). While Cadbury recommended that the majority of the audit committee members be independent non-executive directors, King I did not specify a number. Finally, King I expressed concerns whether there was a sufficient pool of candidates in South Africa with the skills and knowledge to fill directors' positions (Rossouw *et al.*, 2002:297).

As a solution, it proposed that new board appointees should attend training and induction on the company's business, resources, systems and management structure. It also noted that the existence of pyramidal structures and large family-controlled companies listed on the JSE could hinder compliance.

## **ii) Risk management, internal audit and control**

Similar to Cadbury and in terms of Section 10, King I emphasised the need for companies to have a well-resourced internal audit and control unit. It pointed out that internal auditors were complementary to, but different from, outside auditors. As such, it encouraged companies to establish internal audit functions to undertake regular monitoring of key controls and procedures. For example, and under paragraph 10.2, King I urged internal audit units to investigate any suspicion of fraud on behalf of the audit committee. Furthermore, to maintain their independence, King I recommended that the heads of the internal audit unit should have unrestricted access to the chairman of the audit committee.

Regarding internal controls, King I accepted Cadbury's principle that an effective internal control system was an essential part of the efficient management of a company. In this case, King I granted directors two mandates. First, and in line with the South African Companies Act, it mandated directors to maintain a system of internal control over the financial management of the company, including procedures to reduce the incidence of fraud. Secondly, and distinct from the South African Companies Act, it mandated directors to report on the effectiveness of their system of internal control. External auditors should also express their "true and fair" view on the directors' statement in the annual report. Like Cadbury, King I did not explicitly specify how issues of risks should be dealt with or integrated into the company.

## **iii) Accounting and auditing**

Similar to Cadbury, and under Section 10, King I made several recommendations on accounting and auditing for South African companies. Regarding accounting, King I recommended that South African companies should prepare their financial reports in

line with GAAP as recommended by the JSE's Listings Requirements and the South African Accounting Standards Board. It placed four main responsibilities on directors.

First, it mandated directors to prepare financial statements for every financial year giving a true and fair view of the company's state of affairs. Secondly, and similar to the South African Companies Act, it stated that directors had to maintain adequate accounting records. Thirdly, they had to ensure that suitable accounting policies and standards had been consistently applied to the financial reports. Also, in applying accounting standards, substance had to take precedence over form. It had to be easily comprehensible, transparent and maintain the integrity of financial reports.

Finally, directors had to express their opinion on whether the business would continue to operate as a "going concern" in the foreseeable future. In this case, the board was expected to fully state the facts and assumptions used in its assessment of the "going concern" status of the company at the end of a financial year. This would also help the external auditor to express a "true and fair" view of the company's "going concern" status. This was expected to help generate serious deliberation in board meetings, bearing in mind the liabilities that inappropriate assessment or misreporting of the company's financial position could incur.

In this respect, King I recommended that the audit committee had to play a critical role in ensuring the integrity of the financial reports. First, and as described above, the audit committee had to be composed to enable non-executive directors to contribute independent judgement. Secondly, the committee had to review the financial statements. Thirdly, the finance director and the head of internal audit had to attend the audit committee meetings to answer questions on any issues of concern that were raised. Finally, the external auditor also had to have unfettered access to the board chairman, the management, the audit committee and the chairman of the audit committee.

#### **iv) Integrated sustainability reporting/non-financial information**

Companies' explicit requirement to engage in stakeholder reporting is what differentiates King I from Cadbury or other Anglo-American corporate governance

codes. Under Sections 12 and 13, King I made several recommendations regarding affirmative action and stakeholder rights.

Stakeholder issues covered included contribution to the community, health and safety, environment, and fair employment practices (Table 3.1; King I Report on Corporate Governance for South Africa, 1994:para. 12.1). In line with Cadbury, and under Section 13, King I also made recommendations on organisational ethics. However, it did not deal with black economic empowerment, HIV/AIDS and employment equity issues. Concerning investment in local communities, King I tasked companies with assessing the peculiar needs of the communities they operated in. The identified needs then had to be “integrated” into the company’s policies and goals.

These investments included improving access to portable water, sanitation and roads. In consultation with local community leaders, companies could, for example, decide to construct or renovate local schools and health centres. They could also contribute to charitable courses that would benefit local communities. For instance, they could make donations to local non-governmental organisations (NGOs) that offered essential services, like affordable housing. With reference to fair employment practices, King I recommended that companies work towards redressing historical racial imbalances in the workplace, which included contributing to employee skills developments and upholding labour and employee rights. In particular, they had to avoid discrimination and harassment across a range of issues, such as ethnicity, religion and gender.

Concerning health and safety, King I recommended that every company had to provide a safe and healthy working environment. That is, training, tools and protective gadgets had to be provided to reduce workplace accidents and fatalities.

In connection with the environment, King I stated that sustainable development required constant awareness and respect for the conservation of the environment. In this regard, it recommended that companies should carry out regular environmental impact assessments to identify and adequately resolve any negative consequences of their operations. More importantly, King I proposed that the government should introduce more detailed legislation regarding labour relations, health and safety, the environment and issues of transformation that would be legally binding on companies.

Finally, and with reference to ethics, King I urged every company to prepare a code of ethics to guide the dealings of directors, management and employees. Such a code had to be based on the principles of accountability, fairness, responsibility and transparency. Under Subsection 13.2, King I set four main criteria to be satisfied.

First, the code had to commit the company to the highest standards of behaviour. Secondly, it had to be developed to include all its stakeholders so that it could be infused into its culture – it had to define its obligations towards employees, owners, creditors, suppliers, customers and local communities. Thirdly, the code had to receive total commitment from the company’s board and CEO. Finally, it had to be sufficiently detailed in order to give a clear guide to the expected behaviour of all employees.

#### **v) Compliance and enforcement**

Similar to Cadbury, King I also supported the principle of self-regulation or voluntary compliance (Table 3.1; King I Report on Corporate Governance for South Africa, 1994:para. 9.2). Specifically, it stated that putting the code into practice was a direct responsibility of the boards of directors of listed companies, but also the indirect responsibility of auditors and shareholders.

King I charged corporate boards with the responsibility of ensuring that their companies complied with all applicable laws, regulations, rules and standards. The code was appended to the JSE’s Listings Requirements, which required directors of listed companies to make a positive statement on the level of compliance. The board of directors also had to identify and explain any areas of non-compliance.

External auditors were expected to offer their fair view on the extent to which the provisions of King I had been applied. King I also recommended that shareholders, especially local and foreign institutional shareholders, as well as primary stakeholders should actively seek to positively influence their companies to comply with the code. Companies were encouraged to enter into a sustainable dialogue, based on constructive engagement and the mutual understanding of objectives with institutional investors. They also had to seek to enforce their rights as enshrined under the South African Companies Act, such as attending, voting and asking pertinent questions at

AGMs. Finally, to strengthen voluntary compliance and the markets for corporate control and managerial labour, the JSE revised its Listings Requirements in 1995 and 2000 to encourage diffused ownership of listed companies (Armstrong *et al.*, 2006:214).

### 3.5.3 Evaluation of King I

It has been argued that, for the first time, King I offered companies a coherent corporate governance framework that was comparatively relevant to the unique South African context (Armstrong *et al.*, 2006:214). King I differentiated itself from the existing Anglo-American corporate governance codes by going beyond traditional financial aspects of corporate governance to cover non-financial issues, such as ethics and the environment (King II Report on Corporate Governance for South Africa, 2002:para. 4; West, 2009:12). However, as will be discussed in the next subsection, the non-financial issues were covered in less detail or with less clarity (Malherbe & Segal, 2003:193).

Despite being less detailed in its coverage of non-financial issues, King I still represented an early attempt among Anglo-American countries to adopt the integrated approach and required companies to engage in stakeholder reporting (Mallin, 2007:57). According to Aguilera and Cuervo-Cazurra (2009:379-380), King I was the sixth code of corporate governance in the world – after those of the United States (US) in 1978, Hong Kong in 1989, Ireland in 1991, the UK in 1992 and Canada in 1993 – and the first of its kind in the developing world.

More importantly, it laid a foundation for substantial future corporate structural and affirmative action legislative reforms. It has been widely acknowledged that King I was instrumental in promoting the highest standards of corporate governance in South Africa (African Corporate Governance Network, 2016:74). For example, Credit Lyonnais Securities Asia (CLSA) conducted a survey of corporate governance standards of 495 companies in 25 emerging markets in 2000, where it ranked South Africa as the fifth emerging market with good corporate governance structures (King II Report on Corporate Governance for South Africa, 2002:para.15).

As discussed further, the report also encouraged the JSE to introduce more rigorous Listings Requirements, especially regarding director remuneration and ownership of listed companies, and the requirement for director interests, remuneration, and share ownership to be fully disclosed in the annual report (JSE Listings Requirements, 2007, Subsections 3.83, 4.25-8, 7.A.23-7, 7.B.18-21).

Despite these achievements, King I suffered from several weaknesses and deviations from Cadbury. First, and unlike Cadbury, while King I recognised the importance of board subcommittees, it failed to recommend the establishment of a nomination committee (Table 3.1; Rossouw *et al.*, 2002:297). Such a committee would have improved the nomination process and ensured flawless board independence. The absence of a nomination committee undermined board functions where true independence from management was required (Malherbe & Segal, 2003:193).

Secondly, King I was unable to insist on a truly independent non-executive director to chair South African corporate boards (Table 3.1; Malherbe & Segal, 2003:193). This deviation from Cadbury also impaired board independence and increased potential conflict of interests (Malherbe & Segal, 2003:192). Similarly, King I did not deal with the crucial issues of risk management and insider trading among directors and officers.

Thirdly, while King I called for the establishment of a remuneration committee, it failed to establish the economic rationale or specific rules that should guide companies in determining the level of their directors' remuneration. In this case, it failed to deter the concerns of shareholders and the general public about director and executive remuneration (Kakabadse & Korac-Kakabadse, 2002:306; Sarra, 2004:8-10). Fourthly, while King I recognised the need for effective corporate boards, it was unable to determine a coherent framework for objectively evaluating, reporting and improving the effectiveness of corporate boards and their sub-committees.

Non-executive directors are valued for their independence in business judgement and protection of shareholder interests (Cadbury Report, 1992:para. 4.12). However, and unlike Cadbury, King I did not set out a test for determining independence nor provided a clear classification of non-executive directors.



Finally, King I was criticised for having extensive non-corporate governance content, and sometimes vague stipulations on employee participation, stakeholder engagement, and a code of ethics (Malherbe & Segal, 2003:193). According to Malherbe and Segal (2003:193), the extensive non-corporate governance content of King I might have resulted in the slow adoption of its provisions among listed companies.

As a result of these limitations and other international and local developments, the 2002 King Report on Corporate Governance for South Africa (King II) was introduced as an improvement on King I. In the next subsections, the origins and internal corporate governance provisions, especially regarding the improvements on King I, are described.

### **3.6 THE 2002 KING REPORT ON CORPORATE GOVERNANCE FOR SOUTH AFRICA (KING II)**

South Africa succumbed to global demands by reviewing King I, which culminated in the publication of a second King Report (King II) on Corporate Governance for South Africa in March 2002. The following subsections examine the origin and the internal corporate governance structures imposed by the 2002 King Report on Corporate Governance for South Africa.

#### **3.6.1 Background to King II**

Greater market globalisation, ever-increasing competition, greater global interdependencies and more pronounced shareholder activism in the US and elsewhere pose demands for improved corporate governance in today's mature and emerging markets (Kakabadse & Korac-Kakabadse, 2002:305). Armstrong *et al.* (2006:15) note four principles that guided the development of the second King Report, as follows:

- to review the first report and evaluate its usefulness;
- to extend the inclusive approach by which the interests of all stakeholders are considered;

- to consider risk and internal controls assurance; and
- to provide recommendations for enforcement.

Published in 2002, King II dealt with many of the corporate governance issues which had been highlighted with the failures of Enron, WorldCom and Parmalat. As depicted in Table 3.1, King II shared the philosophy of the 1992 Cadbury Report, as it was not prescriptive but rather proposed a code of conduct to be voluntarily applied and self-policed. It built on the King Committee's first report on corporate governance. King II replicated a considerable amount from King I but in more detail.

King II is a comprehensive document divided into six sections dealing with the accountability and responsibilities of boards and directors, and the processes of auditing and accounting. Particular attention was given to internal audit, risk management, non-financial matters, compliance and enforcement. A review of the topics covered by King II and corporate governance reports issued in the UK (the Combined Code, the Turnbull Guidance, the Smith Guidance and the Higgs Report) reveals that similar issues are discussed. Topics dealt with include boards of directors, directors' remuneration, internal control and risk management, and accounting and audit.

Key improvements on the 1994 King I Report were as follows:

- recommendations on the composition of the board of directors, specifically separating the roles of chairman and CEO;
- recommendations on the disclosure of individual directors' remuneration;
- a recommendation that a non-executive director's contract should run for no more than three years;
- a recommendation that greater emphasis be given to the role and contribution of independent non-executive directors;
- a recommendation of three categories of directors: executive, non-executive and independent (those who have no connection with the business) – advising that the contribution of independent directors should provide impartial advice and better represent the interests of shareholders without affiliation to any;

- recommendations on the nomination committee's importance, role and contribution, in addition to the audit and remuneration committees, which would oversee the appointment of new board members;
- recommendations to use information technology (IT) to improve reporting and transparency, and acknowledge that the use of IT in business has its risks;
- an emphasis on the importance of internal audit and risk management; and
- a greater focus on the non-financial aspects of corporate governance – particularly the workforce's safety and health, ethical issues, fair treatment of workers, a requirement for companies to be empathetic to social factors (such as HIV/AIDS and the promotion of black empowerment), the accountability and responsiveness to broader public interests, encouraging a greater sense of responsibility to the environment and the environmental-stakeholder engagement, and to social and ethical accounting, auditing and reporting.

Additionally, King II incorporated guidelines on the handling and disclosure of non-financial matters, and the compliance and enforcement of corporate guidelines. King II also encouraged shareholder activism and greater media involvement in the naming and shaming of offenders of codes of conduct, as well as the establishment of a “delinquent directors” register, where those named would be disqualified from further directorship responsibility under the Companies Act. Similar to the Cadbury Report, King II is a code of conduct and not a law.

King II was commended as the best in class for its emphasis on social, environmental and ethical concerns (Rossouw *et al.*, 2002:301), referring particularly to the integrated sustainability reporting section. Much of the reflection and discussion of corporate governance in South Africa has focused on the King II Report. Understandably, this relates largely to the distinctive nature of the report, and how it relates to South African needs. As noted above, the report adopted an “inclusive” approach, which can be directly linked (if not equated) with the stakeholder model of corporate governance that has its roots in the stakeholder theory, and which stands in opposition to the model of shareholder primacy maintained in the UK and US.

The introduction to the King II Report included seven characteristics of good corporate governance (Institute of Directors in Southern Africa, 2002:para. 18): discipline, transparency, independence, accountability, responsibility, fairness and social responsibility. These corporate governance “virtues” extend the four traditional principles identified in the Millstein Report – presented to the Organisation for Economic Co-operation and Development (OECD) in 1998 – of responsibility, accountability, fairness and transparency.

Although there is significant overlap, and while discipline and independence can be considered to be equally important in other corporate governance reports, the inclusion of social responsibility (in addition to responsibility itself) is notable. In this regard, the report envisaged that a well-managed company would be aware of, and respond to, social issues, placing a high priority on ethical standards. A good corporate citizen is increasingly seen as non-discriminatory, non-exploitative and responsible for environmental and human rights issues (Institute of Directors in Southern Africa, 2002:para. 18.7).

#### **i) Domestic developments**

Weaknesses in corporate governance, including visible omissions in King I, were identified and criticised (Malherbe & Segal, 2003:162). As shown in Table 3.2, the publication of King II was preceded by many Acts. Since the first King Report on corporate governance, at least eight major new or amended Acts have been introduced impacting on corporate governance practices and procedures (Table 3.2). A number of affirmative action and stakeholder laws have also been introduced. These include the Occupational Health and Safety Act 1993, the Labour Relations Act 1995, the Basic Conditions of Employment Act 1997, the National Environmental Management Act 1998, the Employment Equity Act 1998 and the Broad-Based Black Economic Empowerment Act 2003 (King II Report on Corporate Governance for South Africa, 2002:para.10).

These had been proposed by King I and were aimed at redressing some of the negative social and economic legacies of apartheid in South Africa. As explained

above, the Insider Trading Act of 1998 was introduced to offer a more rigorous regulation of directors' and officers' share dealings. These legislative changes needed to be incorporated into the governance of mainstream companies. In addition to legislative developments, South Africa had experienced numerous high-profile domestic corporate failures. As already highlighted in Chapter 1, these included Macmed, LeisureNet and Regal Treasury Private Bank. These corporate failures were mainly attributed to poor corporate governance practices of directors and senior management.

**Table 3.2: Major domestic Acts influencing corporate governance since 1994**

Table 3.2 presents major domestic Acts influencing corporate governance in South Africa since 1994. Column 1 presents the years and Column 2 presents the Acts

Year	Acts
1995	<p><i>Labour Relations Act (LRA)</i></p> <p>The new LRA restricts the concept of unfair labour practice to specific acts on the part of the employer and codifies the principles established by the Industrial Court relating to the requirements that dismissals be substantively and procedurally fair. The new LRA aims to encourage voluntary collective bargaining and the settlement of disputes, and does so by enhancing the powers of new forums designed to facilitate those objectives.</p>
1997	<p><i>Basic Conditions of Employment Act</i></p> <p>This Act gives effect to the right to fair labour practices referred to in the Constitution by establishing and making provision for the regulation of basic conditions of employment; and thereby requires employers to comply with the obligations of the Republic as a member state of the International Labour Organisation.</p>
1998	<p><i>Employment Equity Act</i></p> <p>This Act promotes the constitutional right of equality and the exercise of true democracy; eliminates unfair discrimination in employment; ensures the implementation of employment equity to redress the effects of discrimination; requires the workforce to be broadly representative of South Africa's population; and promotes economic development and efficiency in the workforce.</p>
1998	<p><i>Insider Trading Act</i></p> <p>This Act prohibits individuals with inside information on securities or financial instruments from dealing in such instruments; provides for criminal and civil law penalties for such dealings; and empowers the FSB to investigate matters relating to such dealings.</p>
1999	<p><i>Public Finance Management Act</i></p> <p>This Act regulates financial management in the national government and provincial governments; and ensures that all revenue, expenditure, assets and liabilities of these governments are managed efficiently and effectively.</p>
1999	<p><i>Amendments to the Companies Act</i></p> <p>This Act permits companies to obtain liability cover identifying their directors, compelling disclosure of the identity of beneficial owners of shares held by nominees, and making public companies appoint a company secretary.</p>
1999	<p><i>Amendments to the Bank Act</i></p> <p>This Act enforces higher levels of corporate governance in banks.</p>
1995 and 2000	Revision of JSE's Listings Requirements.

Source: African Corporate Governance Network, 2016:72-73

## ii) International developments

Internationally, investors lost billions of dollars during the 1997 and 1998 Asian economic crisis as all major stock markets crashed (Uddin & Ahsan, 2014:7). The crisis demonstrated that macroeconomic difficulties could be worsened by systematic failure of corporate governance resulting from ineffective oversight by corporate boards and scant recognition of the rights of minority share owners (King II Report on Corporate Governance for South Africa, 2002: para. 22).

Similarly, with South Africa's increasing participation in the global economy, international investors returned. Upon their return, investors and especially foreign institutional investors heavily criticised poor corporate governance structures (Malherbe & Segal, 2003:162). In a survey by the CLSA, South Africa did well in overall corporate governance, but rated poorly in disclosure and transparency (CLSA, 2000:69; King II Report on Corporate Governance for South Africa, 2002:para.15).

Furthermore, during the intervening years, many key international corporate governance codes were released. In the UK, the Combined Code was published in 1998, as was the Hampel Report. These dealt with board issues, remuneration, the role of shareholders and financial reporting, but did not cover stakeholder issues, such as worker participation and employment equity.

In 1999, the OECD published its Principles of Corporate Governance. Finally, the Global Reporting Initiative (GRI) also launched an exposure draft of its Sustainability Reporting Guidelines in 1999 and the first full version in 2000. The GRI is an international reporting guideline that seeks to move corporate reporting from a conventional "single bottom line" to a "triple bottom line" reporting (King II Report on Corporate Governance for South Africa, 2002:275). It requires economic (financial), social and environmental (non-financial) reporting to multi-stakeholders, including shareholders, employees, customers, suppliers, creditors, government and local communities.

### **iii) The King II Committee and its mandate**

In response to these developments, domestic and international, and again under the auspices of the IoDSA, a second King Committee on Corporate Governance (King II) was formed in August 2000. It was also supported by the JSE, the Development Bank of Southern Africa and the major accounting companies. The committee's main mandate was to review corporate governance standards and practices for South Africa in the light of domestic and international developments since 1994.

Five major specialist task teams, consisting of individuals representing a cross-section of South African business and society, were established to deal with, as follows:

- boards and directors;
- accounting and auditing;
- internal audit, control and risk management;
- integrated sustainability reporting; and
- compliance and enforcement (King II Report on Corporate Governance for South Africa, 2002:para. 30).

A draft copy was first issued for public debate and consultation in July 2001. A final copy was issued in March 2002.

### **iv) The general scope of King II**

King II is a 354-page comprehensive document divided into six broad sections: board and directors, risk management, internal audit, integrated sustainability reporting, accounting and auditing, and compliance and enforcement. It expanded King I's fundamental corporate governance principles of accountability, fairness, responsibility and transparency to include discipline, independence and social responsibility (King II Report on Corporate Governance for South Africa, 2002:para.18). It replaced King I's "integrated" corporate governance approach with an "inclusive or instrumental" corporate governance approach (King II Report on Corporate Governance for South Africa, 2002:para. 5).



The inclusive approach to corporate governance attempted to recognise the interests of a wider range of stakeholders without subverting the primary interests of shareholders as the residual owners of the company. In this regard, King II tasked company boards with considering not just the regulatory aspects, but also the investors, media, customers, suppliers, consumers, employees and local communities (King II Report on Corporate Governance for South Africa, 2002:para. 5.2).

Unlike King I, King II offered a clear guideline on how “inclusive” corporate governance can be put into practice (King II Report on Corporate Governance for South Africa, 2002:para. 6). First, the purpose of the company had to be defined. Secondly, the values by which the company would carry out its daily activities should be identified and communicated to all stakeholders. Finally, the stakeholders relevant to the company’s business should also be identified. As a practical guide, it appended the GRI as a yardstick by which companies could measure the extent to which the “inclusive” approach had been applied to their operations.

Another expansion on King I is that King II encouraged South African companies to ensure that their governance structures reflected the value system and personality of African societies (King II Report on Corporate Governance for South Africa, 2002:para. 38). As noted further, these included spiritual collectiveness over individualism, consensus building rather than dissension, humility and helpfulness over criticism, and the spirit of *ubuntu* (humanity, peaceful co-existence and brotherliness). King II stated that this was in recognition of the diversity in South Africa regarding culture, religion and ethnicity.

### **3.6.2 Corporate governance structures imposed on companies by King II**

This subsection describes the internal corporate governance structures imposed by King II. The structures are divided into six main parts: board and directors, risk management, internal audit and control, accounting and auditing, integrated sustainability reporting, and compliance and enforcement. Only improvements on King I are described, while the challenges that King II faced are discussed in Subsection 3.6.3.

## **i) Board and directors**

King II proposed several changes regarding board composition. First, instead of two non-executive directors, King II recommended that the board should mostly consist of non-executive directors. A majority of the non-executive directors should also be independent of management so that shareholders' interests (including minority interests) can be better protected (Table 3.1; King II Report on Corporate Governance for South Africa, 2002:para. 2.2).

The board had to be of sufficient size and diversity in terms of skills (profession, occupation and experience) and demographics (age, race, ethnicity and gender) to improve its effectiveness. Secondly, to ensure balance of power and authority in company decision-making, the chairman of the board should be an independent non-executive director (Table 3.1; King II Report on Corporate Governance for South Africa, 2002:para. 2.3).

Thirdly, a nomination committee, in addition to remuneration and audit committees, had to be formed. A related departure from King I was that all three sub-board committees had to be chaired by independent non-executive directors. Unlike King I, King II recommended that the remuneration committee should consist entirely of independent non-executive directors. The nomination committee had to consist of a majority of independent non-executive directors.

Similar to King I, the board had to meet regularly, at least once a quarter. Individual director's membership and attendance of all board and subcommittees meetings must be fully disclosed in the annual report (King II Report on Corporate Governance for South Africa, 2002:para. 2.1 and 2.2). Fourthly, the performance of the chairman, CEO, subcommittee chairmen, and individual directors had to be independently assessed annually. Unlike King I, King II offered a clear classification of directors into executive, non-executive and independent non-executive directors with a strict definition of director independence (King II Report on Corporate Governance for South Africa, 2002: para. 2.4).

Fifthly, the remuneration, interests and share options of every director, as well as the formal rationale and philosophical basis for director and executive remuneration had to be fully disclosed. The general principle was that remuneration levels should be sufficient to attract, retain and motivate directors and executives of the quality required by the board. Companies were encouraged to ensure that the performance-related elements of directors' remuneration constituted a substantial part of their remuneration package. This would help align their interests with those of shareholders. However, any award of share options to directors had to be subject to shareholders' approval at an AGM.

Finally, King II recommended that every listed company should prohibit dealings in its securities by directors, officers and other selected employees. This should be for a designated period preceding the announcement of its financial results or any other price-sensitive information (Table 3.1; King II Report on Corporate Governance for South Africa, 2002:para. 2.9).

## **ii) Risk management, internal audit and control**

The introduction of risk management represented the main improvement of King II over King I under this section. King II offered clear guidelines which placed the responsibility of the process of risk management under the remit of the board of directors (Table 3.1; King II Report on Corporate Governance for South Africa, 2002:para. 3.1).

The guidelines also charged the board to develop their risk strategies and policies in conjunction with executive directors and senior management. Contrastingly, management was responsible for implementing and monitoring the process of risk management and integrating it into the company's day-to-day activities. The board had to set out the company's risk tolerance level, and assess its current and future risk profile on the basis of various categories, including physical, technology, credit, market, operational, human, resources, regulatory and legal risks.

A major departure from King I was that a risk management committee consisting of executive and non-executive directors, and chaired by a non-executive director should

be appointed. The committee should help the board review the risk management process and the significant risks facing the company. Furthermore, the board should establish a confidential reporting process (whistle-blowing) covering fraud and other risks. Finally, it required companies to provide a comprehensive disclosure regarding the assessment of current and future risks in their annual reports.

### **iii) Accounting and auditing**

Regarding accounting and auditing, King II provided three main improvements on King I. First, it elevated the profile and the powers of the audit committee chairman. The chairman of the audit committee should be an independent non-executive director. The independent chairman of the audit committee should also not be chairman of the main board. The audit committee had to consist of a majority of independent non-executive directors. The majority of the members of the audit committee should also be financially literate. Like the chairmen of the nomination and remuneration committees, the audit committee chairman had to attend the company's AGM to answer shareholders' questions (King II Report on Corporate Governance for South Africa, 2002:para. 2.7).

Secondly, it called for companies to disclose any non-audit or consulting services rendered by its external audit company, so that it could be examined for any potential conflict of interests (King II Report on Corporate Governance for South Africa, 2002:para. 6.1). Finally, and concerning financial reporting, King II recommended that South African companies should prepare to adopt the International Financial Reporting Standards (IFRS) as might be recommended by the JSE's Listings Requirements. South Africa and the JSE formally adopted the IFRS framework in 2005 (Armstrong *et al.*, 2006:219). However, listed companies had until the end of the 2007 financial year to fully adopt the IFRS framework (JSE Listings Requirements, 2007:Subsections 8.3, 8.62, 8.7, 8.10).

### **iv) Integrated sustainability reporting**

Similar to King I, the requirement for companies to report on an integrated sustainability basis had been acknowledged, which truly differentiated King II from

similar Anglo-American corporate governance codes. King II provided several important improvements on King I regarding integrated sustainability reporting (Table 3.2; King II Report on Corporate Governance for South Africa, 2002:para. 5).

First, in addition to health and safety, the environment and ethics, King II recommended that every company had to report on the nature and progress made on employment equity, HIV/AIDS, social investment and transformation (King II Report on Corporate Governance for South Africa, 2002:para. 5). Secondly, and unlike King I, which did not specify any time frame for reporting, King II recommended that reporting should be done at least once a year. In this respect, King II set three levels of reporting in the annual report by directors:

- They had to disclose the policies and practices they had in place.
- They had to disclose how they were implementing the disclosed policies and practices.
- The disclosure had to demonstrate the resultant changes and benefits to their stakeholders.

Thirdly, apart from setting out the general framework for reporting on each stakeholder issue, King II required companies to refer to the relevant stakeholder and affirmative action legislation for detailed guidelines. Concerning employment equity, King II mandated every company to invest in human capital. This had to be targeted at achieving equity and diversity in staff numbers, training, age, ethnicity and gender (King II Report on Corporate Governance for South Africa, 2002:para. 5.1.4). Particularly, every company should deal with issues that create conditions and opportunities for previously disadvantaged individuals (especially women) to reach executive levels in the company. In this case, every company was required to comply with the provisions of the Employment Equity Act 1998.

The Act aims to identify and eliminate all employment barriers, including unfair discrimination, which adversely affect people from designated groups. The Act prohibits direct or indirect unfair discrimination on any grounds, including race, gender, HIV/AIDS status, religion, disability, pregnancy and language. The Act also allows companies to distinguish, exclude or favour any person on the basis of an inherent

requirement for a job. For example, under Section 15, every designated employer must work towards achieving a balance between their non-white and white workforce across all levels of the organisational hierarchy. The Act requires designated employers to submit progress reports to the Department of Labour annually.

A company can be subject to criminal prosecution if it breaches the Act. In connection with transformation, the Broad-Based Black Economic Empowerment Act 2003 proposes which economic transformation can be achieved through equity ownership, management control, employment equity, skills development, preferential procurement, enterprise development and social investment.

First, the Act requires companies to encourage blacks or designated blacks to directly or indirectly acquire equity ownership. The general target for companies is that 25% of their equity should be held by designated black groups. However, targets differ on industrial basis. Currently, mining, media, forestry and construction have developed their own empowerment charters and scorecards (JSE Listings Requirements, 2007: Subsection 8.63).

Secondly, to redress the low participation of blacks in executive management, the Act encourages companies to appoint qualified blacks to influential positions. Thirdly, the Act empowers companies to engage in preferential procurement of raw materials and input from black enterprises. They are allowed to acquire raw material from black enterprises even at higher costs than the raw material may be acquired from white-run enterprises.

Finally, the Act encourages companies to invest in black enterprises and communities directly. They should also invest in skills development of their black employees by creating special training and mentoring opportunities. Similarly, every company is required to submit an annual progress report to the Department of Trade and Industry. Unlike the Employment Equity Act, a company cannot be prosecuted if it breaches the Act. This makes the provisions of the Act aspirational or voluntary rather than mandatory for companies.

There is no formal legislation concerning HIV/AIDS. Nevertheless, King II recommended that every company should adopt plans and policies to explicitly deal with the potential impact of HIV/AIDS on its activities (King II Report on Corporate Governance for South Africa, 2002:para. 5.1.4). This could take the form of encouraging voluntary staff testing to ascertain the prevalence rate among the workforce. It could also take the form of on-site health clinics to offer medical and psychological support, and educational campaigns to improve awareness.

In respect of the environment and health and safety, King I mandated companies to comply with the provisions of the National Environmental Management Act 1998 and the Occupational Health and Safety Act 1993. The Occupational Health and Safety Act requires companies to reduce workplace accidents and fatalities. They must set safety targets and work towards reducing health and safety incidents.

The National Environmental Management Act 1998 sets out good environmental standards and practices that companies are encouraged to comply with. In particular, the Act requires companies to conduct environmental impact assessments where potential negative consequences can be identified and redressed. Finally, and regarding organisational ethics, King II did not make any visible changes from King I. Unlike King I, and as has been pointed out above, King II urged companies to report along the lines of the GRI's triple bottom line reporting as a practical guide on how the "inclusive" stakeholder corporate governance can be implemented.

#### **v) Compliance and enforcement**

Consistent with King I, King II also shared Cadbury's principle-based and qualitative approach to achieving compliance and enforcement of its corporate governance provisions (King II Report on Corporate Governance for South Africa, 2002:para. 2.2). In this regard, King II expanded the compliance and enforcement stakeholders from the board of directors, auditors and shareholders to include financial media, peer pressure and the existing legal system (King II Report on Corporate Governance for South Africa, 2002:para. 6). It called on the investigative media, particularly the financial press, to actively encourage compliance through constant monitoring of corporate conduct. This could be done through the revelation of corporate fraud,

corruption and cronyism. The media could also help in “naming and shaming” consistent violators of the code.

Companies were expected to contribute to the development of financial journalism, such as supporting training workshops and conferences for financial journalists. Peer pressure could also be exerted from organised business in conjunction with the financial press against delinquent directors and managers to promote high corporate governance standards.

King II was meant to supplement rather than substitute the existing legal framework. Therefore, King II expected the existing legal and regulatory system to encourage compliance with the code. It called on the conventional courts to enforce existing remedies for breaches of statutory laws, such as the Companies Act, by delinquent directors and officers. Consistent with King I, King II was appended as part of the JSE’s Listings Requirements, for which all listed companies are expected to voluntarily comply or explain in case of non-compliance (JSE Listings Requirements, 2007: Subsections, 3.84, 7.F.5-6; 8.63).

### **3.6.3 Evaluation of King II**

Despite gaining global recognition and receiving several endorsements from leading academics and policymakers as an example of a good corporate governance model in the world, King II was criticised. Critics argued that King II’s insistence on South African companies adopting the Anglo-American model and tasking boards with meeting demanding stakeholder requirements raised serious challenges (Kakabadse & Korac-Kakabadse, 2002:312). At the centre of this local policy debate was whether this so-called ‘hybrid’ corporate governance model was sufficiently robust to effectively pursue the contrasting agenda of maximising shareholder value and providing a meaningful protection of the interests of a larger stakeholder group (Kakabadse & Korac-Kakabadse, 2002:313; Spisto, 2005:84).

For example, it was suggested that the stakeholders’ requirements that King II imposed on companies, such as the promotion of black empowerment and employment equity, could be more easily accommodated by a continental European-



Asian model of corporate governance (Kakabadse & Korac-Kakabadse, 2002:312). In a typical continental European-Asian corporate governance model, business and organisational issues are the remit of the executive board, while the broader stakeholder interests fall under the umbrella of the supervisory board. Spisto (2005:84) offered similar criticisms of King II. These criticisms could be legitimate because with increasing voluntary corporate social responsibilities reporting in Anglo-American countries, South Africa was likely to lose its uniqueness unless it adopted stakeholder corporate board structures (West, 2009:15).

There were also serious concerns on whether corporate and ownership structures were diffused enough to permit effective and efficient operation of factor markets to achieve voluntary compliance or self-regulation. Okeahalam (2004:367) points out that as a result of rigorous JSE Listings Requirements, ownership is now more dispersed.

Given its core objective of promoting the highest international corporate governance standards in South Africa (King II Report on Corporate Governance for South Africa, 2002:5), it is still unclear why King II called for the exposition of African values and personality, most of which were not compatible with international corporate governance standards nor with the Anglo-American model (King II Report on Corporate Governance for South Africa, 2002:para. 18).

King II's major challenge or weakness was its proposition of a corporate governance model in which companies had to satisfy shareholders' demands by their ability to harness market forces, while social and political dictates required them to satisfy the interests of a wider stakeholder group (Kakabadse & Korac-Kakabadse, 2002:312; Spisto, 2005:95). While critics called for a fundamental change, King II insisted that good corporate governance embraced both performance and conformance. It stated that South African companies' challenge was to seek the appropriate balance between the results of good entrepreneurship and enterprise (performance – corporate profitability) and constraints on corporate activity (conformance – corporate governance rules), which considered the expectations of shareholders and legitimate stakeholders alike (King II Report on Corporate Governance for South Africa, 2002:para. 7.2).

### **3.7 THE 2009 KING REPORT ON CORPORATE GOVERNANCE FOR SOUTH AFRICA (KING III)**

The third report on governance in South Africa (King III) became necessary because of the anticipated new Companies Act No. 73 of 2008 (hereafter the Act) and changes in international corporate governance trends. The following subsections examine the origin and the internal corporate governance structures imposed by the 2009 King Report on Corporate Governance for South Africa.

#### **3.7.1 Background to King III**

There were nine subcommittees for King III: boards and directors; audit committees; risk management; internal audit; integrated sustainability reporting; compliance with laws, regulations, rules and standards; managing stakeholder relationships; fundamental and affected transactions; and business rescue.

King III opted against replicating the Sarbanes-Oxley Act (SOX), which is a statutory regime that advocates “comply or else”, the latter implying facing legal sanctions for non-compliance. Mervyn King (King III Report on Corporate Governance for South Africa, 2009:7) notes that it is worth remembering that the primary roots of the recent financial crisis were situated in the US. Whether the United Nations Governance Code should be “comply or explain” or “comply or else” was debated at the United Nations. The representatives of several of the world bodies were opposed to the word “comply”, because it connoted that it had to adhere and there was no room for flexibility.

King III is based on an “apply or explain” basis in contrast to King II. The main reason for the shift from “comply or explain” to “apply or explain” was the application of the reports. King II was drafted considering affected entities and included listed companies, financial institutions and public entities (Institute of Directors in Southern Africa, 2009:11).

There are some distinct differences between King II and King III (Institute of Directors in Southern Africa, 2009:11-21). The highlighted differences between King II and King III are as follows:

- King III applies to all entities;
- King III emphasises integrated sustainability and performance over and above simply reporting;
- King III recommends that a minimum of two directors, the CEO and the director responsible for finance, should be appointed to the board – the King II recommendation was to appoint a balance of executives and non-executive directors;
- King III urges companies to adopt shareholder approved remuneration policies;
- King III recommends that the board should determine the remuneration of executive directors without the need for shareholder approval;
- King III recommends that non-executive directors should be precluded from receiving share options;
- King III recommends that internal audit should follow a risk-based approach and be strategically positioned and remain independent to achieve its objectives; and
- King III recommends that risk management should be intrusive and not be viewed just as a reporting process to satisfy governance expectations.

Following King III, the JSE requires listed companies to include a narrative statement on how they applied the principles set out in King III in their annual report. Companies are also required to provide explanations enabling stakeholders to evaluate the extent of the company's application and stating whether the reasons for non-application were justified.

There are examples in South Africa of companies listed on the JSE that did not follow recommended practices, but explained the practice adopted and have prospered. In these examples, the board ensured that acting in the best interests of the company was the overriding factor, subject always to proper consideration of the legitimate interests and expectations of the company's stakeholders.

A new issue arising from King III is business rescue. South Africa has been an unusual case in not having adequate business rescue legislation. The ability to rescue appropriate companies is in the best interests of shareholders, creditors, employees

and other stakeholders, as well as the country as a whole because of the high costs to the economy if businesses fail.

Business rescue legislation needs to balance the rights of stakeholders without facilitating abuse. The business community has long recommended that there should be business rescue provisions for all types of entities and not just companies. Furthermore, directors need to be aware of possible abuses that may arise.

### **3.7.2 Corporate governance structures imposed on companies by King III**

This subsection describes the internal corporate governance structures imposed by King III. The structures are divided into six main parts: board and directors, risk management, internal audit and control, accounting and auditing, integrated sustainability reporting/non-financial information, and compliance and enforcement. These structures are evaluated in Section 3.7.3.

#### **i) Board and directors**

The board should constitute a balance of power, with a majority of non-executive directors. The majority of non-executive directors should be independent. When determining the number of directors serving on the board, the knowledge, skills and resources required for conducting the board's business should be considered. Every board should consider whether its size, diversity and demographics make it effective as well as have a minimum of two executive directors of whom one should be the CEO and the other director responsible for finance.

To ensure and promote board staggering, at least one-third of the non-executive directors should rotate annually. Any independent non-executive directors serving more than nine years should be subject to a rigorous review of their independence and performance by the board. Concerning the remuneration of directors and senior executives, companies should disclose the remuneration of each individual director and prescribed officer.

The board should delegate certain functions to well-structured committees but without abdicating its own responsibilities. King III recommends establishing risk, nomination and remuneration committees.

## **ii) Risk management, internal audit and control**

King III reinforces the management and governance of risk, which was first introduced by King II. The board should be responsible for the governance of risk. It should determine the levels of risk tolerance and appoint a committee responsible for risk. The board's role is to set a risk appetite or risk tolerance level for the company. This should be determined according to the strategy adopted by the company and should consider sustainability, ethics and compliance risks.

The board should oversee the identification of the key risk areas of the company and ensure that the management thinks of pertinent risks. These identified risks should be assessed for likelihood and magnitude of potential effect. The board should be actively involved in identifying and monitoring the key risks emanating from this process. Where appropriate, a risk committee should be established.

## **iii) Accounting and auditing**

Companies should have independent structures to verify and safeguard the integrity of their financial reporting. The board should ensure that the company implements a structure of review and authorisation designed to ensure the truthful representation of the company's financial position.

The structure should include a review and consideration of the financial statements by the audit committee, and a process to ensure the independence and competence of the company's external auditors. A structure as described above does not diminish the board's responsibility to ensure the integrity of the company's financial reporting.

#### iv) **Integrated sustainability reporting**

The integrated report, as defined in Chapter 3 of the King III Report, should include a statement from the board outside the annual financial statements that the board established formal policies and frameworks for the design and implementation of the system of internal financial controls, and that a review of internal financial controls took place. The board should make a statement on the effectiveness of the company's internal financial controls. The internal audit should make a written assessment of the internal financial controls as described in Chapter 5, Principle 5.2. The audit committee should assist the board with this review and statement as described in Principle 3.8 of Chapter 3.

The board should ensure that there is transparent and relevant communication with stakeholders. The integrated report is an important mechanism for formal contact with stakeholders. Accordingly, companies should not only report on the positive aspects of their businesses, but also on the challenges and the steps taken to meet these challenges. Therefore, the integrated report should not be confined to past issues, the report should instead provide forward-looking information to place the results and performance in context and to show transparency.

This approach will foster the trust necessary for maintaining good stakeholder relationships. The board should include commentary on the company's financial results to enhance the clarity and balance of reporting. This commentary should include information needed by an investor to make an informed assessment of the company's economic value and not just its book value.

The board should disclose that the company is a going concern and whether it will continue to be a going concern. If it does not, the board should give the reasons and the steps the board is taking to remedy the situation. The following aspects regarding directors should be disclosed in the integrated report:

- the reasons for the cessation of appointment of directors. The purpose of this is to enable shareholders to fulfil their role as the ultimate arbiters of who should sit on the board or in case it signals cause for concern. Full, timely and appropriate disclosure will reduce speculation and uncertainty;

- the composition of the board and board committees and the number of meetings held, attendance and activities;
- the board should consider the length of service and age of its directors (as well as their effectiveness and independence), and disclose these in the integrated report.

#### **v) Compliance and enforcement**

Companies must comply with the law and regulations (Acts promulgated by Parliament, subordinate legislation, and applicable binding industry requirements such as the JSE Listings Requirements). They should consider if adherence to applicable non-binding rules and standards achieves good governance, and should adhere to them if that would result in best practice.

Companies should disclose the applicable non-binding rules and standards to which they adhere on a voluntary basis. One of the board's important responsibilities is to assess the company's compliance with all laws and regulations, and applicable non-binding rules and standards which the company abides by. Compliance with laws and regulations should be proactively managed by companies and compliance should be a standing item on the board's agenda, even if this responsibility is delegated to a separate committee or function within the organisational structure. Compliance risk can be described as the risk of damage arising from non-adherence to the law and regulations, the company's business model, objectives, reputation, financial soundness, stakeholder relationships or sustainability. The risks of non-compliance should be identified and resolved through the company's risk management processes.

#### **3.7.3 Evaluation of King III**

The revision of King III was informed by significant corporate governance and regulatory developments, locally and internationally, which need to be considered. The other consideration is that while listed companies generally apply King III, non-profit organisations, private companies and entities in the public sector have experienced challenges in interpreting and adapting King III to their circumstances. Several smaller

entities have complained that the implementation of some of the proposed governance structures in the King Report were too onerous, too expensive and, in certain instances, too difficult to interpret and implement.

The recently published King IV is an improvement in terms of interpretation and is more succinct than King III. For instance, King IV provides “sector” supplements to guide different types of organisations on how to apply the King IV Code within their contexts. This enhancement will make King IV more accessible to all organisations.

Simplification and ease of interpretation and access will be a key tenet of King IV. One of the ways that this will be achieved is by clearly differentiating principles from practice recommendations. Principles will be stated as higher-order objectives, for example, the board should be constituted so that power is balanced and decision-making is objective. This practice can be achieved by having a majority of independent directors on the board.

The new version of King IV was commissioned in November 2016 and is effective for financial years commencing 1 April 2017. Similar to King I, II and III, it is envisaged that South African listed companies would be required to conform to King IV.

### **3.8 CHAPTER SUMMARY**

This chapter focused on corporate governance in South Africa. The central objective was to provide a comprehensive description of the South African corporate governance framework. Following existing literature, it classified the South African corporate governance landscape into external and internal. The external corporate governance is made up of major financial regulatory and enforcement bodies which are charged with the formulation, implementation and enforcement of statutory and voluntary corporate laws. These include the Ministry of Finance, the Department of Trade and Industry, the Registrar of Companies, the FSB, the JSE Ltd and the SARB.

By contrast, the internal corporate governance environment consists of statutory corporate laws and voluntary corporate codes of conduct that govern companies from within. These include the South African Companies Act 2008, the Insider Trading Act



1998, the JSE Listings Requirements, and the 1994, 2002 and 2009 King Reports on Corporate Governance for South Africa. For each internal corporate governance legislation or code, and where applicable, its origins, provisions, strengths, challenges and weaknesses were comprehensively discussed.

The overall picture that emerged is that corporate governance is fluidly developing within South Africa. Hence, the King Reports have played a significant role in formally institutionalising corporate governance in the country. The reports have helped raise awareness of what constitutes good corporate practice among listed and non-listed companies.

More importantly, the reports have helped promote a unique corporate governance model, which considers the interests of a wider stakeholder group, but equally recognises that it is important for companies to be economically profitable. However, it also raises serious questions. This is because, while South Africa appears to have a well-established financial regulatory structure, it faces significant operational, enforcement and financial challenges.

The South African corporate governance model is predominantly Anglo-American. However, critics state that super-imposing social and environmental demands onto a corporate governance model that is predominantly Anglo-American raises substantial room for conflicts. Although, ignoring the South African context and given that King Report is predominantly Anglo-American with emphasis on shareholder primacy, the *a priori* theoretical expectation will be that “better-governed” companies tend to be associated with higher financial value than their “poorly-governed” counterparts.

This is the central thrust underlying the study. The study seeks to empirically ascertain whether South African listed companies that comply better with King III tend to be associated with higher financial performance than those that do not. Therefore, in the next chapter, the theoretical literature that attempts to link internal corporate governance structures with company financial performance is discussed.

## **CHAPTER 4**

# **LITERATURE REVIEW AND RESEARCH HYPOTHESES ON THE CORPORATE GOVERNANCE AND FINANCIAL PERFORMANCE NEXUS**

### **4.1 INTRODUCTION**

The main aim of this chapter is to develop theory-based hypotheses in order to empirically answer the research questions established in Section 1.5.2 of Chapter 1. To achieve the aim, the chapter discusses the existing empirical literature on internal corporate governance and its impact on financial performance. The chapter builds on Chapter 3 by identifying three major theories in corporate governance literature. The chapter culminates in the development of hypotheses.

The rest of the chapter is organised as follows: Section 4.2 reviews the relationship between internal corporate governance and company performance. Sections 4.3, 4.4 and 4.5 review the theoretical building blocks on which the study is based. The theoretical frameworks and empirical findings of the corporate governance and financial performance relationship are reviewed in Section 4.6. The section culminates in the hypotheses for the study. Section 4.7 summarises and concludes the chapter.

### **4.2 REVIEW OF THE LITERATURE ON INTERNAL CORPORATE GOVERNANCE AND COMPANY PERFORMANCE**

This section discusses the relevant extant theories that attempt to link internal corporate governance structures and company performance. Theories underlying corporate governance have been drawn from a variety of disciplines, such as accounting, economics, finance and law (Durisin & Puzone, 2009:266). In this study, corporate governance is approached from a financial perspective, using a quantitative research methodology.

Similar to past studies (Aduda *et al.*, 2013:121; Filatotchev & Boyd, 2009:259; Gartenberg & Pierce, 2017:317; Haniffa & Hudaib, 2006:1034; Tshipa & Mokoaleli-Mokoteli, 2015b:149; Wagana, 2016:222), this study adopted a multiple theoretical orientation by combining several key theoretical perspectives, such as the agency theory, stewardship theory and resource dependence theory. The choice to use multiple theoretical perspectives is further motivated by the complementary nature of each theory. For instance, Cohen, Krishnamoorthy and Wright (2008:181) and Nelson, Singh, Elenkov, Ma, Krug and Davis (2013:21), state that the agency theory on corporate governance should be complemented by additional perspectives such as the resource dependence theory, stewardship theory and stakeholder theory.

### **4.3 AGENCY THEORY**

One of the theoretical principles underscoring corporate governance is the agency theory, which was first developed by Jensen and Meckling (1976:305). An *agency relationship* is a contract under which one or more persons (the principal(s)) engage another person (the agent) to carry out some service on their behalf (Jensen & Meckling, 1976:306). This indicates that the separation between control functions by management (agents) and shareholders (principals) is a potential source of conflict of interest. The agency theory, then, is generally concerned about the alignment of interests of management and shareholders.

There are various ways of aligning the interests of management with those of shareholders. The South African Companies Act No. 71 of 2008 encourages the alignment by requiring every director to hold a symbolic one share of the company for which he or she is a director. In the same vein, King III recommends that the performance-related elements of directors' remuneration (such as stock options) should constitute a substantial portion of their total remuneration package to align their interests with those of shareholders.

Agency theorists trace their origins to the school of economics and finance (Davis, Schoorman & Donaldson, 1997:612). According to agency theorists, investors have surplus funds to invest but due to lack of managerial expertise and time to manage their funds, investors employ the services of managers to invest their funds in

ostensibly profitable ventures to generate good returns. The managers are rewarded for taking care of the investors' funds.

The relationship between the manager and investor is supposed to be a positive sum game as investors may need managers' expertise to increase their returns on investments, and managers may need investors' funds for capital and operational expenditures. Kiefer, Jones and Adams (2017:48) argue that the relationship is symbiotic, where shareholders provide financial capital, while management contributes human capital.

However, the relationship is often a zero sum game, where managers enrich themselves to the detriment of the owners or investors (La Porta, Lopez-de-Silanes, Schleifer & Vishny, 2002:4). This is because the actions and interest of managers are not aligned with those of the shareholders (Jensen & Meckling, 1976:360). Fiduciary functions have been introduced by organisations to counter the effects of misaligned interests. The agency theory substantiates the argument for board independence to "reduce the likelihood that the agenda and initiatives will be dominated by the CEO" (Kim, Pantzalis & Park, 2013:223).

According to Shleifer and Vishny (1997:742), managers can short-change shareholders by making themselves indispensable to stay in the job even if they are no longer valuable to the company. This is likened to managerial expropriation of shareholder funds. The expropriation of funds can also take more elaborate forms, such as engaging in transfer pricing (Shleifer & Vishny, 1997:742) and even overpayment of executives (La Porta *et al.*, 2002:4). Such transfer pricing and exorbitant perks have the same effect as theft (La Porta *et al.*, 2002:4). This being the case, the agency theory provides a fundamental frame for the design of corporate governance structures.

#### **4.3.1 Agency theory and corporate governance**

Agency theory-based research focuses largely on the relationship between board structure, control over management behaviour and strategic decision-making (Hafsi & Turgut, 2013:463). Agency theorists use the term *corporate governance* to interrogate

the role of agents (managers) in fulfilling part of their contractual agreement with the principal (investor). The rudimentary view held by agency theorists of corporate governance is that at any given time, managers have self-interest and may not act to maximise shareholder returns, unless appropriate internal governance structures and controls (to monitor costs) are put in place to protect the interests of shareholders (Jensen & Meckling, 1976:305).

The agency framework suggests that corporate governance seeks to create and monitor the mechanisms that are put in place by shareholders to ensure that managers maximise shareholders' wealth by reducing agency loss (Adegbite, Amaeshi & Amao, 2012:389; Bonazzi & Islam, 2007:7). In the absence of strong corporate governance, management can use the additional control, not for long-term profitability, but instead, for their own personal wealth, status and goals (Gartenberg & Pierce, 2017:305).

Rebeiz (2015:752) describes the monitoring mechanisms as internal corporate governance structures. Sternberg (1998:20) asserts that the solitary role of corporate governance is to ensure that the company's financial and human capital resources as well as assets are directed so that it achieves the corporate mandate and objectives to shareholders' satisfaction. Accordingly, this simply means that agency theorists regard corporate governance as a mechanism to reduce agency loss. One such mechanism would be the deployment of the board of directors to act as monitors on behalf of investors.

The agency cost has gained prominence in the corporate governance literature as a result of the shortcomings of the stewardship theory (Rebeiz, 2015:749). The next section discusses stewardship theory.

#### **4.4 STEWARDSHIP THEORY**

Stewardship theory arose from the seminar work by Donaldson and Davis (1991:50). Stewardship theorists trace their origins back to the human relations school of management (Hung, 1998:106), the organisation theory (Clarke, 1998:61), and sociology and psychology (Muth & Donaldson, 1998:5). Unlike the agency theory, the stewardship theory assumes that management are stewards whose interests are

aligned with those of the owners (shareholders). Therefore, managers are motivated to make decisions that correspond with those of the shareholders that would maximise financial performance. The stewardship theorists posit that executive managers are intrinsically trustworthy and reliable individuals (Nicholson & Kiel, 2007:588).

Proponents of the stewardship theory contend that better financial performance is likely to be associated with internal corporate governance practices that grant managers greater autonomy and power. The power should be centralised in the hand of the managers because of their intimate knowledge of the business (Rebeiz, 2015:748). These powers include combining the positions of chairman and chief executive officer (CEO) (Donaldson & Davis, 1991:51). In this situation, power and authority are vested in a single person and there is no room for uncertainty as to who has authority or responsibility. It is believed that a single leadership structure, having combined the CEO and chairman roles, will assist the company to attain superior performance to the extent that the CEO exercises complete authority over the company and that the CEO's role is unambiguous and unchallenged.

#### **4.4.1 Stewardship theory and corporate governance**

Corporate governance under the stewardship model is premised on the logic that managers work diligently to maximise shareholders' returns by virtue of being good stewards of corporate assets (Donaldson, 1990:369). Therefore, this view leads to the assumption that management performance is not necessarily influenced by self-interest, but is more likely to be affected by the governance structural impediments that inhibit effective action (Davis *et al.*, 1997:613).

Consequently, it could be argued that corporate governance, under the banner of the stewardship theory, is associated with "structure" and hierarchy. This is corroborated by Whittred (1993:103), who assert that corporate governance should provide facilitating and empowering structures to managers, which should enable managers to deliver superior returns to shareholders. Hence the stewardship theory seeks to underscore the importance of combining the CEO and chairman roles to attain financial performance for the company. The stewardship theorists rationalise that in

order to reduce agency costs, companies should not split the dual role of CEO and chairman (Abels & Martelli, 2013:137).

## 4.5 RESOURCE DEPENDENCE THEORY

Nguyen, Locke and Reddy (2015a:189) describe the *resource dependence theory* as an association between board characteristics and the company's critical resources, including aspects such as the companies' "prestige and legitimacy". The resource dependence theorists trace their origins to the school of sociology (Clarke, 1998:61). It was developed by Pfeffer (1972:227) to emphasise that the board, particularly the composition of the non-executive directors, can provide the company with resources that can enhance company performance. First, the board and non-executive directors can offer essential resources, such as expert advice, requisite experience, independence and knowledge (Haniffa & Cooke, 2002:319). Secondly, they can provide reputation, credibility and critical business contacts (Haniffa & Hudaib, 2006:1039). Thirdly, the board can facilitate access to business or political network, information and capital (Nicholson & Kiel, 2007:589).

Finally, the board provides a critical link to a company's external environment and significant stakeholders such as creditors, suppliers, customers and competitors. As a result, it has been argued that a greater level of links to the external environment is associated with better access to resources (Nicholson & Kiel, 2007:589). In other words, the resource dependence theory postulates that apart from the monitoring function, the board of directors also serves as a resource provider. Hillman and Dalziel (2003:383) refer to the ability of the board to solicit essential resources to the company as "board capital".

### 4.5.1 Resource dependence theory and corporate governance

As stated by Hung (1998:104), companies depend on one another for access to valued resources. The resource dependence theory posits that companies are interrelated and depend on the external environment for survival. According to Pfeffer (1972:227), the board of directors could be seen as the requisite link between the company and the external environment.

A board's ability to fulfil this function is linked to a director's connections to other entities – that is, the board interlocks as the latter is frequently regarded as a conduit between companies (Shropshire, 2010:366). When a member of a board of directors also sits on other boards of directors, a director interlock is created. Hence, Hung (1998:105-106) states that there are indeed benefits to director interlocking. This could impact financial performance positively.

#### **4.6 REVIEW OF EMPIRICAL LITERATURE ON INTERNAL CORPORATE GOVERNANCE AND HYPOTHESES DEVELOPMENT**

As already mentioned, one of the hedging mechanisms that shareholders rely upon is internal corporate governance. This relates to mechanisms that are in place to ensure that agency relationship is nurtured. The next subsection reviews the empirical literature on the relationship between corporate governance characteristics and company performance. Accordingly, the hypotheses on the effect of board size, board independence, board activity, board diversity, leadership structure and presence of key board committees on financial performance are developed. It is worth repeating that these hypotheses are crafted from the combined orientations of the agency theory, resource dependence theory and stewardship theory.

The research problem and objectives highlighted in Chapter 1 provide a suitable basis for formulating the main testable hypothesis for the study. Drawing from the King III Code of Governance Principles and Clause 3.84 of the JSE Listings Requirements specifies that listed companies should disclose compliance of corporate governance variables in their annual report.

The variables specific to this study are:

- board size;
- board independence (proportion of independent non-executive directors);
- presence of key board committees;
- board activity (frequency of board meetings);
- board diversity; and
- leadership structure (CEO duality).



The foregoing variables are all internal structures and processes within the control of the company's shareholders and the board of directors. Brown, Beekes and Verhoeven (2011:98) refer to these as internal corporate governance structures. Hence the focus of this study is on the impact of internal corporate governance structures on financial performance.

For each of the six internal corporate governance structures, the review will be divided into two parts. The empirical evidence between a particular board structure variable and financial performance is first presented, with the provisions of the Companies Act No. 71 of 2008, King III and JSE Listings Requirements relating to the variable then being described. Finally, the research hypotheses are developed for the study. The next subsections review studies in terms of a set of six internal corporate board structure variables, which has been found to influence the financial performance of a company.

#### **4.6.1 Board size and financial performance**

The issue of board size as a corporate governance mechanism has received considerable attention in recent years from academics, regulators and market participants. It continues to receive attention because empirical evidence of the impact of board size on company performance is inconclusive (Johl, Kaur & Cooper, 2015:239; Uadiale, 2010:155), and even fundamental theories of corporate governance are at loggerheads. For instance, the agency theory predicts an inverse relationship between board size and company performance (Jensen, 1993:849), while the resource dependence theory foresees a positive relationship (Dalton, Daily, Johnson & Ellstrand, 1999:686).

From the perspective of the agency theory, Jensen (1993:865) argues that bloated boards are less likely to function effectively and recommends that the optimal size of the board should be eight. These sentiments are backed up by Lipton and Lorsch (1992:59) and Sonnefield (2002:111), among others. An opposing view by Dalton *et al.* (1999:686) is that, according to resource dependence theorists, a large board leads to a better financial performance.

Empirically, the nexus between board size and company performance in the extant literature is inconclusive. There are three streams of research findings, those that report a positive impact (Arora & Sharma, 2016:428; Zakaria, Purhanudin & Palanimally, 2014:10), those that record a negative relationship (Garanina & Kaikova, 2016:347; Samuel, 2013:88;) and those that report no association (Wintoki *et al.*, 2012:592).

Zakaria *et al.* (2014:10) examined a sample of 73 companies over six years from 2005 to 2010, using return on assets (ROA) as a measure for company performance. Their findings revealed that board size positively influenced company performance. Notably, their study captured three stages of economic conditions: before the crisis (2005-2006), during the crisis (2007-2008) and after the crisis (2009-2010).

Similarly, Shukeri, Shin and Shaari (2012:123) found that board size related positively to return on equity (ROE) in their study of 300 Malaysian public listed companies. This is corroborated by Arora and Sharma (2016:430), whose findings from a sample of 1 922 Indian companies, for the period 2001 to 2010, concluded that larger boards were associated with a greater depth of intellectual knowledge, which, in turn, helped to improve decision-making and enhance the performance. These findings indicate that companies need to emphasise having a larger board size to provide greater monitoring, increase the independence of the board and counteract the managerial entrenchment, thus increasing company performance (Fauzi & Locke, 2012:61; Johl *et al.*, 2015:242; Moscu, 2013b:22).

However, Samuel (2013:88) disputed the positive relationship between a larger board size and company performance. Employing a sample of 50 companies quoted on the Nigerian Stock Exchange during 2001 and 2010 with net profit after tax (NPAT) as the dependent variable, Samuel found that a larger board impacted the value of a company negatively, which tended to be harmful to the financial performance and corporate governance. In their study of 176 companies listed on the Bombay Stock Exchange (BSE) of India during the financial years 2008 to 2009, Kumar and Singh (2013a:92) found a negative association between board size and company value. Similarly, using a large sample of 2 746 UK-listed companies from 1981 to 2002, Guest

(2009:385) reported a statistically significant and negative relationship between board size and performance, as proxied by Tobin's Q, ROA and share returns.

These findings corroborate the investigation by Nakano and Nguyen (2013:5) on the relationship between board size and financial performance using a sample of 1 771 Japanese companies listed on the Tokyo Stock Exchange between 2003 and 2007. They also found an inverse relationship between company market value as represented by Tobin's Q, ROA and the size of the board of directors. The findings of these studies generally offer credence to the theory that smaller boards are more likely to permit candid evaluation of managerial performance, effective managerial monitoring and faster decision-making (Jensen, 1993:865; Lipton & Lorsch, 1992:59).

Finally, using a sample of eight banking companies listed on the Ghana Stock Exchange with data from 2007 to 2012, Agyemang, Aboagye, Antwi and Frimpong (2014:45) found no significant relationship between board size and company performance. Yasser, Entebang and Mansor (2011:482) clear the confusion of the conflicting results by recommending that the board size should be confined to a sizeable limit.

According to the South African Companies Act No. 71 of 2008, all public companies must have a minimum of three directors, while the JSE's Listings Requirements mandate listed companies to have a minimum of four directors. None of these sets a maximum board size. King III does not specify the exact number of directors that should form a board, but it does set out a general principle that every board must consider whether its size makes it effective or not. This suggests that even though King III admits that a company's board size may affect its performance, it allows companies to determine the actual board size.

Given the conflicted prediction and the expectations of the King Code on the relationship between board size and company performance, the first pair of hypotheses for the study is proposed as follows:

$H_{10}$ : *There is a statistically significant positive relationship between board size and financial performance.*

$H_{1a}$ : *There is no statistically significant relationship between board size and financial performance.*

#### **4.6.2 Board independence and financial performance**

Just a few decades ago, a board member would have been considered as independent if such a board member did not belong to the management cohort. With the passage of time, the definition of *independent board member* has been refined.

In the South African context, an independent non-executive director (INED) is one who fulfils the following (King III Report on Corporate Governance for South Africa:Chapter 2.67):

- is not a representative of a shareholder who has the ability to control or significantly influence management or the board;
- does not have a direct or indirect interest in the company (including any parent or subsidiary in a consolidated group with the company), which exceeds 5% of the group's total number of shares in issue;
- does not have a direct or indirect interest in the company, which is less than 5% of the group's total number of shares in issue, but is material to his or her personal wealth;
- has not been employed by the company or the group of which it currently forms part in any executive capacity, or appointed as the designated auditor or partner in the group's external audit company, or senior legal advisor for the preceding three financial years;
- is not a member of the immediate family of an individual who is, or has during the preceding three financial years, been employed by the company or the group in an executive capacity;

- is not a professional advisor to the company or the group, other than as a director;
- is free from any business or other relationships (contractual or statutory) which could be seen by an objective outsider to interfere materially with the individual's capacity to act in an independent manner, such as being a director of a material customer or supplier to the company; or
- does not receive remuneration contingent upon the performance of the company.

In the same vein, Rebeiz (2015:748) refers to an independent non-executive director as a structurally independent director who is not significantly involved in the strategic and operational conduct of the company through professional affiliations that span well beyond the directorship position. In identifying and defining boardroom independence, this study confines itself to the definition of King III.

The performance effect of board independence is predicted by both the agency theory and resource dependence theory. Agency theorists state that a higher proportion of independent non-executive directors leads to greater monitoring by the board (Nicholson & Kiel, 2007:587).

They argue that if the monitoring functions of the board are implemented effectively, the probability of management to embark on selfish activities would be minimised. This perspective is compatible with the view of resource dependence theorists, who posit that non-executive directors provide a conduit to vital resources required by companies; therefore, a higher proportion of non-executive directors may have a positive impact on the company performance.

There are a few South African studies pertaining to the relationship between INED and company performance. Some of the few conducted in South Africa on the subject are those by Meyer and De Wet (2013:27), Muchemwa, *et al.* (2016:498), Ntim (2011:428), Pamburai *et al.* (2015:115), Semosa (2012:77) and Tshipa and Mokoaleli-Mokoteli (2015b:164). Consistent with the conflicting nature of the theoretical literature on INEDs, empirical evidence of the relationship between the percentage of INEDs

and financial company performance is mixed. In fact, there are three streams of research: the first stream of research posits a positive correlation between proportion of outside directors and company performance (Gupta & Fields, 2009:161; Lin & Chang, 2014:67; Ntim, 2011:428; Pamburai *et al.*, 2015:115), the second stream of research reports no correlation between compositional independence and company performance (Burton, 2000:194; Wintoki *et al.*, 2012:581), while the third stream of research highlighting an inverse relationship (Vintilă & Gherghina, 2013:896; Wahba, 2015:37).

Ntim (2011:428) investigated the relationship between the presence of INEDs and company performance using a sample of 169 JSE-listed companies from 2002 to 2007, with Tobin's Q and ROA proxies for company performance. He found that the presence of INEDs impacted positively on company performance. Similarly, in an investigation of the impact of independent boards of directors on 236 Taiwanese listed companies from 2011 to 2012, Lin and Chang (2014:67) found that the ratio of the independent directors was positively correlated with ROA and ROE. Their results support the mandatory regulation by the Taiwanese government to establish an independent director system for all applicants for company listing and public companies that trade stock over the counter. Companies that do not comply with this requirement are excluded from public listing and from offering traded stocks.

Further, Gupta and Fields (2009:161) examined a US sample of 744 independent INED resignations from 1990 to 2003 to ascertain the value that the market places on board independence. They reported that, on average, the announcement of independent INED resignations resulted in a 1.22% loss in a company's market value. This indicates a positive link between INEDs and company performance, and that investors value board independence, because independent boards are associated with greater monitoring of managerial behaviour. As Rebeiz (2015:747) puts it, the significance of independent directors is underscored by the fact that an inside directorship position implies that management is overseeing management.

However, in a sample of 40 Egyptian listed companies from 2008 to 2010 using a generalised least squares method, Wahba (2015:37) found that increasing the proportion of non-executive members to the total number of directors impacted

negatively on financial performance. The negative impact of independent directors on company performance is also reported in the study of companies listed on the Bucharest Stock Exchange between 2007 and 2011, using 334 firm-year observations of unbalanced panel data (Vintilă & Gherghina, 2013:896).

In support of Vintilă and Gherghina (2013:896), in a sample consisting of 182 firm-year observations, Koerniadi and Tourani-Rad (2012:15) examined the effects of the presence of independent directors on company value, using both hybrid-based performance measures (Tobin's Q ratio and economic value added (EVA)) and accounting-based ratios (ROA and ROE). They found that, instead of adding value, independent directors in New Zealand negatively affected company value. Consistent with the stewardship theory, they found that independent directors only had a positive effect on company value when they were in the minority. These findings are interesting given the increasing trend towards independence in corporate boards around the globe and suggest that board independence may not be the solution.

Another stream of empirical papers indicates that INEDs do not impact performance. For example, Wang (2014:171) tested the correlation between independent directors and company performance in Chinese listed companies based on the statistical data from 30 collected sampled articles and found the following:

- board independence had no significant impact on company performance;
- independent directors' characteristics and background had a controversial effect on company performance; and
- independent directors' compensation had a significant positive effect on company performance.

This could suggest that independent directors may primarily play an advisory role but not a monitoring role in Chinese listed companies.

The South African Companies Act No. 71 of 2008 requires every public company to appoint at least three INEDs. King III requires boards to be comprised of a majority of non-executive directors, of whom the majority should be independent (KPMG, 2009:2). The JSE Listings Requirements also require South African corporate boards of

directors to consist of a majority of INEDs. This suggests that King III expects companies with more INEDs on their boards to perform financially better than those with fewer INEDs. Based on the aforementioned considerations, the second pair of hypotheses of this study is proposed as follows:

*H<sub>20</sub>: There is a statistically significant positive relationship between board independence and financial performance.*

*H<sub>2a</sub>: There is no statistically significant relationship between board independence and financial performance.*

#### **4.6.3 Presence of board committees and financial performance**

Board committees are the critical aspect of monitoring and therefore of the board. This is because critical processes and decision-making are not done at board level but at committee levels such as the nomination committee, audit and risk committee and remuneration committee (Dalton *et al.*, 1999:682). To this end, the establishment of board subcommittees has been strongly recommended as a suitable mechanism for improving corporate governance, by delegating specific tasks from the main board to a smaller group and harnessing the contribution of non-executive directors (Spira & Bender, 2004:489).

Essentially, the board delegates certain functions to these well-structured committees but without abdicating its own responsibilities. The purpose of establishing the committees is to alleviate its workload and to create committees that can function more effectively due to its composition consisting of a smaller grouping that can focus on key areas. Board committees enable directors to cope with two of the most important problems they face: the limited time they have available, and the complexity of the information with which they must deal (Dalton *et al.*, 1999:682).

In the UK, the Cadbury Committee proposals focus on audit committees, while the Greenbury study group advocates remuneration committees. In South Africa, King III and JSE Listings Requirements require the establishment of audit, remuneration and nomination committees.



Using a balanced panel of 79 New Zealand listed companies, for the period 2007 to 2011, the study of Fauzi and Locke (2012:61) exhibits a positive relationship between existence of board committees (remuneration, audit and nomination) and ROA and Tobin's Q, alluding to the viewpoint that the presence of key internal board committees increases company performance. However, using 307 US-listed companies from 1990 to 1994, Vefees (1999b:199) reports a negative relationship between the establishment of board nomination committee and company value.

With regard to the audit committee, using a sample of 11 listed companies of Pakistan from 2010 to 2011, Arslan, Zaman, Malik and Mehmood (2014:154) reveal a positive and significant relationship of ROE and profit margin with audit committee. This is consistent with the study of Tornyeva and Wereko (2012:102), which used a self-administered questionnaire and the financial statements of the Ghana listed companies from 2005 to 2009 to establish a statistically significant positive relationship between the size of audit committee and performance. The implications of their study are that audit committee members with financial skills contribute positively to company performance.

Likewise, Aldamen, Duncan, Kelly, McNamara and Nagel (2012:971), Amer, Ragab and Shehata (2014:1) and Tornyeva and Wereko (2014:409) found that the combination of education and experience impacted company performance positively. Their results support the literature which states that knowledge and experience of audit committees influence better financial reporting, in turn, increasing company performance. By contrast and unexpectedly, the study by Ghabayen (2012:168), which included 102 non-financial companies listed on the Saudi Market during the year 2011, could not provide evidence of the relationship between audit committee composition and company performance.

Regarding the remuneration committee, in a sample of 220 large British listed companies, Main and Johnston (1993:351) examined the role of remuneration committees in British boardrooms. They reported that the presence of a remuneration committee was associated with higher executive pay, which reduced shareholder value. In the same vein, using a sample of 367 UK-listed non-financial companies, consisting of 98 failed and 269 non-failed companies, drawn from the top 500 UK-

listed companies, from 1994 to 2011, Appiah and Chizema (2015:624) found a significant negative association between remuneration committee efficacy and corporate failure.

As regards the nomination committee, using a sample of 606 large US-listed companies, Vefeeas (1999b:199) documents a positive relationship between the establishment of nomination committees and the quality of new director appointments. This implies that nomination committees can improve board quality, which may ultimately improve the effectiveness with which the board carries out its monitoring and advisory roles. In separate studies, but using samples of US-listed companies, Chhaochharia and Grinstein (2009:231) and Sun and Cahan (2009:193) report a significant decrease in CEO compensation for US companies with independent nomination committees compared with those without compensation committees. This suggests that the establishment of independent nomination committees is associated with better monitoring of managerial compensation.

The South African Companies Act No. 71 of 2008 requires every public company to establish an audit committee, which must consist of at least two INEDs. Similarly, King III and the JSE Listings Requirements require South African-listed companies to institute audit, remuneration and nomination committees. Both King III and the JSE Listing Requirements specify that each committee should be chaired by an INED.

The committee must also be composed either entirely of INEDs (in the case of the remuneration committee) or by a majority of INEDs (in the case of audit and nomination committees). Further, the audit committee members must be financially literate and should be chaired by a person other than the chairman of the board. This suggests that King III expects that the establishment of board committees may directly or indirectly impact financial company performance positively. Based on the preceding literature, the third pair of hypotheses of this study is proposed as follows:

*H<sub>30</sub>: There is a statistically significant positive relationship between the existence of board committees and financial performance.*

*H<sub>3a</sub>: There is no statistically significant relationship between the existence of board committees and financial performance.*

#### 4.6.4 Board activity and financial performance

*Board activity* is defined as the frequency of board meetings in a year (Pamburai *et al.*, 2015:123). One aspect in relation to the board internal structure is board activity (Arosa, Iturralde & Maseda, 2013:129). Following Jackling and Johl (2009:496) and Pamburai *et al.* (2015:123), one way to measure the board activity is the frequency of board meetings. The meetings frequency can be a factor that may help to establish if the board of directors is an active or a passive board.

Notwithstanding, there is limited evidence of the relationship between the frequency of board meetings and financial performance. Secondly, the limited evidence is also conflicting, which makes the frequency of board meetings and financial performance association a ripe area for further research.

For 169 SA-listed companies from 2002 to 2007, Ntim and Osei (2013:83) report a statistically significant and positive association between the frequency of board meetings and company performance, implying that South African boards that meet more frequently tend to generate higher financial performance.

Similarly, in a six-year study between 1999 and 2005, Brick and Chidambaran (2010:536) investigated the relationship between board monitoring activity and company value, using a sample that consisted of 5 228 firm-year observations. They found that board activity, through board meetings, had a positive impact on company value. According to Agyemang *et al.* (2014:55), this implies that, as the number of board meetings increases, the monitoring and advisory role of boards improves, translating into company performance.

In contrast, El Mehdi (2007:1429) found that the frequency of board meetings had no association with economic performance, using a small sample of 24 Tunisian listed companies from 2000 to 2005. She states that financial performance, which is tied most closely to the quality of the day-to-day management of the company, is likely to be less affected by the frequency of board meetings. Similarly, in a panel study methodology for a sample of 137 JSE-listed companies between 2002 and 2011,

Tshipa and Mokoaleli-Mokoteli (2015b:163) found that the frequency of board meetings did not impact company performance.

King III and the JSE Listings Requirements task South African listed companies with establishing a policy for the frequency, purpose, conduct and duration of their boards of directors and board subcommittees' meetings. Specifically, King III recommends that the board of directors should sit at least once a quarter, and that the frequency of meetings should be determined regarding specific circumstances within the company. This implies that King III expects a higher frequency of board meetings to impact positively on financial performance. Based on the aforementioned arguments, the fourth pair of hypotheses for the study is proposed as follows:

*H<sub>4o</sub>: There is a statistically significant positive relationship between board activity and financial performance.*

*H<sub>4a</sub>: There is no statistically significant relationship between board activity and financial performance.*

#### **4.6.5 Board diversity and financial performance**

Boards of directors are becoming more and more gender balanced across the world due to the increased pressure of legislators, regulators, advocacy groups and institutional investors (Kumar & Zattoni, 2016:388). *Board diversity* is broadly defined as various attributes, such as age, gender, ethnicity, culture, religion, constituency representation, independence, knowledge, educational and professional background, technical skills and expertise, commercial and industry experience, and career and life experience (Van der Walt & Ingley, 2003:219). Board diversity is one of the most under-researched board structure variables and yet a topical subject (Carter, D'Souza, Simkins & Simpson, 2010:397).

Research on board diversity has grown exponentially in the last two decades as companies have been pressured to increase diversity on their boards of directors in respect of gender and race/ethnicity to reflect the external environment and represent the interests of different stakeholders. A number of studies has explored the impact of board diversity on company financial performance (Campbell & Mínguez-Vera,

2008:435; Erhardt, Werbel & Shrader 2003:102; Zahra & Pearce, 1989:291; Zhang, 2012:686).

Few studies have been carried out in developing countries (Wachudi & Mboya, 2009:128). The few existing studies in the developing countries were conducted in the context of a few developed economies, such as the US (Adams & Ferreira, 2009:291), Canada (Francoeur, Labelle & Sinclair-Desgagné, 2008:83), Germany (Rose, Munch-Madsen & Funch, 2013:15) and Spain (Martin-Ugedo & Minguez-Vera, 2014:136). While these studies focused only on gender diversity, other studies have focused on gender diversity and racial or ethnic background (Akpan & Amran, 2014:81).

Interestingly, diversity in terms of gender is glaringly lacking. The representation of female directors in the boardroom falls far behind (Farrell & Hersch, 2005:86). In a study conducted between 2002 and 2011, Tshipa and Mokoaleli-Mokoteli (2015a:75) reported that females constituted only 13% of SA-listed boards in 2011, and Swartz and Firer (2005:145) reported that the board of an average South African listed company was only 6% female in 2003.

Not surprisingly, there has been a pressure for governance reforms, especially from shareholders, which may foster gender diversity in the boardroom in many countries (Kumar & Zattoni, 2016:388). Norway was one of the first countries to impose a law in 2003 requiring Public Limited Companies to have a 40% female board by 2008 (Holst & Schimeta, 2011:24). Spain followed Norway's example and enacted a law prescribing a 40% quota of female board members by 2015 (Adams & Ferreira, 2009:292). Other European countries such as the Netherlands and France also imposed female quotas (Böhren & Ström, 2010:1282; Holst & Schimeta, 2011:25). However, Humphries and Whelan (2017:10) in a sample consisting of 55 countries with corporate governance codes, which included South Africa, concluded that gender disparity of the board could be a consequence of cultural dimensions of power distance, masculinity and uncertainty avoidance.

There are mixed theoretical propositions on the impact of board diversity on company performance: those who argue for more diversity in boardrooms and those who are in favour of corporate monoculture and boardroom uniformity. Some studies found

positive links between increased board diversity and company performance (Ayadi *et al.*, 2015:743; Julizaerma & Sori, 2012:1077; Kim *et al.*, 2013:223; Lückerath-Rovers, 2013:491; Nielsen & Nielsen, 2013:373; Taljaard *et al.*, 2015:426; Zhang, 2012:686), while others found no relationship (Jhunjhunwala & Mishra, 2012:71; Mahadeo, Soobaroyen & Hanuman, 2012:375) and still others indicated that increased levels of diversity could be detrimental to company performance (Akpan & Amran, 2014:86; Carter *et al.*, 2010:396).

Proponents of diversity in corporate boardrooms usually base their arguments on agency, resource dependence, human capital and signalling theories (Taljaard *et al.*, 2015:425). First, the agency theory states that diversity in the boardroom increases board independence and improves executive monitoring (Van der Walt & Ingley, 2003:219). Secondly, it brings diversity in ideas, perspectives, experiences and business knowledge to the decision-making process in boardrooms (Baranchuk & Dybvig, 2009:715). This can aid better appreciation of the intricacies of the external environment and global marketplace. Board diversity can also increase creativity and innovation in boardrooms due to diversity in cognitive abilities, which can also facilitate effective decision-making (Carter, Simkins & Simpson, 2003:36).

Thirdly, the resource dependence theory indicates that board diversity helps to link a company to its external environment and secure critical resources, including skills, business contacts, prestige and legitimacy (Goodstein, Gautum & Boeker, 1994:241). Fourthly, Rose (2007:405) argues that a higher degree of board diversity may serve as a positive signal to potential job applicants. This will help in the attraction and retention of skills. Finally, corporate boards of qualified individuals of diverse backgrounds and constituencies can help provide a better link with a company's stakeholders, such as consumers and the local community. This can improve a company's reputation and commercial opportunities (Shrader, Blackburn & Iles, 1997:355). Carter *et al.* (2003:36) state, for example, that by matching the diversity of a company's board to the diversity of its customers and suppliers, board diversity can significantly increase its ability to penetrate competitive markets.

However, relying on agency and organisation theories, opponents contend that board diversity can impact company performance negatively. First, it has been suggested

that a more diverse board may not necessarily result in more effective monitoring and decision-making. This is because diverse board members may be appointed as a sign of tokenism, and as such, their contributions may be marginalised (Rose, 2007:406). Secondly, the organisation theory indicates that diversity within the board may significantly constrain its efforts to take decisive action and initiate strategic changes, especially in times of poor company performance and environmental turbulence (Goodstein *et al.*, 1994:243).

Thirdly, diverse board members may bring their individual and constituencies' interests and commitments to the board (Baysinger & Butler, 1985:110), and thus create cabals within the board. The more diverse these interests are, the greater the potential for conflicts and factions to emerge (Baranchuk & Dybvig, 2009:725). This can inhibit boardroom cohesion and performance (Goodstein *et al.*, 1994:243).

Finally, Rose (2007:405) argues that the recommendation that company boards should be constituted to reflect all their important stakeholders and society as a whole is incompatible with the notion of business. This is because if board members are not appointed on merit or their ability to contribute meaningfully to the decision-making process in the boardroom, it will result in the creation of diverse but comparatively ineffective larger boards. This can impact negatively on financial performance.

In a sample of 90 listed companies on the Nigerian Stock Exchange from 2010 to 2012, Akpan and Amran (2014:86) showed that the female presence on Nigerian boards had a negative influence on company performance. By means of a panel study over 12 years from 1998 to 2009 using a sample of 32 commercial banks in Kenya, Wachudi and Mboya (2009:128) found that the board gender diversity had no effect on the performance of banks in Kenya. They found that, on average, in a typical board size of eight members, only one was a female director.

This is corroborated by Tshipa and Mokoaleli-Mokoteli (2015a:73), who used a sample of 137 SA-listed companies from 2002 to 2011, in which they also found that board gender diversity did not influence financial performance. However, they attributed the finding to the fact that the number of females serving on South African boards was too small to impact on board decisions significantly. In support of a no-effect impact on

company value is the Carter *et al.* (2010:396) study of companies in the S&P 500 index from 1998 to 2002, which revealed that the inclusion of females and ethnic minorities on corporate boards had no effect on company performance.

Contrary to the above, Ayadi *et al.* (2015:743), Julizaerma and Sori (2012:1077), Lückerath-Rovers (2013:491) and Zhang (2012:686), found a positive association between gender diversity and company performance. Similarly, Oba and Fodio (2013:170) found that both female director presence and proportion impacted financial performance positively. Triana, Miller and Trzebiatowski (2013:609) provide a different perspective to the debate by stating that board gender diversity is double-edged because it can propel or impede strategic change, depending on company performance and the power of female directors.

Taljaard *et al.* (2015:425) collected share returns and directors' demographic data for a sample of the 40 largest companies listed on the JSE from 2000 to 2013. This data was analysed using Muller and Ward's (2013:1) investment style engine by forming portfolios of companies based on board diversity constructs. Time series graphs of cumulative portfolio market returns were analysed to determine if the diversity dimensions tested were associated with improved share performance. The results show that racial diversity within boards is not associated with financial performance. However, increased gender diversity has strong associations with improved share price performance.

While fostering female representation in the boardroom for ethical and social reasons is beyond dispute, the performance effects of an increased female representation on the board have not been tested largely. The conflicting findings may also be explained by country and environmental differences. In this regard, South Africa offers an interesting research context in which to explore the impact of board diversity on company performance. South Africa has an ethnically diverse populace – made up of people from all over the world, including European whites, Chinese, Indians, mixed race and black Africans. Examining board diversity in terms of race and gender can bring insight that may enrich the board gender diversity and company performance literature.



The study also contributes to the debate of whether governments should consider adopting quota legislation to increase female representation on the board of directors, such as in Spain, Norway, the Netherlands and France. Tshipa and Mokoaleli-Mokoteli (2015a:71) state that there is evidence of a business case to advocate the implementation of quota legislation in South Africa.

According to the King III Report, diversity applies to academic qualifications, technical expertise, relevant industry knowledge, experience, nationality, age, race and gender. In this study, *board diversity* is defined on the basis of both gender and race. The South African Employment Equity Act 1998 stipulates that every company with more than 100 employees should ensure that its labour force, including top management, is constituted by a balance between non-whites and whites.

Among the non-whites, black males and females are expected to be given special preference. By contrast, King III and the JSE's Listings Requirements do not set any specific targets for companies. However, they recommend that every company should consider whether its board is diverse enough in terms of skills (profession and experience) and demographics (age, ethnicity and gender). This is expected to ensure that the composition of South African boards reflects the diverse South African context and make them effective. They also encourage companies to comply with the provisions of the Employment Equity Act. This indicates that King III expects board demographics diversity to have a positive impact on the financial performance of companies. Based on the aforementioned arguments, the fifth pair of hypotheses for the study is proposed as follows:

*H<sub>50</sub>: There is a statistically significant positive relationship between board diversity and financial performance.*

*H<sub>5a</sub>: There is no statistically significant relationship between board diversity and financial performance.*

#### 4.6.6 Leadership structure and financial performance

*Leadership structure* is defined as CEO duality if one person occupies both the position of CEO and chairman and CEO non-duality if the positions are separated (Yasser & Al Mamun, 2015:710). The evidence of the relationship between CEO duality and financial performance is mixed (Gill & Mathur, 2011:83; Moscu, 2013a:156). The agency theory states that CEO duality is bad for company performance as it compromises the monitoring and control of the CEO. However, in the last few years, many companies have converted from the dual CEO leadership structure to a non-dual structure, while a much smaller number of companies converted in the opposite direction (Moscu, 2013a:156). Hence the problem of separating the roles of CEO and chairman of the board still seems unresolved. Interestingly, Yang and Zhao (2014:1) report that duality companies outperform non-duality companies by 3% to 4%, which underscores the benefits of CEO duality in saving information costs and making speedy decisions.

Moscu (2013a:165) investigated the relationship between role or CEO duality and two accounting measures of financial performance (ROE and ROA) of 64 Romanian companies listed on the Bucharest Stock Exchange, reporting that CEO duality did not have an effect on either ROA or ROE. Similarly, using a data sample from 39 listed companies on the Bahrain Bourse from 2010 to 2012, Amba (2013:88) revealed that CEO duality had no significant effect on ROA, ROE and asset turnover.

In a study that constituted all companies listed on the Nigerian Stock Exchange from 1992 to 2009 (for ownership-dispersed companies) and 2003 to 2009 (for ownership-concentrated companies), Ujunwa, Salami and Umar (2013:102) found that CEO duality, irrespective of the ownership structure, impacted negatively on the financial performance of Nigerian companies. This is consistent with the agency theory and the study of Mesut, Leyli, Veysel and Serdar (2014:149), which assert that CEO duality impacts negatively on company performance. This indicates that monitoring by the board improves when the roles of CEO and chairman are split.

Another stream of empirical studies indicates that CEO duality has a positive impact on financial performance. Using a sample of 75 Canadian service companies listed on

the Toronto Stock Exchange from 2008 to 2010, Gill and Mathur (2011:83) showed that CEO duality positively impacted profitability. Al-Matari, Al-Swidi, Bt-Fadzil and Al-Matari (2012:311) also showed that CEO duality had a positive impact on company performance, having conducted an investigation on 136 Kuwaiti companies for the 2009 financial year.

King III and the JSE Listings Requirements explicitly state that the positions of the chairman and the CEO should not be held by the same individual. It also states that the chairman must be independent as defined in Section 3.3.3.2 of Chapter 3 of the King III Code. The chairman is responsible for the effective functioning of the board and the CEO is responsible for the running of the company's business. There should be a clear distinction between these roles. This suggests that King III recognises role or CEO duality as an undesirable development, while role separation is seen as good corporate governance practice. Based on the aforementioned arguments, the sixth pair of hypotheses for the study is proposed as follows:

*H<sub>6o</sub>: There is a statistically significant positive relationship between leadership structure and financial performance.*

*H<sub>6a</sub>: There is no statistically significant relationship between leadership structure and financial performance.*

## **4.7 CHAPTER SUMMARY**

The chapter elaborated on the unresolved and often conflicting findings relating to the relationship between various corporate governance variables and company performance. For each corporate governance variable, the empirical evidence of prior literature highlighted that in all six hypotheses, there are three streams of empirical evidence:

- those who established a positive link between a particular corporate governance variable and company performance;
- those who established a negative relationship; and
- those who established a no-effect.

Six pairs of theory-based hypotheses on the relationship between corporate governance attributes and company performance, denoted [H<sub>1</sub> – H<sub>6</sub>], were developed. Table 4.1 summarises these hypotheses, together with the predicted signs. The next chapter prepares the ground for hypothesis testing by resolving some of the outstanding methodological issues relating to the study as well as developing the econometric models to test the hypotheses.

**Table 4.1: Summary of the six research hypotheses for the relationship between corporate governance structures and company performance**

The columns show all the hypotheses for the study. Column 2 presents the tested relationship based on empirical evidence and Column 3 reports the predicted sign based on empirical findings.

*Note: Symbol (+) represents positive significant relationship*

Hypotheses	Tested relationships	Predicted sign
H <sub>1</sub>	board size and financial performance	+
H <sub>2</sub>	board independence and financial performance	+
H <sub>3</sub>	presence of board committees and financial performance	+
H <sub>4</sub>	board activity and financial performance	+
H <sub>5</sub>	gender diversity and financial performance	+
H <sub>6</sub>	board leadership and financial performance	+

Source: Compiled from King III Report, Companies Act, Literature and JSE Listings Requirements

## CHAPTER 5

# RESEARCH METHODOLOGY

### 5.1 INTRODUCTION

This chapter focuses on the research methodology used in the study and how it relates to the research objectives as outlined in Section 1.5.2 of Chapter 1. Leedy and Ormrod (2001:14) define *research methodology* as the general approach the study takes in carrying out the research project.

The main aim of this study is to explore and understand how corporate governance affects company performance in terms of both market-based performance and accounting-based performance, in three economic periods. As already mentioned in previous chapters, the review of the literature indicates that research to date has a mixed record of findings regarding the relationship between corporate governance and financial performance. Section 1 of Chapter 1 highlighted that such contrast in research findings may be due to the nuances associated with different periods, estimation methods, industry-specific factors and proxies for performance. To this end, the chapter describes the methodology that is used in undertaking the research and justifies the use of the general least squares (GLS) estimator over the two-stage least square (S2LS) and general method of moments (GMM). The four empirical models employed to test the relationship between corporate governance and financial performance are also presented as equations 5.2, 5.3, 5.4 and 5.5.

The chapter is structured as follows: Section 5.2 identifies corporate governance proxies. Section 5.3 identifies paradigms of research and Section 5.4 outlines the objectives of the research. Data collection is done in Section 5.5. Details of the sources of data in the study are discussed in Section 5.6 and Section 5.7 reveals criteria for data selection. Section 5.8 provides the data framework sample and Section 5.9 deals with controlling for sample bias. Section 5.10 elaborates on the measurement and analyses of the variables. Section 5.11 discusses the panel data analysis and Section

5.12 presents the model specification. Section 5.13 presents the specification tests used. Finally, the chapter is concluded in Section 5.14.

## **5.2 CORPORATE GOVERNANCE PROXIES**

The corporate governance proxies for the study are premised on the provisions of King III, the Companies Act of 2008 and the JSE Listings Requirements. South African listed companies are required to comply with JSE Listings Requirements, hence the latter supercedes. In the main, the corporate governance variables are selected based on the findings of prior research as discussed in Chapter 4 as well as on their implementation becoming mandatory under the JSE Listings Requirements. Notably, Section 8.63 of the JSE listing requirements takes a cue from King III, which follows an “apply or explain” principle.

## **5.3 PARADIGMS OF RESEARCH**

Essentially, paradigms are classified either as positivist or interpretive paradigms (Aliyu, Bello, Kasim & Martin, 2014:80). The positivist paradigm focuses on an objective description and exploitation, and researchers are seen as independent, while the interpretive paradigm focuses on subjective description and argues that human behaviour can be studied in the same way as non-human phenomena. A positivist paradigm is employed when quantitative data are considered. Therefore in this study a positivist paradigm was adopted, which called for the collation and analysis of quantitative data.

First, the study investigates the current state of corporate governance principles in the South African context following the implementation of King II. This is achieved through the analysis of corporate governance mechanisms based on secondary data. Secondly, the study attempts to establish the relationship between corporate governance and company performance. Thirdly, the study seeks to delineate the corporate governance and performance nexus in three distinct economic periods. Finally, it considers both the industry dynamics as well as the different financial periods to investigate the relationship between corporate governance and performance across the five South African industries.

Therefore, the study is suited to a positivist paradigm and uses deductive reasoning and quantitative techniques because the positivist approach seeks facts or causes and effects of social phenomena (Williams, 2007:65). The reasoning is deductive because the hypotheses are derived first and the data is collected later to confirm or refute the association. Bryman and Bell (2007:14) indicate that the deductive approach is related to quantitative research, which follows objectivism, ontological realism and epistemological positivism. Quantitative research involves the collection of data so that information can be quantified and subjected to statistical treatment in order to support or refute “alternate knowledge claims” (Creswell, 2003:153). Consequently, quantitative data is used to test the hypotheses in this study.

#### **5.4 RESEARCH OBJECTIVES**

The aim of this research is to investigate the compliance levels of South African JSE-listed companies to the King Code of good corporate governance and examine the relationship between compliance and performance. The research area is corporate governance, and the specific focus here is the current state of corporate governance practice and its relationship with company performance in a developing country, namely South Africa. The aim of the research is to improve governance practice in South Africa by investigating a link between good governance and performance. As already mentioned in Section 1.6.2 of Chapter 1, to achieve the research aim, the objectives of this study are as follows:

- to investigate the extent to which South African listed companies comply with King Code of corporate governance, following the implementation of King II in 2002;
- to investigate the relationship between corporate governance and company performance using a number of estimation methods and proxies of financial performance;
- to investigate whether compliance to good corporate governance differs during three financial periods, namely before the financial crisis, during the financial crisis and after the financial crisis;

- to develop a corporate governance model that is appropriate for each of the five industries in South Africa, for three different periods, namely before the financial crisis, during the financial crisis and after the financial crisis.

## 5.5 SECONDARY DATA COLLECTION

This section summarises the process of data collection. According to Creswell (2003:18), quantitative research collects data on predetermined instruments that yield statistical data. Further, Denzin and Lincoln (1994:4) posit that quantitative research emphasises the measurement and analysis of causal relationships between variables. Ghauri and Gronhaug (2005:19) state that due to the adequacy of secondary data there is no need to collect primary data if secondary data are available to answer the research questions. Therefore, this research used secondary data to measure corporate governance mechanisms and company performance.

The sample companies used to examine the internal corporate governance and financial performance nexus are drawn from companies listed on the JSE Ltd, South Africa. On 26 February 2015, a total of 324 companies were officially listed on the main board of the JSE. Companies listed on the Alternative Exchange (AltX) were not considered, because they were subject to different listings, financial reporting and corporate governance requirements. The official list of all the main board listed companies with their respective industrial classifications was obtained directly from the Market Information Department of the JSE.

For the purpose of this study, data were collected for the period 2002 to 2014. This period was chosen to test the relationship between governance and company performance because it reflected the corporate governance practices of companies after the implementation of King II, which required South African companies to “comply or explain”.

On 26 February 2015, South Africa had nine major industries, namely basic materials, consumer goods, consumer services, financials, health care, industrials, oil and gas, technology and telecommunications. Notably, no companies were listed in the utilities



industry. Table 5.1 presents the industrial composition of all companies listed on the main board of the JSE on 26 February 2015. The table indicates that the market was dominated by financials, basic materials, industrials and consumer services. Together, the four industries accounted for approximately 84% of the entire JSE population of listed companies.

## 5.6 DATA AND SOURCES

Two main types of data are employed when examining the relationship between internal corporate governance structures and the financial performance of South African listed companies. The first category consists of internal corporate governance variables. All internal corporate governance variables are manually extracted from the annual reports of the sampled companies. Company annual stock market and financial accounting performance variables constitute the second type of data used in this study. These are all collected from the INET BFA database. INET BFA database is South Africa's leading provider of financial data feeds as well as organisation information including annual reports and financial statements (Bussin & Modau, 2015:7).

Table 5.1 provides insight into how the number of companies was reduced from 295 to 90. Panel A of the table presents South African listed companies (population) on the JSE on 26 February 2015, classified by industry. Panel B shows the selected companies within each industry. As depicted in Table 5.1, in total, 90 companies complied with the selection criteria, forming approximately 31% of the total 3 835 annual reports obtained (295 companies over 13 years). These companies constitute 30.7% of the total market capitalisation of the JSE listed companies and as such represent a wide spectrum of stakeholders' interest and shareholders' wealth.

Notably, departing from the conventional practice of prior studies, this study does not exclude companies within the financials industry, based on four reasons. First, both financial and non-financial companies are subject to similar disclosure in terms of JSE Listings Requirements. More precisely, corporate governance regulations in South Africa, including the Listings Requirements, the Companies Act and the King Code are applicable to all companies. Therefore, it is anticipated that there would be general

convergence regarding the content of disclosure across all industries. Secondly, most existing studies on corporate governance focused on a few industries, for example, manufacturing companies and excluded other industries (Ammann *et al.*, 2013:463). Therefore, the current study seeks to examine all industries (both financial and non-financial) to fill this gap in corporate governance literature (Ammann *et al.*, 2013:452).

Thirdly, studies that excluded financial companies were conducted in developed countries, particularly in the US, where there are a large number of companies. In contrast, there are far fewer listed companies in emerging countries, including South Africa. Therefore, excluding financial companies from studies on developing countries would limit the sample size. Furthermore, incorporating both financial and non-financial companies is consistent with a number of studies in the corporate governance literature (Ammann *et al.*, 2013:461; Tsamenyi, Enninful-Adu & Onumah, 2007:319).

## 5.7 CRITERIA FOR SELECTING THE FINAL SAMPLE

To be included in the final sample, a company had to meet the following three criteria:

- at least 12 full set of a company's annual reports from 2002 to 2014 had to be available on the INET BFA database;
- its corresponding market and accounting information had to also be available on the INET BFA database;
- its primary listing should be in South Africa's JSE.

The above selection criteria was important in order to allow for the assessment of the compliance levels for the South African JSE listed companies over a period of time. The sample period starts with 2002, which is the year when King II came into force. Year 2014 is the most recent year at the time of undertaking the analysis of the study.

The only exclusion to the three criteria mentioned above is where one annual report is missing due to a financial year change. Such a company is also included in the final sample. In essence, the study allowed for only one year of the company's data to be missing in order to be included in the final sample. In total, there were 27 companies

that had one annual report missing on the INET BFA database due to financial year change.

**Table 5.1: Summary of the sample selection procedure**

Table 5.1 contains the five industrial compositions of South African listed companies between the period 2002 and 2014. The second column of Panel A shows the number of listed companies for each industry and the third column shows the proportion of listed companies per industry. Panel B shows the industrial composition of listed companies with full data in terms of the criterion in Section 5.7. Column 2 presents the number of all companies with the requisite data within the industry and Column 3 reports the proportion of sampled companies per industry.

<b>Panel A</b>		
<i>Industrial composition of companies listed on the JSE and available to be sampled on 26/02/2015</i>	<i>Number in each industry</i>	<i>Percentage of sample (%)</i>
Basic Materials	69	23.40
Consumer goods	23	07.80
Consumer services	43	14.58
Financials	91	30.84
Industrials	69	23.38
-----		
Total companies available to be sampled	295	100
Less: Suspended and merged companies	80	
Companies with more than one yearly data missing	74	
Companies with JSE as a secondary listing	51	
Total companies excluded	205	69.5
-----		
Total selected sample	90	30.5
<b>Panel B</b>		
<i>Industrial composition of sampled companies with full data and available to be sampled on 26/02/2015</i>	<i>Number in each industry</i>	<i>Percentage of sample (%)</i>
Basic Materials	18	6.10
Consumer goods	08	2.71
Consumer services	19	6.44
Financials	20	6.78
Industrials	25	8.47
-----		
Final selected sample	90	30.5

Source: The JSE Market data 2015

## 5.8 DATA FRAMEWORK

The study uses a panel data framework which follows the one used by Abor and Biekpe (2007:288). This involves the pooling of observations on a cross-section of units over several periods and provides results that are simply not detectable in pure cross-sections or pure time series studies. The four main advantages of using a panel design are that the sample size can be increased, individual heterogeneity (differences among individual objects) can be controlled for, multicollinearity (correlation among the explanatory variables) can be reduced (Schils, 2005:68) and statistical problems such as endogeneity (Börsch-Supan & Köke, 2002:301; Gujarati, 1995:637; Larcker & Rusticus, 2007:208) can be minimised. Possible unobserved individual effects, due to individual heterogeneity, are controlled for by using repeated observations on the same companies over time. However, a disadvantage of using panel data is that it is very time-consuming to source the data (Schils, 2005:68).

As Table 5.1 shows, the full set of data required was obtained for a total of 90 (31%) out of the 295 companies, constituting all five major industries. Out of the original sample size of 295 JSE-listed companies, 164 companies had more than one annual report missing. A further 51 companies were those that had dual listing status and did not have JSE as its primary listing exchange. The remaining 90 companies complied with the selection criteria and had full sets of annual reports with corresponding financial data.

The sample of 1 170 firm-year observations is comparable with most previous South African studies such as that of Pamburai *et al.* (2015:122), who used 158 firm-year observations, Taljaard *et al.* (2015:425), who used 520 firm-year observations, Meyer and De Wet (2013:24), who used 252 firm-year observations and Mans-Kemp and Viviers (2015b:26), who used 1 247 firm-year observations. The findings of this study may not be substantially impaired as the final sample size is large enough compared with other South African studies. The rationale for excluding companies with more than one piece of data missing was informed by one of the research questions, which was to assess the corporate governance compliance levels over a period of time in order to determine the impact of compliance on company performance.

## 5.9 CONTROLLING FOR SAMPLING BIAS

Apart from survivorship bias, this study is also prone to sample selection criteria bias. *Sampling bias* refers to the tendency of a sample to differ from the population in a specific, systematic manner due to various reasons, including the sample selection method and the manner in which data are processed (Peck, Olsen & Devore, 2009:33). Sample selection bias can lead to the systematic exclusion of a part of the population (Peck *et al.*, 2009:33). This study circumvents sampling bias by including all companies, large and small, in all five industries, to be part of the population. Many corporate governance studies seem to be biased towards large listed companies, often excluding small companies. As confirmed by Huse (2007:109), the size of a company, among others, has an influence on corporate governance aspects such as the size of the board.

## 5.10 DATA COLLECTION

*Data collection* entails the systematic gathering of data for a specific purpose from various sources, such as interviews and published annual reports (Silber & Foshay, 2010:96). According to the positivistic research paradigm that was considered in the current study, hypotheses were developed taking a cue from prior studies as well as King III, the Companies Act of 2008 and the JSE Listings Requirements. These hypotheses contained variables which had to be carefully defined. Part of the data collection process entails the identification of the relevant variables (Creswell, 2003:126). In the following section, each of the dependent and independent variables is discussed.

### 5.10.1 Independent corporate governance variables

The explanatory variables in this model consist of individual internal corporate governance structures in line with prior studies (Arora & Sharma, 2016:426; Pamburaj *et al.*, 2015:127; Rodriguez-Fernandez *et al.*, 2014:493). The corporate governance variables are as follows:

- board size;

- board independence;
- presence of key board committees;
- board activity;
- board diversity; and
- leadership structure.

The internal corporate board structures are measured in accordance with prior research. *Board size* means the number of board members (Javed, Saeed, Lodhi & Malik, 2013:248; Meyer & De Wet, 2013:24). *Board independence* means the proportion of independent non-executive directors (Wabha, 2015:17). *Presence of key board committees* denotes the existence of an audit committee, nomination committee and remuneration committee, which takes the dummy 1 if a company has all three committees, otherwise equal to zero (Agyemang & Castellini, 2015:61; Fauzi & Locke, 2012:52). *Board activity* means the number of times the board meets in a financial year (Fallatah & Dickins, 2012:10029).

*Board diversity* denotes the number of non-white board members sitting on a board (Fauzi & Locke, 2012:52; Taljaard *et al.*, 2015:444; Yasser & Al Mamun, 2015:710). *Leadership structure* is defined as CEO duality if one person occupies both the position of CEO and board chairman and CEO non-duality if the positions are separated (Yasser & Al Mamun, 2015:710). Therefore, it is a dummy variable 1 if the CEO and board chairman positions are occupied by different persons, otherwise equal to zero (Agyemang & Castellini, 2015:61; Tshipa & Mokoaleli-Mokoteli, 2015b:157; Wabha, 2015:17; Yasser & Al Mamun, 2015:710).

### **5.10.2 Control variables: company characteristics**

This study employs a number of control variables to reduce potential omitted variables bias (Ntim *et al.*, 2012:122). These variables are company size (FS) measured using the natural log of sales; leverage, ratio of total debt to assets (LEV); company age (AGE) from the date of incorporation of the company and company growth opportunities (GP), proxied by the natural log of advertising expenditure to total sales (Arora & Sharma, 2016:430; Nguyen, Locke & Reddy, 2015b:154; Rodriguez-

Fernandez *et al.*, 2014:493; Yasser & Al Mamun, 2015:710). The variables were chosen based on theoretical expectation and are in line with previous empirical studies examining the relationship among corporate governance, voluntary corporate governance disclosure and company performance.

Arguably, there may be other variables that can influence the relationship between corporate governance and financial performance, which are not included in the used model. More precisely, there are three reasons for limiting the study to these variables:

- some variables lack a theoretical link with the corporate governance and financial performance relationship;
- non-availability of data, which limits the use of other variables; and
- it is in line with prior studies that widely use these specific variables, which can facilitate comparison of the findings with those of previous studies.

### **5.10.3 Other control variables: company characteristics**

Additional to the aforementioned control variables, this study also employs the one-year lagged performance measure as an explanatory variable to control for the dynamic nature of the corporate governance and performance nexus as suggested by Wintoki *et al.* (2012:582). Using the lagged performance measure (dependent variable) as an explanatory variable mitigates for potential dynamic panel bias (Afrifa & Tauringana, 2015:730; Lacker & Rusticus, 2010:186).

The next subsection discusses the theoretical basis for selecting the dependent variables and the empirical evidence from previous studies. It also identifies different performance measures in the extant literature.

### **5.10.4 Dependent variables: performance measures**

Company performance is one of the most important constructs in corporate governance research. Reviewing past studies reveals a multidimensional conceptualisation of company performance related predominately to stakeholders, heterogeneous product market circumstances and timelines. A review of the

operationalisation of performance highlights the limited effectiveness of commonly accepted measurement practices in tapping this multidimensionality.

According to Richard, Devinney, Yip and Johnson (2009:718), discussing these findings requires researchers to possess a strong theoretical rationale on the nature of performance (i.e. theory establishing which measures are appropriate to the research context) and rely on strong theory as to the nature of measures (i.e. theory establishing which measures should be combined and the method for doing so).

Taking a cue from Richard *et al.* (2009:718), this study uses a combination of performance measures. Uniquely, this study uses ROA and ROE as accounting measures and Tobin's Q and economic value added (EVA) as market/hybrid measures. The rationale for using a myriad of dependent variables is based on a study of Kumar and Singh (2013a:92). The choice of two performance measures per category is based on countering issues of heteroscedasticity during analysis. The section below justifies the rationale for selecting ROA, ROE, EVA and Tobin's Q as performance measures.

#### **i) Accounting-based measures**

Accounting-based measures are the most common and readily available means of measuring organisational performance. The validity of their use is found in the extensive evidence showing that accounting and economic returns are related. For instance, Danielson and Press (2003:493) found that the correlation between accounting and economic rates of return was above 0.75, and Jacobson (1990:79) found that despite a weak *R*-squared of 0.2, return on investment (ROI) could distinguish performance between companies and over time.

Nevertheless, it is noted that measures can be distorted by accounting policies, human error and inconsistency in the application of accounting systems, such as GAAP standards. For instance, choices about depreciation schedules, inventory and booking expenses can undermine the ability to accurately tap the time dimension. Therefore, to rigorously apply accounting measures, one must understand the nature of the rules



(equations) that define the measure of interest (Richard *et al.*, 2009:728). However, researchers rarely have the inclination, time or data to achieve this.

Another important limitation of accounting-based performance measures is that they emphasise historic activity over future performance (Keats, 1988:151). Due to their reliance on auditable sources, accounting measures reflect what has happened and can be quite limited in anticipating and revealing expectations about future performance. This could possess either positive or negative consequences. Hence the apparent predictability and validity of accounting measures as signals of economic returns may have less to do with their validity and more to do with the stationary properties of the environment in which the measurement is taking place.

The implication is that the more turbulent the environment is, the less clear the rules of performance are, and the more variable the regulatory and institutional environment in which companies are operating, the less valid and comparable are accounting measures as signals of economic returns (Richard *et al.*, 2009:728). For instance, Jusoh and Parnell (2008:5) encountered difficulties applying Western accounting measures to the emerging Malaysian environment but found that measures of organisational effectiveness, such as customer and employee satisfaction, were more robust. A case study on measurement in Vietnam also found accounting measures to be a biased reflection of performance (Luu, Kim, Cao & Park, 2008:373).

*Return on assets (ROA)* is defined in this study as the book value of operating profit at the end of a financial year, divided by the book value of total assets at the end of a financial year (Fich & Shivdasani, 2006:703; Yermack, 1996:192). It measures how efficiently and effectively a company manages its operations and uses its assets to generate profits (Ross, Ross, Westerfield & Jordan, 1998:62). On average, higher ROA indicates effective and efficient use of a company's assets in maximising the value of its shareholders' investments by management (i.e. internal corporate governance structures).

For the purposes of this study, standardised ROA ratios were sourced on an annual basis from the INET BFA database. The equation for the standardised ROA ratio (INET BFA: 2016:5) is:

$$ROA = ((Profit\ before\ interest\ and\ tax - total\ profits\ of\ extraordinary\ nature) / Total\ assets) * 100$$

ROA is an effective measure of performance because it eliminates the problem of size, which makes it easier for comparisons to be drawn across companies (Lev & Sunder, 1979:187). Demsetz and Lehn (1985:1160) suggest that, as an accounting profit, ROA may reflect year-to-year fluctuations in underlying business conditions better than stock market rates of return. This is because stock market rates of return reflect expected future developments that may mask current fluctuations in business conditions. ROA has also been used widely by prior corporate governance studies (Adewuyi & Olowookere, 2013:179; Gherghina, 2015:97; Habib, 2016:11; Orazalin *et al.*, 2016:805; Yasser & Al Mamun, 2015:710). However, the use of ROA has been criticised on several grounds.

First, ROA is a historical measure, and past profits can be a poor reflection of true future profitability (Ross *et al.*, 1998:62). A closely related weakness is that because ROA is based on historical cost accounting, it is unable to directly reflect current changes in valuation by the equity markets (Krivogorsky, 2006:185). Secondly, through changes in accounting policies, methods and techniques, ROA is suggested to be susceptible to all kinds of managerial manipulations (Alexander, Britton & Jorissen, 2007:867; Mangena & Tauringana, 2008:14). Finally, ROA has been criticised for its inability to reflect industry and environmental differences, non-financial performance factors, such as customer and employee satisfaction, short-term fluctuations in business fortunes, and changes in the value of money as a result of inflation and fluctuations in exchange rates (Alexander *et al.*, 2007:867). However, the impact of these weaknesses has been minimised through the inclusion of extensive control variables, which takes into account how time, industry and size, for example, affect a company's financial performance.

Another important measure of company performance used in corporate governance research is return on equity (ROE), which, like ROA, is also an accounting-based measure. The primary aim of an organisation's operation is to generate profits to the benefit of investors. Therefore, *return on equity* is a measure that shows investors the profit generated from money invested by shareholders (Epps & Cereola, 2008:1138). It is defined as the net income divided by common equity and is used as a general indication of the company's efficiency. In other words, it measures management's ability and efficiency in using the company's equity to generate operating profits.

Like ROA, ROE is arguably the most widely used overall measure of financial performance (Rappaport, 1986:31). This is corroborated by Ahsan (2012:132), who states that ROE is perhaps the most important ratio an investor should rely on. The fact that ROE represents the end result of structured financial ratio analysis, also called Du Pont analysis (Correia, Flynn, Uliana & Wormald, 2003:5-19), contributes towards its popularity among analysts, academics, financial managers and shareholders alike. However, De Wet and Du Toit (2007:67) found that ROE was not an effective accounting-based performance measure. Therefore, a traditional accounting-based performance measure such as ROE is not necessarily a driver of shareholders' wealth.

Notwithstanding, the advantage of using ROE as an accounting-based measure is that it is a straightforward benchmark that is easy to calculate and allows investors to compare the company's use of its equity with other investments. Compared with ROA, ROE has its strength in that it considers the amount and cost of a company's debt, which is considered a major element in the financial statement in the case of financial companies.

Although ROE is mostly favoured because it links the statements of the financial performance (earnings) and position (equity), it has serious flaws for a performance proxy. The first is that the earnings can be (and are) manipulated legally within the framework of the generally accepted accounting practice (GAAP) via changes in accounting policy. Secondly, similar to other accounting measurements such as return on asset (ROA), its other disadvantage relates to the widely held belief that it might not be absolutely accurate in measuring a company's performance in the case of

companies in developing countries, where accounting standards are not necessarily well established (Wiwattakantang, 1999:371). Another problem with the use of ROE, as identified by Finegan (1991:33), is that it does not consider the timing of cash flows.

Fourthly, Copeland, Koller and Murrin (1996:105) assert that ROE does not take into consideration long-term growth prospects because it is a short-term performance measure. This could potentially lead to a company improving its ROE, while at the same time earning a return that is below its weighted average cost of capital (WACC) and thereby destroying shareholders' value. Based on previous corporate governance research and similar to the work of Darko, Aribi and Uzonwanne (2016:265) and Orazalin *et al.* (2016:806), this study uses ROA and ROE as accounting-based measures.

For the purposes of this study, standardised ROE ratios were sourced on an annual basis from the INET BFA database. The equation for the standardised ROE ratio (INET BFA: 2016:6) is:

$$ROE = (Profit\ after\ taxation / Total\ owners\ interest) * 100$$

## ii) Financial market-based measures

Within the strategy, economics and finance literature, financial market-based measures, most dominantly shareholder return, are the preferred instrument for characterising organisational performance. The greatest strength of these measures, unlike accounting-based measures, is that they are forward looking, in theory representing the discounted present value of future cash flows (Fisher & McGowan, 1983:82).

However, the connection between financial market measures, such as the stock price or excess stock returns, to the actual performance of the company depends on how much of the rent generated from its activities flows to shareholders and the informational efficiency of the financial market. The usual justification of these measures is that companies are instruments of shareholders. Moreover, research on

psychological and other influences indicates that market values do not simply reflect an efficient appraisal of future cash flows (Malkiel, 2003:59).

Empirical research in finance has shown that only a small proportion of share price movement is explained by systematic economic effects (Cutler, Poterba & Summers, 1989:4; Roll, 1988:31). Instead, share price movements are often attributed to financial market volatility (Shiller, 1989:724), momentum (Chan, Megadeath & Lakonishok, 1996:1681) and herding behaviour (Graham, 1999:237; Grinblatt, Titman & Wermers, 1995:1088).

A major limitation of the use of financial market data in management research is that it evaluates the organisation as a whole. Therefore, although market value might be generally recognised as the most appropriate measure of overall company performance, it is less useful for research focusing on performance where the dimensionality is defined in terms of a product or a strategic business unit (Richard *et al.*, 2009:731). As a result of the preceding, this study does not use any of the financial market-based performance proxies.

### iii) **Market-based measures**

An advantage of hybrid/market-based measures is that they are better able to balance risk (largely ignored by accounting-based measures) against operational performance issues that are sometimes lost in market-based measures. Tobin's Q is perhaps the earliest and most popular hybrid measure of company performance. *Tobin's Q* is the ratio of the market value of company assets to their replacement cost and is a theoretically based measure of economic return (Tobin, 1969:15). Generally, Tobin's Q measures the effectiveness with which a company's management is able to use its assets to generate value for shareholders.

For the purposes of this study, standardised Tobin's Q values were sourced on an annual basis from the INET BFA database. The equation for the standardised Tobin's (INET BFA: 2016:8) is:

*Tobin's Q = (Market value of equity plus book debt) / assets (valued at replacement cost)*

Like ROA, a higher Tobin's Q indicates greater effectiveness of a company's internal corporate governance structures, as well as a better perception of a company's financial performance by the market (Haniffa & Hudaib, 2006:1045). A Tobin's Q ratio of less than 1 indicates that stock is undervalued, and in this situation, companies have little incentive to invest because the value of new capital investment falls below its costs. Conversely, a Tobin Q ratio of more than 1 indicates that a stock is overvalued and companies have a strong incentive to invest because the value of new capital investment exceeds costs.

The concept of Tobin's Q has great intuitive appeal and is of immense theoretical and practical relevance (Chung & Pruitt, 1994:70). As such, it has been extensively used as a proxy for financial performance in corporate governance research (Agrawal & Knoeber, 1996:377; Chung & Pruitt, 1994:70; Darmadi, 2013:288; Gompers, Ishii & Metrick, 2003:107; Henry, 2008:912; Kumar & Singh, 2013b:44; Meyer & De Wet, 2013:19; Morck, Shleifer & Vishny, 1988:293; Rashid & Islam, 2013:76; Tshipa & Mokoteli-Mokoaleli, 2015b:149; Yermack, 1996:185), but also within the larger corporate finance arena (Lewellen & Badrinath, 1997:77; Perfect & Wiles, 1994:313).

This makes it a very advantageous performance proxy because its empirical validity is grounded in rigorously established empirical research. However, and like any other performance proxy, it has received a barrage of criticisms. Unlike other performance proxies such as ROA, most of its criticisms concern how it is constructed and potential measurement errors (Klock, Thies & Baum, 1991:241).

A major line of criticism of Tobin's Q is that it is too expensive in terms of computational effort and data requirements (Chung & Pruitt, 1994:70). As a result, and as explained above, many approximations have been developed, most of which propose the use of

book values of assets, equity and debt (Chung & Pruitt, 1994:70; Lewellen & Badrinath, 1997:77; Perfect & Wiles, 1994:313). This leads to a related criticism that its calculation involves the use of accounting variables prepared in terms of historical cost accounting (Shabbir & Padgett, 2008:8).

Thus, the Tobin's Q appears to suffer from most of the weaknesses of conventional accounting-based measures of performance. These weaknesses include being prone to managerial manipulation and creative accounting, as discussed in previous sections. However, with the gradual move towards fair value accounting (Alexander *et al.*, 2007:115-117) or even a mixture of historical cost and mark-to-market accounting (Danbolt & Rees, 2008:272), it can be argued that this criticism will increasingly be less valid.

Another criticism of the Tobin's Q is that its application may result in spurious correlations with corporate governance mechanisms, in that a higher Tobin's Q may not necessarily indicate that a company's management has a better ability in using its assets in generating value. This is because the differences between market and book values can be due to a variety of factors, such as undervaluation of tangible and financial assets recognised on the balance sheet (Beattie & Thomson, 2007:130). It can also be due to the value of intangibles that have not been captured on the balance sheet, as well as market prices that do not accurately reflect the intrinsic values of assets (Beattie & Thomson, 2007:130). Like ROA, Tobin's Q may not capture how the informal human relationships that may, for example, exist among board members, affect financial performance.

One difficulty with the adoption of Tobin's Q is that the replacement value of the company's assets is almost always measured through its closely related proxy, the book value of assets (Varaiya, Kerin & Weeks, 1987:494). This means that this is the historical rather than current replacement cost. Similarly, as a market-based performance measure, changes in Tobin's Q may not be an accurate reflection of the underlying economic fundamentals of a company, but may be driven by investors' sentiments and speculation, which are meant to satisfy their short-term parochial economic interests (Henwood, 1997:145).

An anecdotal example of this is the widely reported current financial crisis, the so-called 'credit crunch', within the global financial markets in which share prices of some companies, especially financial companies, are alleged to have been driven down by investor speculation (Gorton, 2009:6). Therefore, to minimise the potential impact of these limitations on the results, extensive lists of control variables will be included in the model. It may also justify the use of both accounting- and market-based measures of performance, allowing each measure to complement the weaknesses of the other.

Despite empirical similarity, the adoption of book value introduces the potential for a number of accounting distortions (Perfect & Wiles, 1994:313). This is seen in the failure of empirical Tobin's Q measures to include intangible assets in the replacement cost. Several authors propose formally measuring intangible assets and particularly the intangible intellectual capital resident within software, patents and employees (Edvinsson & Malone, 1997:341).

However, despite these calls to improve the accounting of intangible assets, and their inclusion in company financial statements, most current Financial Accounting Standards Board (FASB) accounting measures ignore them. This limitation has led to the development of a number of alternative mixed measures.

Economic value added (EVA) is one such alternative mixed measure. Stern Stewart's trademarked EVA has become perhaps the most popular mixed measure (Stern, Stewart & Chew, 1995:32) and is a useful tool for assessing financial performance, as it combines factors such as economy, accounting and market information in its evaluation.

In fact, many studies have shown the advantages of using EVA over the traditional tools for assessing company performance due to its transparency and capacity to provide more vital information. As an EVA advocate and supporter, Stewart (1994:79) states that EVA stands as the single best measure of wealth creation on a contemporaneous basis and is almost 50% better than its closest accounting-based competitor (accounting measurement tool) in explaining changes in shareholder wealth.



Similarly, McClenahan (1998:3) observes that conventional company performance measures are being relegated as performance metrics, such as EVA becoming management's primary tool for performance measurement and Herzberg (1998:49) states that there has been widespread adoption of EVA by security analysts. Furthermore, EVA is thought to be superior to accounting profits as a measure of value creation, because it recognises the cost of capital and hence the riskiness of a company's operations (Lehn & Makhija, 1996:35).

EVA is a combination of market, accounting and economic information, giving it a much wider net. By focusing on financial results in economic terms but not accounting terms, it provides a significant information value beyond the traditional accounting measures such as EPS, ROA and ROE (Chen & Dodd, 2001:72).

Early research suggested that EVA, which is based on the return over the cost of equity, was a better predictor than EPS, EPS growth (Milunovich & Tsuei, 1996:104), ROA, ROE and return on sales (ROS) (Lehn & Makhija, 1997:90). EVA can be seen as reliable performance measures, which can be maximised in order to maximise shareholder value (De Wet & Du Toit, 2007:63). Based on previous corporate governance research and similar to Prusty (2013:341), Pamburai *et al.* (2015:124) and Arora and Sharma (2016:430), this study uses Tobin's Q and EVA as hybrid-based performance proxies.

For the purposes of this study, standardised EVA values were sourced on an annual basis from the INET BFA database. The determinates of EVA (INET BFA: 2016:3) are:

- $EVA = \text{Spread} * CE$
- $\text{Spread} = (\text{ROCE} / \text{WACC})$
- $\text{ROCE} = \text{NOPAT} / CE$
- $\text{NOPAT} = \text{Net Operating Profit after Tax}$
- $\text{ROCE} = \text{Return on Capital Employed}$
- $\text{WACC} = \text{Weighted Average Cost of Capital}$
- $CE = \text{Capital Employed}$

## 5.11 PANEL DATA

Two main panel data regression models (the fixed-effects model and the random-effects model) have different assumptions about the error term. The fixed-effects model assumes that the individual effect term is constant. However, the random-effects model assumes that the individual's effect is random. Consistent with the studies of Arora and Sharma (2016:426), Wintoki *et al.* (2012:582) and Yegon, Sang and Kirui (2014:145), this study uses the fixed-effects panel data regression model to mitigate the bias arising from unobservable heterogeneity.

This approach is employed as the first level of hedging against endogeneity due to omitted variables. However, a caveat of using the fixed-effects model is that it assumes that current observations of independent variables are completely independent of past values of dependent variables, otherwise it will produce inconsistent parameter estimates (Schultz *et al.*, 2010:147). As discussed in Section 1.4 of Chapter 1, this study deals with the caveat by considering the effect of historical performance on current governance when running the estimation models (Arora & Sharma, 2016:430; Wintoki *et al.*, 2012:582).

## 5.12 MODEL SPECIFICATION

As mentioned in Section 1.4 of Chapter 1, one of the most daunting tasks in corporate governance empirical studies is dealing with the endogeneity of corporate governance independent variables. Being oblivious to endogeneity may result in spurious and unreliable causality inferences (Roberts & Whited, 2013:494).

In the light of this, Wintoki *et al.* (2012:585) recommend that the appropriate empirical model for the corporate governance and performance nexus should be a dynamic model instead of a static model, in which lagged performance is used as one of the independent variables. Therefore, this study also adopts a dynamic modelling approach to investigate the relationship between corporate governance and company performance. By doing so, this study responds to recent calls by Arora and Sharma (2016:430), Nguyen *et al.* (2014:1), Nguyen *et al.* (2015a:184), Schultz *et al.*

(2010:145) and Waweru, (2014:473,) to use dynamic panel models in corporate governance and finance studies.

In view of the preceding, the model specification for this study is as follows:

$$\begin{aligned}
 Y_{it} = & \alpha_0 + \alpha_1 Y_{it-1} + \beta_1 BS_{it} + \beta_2 BI_{it} + \beta_3 BC_{it} \\
 & + \beta_4 BA_{it} + \beta_5 BD_{it} + \beta_6 LS_{it} + \beta_7 AGE_{it} \\
 & + \beta_8 SIZE_{it} + \beta_9 LEV_{it} + \beta_{10} G_{it} + \varepsilon_{it} \quad (\text{Equation 5.1})
 \end{aligned}$$

where  $Y_{it}$  measures company performance indicators, ROA, ROE, Tobin's Q and EVA,  $Y_{it-1}$  represents the performance lag of one year.  $BS_{it}$ ,  $BI_{it}$ ,  $BC_{it}$ ,  $BA_{it}$ ,  $BD_{it}$  and  $LS_{it}$  are corporate governance variables, namely board size, board independence, presence of key board committees, board diversity and leadership structure respectively, of company  $i$  at period  $t$ . AGE, SIZE, LEV and G are used as control variables for company age, company size, leverage and growth prospects. The intercept is  $\alpha_0$ , the error term is  $\varepsilon_{it}$  and  $\alpha_1$  is the unknown estimated coefficient. The following models are thus used for the entire period (2002-2014), pre-financial crisis (2005-2007), during the crisis (2008-2010) and post-financial crisis (2011-2013), for the whole sample as well as for each industry.

#### Model 1

$$\text{Tobin's Q} = \alpha_0 + \text{Tobin's Q}_{it-1} + \beta_1 BS_{it} + \beta_2 BI_{it} + \beta_3 BC_{it} + \beta_4 BA_{it} + \beta_5 BD_{it} + \beta_6 LS_{it} + \beta_7 AGE_{it} + \beta_8 SIZE_{it} + \beta_9 LEV_{it} + \beta_{10} G_{it} + \varepsilon_{it} \quad (\text{Equation 5.2})$$

#### Model 2

$$\text{ROA} = \alpha_0 + \text{ROA}_{it-1} + \beta_1 BS_{it} + \beta_2 BI_{it} + \beta_3 BC_{it} + \beta_4 BA_{it} + \beta_5 BD_{it} + \beta_6 LS_{it} + \beta_7 AGE_{it} + \beta_8 SIZE_{it} + \beta_9 LEV_{it} + \beta_{10} G_{it} + \varepsilon_{it} \quad (\text{Equation 5.3})$$

#### Model 3

$$\text{EVA} = \alpha_0 + \text{EVA}_{it-1} + \beta_1 BS_{it} + \beta_2 BI_{it} + \beta_3 BC_{it} + \beta_4 BA_{it} + \beta_5 BD_{it} + \beta_6 LS_{it} + \beta_7 AGE_{it} + \beta_8 SIZE_{it} + \beta_9 LEV_{it} + \beta_{10} G_{it} + \varepsilon_{it} \quad (\text{Equation 5.4})$$

#### Model 4

$$\text{ROE} = \alpha_0 + \text{ROE}_{it-1} + \beta_1 BS_{it} + \beta_2 BI_{it} + \beta_3 BC_{it} + \beta_4 BA_{it} + \beta_5 BD_{it} + \beta_6 LS_{it} + \beta_7 AGE_{it} + \beta_8 SIZE_{it} + \beta_9 LEV_{it} + \beta_{10} G_{it} + \varepsilon_{it} \quad (\text{Equation 5.5})$$

As already mentioned, for corporate governance measures, the study considers board size, board independence, board committees, board activity, board diversity and leadership structure, while the control variables are company age, company size, leverage and growth prospects. Data for the performance measures, ROA, ROE, Tobin's Q and EVA are not manually calculated but retrieved from the INET BFA database. The construction of these variables for the empirical analysis is presented in Table 5.2. Definitions of variables are largely adopted from existing literature with the aim of making a meaningful comparison with earlier empirical studies.

### 5.13 SPECIFICATION TESTS

In order to build a reliable model that can provide reliable and non-spurious results, certain tests are conducted.

#### 5.13.1 Testing for the presence of outliers

A box-plot is used to identify outliers in the study. Data points that are outside the inner fence are known as *outliers*. Outright rejection of outliers is not always a wise procedure as sometimes the outlier could provide information that other data points cannot provide due to the fact that the outlier arises from unusual combinations of circumstances which may be of vital interest to the study (Gujarati, 2004:541). This study investigates the relationship between corporate governance and company performance in different economic circumstances, pre-financial crisis, during the crisis and post-financial crisis. Therefore, it is vital that outliers are not removed but that an estimator that is robust to the presence of outliers is employed. In addition, the study seeks to identify the compliance levels of South African listed companies during crisis and non-crisis periods. Consequently, due to the nature of the study, outliers are not removed but an estimation technique that is robust to the presence of outliers is used. The generalised least squares (GLS) estimator is known to be insensitive to the presence of outliers and heteroscedasticity (Gujarati, 2004:400).

**Table 5.2: Description of variables used in the study**

Table 5.2 reports description of variables in the study. Column 1 presents the abbreviation used in Equation 5.1. Column 2 reports the variables in full and Column 3 defines the variables. Column 4 provides the data source.

Abbreviation	Variables	Definitions of variables	Source
CG			
BS	Board size	The total number of directors sitting on the board	Annual report
BI	Board independence	Percentage of independent non-executive directors	Annual report
BC	Board committees	A dummy variable that takes a value of 1 if the company has nominations, remuneration and audit committees, otherwise 0.	Annual report
BA	Board activity	The number of times the board of directors meets in a financial year	Annual report
BD	Board diversity	Percentage of non-white females on a board	
LS	Leadership structure	A dummy variable that takes the value of 1 if the positions of CEO and chairman are held by two different persons, otherwise 0.	Annual report
<i>Control</i>			
Age	Company age	Present year minus incorporation year	INET BFA database
Size	Company size	Natural logarithm of the book value of total assets	INET BFA database
Lev	Leverage	Borrowing divided by total assets	INET BFA database
Growth	Growth prospects	Ratio of capital expenditure to total assets	INET BFA database
$Y_{it-1}$	Lagged dependent	One-year lag of company performance	INET BFA database
<i>Performance</i>			
ROA	Return on assets	Accounting based measure	INET BFA database
ROE	Return on equity	Accounting based measure	INET BFA database
Tobin's Q	Tobin's Q	Market based measure	INET BFA database
EVA	Economic value added	Market based measure	INET BFA database

Source: INET BFA (2016)

### 5.13.2 Panel data unit root test

The *unit root test* is a test of stationarity of the time series. Various unit root tests such as those of Levin, Lin and Chut (2002:1) and Im, Pesaran and Shin (2003:53) have been developed to test the unit root of panel data. The study uses the Levin, Lin and Chu test.

### 5.13.3 Heteroscedasticity

*Heteroscedasticity* refers to non-constant variances related to the error term in the model. This is a problem because it indicates that there is a significant variability in the model. This study uses the F test and the Chi-sq test. If the p-value  $< 0.05$  (5%), then there is heteroscedasticity. If the p-value  $> 0.05$ , there is no heteroscedasticity. However, the preferred estimator for this study, GLS, is known to be robust to heteroscedasticity (Gujarati, 2004:400).

### 5.13.4 Serial correlation

*Serial correlation* refers to a situation where an independent variable is correlated with its past values or with the lags of other dependent variables in the model. Serial correlation in this study is tested using the Durbin-Watson test (Farebrother, 1980:1553).

### 5.13.5 Endogeneity

*Endogeneity* refers to a correlation between the error term and one or more of the independent variables. There is a potential endogeneity between the dependent variable and some of the explanatory variables (e.g. leverage), which could lead to biased estimates. However, testing for endogeneity in panel models is a complicated matter; the Hausman test estimates augmented regression, by which one needs to identify the potentially endogenous variables as well as valid instruments for them. If the structure of the endogenous variables is incorrectly specified, the instruments provided for the test are invalid (or weak), which can severely bias the testing procedure itself and lead to invalid inferences. To circumvent the concerns on

endogeneity, this study uses the one-period lagged independent variable in order to avoid the drawbacks of endogeneity as recommended in the study of Orazalin *et al.* (2016:809).

### **5.13.6 Multicollinearity**

The issue of *multicollinearity* appears if two or more variables are highly correlated, which might affect the estimation of the regression parameters (Tu, Kellett, Clerehugh & Gilthorpe, 2005:458). Positive correlations can yield less precise estimates, induce parameters to switch signs and affect  $R^2$  (Mela & Kopalle, 2002:675). The use of too many dummy variables is a typical cause of what is termed “exact multicollinearity”, which is when one explanatory variable is an exact linear combination of one or more other explanatory variables, including the intercept (Verbeek, 2004:42). Similar to the studies of Muchemwa *et al.* (2016:503), Orazalin *et al.* (2016:807) and Pamburai *et al.* (2015:125), a Pearson correlation matrix (PCM) and variance inflation factor (VIF) are used in the study to identify the presence of multicollinearity.

### **5.13.7 Normality**

An analysis of the skewness and kurtosis is used to signal any possible violation of the normality assumption. The kurtosis should be within plus or minus 1.96, while the skewness should be within a range of plus or minus 3 (Haniffa & Hudaib, 2006:1048). Following Pamburai *et al.* (2015:126), the ranking of the independent variables is applied to rectify the normal distribution if there is evidence of violation of the normality assumption. Alternatively, another estimation technique other than the ordinary least squares (OLS) method may be used. This study, similar to Wahba (2015:37), uses GLS as an alternative estimator.

## **5.14 ESTIMATION METHODS**

As mentioned in Section 1.4 of Chapter 1, the lack of consensus on the impact of corporate governance may be attributed to an inadequate and sometimes irrelevant estimation method. The subsection below seeks to justify the selection of the estimation method for the study.

Because the variables under consideration are of an endogenous nature, the corporate governance variables may be influenced by the past performance of a company (Wintoki *et al.*, 2012:581). Consequently, ordinary least squares (OLS) could result in bias and erratic results (Maddala & Lahiri, 2009:250). It is well-documented in econometric literature that estimating Equation 5.1 via the OLS method yields biased and inconsistent coefficients because the OLS ignores the time-invariant unobserved individual effects ( $\mu_i$ ) and the endogeneity of  $Y_{it-1}$  (Flannery & Hankins, 2013:2; Maddala & Lahiri, 2009:355).

One way of reducing the endogeneity problem of omitted variable bias is to employ a two-stage least squares (2SLS) model using appropriate instrument or IV methods. However, as reflected in the study of Dam and Scholtens (2012:240), the instruments approach introduces the problem of identifying the correct instruments. Similarly, although the IVs approach is commonly used to mitigate the simultaneity concern, it is not designed to deal with dynamic endogeneity, which very likely arises in the board structure and company performance relationship (Wintoki *et al.*, 2012:582).

The other econometric technique, which has been lauded by the literature, and which can correct the shortcomings of the OLS, 2SLS and IV methods' inconsistencies, if T is fixed, is the system generalised moment of methods (System-GMM) (Arora & Sharma, 2016:426; Nguyen *et al.*, 2015b:154). However, one of the strict conditions of System-GMM is that T should be small and N should be large (Han & Phillips, 2010:139). As a result, the use of System-GMM in the current study violates that condition. This is because the current study employs a data set of T = 13 and N = 90, which is a large T and a small N.

An alternative estimator, which is known to be relatively robust to heterogeneity and endogeneity, is the generalised least squares (GLS) methodology. GLS is a technique for estimating the unknown parameters in a linear regression model. It is applied when the variances of the observations are unequal or when there is a certain degree of correlation between the observations.

Unequal variances may exist due to the presence of outliers and skewness. Therefore, it is desirable that a population with smaller variability is given more weight than



observations of populations with greater variability. While the OLS method does not use information relating to the unequal variability of the dependent variable, because it assigns equal weight or importance to each observation, GLS can produce more accurate estimators because it clearly takes such information into account (Rana & Al Amin, 2015:154).

As a consequence and at this preliminary stage, the OLS, 2SLS and GMM approaches appear to be undesirable, at least in the current study. In Chapter 6, and consistent with Schultz *et al.* (2010:145), the study tests which model is better aligned to the data set, by fitting a comprehensive model of corporate governance and performance using a range of econometric techniques such as 2SLS, GLS and GMM. It does so by comparing the statistical models using the coefficient of determination,  $R^2$  and an estimate of the error variance,  $S^2$  (Rad, 2014:114). Similar to the study of Rad (2014:114), the estimation method with the smallest  $S^2$  and the largest  $R^2$  is preferable.

## 5.15 CHAPTER SUMMARY

This chapter presented the methodology used to conduct the research. Owing to the dynamic nature of corporate governance studies, the empirical models in the study employ a dynamic modelling framework as shown in Equations 5.1 to 5.5 to take into account endogeneity issues. Consequently, the one-year lagged dependent variable is employed as one of the independent variables. Knowing that the OLS standard errors are biased means that there is information in the residual that the researcher is not using (i.e. the residuals are correlated) (Petersen, 2009:476). This suggests that researchers can improve the efficiency of their estimates (using a technique such as fixed effects, GLS or GMM) and may also use these techniques to test whether their model is correctly specified (Petersen, 2009:476). Therefore, the empirical models are estimated by the GLS estimator as the main estimator and cross-referenced by GMM and 2SLS. The next chapter presents the results and discussions of the descriptive statistics and the regression model.

## CHAPTER 6

# EMPIRICAL EVIDENCE OF CORPORATE GOVERNANCE STRUCTURES AND FINANCIAL PERFORMANCE IN SOUTH AFRICA

### 6.1 INTRODUCTION

In estimating Equation 5.1 for the South African market, this chapter provides empirical evidence to test the six hypotheses on the relationship between corporate governance structures and company performance of South African listed companies [denoted as **H1 – H6**]. The empirical findings provided by this chapter contribute to the understanding of the causal effects of the corporate governance attributes on company performance in the South African market.

In all the regression outputs of the study, only the Adjusted  $R^2$  and not  $R^2$  are reported. This is because the use of an Adjusted  $R^2$  is an attempt to take account of  $R^2$  spuriously increasing when additional independent variables are added to the model. Adjusted  $R^2$  is a modification of  $R^2$  that adjusts for the number of independent terms in a model relative to the number of data points.

The remainder of the chapter proceeds as follows: Section 6.2 begins by presenting preliminary data analyses, including descriptive statistics, correlation matrix and multicollinearity diagnostic. Additionally, the section confirms in Subsections 6.2.5 and 6.2.6 that the nature of data was taken into consideration in order to select the most appropriate estimation approach and performance indicators for the study. Section 6.3 presents the regression results of corporate governance and financial performance using Model 1 (equation 5.2) and Model 2 (equation 5.3). The impact of industry dynamics on the relationship between corporate governance and financial performance is discussed in Section 6.4. The regression results are then tested for sensitivity and robustness in Section 6.5. Section 6.6 concludes the chapter.

## 6.2 PRELIMINARY DATA ANALYSIS

As already presented in Table 5.1, the panel data set for the South African market includes 1 170 firm-year observations, which had relatively full information on key corporate governance variables, covering a 13-year period from 2002 to 2014. The study uses multiple regression analysis to investigate the relationship between corporate governance and company performance. Before conducting the regression analysis, various preliminary tests are conducted (Haniffa & Hudaib, 2006:1047; Pamburai *et al.*, 2015:124). The following section discusses the assumptions of the OLS to determine which estimation technique is appropriate for the study. These assumptions include normality, linearity, homoscedasticity, multicollinearity, auto-correlation and presence of outliers.

### 6.2.1. Selection of the appropriate estimation method for the study

Table 6.1 presents weighted statistics for the three estimation tools considered in the study. The results show that the F-value for the GLS estimator is statistically significant at the 1% significance level for all performance measures, which means that there is a significant linear relationship between the explanatory variables and the performance measures. However, the F-values for GMM and 2SLS are insignificant for all performance measures.

In addition, of all the estimators, the GLS estimator has the smallest residuals ( $S^2$ ) and the highest adjusted  $R^2$ , regardless of the performance measures. For instance, for Tobin's Q, the adjusted  $R^2$  is 46.23% for GLS and 3.78% and 3.98% for GMM and 2SLS respectively. Similarly, EVA displays an adjusted  $R^2$  of 23.92% for GLS to -6.95% and -7.36% for GMM and 2SLS respectively. Other performance measures such as ROE and ROA display the same pattern.

Considering the residuals, the GLS estimator presents a residual of 93.89 for Tobin's Q, while GMM and 2SLS report residuals of 155.08 and 154.79 respectively. In the same vein, GLS has a residual of 95.92 for ROA, to 103.56 and 103.55 for GMM and 2SLS respectively. The same trend emerges for the other two performance metrics, ROE and EVA.

Therefore, based on displaying the smallest residuals ( $S^2$ ) and highest adjusted  $R^2$  as well as the F-value as guided by the study of Rad (2014:114), GLS estimator emerged as the estimation method which best fits the model. This estimation technique allows for potential sources of endogeneity inherent in the corporate governance and company performance relationship, including dynamic endogeneity, simultaneity and unobserved time-invariant heterogeneity across companies.

### **6.2.2 Assumption of autocorrelation**

The *Durbin-Watson (DW)* statistic indicates independence between the residuals when DW statistic encompasses values between 1.5 and 2.5 (Diebold, 2016:206; Greene, 2002:270) where values near 2 indicate the lack of autocorrelation (Schwarz, 2015:1093). In this study, such a condition is met for all dependent variables, which indicates that the data are not autocorrelated. Appendix 1 indicates that DW is 1.84 for Tobin's Q and 2.19 for ROA (entire period), 1.71 and 1.84 for Tobin's Q and ROA respectively (pre-crisis period), 2.09 and 2.27 for Tobin's Q and ROA respectively (during crisis period) and 1.82 and 2.18 for Tobin's Q and ROA respectively (after the crisis period). The rest of the weighted statistics are fully shown in Appendix 1.

### **6.2.3 Panel data unit root test**

For this study, Levin, Lin and Chut test is applied and the test gives absence of unit roots by rejecting the null hypothesis. Appendix 2 reveals that using variables without taking the first difference in the estimation model may give spurious results. Therefore, the study uses the first difference to obviate unit root.

**Table 6.1: Selection of the appropriate estimation method**

Table 6.1 presents the weighted Adjusted R<sup>2</sup>, Residuals and F-statistics for the three estimation models. Panel A provides results for the GLS estimator, Panel B presents results for the GMM estimator and Panel C portrays results for the 2SLS.

GLS				
<i>Panel A - Entire period (2002-2014)</i>				
	<b>Tobin's Q</b>	<b>EVA</b>	<b>ROE</b>	<b>ROA</b>
Adjusted R <sup>2</sup>	0.4623	0.2392	0.0586	0.5645
Residuals (S <sup>2</sup> )	93.89	2.46E13	1283.38	95.92
Prob (F-statistics)	0.0000	0.0000	0.0000	0.0000
GMM				
<i>Panel B - Entire period (2002-2014)</i>				
	<b>Tobin's Q</b>	<b>EVA</b>	<b>ROE</b>	<b>ROA</b>
Adjusted R <sup>2</sup>	0.0378	-0.0695	-0.2902	0.4778
Residuals (S <sup>2</sup> )	155.08	4.45E13	1692.88	103.56
Prob (F-statistics)	0.9892	0.9799	0.4289	0.8645
2SLS				
<i>Panel C - Entire period (2002-2014)</i>				
	<b>Tobin's Q</b>	<b>EVA</b>	<b>ROE</b>	<b>ROA</b>
Adjusted R <sup>2</sup>	0.0398	-0.0736	-0.2947	0.4779
Residuals (S <sup>2</sup> )	154.79	4.48E13	1698.91	103.55
Prob (F-statistics)	0.9659	0.7011	0.2848	0.4270

#### 6.2.4 Selection of the requisite performance measures for the study

As mentioned in Section 1.1 of Chapter 1, extant literature is inconclusive about the relationship between corporate governance and company performance (Shank *et al.*, 2013:391). This lack of research consensus may be attributed, amongst others to low statistical power of econometric models (French & Popovici, 2011:128).

As revealed in Table 6.1, the explanatory powers for ROE and EVA are very low for all estimators and considerably better for the generalised least squares estimator. For the generalised method of moment, the Adjusted  $R^2$  is -6.9% and -29% for EVA and ROE respectively, while for the two-stage least squares, it is -7.3% and -29% for EVA and ROE respectively. With regard to the generalised least squares estimator, the variables are significantly better with the Adjusted  $R^2$  of 5.8% for ROE and 23.9% for EVA.

Consequently, based on the low explanatory powers of ROE and EVA as presented in Table 6.1, which indicate that the two performance measures lack the power to conclude predictive accuracy, they are dropped using the goodness-of-fit of the three estimators (Ayadi *et al.*, 2015:742). Alzharani, Che-Ahmad and Aljaaidi (2012:52) attribute the low coefficient of determination (Adjusted  $R^2$ ) to the limited number of the independent variables included in the model.

According to Rebeiz (2015:753), accounting returns such as ROE are susceptible to the level of financial leverage of the company. It is suspected that, unless the accounting returns are deleveraged, the output may be distorted by the company leverage. It is therefore not surprising that many corporate governance studies such as those of Alalade, Onadeko and Okezie (2014:292), Alzharani *et al.* (2012:52), Rodriguez-Fernandez *et al.* (2014:494) and Yasser and Al Mamun (2015:712) exhibit low statistical power for ROE. Other studies such as that of Pamburai *et al.* (2015:124) employ ROA as opposed to ROE as a performance measure. In the same vein, studies such as those of Afrifa and Tauringana (2015:724), Nguyen *et al.* (2015b:154) and Vintilă and Gherghina (2013:885) also employ Tobin's Q instead of EVA as market-based measures.

The use of EVA may be premature for corporate governance studies as the adoption and usage of EVA have been very slow with only about 400 companies worldwide having reported on EVA (Stewart, 2002:4). In South Africa, only a handful of companies use EVA. In fact, it is only applicable to industrial companies, wherein, financial, mining and investment companies do not provide the type of financial information required to compute EVA. It is therefore not surprising that the study of Pamburai *et al.* (2015:118) is the first South African study of developing and emerging economies to use EVA as a proxy for company performance, in addition to ROA and Tobin's Q. However, their findings are very inconsistent and contradictory between the three performance measures, ROA, Tobin's Q and EVA.

Therefore, similar to the studies of Bhagat and Black (2002:231), Mehran (1995:163), Schultz *et al.* (2010:154), Wintoki *et al.* (2012:591) and Yermack (1996:185), this study uses ROA and Tobin's Q as performance metrics. As explained in Section 7.10 of Chapter 7, an avenue for further research could be an investigation into why ROE and EVA always exhibit a lower statistical power compared with its counterparts, ROA and Tobin's Q respectively.

### **6.2.5 Assumption of normality**

The data with a normal distribution has a bell-shaped probability density (Hansen 2017:114) within standard skewness of  $\pm 1.96$  and standard kurtosis of  $\pm 3$  to be normal (Haniffa & Hudaib, 2006:1048). As presented in Table 6.2, an analysis of the skewness and kurtosis indicates that most of the variables used in this study do not meet the assumption of normality – only board committee (BC) independent variable meets the assumption of normality with a skewness of 0.625 and kurtosis of 1.39. Consequently, the non-normal distribution of the variables indicates that an ordinary least squares (OLS) regression is not appropriate for the study. An alternative is to use a generalised least squares (GLS) model, which will provide more robust estimates (Olsson, Foss, Troye & Howell, 2000:560; Wahba, 2015:37).

**Table 6.2: Descriptive statistics of the variables**

Table 6.2 presents descriptive statistics of all variables based on a sample of 1 170 firm-year observations for South African listed companies. The variables are as defined in Table 5.2.

<i>Variables</i>	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Std. dev.</i>	<i>Skewness</i>	<i>Kurtosis</i>	<i>Jarque-Bera</i>	<i>Observations</i>
<i>Dependent variables:</i>									
Tobin's Q	2.200	1.080	0.040	299.370	12.822	21.559	488.060	11521196	1166
EVA	-730309.4	20125.33	-77615734	28247528	6450999	-6.014246	53.85678	132685.8	1166
ROE	17.08574	17.53500	-639.53	384.0300	36.35168	-8.614988	155.4962	1144233	1166
ROA	11.13275	10.74000	-84.01	78.4200	13.65236	-0.580636	11.65601	3705.695	1166
<i>Independent variables:</i>									
Board Size	10.66	10.00	4.00	31.00	4.01	1.024	4.627490	332.4930	1166
Board Independence	0.44	0.45	0.00	1.83	0.21	-0.188	4.131519	69.1354	1166
Board Committees	0.649	1.00	0.00	1.00	0.47	-0.625	1.391146	201.7664	1166
Board Activity	5.039	5.00	0.00	18.00	1.67	1.582	8.714135	2073.025	1166
Board Diversity	0.157	0.13	0.80	0.00	0.15	1.075	4.206148	295.4539	1166
Leadership Structure	0.935	1.00	0.00	1.00	0.24	-3.551	13.61541	7926.302	1166
<i>Control variables:</i>									
Firm Size	15.236	15.18	5.94	21.366	2.30	0.197	3.236	10.30654	1166
Growth Prospects	0.092	0.051	0.00	6.495	0.325	13.105	207.340	2061969	1166
Leverage	-1.094	1.200	-943.1	762.11	47.594	-4.196764	210.755	2100401	1166
Firm Age	31.688	24.00	0.00	117.00	21.824	1.016	3.672	222.5907	1166



## 6.2.6 Endogeneity tests

The study is mindful of potential endogeneity problems which may significantly affect empirical findings. Generally, endogeneity problems arise in three different ways:

- correlation with the error term (Wooldridge, 2002:50);
- omitted variable bias; and
- simultaneity (Larcker & Rusticus, 2010:186).

As already mentioned in Section 5 of Chapter 5, one way of reducing the endogeneity problem of omitted variable bias is to adapt a system of two-stage least squares (2SLS) using an appropriate instrument; however, this approach introduces the problem of identifying the correct instruments (Dam & Scholtens, 2012:240).

Similar to the study of Afrifa and Tauringana (2015:724), this study tries to reduce the potential endogeneity problem of simultaneity, which is found to be the most common endogeneity problem in corporate governance research, by lagging independent variables and investigating the association between changes in the independent variables and the dependent variable. The finding of the test is presented in Table 6.14 and discussed in Section 6.5.1. The second issue of endogeneity, which is unobserved heterogeneity, is resolved by staggering the investigation of the relationship of corporate governance and company performance in three economic periods as well as taking into account industry nuances (Abzari *et al.*, 2012:395; Afrifa & Tauringana, 2015:729; Van Essen *et al.*, 2013:201). This is presented in Sections 6.3 and 6.4.

The third issue of endogeneity, which is referred to as dynamic endogeneity, is presented in Table 6.3. Dynamic endogeneity is present when the current value of a variable is influenced by its value in the preceding period of time (Schultz *et al.*, 2010:147). Most prior studies of the impact of corporate governance on company performance have estimated “static” models of the form: performance = f (corporate governance), where corporate governance reflects attributes such as board size, board independence, board committees, leadership structure, board diversity and board activity. In agreement with the studies of Ayadi *et al.* (2015:742) and Schultz *et al.* (2010:145), this study also posits that the appropriate empirical model should be a

“dynamic” model of the form: performance = f(past performance, corporate governance).

Table 6.3 provides justification for the choice of a “dynamic” model over a “static model” for this study using only the GLS estimator. Other estimators such as 2SLS and GMM are presented in Appendix 3 and reflect the same findings.

**Table 6.3: Effect of past performance on the GLS estimator**

Table 6.3 presents the effect of past performance on the estimation model using the GLS estimator. Each dependent variable shows the effect of excluding past performance (Static) as well as the effect of including past performance (Dynamic) on the explanatory power of the model. The abbreviations and definitions of the independent and control variables presented in this table are contained in Table 5.2.

The effects of the GMM and 2SLS estimators are not reported here but also show the same impact. They are however presented in Appendix 3

Notes: \*\*\*Significant at the 0.01 level; \*\*significant at the 0.05 level; \*significant at the 0.10 level; coefficients are in parentheses. N/S denotes no statistical significance.

Column 1	Tobin's Q		EVA		ROA		ROE	
	Column 2 Static	Column 3 Dynamic	Column 4 Static	Column 5 Dynamic	Column 6 Static	Column 7 Dynamic	Column 8 Static	Column 9 Dynamic
Performance lag (-1)	N/A	(0.6725)***	N/S	(0.4987)***	N/S	(0.738095)***	N/S	(0.229917)***
Board Size	(0.0925)***	(0.0573)***	N/S	N/S	(0.247524)*	(0.207475)*	(0.735077)*	(0.656056)*
Board Independence	N/S		N/S	N/S	(-5.063747)**	(-2.728265)*	N/S	N/S
Board Committees	(0.4560)***	(0.2513)**	N/S	N/S	N/S	N/S	N/S	N/S
Board Activity	(-0.1657)***	(-0.0792)**	(-65960.02)*	(-44148.40)*	(-0.594813)**	(-0.332465)*	(-1.181701)*	(-0.910682)*
Board Diversity	N/S	N/S	N/S	N/S	N/S	N/S	(23.91817)***	(20.67649)***
Leadership Structure	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Firm Size	(-0.2340)***	(-0.1386)***	N/S	N/S	(-0.461676)*	(-0.462384)**	N/S	N/S
Growth Prospects	(-0.3579)**	(-0.1964)**	N/S	N/S	N/S	N/S	N/S	N/S
Leverage	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Firm Age	N/S	N/S	N/S	N/S	(0.038881)**	N/S	N/S	N/S
Adjusted R-squared	0.0439	0.4623	0.0045	0.2392	0.0237	0.5645	0.0235	0.0586
Residual	161.89	93.89	4.12x10 <sup>13</sup>	2.46x10 <sup>13</sup>	181.196	95.92	1309.139	1283.38

Table 6.3 shows that when GLS is applied to the “dynamic” model, the results reveal the first clear indication of the importance of past performance in the corporate governance and performance relationship. For Tobin’s Q (see Columns 2 and 3 of Table 6.3), the Adjusted R<sup>2</sup> rises from a meagre 4.4% in the “static” model to 46.2% in the “dynamic” model, while the Residual reduces from 161.89 to 93.89 during the transition. The magnitudes of the estimated coefficients on all variables fall drastically and the significance levels are generally unchanged.

In respect of EVA (see Columns 4 and 5 of Table 6.3), Adjusted  $R^2$  increases from 0.45% in the “static” model to 23.9% in the “dynamic” model, while residual reduces from  $4.12 \times 10^{13}$  to  $2.46 \times 10^{13}$ . The magnitudes of the estimated coefficients on the significant variable also fall drastically and the significance level stays the same.

Similarly, with ROA (see Columns 6 and 7 of Table 6.3), the Adjusted  $R^2$  increases from a scanty 2.37% in the “static” model to 56% in the “dynamic” model, while the Residual reduces from 181.196 to 95.92 during the transition. However, the signs of the coefficients do not change, while the significance levels experience modest adjustments. Following the same pattern, the adjusted  $R^2$  of ROE (see Columns 7 and 8 of Table 6.3) increases from 2.3% when the model is “static” to 5.8% when the model is “dynamic”, while residual decreases from 1 309.139 to 1 283.38 from “static” to “dynamic”. The magnitudes of the estimated coefficients decrease modestly, while the significance levels stay the same.

Similarly, Table 6.3 shows that the explanatory power of the “dynamic” models is improved when compared with the “static” ones (as evidenced by the considerably higher values of Adjusted  $R^2$  and low values of Residuals) regardless of the estimation techniques used. This indicates that an appropriate regression specification should include a lagged dependent variable in the right-hand side of Equation 5.1 to control for potential dynamic panel biases (Flannery & Hankins, 2013:2). This also supports the view of Schultz *et al.* (2010:148) and Wintoki *et al.* (2012:583), that the relationship between corporate governance structures and company performance should be investigated in a dynamic framework. In agreement with previous studies, this study follows Nguyen *et al.* (2015b:152), who employed a one-year lagged performance measure as an explanatory variable to control for the dynamic nature of the corporate governance and performance relationship as suggested by Wintoki *et al.* (2012:603).

### **6.2.7 Assumption of outliers**

A box-plot was conducted to identify the presence of outliers in the data. As presented in Appendix 4, there are a few outliers, though not significant. The presence of outliers may give rise to heteroscedasticity (Gujarati, 2004:390). Unequal variances may exist

due to the presence of outliers and skewness. A GLS regression with a robust standard error was carried out to test the research hypotheses.

GLS is applied when the variances of the observations are unequal or in the presence of heteroscedasticity (Gujarati, 2004:400). While the OLS method assigns equal weight or importance to each observation and does not use information relating to the unequal variability of the dependent variable, GLS can produce more accurate estimators in the presence of outliers or heteroscedasticity, because it clearly takes such information into account (Aslam & Pasha, 2007:110; Gujarati, 2004:400).

### **6.2.8 Assumption of multicollinearity**

According to Verbeek (2004:42), independent variables are multicollinear if there exists a linear relationship among some or all independent variables of a regression model. Multicollinearity problems may lead to unreliable estimates with high standard errors and unexpected signs or magnitude (Verbeek, 2004:43). The problem of multicollinearity occurs when the correlation between two independent variables exceeds 0.8 (Gujarati & Porter 2009:861). Essentially, multicollinearity saps the statistical power of the analysis in a way that coefficients may switch signs thus making it difficult to specify the correct model.

To detect this problem, the Pearson correlation matrix is used to test the multicollinearity problem (Sheikh & Wang, 2012:636). Table 6.4 presents the correlation matrix for the study for the independent and the dependent variables. Similar to the studies of Mohammed, Che-Ahmad and Aljaaidi (2012:52) and Pamburai *et al.* (2015:124), the fact that the correlation coefficients are below the 0.8 threshold indicates that multicollinearity is not a problem in this study.

Further, similar to the studies of Muchemwa *et al.* (2016:503), Pamburai *et al.* (2015:125) and Rodriguez-Fernandez *et al.* (2014:495), in addition to the correlation matrix, this study also assesses the variance inflation factors (VIF) to check the level of multicollinearity for each dependent variable against all six independent variables. Chatterjee and Hadi (2012:236) posit that a value of VIF larger than 10 should be considered an indication of the presence of multicollinearity. The results presented in

Column 16 of Table 6.4 indicate that multicollinearity is not a problem because all VIF values are well below the cut-off point of 10 as stated by Chatterjee and Hadi (2012:236).

Notably, the highest correlation is between the size of the board and leadership structure at 0.706. This means that larger boards tend to ensure that there is separation of powers between the CEO and the chairman. The next high correlation is between board independence and company size at 0.404. This indicates that large companies have the propensity to ensure independence in South African boardrooms. Another interesting correlation is between ROA and ROE at 0.422. Other correlations range between -0.004 and 0.370.

### **6.2.9 Descriptive statistics**

Table 6.2 presents the descriptive statistics of dependent and independent variables used in Equation 5.1. Descriptive statistics have been widely used in corporate governance research (Lone, Ali & Khan, 2016:789; Orazalin *et al.*, 2016:805; Teti, Dell'Acqua, Etro & Resmini, 2016:837).

In this study, descriptive statistics provide a comparison of changes in the data from 2002 to 2014. They show the extent to which companies have adopted the recommendations of the 2002 King II Code of best practice on corporate governance and the trends of the company performance variables. It is expected that companies will have a steady positive trend from 2002 as the uptake for compliance to King II increases and as a result of listing rules requiring companies to report on corporate governance practices recommended by the King III Code of best practice on corporate governance.

The section below provides descriptive statistics of the corporate governance variables and the dependent variables. Appendices 6,7,8,9 and 10 presents descriptive statistics for financials, consumer services, consumer goods, industrials and basic materials industries, respectively for the entire period, pre-crisis period, during crisis and post-crisis period. Table 6.2 provides descriptive statistics for all companies for the entire period.

**i) Board size**

The average size of a board reported in 2002 and 2014 was 9.76 and 11.07 respectively. The overall mean of the size of the board is 10.65, which is in line with the findings of Meyer and De Wet (2013:26) and Tshipa and Mokoaleli-Mokoteli (2015b:157), who reported a board size of 10.09 and 10.28 respectively.

As expected, the financials industry has the highest number of board members (11.72) with the consumer services industry the lowest (9.92). This is because the financials industry, especially the banking sector, has more board committees than any other industry, hence the size of the board, whose members need to be allocated into various sub-committees.

Notably, all South African industries enhanced their respective boardrooms by increasing the number of board members after the global financial crisis. However, the increase in the board size does not commensurate with the increase in independent non-executive directors for the consumer services and consumer goods industries.

**Table 6.4: Pearson correlation matrix for variables used in the study**

Table 6.4 presents pair-wise correlation coefficients, which are based on a sample of 1 170 firm-year observations for South African listed companies. The variance inflation factors (VIFs) and tolerance values are also based on the common sample of 1 170 firm-year observations. The abbreviations and definitions of the independent and control variables presented in this table are contained in Table 5.2. Asterisks indicate significance at 0.01 (\*), 0.05 (\*\*) and 0.1 (\*\*\*) respectively

Variable	Tobin's Q	EVA	ROE	ROA	BS	BI	BC	BA	BD	LS	FS	GP	LV	AGE	VIF	Tolerance level (1/VIF)
Tobin's Q	1.000															
EVA	(0.019)	1.000														
ROE	(0.029)	(0.021) ***	1.000													
ROA	(0.009)	(0.146)***	(0.422)***	1.000												
BS	(-0.032)	(-0.138)***	(0.053)*	(-0.045)	1.000										8.237	0.121
BI	(0.008)	(-0.144)***	(0.034)	(-0.117)***	(0.282)***	1.000									9.797	0.102
BC	(0.053)*	(-0.048)*	(0.054)*	(0.031)	(0.370)***	(0.348)***	1.000								8.216	0.122
BA	(-0.048)	(0.046)	(-0.023)	(-0.093)***	(0.310)***	(0.242)***	(0.204)***	1.000							2.324	0.431
BD	(-0.008)	(-0.059)**	(0.078)***	(-0.005)	(0.211)***	(0.140)***	(0.197)***	(0.112)***	1.000						9.752	0.103
LS	(0.016)	(0.028)	(-0.014)	(-0.027)	(0.169)***	(0.124)***	(0.129)***	(0.118)***	(0.136)***	1.000					1.848	0.541
FS	(-0.172)***	(-0.222)***	(0.053)*	(-0.077)***	(0.706)***	(0.404)***	(0.328)***	(0.329)***	(0.205)***	(0.125)***	1.000				6.513	0.154
GP	(-0.013)	(0.036)	(0.014)	(0.007)	(0.061)***	(0.087)***	(0.062)***	(0.110)***	(0.055)*	(0.034)	(-0.117)***	1.000			9.260	0.101
LV	(0.028)	(-0.066)**	(0.005)	(0.019)	(-0.004)	(-0.017)	(-0.029)	(0.004)	(0.018)	(-0.010)	(-0.040)	(-0.004)	1.000		1.796	0.557
AGE	(0.005)	(0.025)	(0.006)	(0.044)	(0.023)	(0.135)***	(0.105)***	(0.064)***	(-0.011)	(0.023)	(0.046)	(0.097)***	(-0.006)	1.000	1.591	0.629

BS - Board Size

BI - Board Independence

BC - Board Committees

BA - Board Activity

BD - Board Diversity

LS - Leadership Structure

FS – Firm Size

GP – Growth prospects

LV – Leverage

AGE – Firm Age

## ii) Board independence

Board composition, which is the proportion of independent non-executive directors on the board, shows that in 2002, the number of independent non-executive directors was a maximum mean of 27% and in 2014, the maximum mean was 53%, which almost doubled, an indication that South African companies see the need to increase the representation of non-executive directors. The steady increase from 2010 could be attributed to the implementation of King III, which requires boards to be comprised of a majority of non-executive directors, of whom the majority should be independent. This suggests that King III has assisted in making South African corporate boards more independent.

Notwithstanding, the mean of 44% for the pooled sample is still below the threshold of the King III, which requires the majority of the board members to be independent. However, the finding is in line with the evidence of prior South African studies. In separate studies, Meyer and De Wet (2013:26) and Pamburai *et al.* (2015:125), found an average percentage of independent non-executive directors of 47% whereas Tshipa and Mokoaleli-Mokoteli (2015b:157) reported a mean of 39% for the pooled sample.

Prior to the global financial crisis, the representation of independent non-executive directors was 42% and increased to 46% after the crisis. As expected, the financials industry reported larger boards and a bigger proportion of board independence.

All industries but consumer services and consumer goods increased their composition of independent directors after the global financial crisis. This is a thought-provoking observation, because it appears from the financial proxy such as EVA that these were the only two industries that realised a positive EVA after the global financial crisis, an indication that the two industries were almost insulated (at least with regard to EVA) from the financial crisis and saw no need to improve its board independence. Notably, no industry had a majority of independent non-executive directors on the board, which was a deviation from the King III that the board composition should have a majority of independent directors.



### iii) Board committees

Overall, 65% of companies had commissioned all committees. In 2002, a meagre 31% of companies had risk/audit, remuneration and nominations committees. This figure increased to 86% in 2014, which showed that the number of companies complying with the King III Code of best practice on corporate governance had more than doubled.

The main contributor to the high compliance levels is the industrials industry with 71% of companies within the industry having established all three board committees. The main culprit is the financials industry, in which there are 43% compliant companies. Compliance levels in the rest of the industries are about 60%.

As with the study of Mans-Kemp and Viviers (2015b:30), the majority of the considered companies had audit, remuneration and nomination committees. All industries except for basic materials and consumer goods increased the presence of all three committees after the global financial crisis. The financials industry contributed the most to the post-global financial crisis mean of 68.89%. Notably, in the industrials industry, 75% of the companies had all three committees after the global financial crisis.

### iv) Board activity

On average, the frequency of board meetings is 5.04, with some companies having not met at least once during the study period and others having met 18 times. The mean of board meetings held five times a year is aligned to King III, which recommends a minimum of four annual meetings per year. It is also aligned to previous studies of Ntim and Osei (2013:93), Pamburai *et al.* (2015:125) and Tshipa and Mokoaleli-Mokoteli (2015b:158), who reported 5.33, 4.70 and 5.06 respectively.

In the agency framework, board activity, as measured by frequency of board meetings, may indicate active monitoring by the board (Conger, Finegold & Lawler, 1998:137). To this end, it would be expected that during and after the global financial crisis, a more active and effective monitoring of the board was required, which would mean an increase in the number of board meetings.

Overall, the number of board activity increased from meeting 4.96 times before the crisis to meeting 5.18 times after the crisis. All industries except the consumer services increased their board activities during the transition. The boards of the industrials industry met the most times (5.54), followed by basic materials (5.44).

#### **v) Board diversity**

The mean percentage of non-white female directors is 16%, which is low but still better than in other countries such as China (8.50%), Hong Kong (9%), Indonesia (4.50%), Japan (0.90%), Malaysia (7.80%), Singapore (6.90%), South Korea (1.90%) and Thailand (8.70%), as reported by Catalyst (2012a:1). Only Norway (40.5%), Sweden (27%), Finland (26.8%), France (18.3%), UK (20.7%) and Denmark (17.2%) are above South Africa in terms of board seats held by women (Catalyst, 2012a:1).

It is noteworthy that the number of non-white women on South African boards increased significantly up to 2011. This is in line with the study of Taljaard *et al.*, (2015:439), who reported similar results in a study of 40 companies listed on the JSE from 2000 to 2013. However, there was a significant decrease from 23% in 2011 to 12% in 2012. This low representation of women on South African boards calls for a business case to advocate the implementation of quota legislation in South Africa (Tshipa & Mokoaleli-Mokoteli, 2015a:74).

As previously noted, all industries increased the size of the board after the financial crisis. The increase in board size commensurated with an increase in the representation of women in South African boardrooms. The industrials industry contributed the most in the overall representation of 22.2% of women after the global financial crisis with the financials industry only marginally increasing the cohort of women by a meagre 0.97% from 19.66% to 19.85%.

## **vi) Leadership structure**

Analysis of the leadership structure for the study period indicates that 93% of the companies separated the leadership roles; this was 80% in 2002 and increased to 96% in 2014. The upward trend is in agreement with the views of Chen, Lin and Yi (2008:61), who note the recent trend of converting from a dual to a non-dual CEO structure by an increasing number of companies. Only 6% of the sampled companies did not separate the position of chairman and CEO and consequently did not comply with the King III Code of best practice. This is in line with the study of Tshipa and Mokoaleli-Mokoteli (2015b:158), who reported that 9% of South African companies did not separate the roles of the CEO and chairman.

Interestingly, the leadership structure prior to the global financial crisis was 93% and increased to 95% after the crisis. In some cases, it could be that the arrangement was on a temporary acting appointment while the recruitment of a CEO was underway. It is common practice to appoint the chairman to act as a CEO while the recruitment process of appointing a permanent CEO is underway. During both periods, the basic materials industry reported 100%, while consumer goods maintained 89% before and after the crisis. All other industries increased their leadership proportions. Further analysis of the data reveals that consumer goods had the second highest number of independent non-executive director in its fold, which could mean that even though there was no 100% separation of the CEO and chairman, there was still independent decision-making brought about by independent directors.

## **vii) Tobin's Q**

As stated in the previous chapter, Tobin's Q measures market performance. A Tobin's Q value of greater than 1 represents a positive investment opportunity. The mean value for Tobin's Q for 2002 was 1.91 and decreased to 1.26 in 2014. The results of Tobin's Q show that market value of South African companies decreased over the years. The value plummeted to 1.23 in 2009 after the global financial crisis, an indication that the market performance of South African companies was severely hit by the global financial crisis. Notwithstanding, the lowest value in 2008 was still above 1, which indicates good investment prospects.

The overall Tobin's Q decreased from 2.84 before the global financial crisis to 1.23 after the global financial crisis. As expected, the basic materials industry was the hardest hit with a drop of 449%, from 8.07 to 1.47. Overall, the mean of Tobin's Q is consistent with those reported by prior South African studies. Pamburai *et al.* (2015:125) reported an average Tobin's Q of 1.56, for a sample of 158 companies listed on the JSE for the year 2012. Meyer and De Wet (2013:26) also reported an average Tobin's Q value of 1.456 for a sample of 126 companies listed on the JSE for the years 2010 to 2012

### **viii) EVA**

Economic value added (EVA) has a mean value of -730309, indicating that, on average, company performance/value increased by -730309 units, minimum value added of -77615734 units and a maximum value added of 28247528 units. It is noted that the mean of EVA was negative for the most period, indicating that, on average, South African companies destroyed wealth on an annual basis in terms of EVA. A positive mean EVA was only reported in 2008 for this study, while in the study of Pamburai *et al.* (2015:125), South African companies realised a positive mean EVA in 2012. Interestingly, EVA and ROE were at an all-time high in 2008.

The pattern of EVA before and after the global financial crisis brings an interesting dimension across industries. Before the global financial crisis, the basic materials, consumer services and industrials industries all realised a positive EVA, with financials and consumer goods hovering below the negative axis. However, after the global financial crisis, basic materials and financials were the only two industries to have regressed to a negative EVA value.

### **ix) ROA**

The mean value for ROA was 10.30% in 2002 and decreased to its all-time lowest point of 8.06 in 2014. The financials industry contributed the least to the overall ROA with a meagre 2.72, while consumer services contributed the largest with an ROA of 17.8. In particular, the lowest ROA point was attained in 2014 and the highest ROA was prior to the global financial crisis at 14.35. In fact, all industries were affected after

the global financial crisis with only consumer goods attaining a meagre increase of 5% from 17.35 to 18.31.

Overall, the averages of the ROA are consistent with those reported by prior South African studies. Tshipa and Mokoaleli-Mokoteli (2015b:157) reported an average ROA of 8%, for a panel study sample of 137 JSE-listed companies from 2002 to 2011. Pamburai *et al.* (2015:125) also reported an average ROA value of 6% for a sample of 158 companies listed on JSE for the year 2012. Similarly, using a panel data of 247 company years for the 50 largest JSE-listed companies, Waweru (2014:469) reported an ROA average of 9%. A positive mean value in both periods indicated that listed companies created values for their shareholders.

All industries except for consumer goods saw a dip in ROA value after the global financial crisis. The basic materials industry was significantly affected with a reduction of 284% in ROA value.

#### **x) ROE**

The mean value for ROE was the lowest (9.45) in 2013 and the highest (26.36) in 2014. Consumer services contributed the most with its ROE of 28.33 over the period, while the basic materials industry was below the average with 9.27. The ROE for all industries went down drastically with basic materials the mostly hit with a more than 200% decrease in value. The positive mean values indicate that South African listed companies do create value for their shareholders.

Prior to the global financial crisis, all industries had a positive ROE. However, the basic materials and financials industries were severely impacted after the global financial crisis. Consumer goods was the only industry to have seen a marginal increase in the ROE value from 18.85 to 18.98.

### 6.3 REGRESSION RESULTS OF CORPORATE GOVERNANCE AND FINANCIAL PERFORMANCE

As justified in Section 6.2.4, due to the low explanatory power, ROE and EVA are removed from the analysis. As already mentioned, the relationship between corporate governance and company performance is tested by using the lagged value of performance measures ( $t-1$ ) to minimise the simultaneity problem. Therefore, company performance is measured through two measures, namely market-based performance by way of Tobin's Q and accounting-based performance by way of ROA.

According to Lacker and Rusticus (2010:186) and Wooldridge (2002:50), unobserved heterogeneity is a situation when a relation between two or more variables is affected by an unobservable factor. The exogenous shock of the global financial crisis could be one such unobserved heterogeneity. Hence this study considers three economic periods. Table 6.5 reports the regression results of corporate governance on Tobin's Q and ROA. Therefore, four regressions between corporate governance and TQ (ROA) are used; one for the entire period (2002-2014), one for the pre-crisis period (2005 to 2007), one for the crisis period (2008 to 2010) and the other for the post-crisis period (2011 to 2013). To facilitate comparison and comprehension, Tables 6.6 and 6.7 present a summary of all eight hypotheses and results for the econometric model for both accounting-based and market-based performance measures, respectively.

**Table 6.5: Regression results of the impact of corporate governance attributes on Tobin's Q and ROA**

Table 6.5 shows regression results of the impact of corporate governance attributes on Tobin's Q and ROA for South African listed companies for the 2002-2014 period, pre-crisis period, crisis period and post-crisis period. Column 1 shows the corporate governance variables. Column 2 shows the impact of corporate governance on Tobin's Q, while Column 3 presents the impact of corporate governance on ROA. The abbreviations and definitions of the independent and control variables presented in this table are contained in Table 5.2.

Panel A is for the entire period (2002-2014), Panel B is for the pre-crisis period (2005-2007), Panel C is for the crisis period (2008-2010) and Panel D is for the post-crisis period (2011-2013).

Notes: \*\*\*Significant at the 0.01 level; \*\*significant at the 0.05 level; \*significant at the 0.10 level; coefficients are in parentheses. The table excludes control variables, which are reported in Appendix 1. N/S denotes no statistical significance

*White heteroskedasticity-consistent standard errors and covariance*

<b>Panel A - Entire period (2002 – 2014)</b>		
<i>Column 1</i>	<i>Column 2</i>	<i>Column 3</i>
<i>CG variables</i>	<b>Tobin's Q</b>	<b>ROA</b>
Perf (-1)	(0.6750)***	(0.7409)***
Board Size	(0.0593)***	(0.2119)***
Board Independence	N/S	(-2.7197)**
Board Committees	(0.2536)***	N/S
Board Activity	(-0.0808)***	(-0.2856)*
Board Diversity	N/S	N/S
Leadership Structure	N/S	N/S
<b>Panel B - Pre-crisis (2005 -2007)</b>		
CG variables		
Perf (-1)	(0.5815)***	(0.5746)***
Board Size	(0.0802)***	N/S
Board Independence	(0.8351)**	(-3.5526)**
Board Committees	(0.5538)***	N/S
Board Activity	N/S	N/S
Board Diversity	N/S	N/S
Leadership Structure	N/S	N/S
<b>Panel C - During the crisis period (2008 – 2010)</b>		
CG variables		
Perf (-1)	(0.7677)***	(0.7925)***
Board Size	N/S	N/S
Board Independence	N/S	(-3.8980)*
Board Committees	N/S	(1.5827)**
Board Activity	N/S	(-0.4276)*
Board Diversity	N/S	N/S
Leadership Structure	(0.2754)**	N/S
<b>Panel D - After the crisis period (2011 – 2013)</b>		
CG variables		
Perf (-1)	(1.0510)***	(0.8800)***
Board Size	(0.0126)**	(0.3464)***
Board Independence	N/S	N/S
Board Committees	(-0.0662)*	(-1.3793)*
Board Activity	N/S	(-0.3756)*
Board Diversity	(-0.2392)**	N/S
Leadership Structure	N/S	N/S

### 6.3.1 Tobin's Q and corporate governance: Model 1

Column 2 of Table 6.5 contains GLS regression results for Model 1 based on the market-based measure of company performance (Tobin's Q). The variables investigated in this model are only the corporate governance attributes that are significant to the performance metric. For ease of comparison, Table 6.6 presents a summary of all six hypotheses and results for the GLS model based on all company years, before, during and after the crisis for Tobin's Q. Appendix 1 indicates that the F-value is statistically significant at the 1% significance level, which means that there is a significant linear relationship between the explanatory variables and Tobin's Q (F-value is 99.227 at p-value of 0.000). The Adjusted R<sup>2</sup> is approximately 46%. This means that at least 46% of the variations in the sampled companies' market-based returns (Tobin's Q) can be explained jointly by the six corporate governance variables.



**Table 6.6: Summary of all hypotheses as measured by Tobin's Q based on the entire period, pre-crisis, during crisis and post-crisis periods for all companies**

Table 6.6 presents a summary of all hypotheses and Tobin's Q. Column 1 shows the independent variables for the study. Column 2 is the hypothesis number and Column 3 reports the hypothesised sign. Columns 4, 5, 6 and 7 report the findings based on the entire period, pre-crisis, during crisis and post-crisis. The conclusion of the hypothesis is provided in Column 8, while Column 9 links the conclusion to the relevant corporate governance theory.

Independent variable	Hypothesis number	Hypothesised sign	Tobin's Q				Conclusion	Relevant corporate governance theory
			Entire period (2002-2014)	Pre-crisis (2005-2007)	During crisis (2008-2010)	Post-crisis (2011-2013)		
Board size	1	+	Accept	Accept	Reject	Accept	Board diversity had an influence on Tobin's Q during the entire period, pre-crisis period and post-crisis period.	The positive relationship supports the agency and resource dependence theory.
Board independence	2	+	Reject	Accept	Reject	Reject	The proportion of independent non-executive directors had an influence on Tobin's Q only during the pre-crisis period.	The positive relationship supports the agency and resource dependence theory.
Board committees	3	+	Accept	Accept	Reject	Reject	The presence of audit, remuneration and nomination committees had an influence on Tobin's Q only during the entire period and pre-crisis period.	The positive relationship supports the agency and resource dependence theory.
Board activity	4	+	Reject	Reject	Reject	Reject	The frequency of board meetings had no influence on Tobin's Q.	The inverse and no-impact relationship rejects the agency and resource dependence theory.
Board diversity	5	+	Reject	Reject	Reject	Reject	The proportion of non-white females had no influence on Tobin's Q.	The inverse and no-impact relationship rejects the agency and resource dependence theory.
Leadership structure	6	+	Reject	Reject	Accept	Reject	Separating the roles of chairman and CEO had an influence on Tobin's Q only during the crisis period.	The positive relationship supports the agency and resource dependence theory.

	Positively significant
	Negatively significant
	Insignificant

The statistical  $t$  and its significance for each coefficient indicate that by rejecting the null hypothesis, the regression coefficient value is zero in the data population. In this analysis, only the null hypothesis for the variables board size ( $= 0.0593$ ,  $t = 4.7020$ ,  $p < 0.01$ ), board committee ( $= 0.2536$ ,  $t = 2.7496$ ,  $p < 0.01$ ) and board activity ( $= -0.0808$ ,  $t = -2.8537$ ,  $p < 0.01$ ) is rejected and, therefore, these are the only variables that significantly contribute to explain Tobin's Q.

To test for the sensitivity of the regression output to omitted variables, two control variables, leverage and company age, are removed from Equation 5.2 and the regression rerun. The objective of this test is to determine if the regression output is the same when leverage and company age are dissociated from the regression. The output indicates that the F-value is statistically significant at the 1% significance level, which means that there is a significant linear relationship between the explanatory variables and Tobin's Q (F-value is 121.332 at p-value of 0.000). However, when Equation 5.2 has two control variables as opposed to four, the Adjusted R<sup>2</sup> increases very marginally by 0.02% to 48.2%.

Therefore, the results are not sensitive to the addition or removal of control variables. The direction or signs of the coefficients as well as the significance levels do not change when two control variables are added or removed. Consequently, the discussion below is based on the estimated coefficients that include all four control variables. However, only significant corporate governance variables are discussed.

In agreement with accounting returns, board size is found to be positively associated with the market-based performance measure and statistically significant for the entire sample period. This lends support to Hypothesis 1 (see Column 4, Row 3 of Table 6.6), namely that there is a statistically significant and positive relationship between Tobin's Q and board size. It also supports the evidence of prior studies, which record a statistically significant and positive relationship between board size and Tobin's Q (Arora & Sharma, 2016:428; Shukeri *et al.*, 2012:123; Zakaria *et al.*, 2014:10). However, it contradicts the results of past studies that report a statistically significant and negative link between board size and Tobin's Q (Garanina & Kaikova, 2016:347; Samuel, 2013:88) as well as those who document no association (Wintoki *et al.*, 2012:592).

Theoretically, this indicates that the market perceives larger boards to be more effective than smaller boards. This is because if the board is bloated, the chances of board interlocks are higher, thus creating a virtual link to other entities or external resources (Shropshire, 2010:346), which may generate positive returns for the company (Mace, 1971:111). Interestingly, board size is statistically positively related to Tobin's Q, both during pre- and post-crisis periods. However, similar to accounting returns, there is no association between board size and market returns during the crisis period. This implies that board size influences market performance only during steady-state times.

The statistically significant and negative relationship between board independence and Tobin's Q means that Hypothesis 2 (see Column 4, Row 4 of Table 6.6) is not supported. The finding is consistent for the entire period, pre-crisis and during crisis periods. This finding is also contrary to the expectations of various corporate governance codes, including King III, which promotes the inclusion of more independent non-executive directors on corporate boards. Empirically, it also does not support the results of recent South African studies such as the studies of Muchwemwa *et al.* (2016:504) and Pamburai *et al.* (2015:128), who also contrary to the expectations of King III, report that board independence has no impact on Tobin's Q. However, the findings is in agreement with the stewardship theory, which states that independent non-executive directors often command less knowledge about the business, and find it difficult to understand the complexities of the company (Weir & Laing, 2000:267).

The presence of board committees is found to be positively related and significant to market valuation over the entire sample period. This relationship supports Hypothesis 3 (see Column 4, Row 5 of Table 6.6) as well as the recommendations of King III that companies should establish nominations, audit/risk and remunerations committees. This is because critical processes and decision-making are not done at board level but at committee levels such as nominations committee, audit and risk committee and remuneration committee (Dalton *et al.*, 1999:682). The finding implies that the market values the establishment of the three board committees as a monitoring mechanism on behalf of the board. Empirically, this finding corroborates the prior study of Fauzi and Locke (2012:61), who report a statistically significant nexus between the board committees and Tobin's Q.

The significance level of board committees and Tobin's Q is consistent during the non-crisis periods, although the coefficient signs are opposite. In the period leading to the crisis, board committees exhibited positive market returns for South African companies, while after the global financial crisis, there was an inverse relationship. This could be attributed to the fact that most companies were going through the recovery phase during this time. On the contrary and similar to the accounting returns, the presence of nomination, remuneration and audit/risk committees did not have an influence on market returns during the crisis period.

Given that constant monitoring could reduce the agency problem, it is interesting to note that board activity appears to be significantly negatively correlated with Tobin's Q. The statistically significant and negative coefficient on board activity is consistent with the results reported by Pamburai *et al.* (2015:127) for South African listed companies. Therefore, Hypothesis 4 (see Column 4, Row 6 of Table 6.6) is rejected. The finding contradicts the recommendations of King III and the results of Agyemang *et al.* (2014:55), Brick and Chidambaran (2010:536) and Ntim and Osei (2013:89), who report a statistically significant and positive association between board activity and company performance. However, this finding is in line with the results of El Mehdi (2007:1429) and Tshipa and Mokoaleli-Mokoteli (2015b:163), who report that the frequency of board meetings has no association with performance. The no-impact relationship is also observed during all three economic periods.

The statistically insignificant relationship between board diversity and Tobin's Q means that Hypothesis 5 (see Column 4, Row 7 of Table 6.6) is rejected. Empirically, the finding supports the South African study of Taljaard *et al.* (2015:439), who found no relationship between gender diversity in terms of race and company performance. However, the findings contradict Ararat, Aksu and Cetin (2015:99), who posit that demographic diversity has a stronger effect on board monitoring and hence on company performance.

Interestingly, the no-significance findings are consistent across all periods, except for the post-crisis period, where it is significantly negative. This is less empirically surprising as the number of non-whites and women representation on South African

corporate boards is small such that they may not have any significant impact on board decisions.

The statistically significant and positive association between leadership structure and Tobin's Q rejects Hypothesis 6 (see Column 4, Row 8 of Table 6.6), namely that separating the position of CEO and chairman significantly impacts negatively on company performance. It also does not lend empirical support to the recommendations of corporate governance codes, including King II, that the roles of chairman and CEO should be split. Empirically, this finding supports the studies of Lin and Jen (2011:17) and Nath, Islam and Saha (2015:110), who also report a non-significant relationship between leadership structure and Tobin's Q. Notably, the no-impact relationship is consistent across all periods except for the crisis period, where it is positive and significant, an indication that during the crisis period, it is imperative for South African companies to separate the roles of chairman and CEO.

### **6.3.2 ROA and corporate governance: Model 2**

Appendix 1 indicates that for the entire period (2002-2014), the F-value is statistically significant at the 1% significance level, which means that there is a statistically significant linear relationship between the explanatory variables and ROA (F-value is 140.475 at p-value of 0.000). The Adjusted  $R^2$  is approximately 56%. This means that at least 56% of the variations in the sampled companies' accounting returns (ROA) can be explained jointly by the six corporate governance variables. This Adjusted  $R^2$  is better than in most recent studies such as those of Rodriguez-Fernandez *et al.* (2014:494) and Schultz *et al.* (2010:157), who report 16% and 16.7% respectively where the dependent variable is ROA.

**Table 6.7: A summary table of all hypotheses as measured by ROA based on the entire period, pre-crisis, during crisis, and post-crisis for all companies**

Table 6.7 presents a summary of all hypotheses and Tobin's Q. Column 1 shows the independent variables for the study. Column 2 is the hypothesis number and Column 3 reports the hypothesised sign. Columns 4, 5, 6 and 7 report the findings based on the entire period, pre-crisis, during crisis and post-crisis. The conclusion of the hypothesis is provided in Column 8, while Column 9 links the conclusion to the relevant corporate governance theory.

Independent variable	Hypothesis number	Hypothesised sign	Return on assets (ROA)				Conclusion	Relevant corporate governance theory
			Entire period (2002-2014)	Pre-crisis (2005-2007)	During crisis (2008-2010)	Post-crisis (2011-2013)		
Board size	1	+	Accept	Reject	Reject	Accept	Board size had an impact on ROA only during the entire period and post-crisis period.	The positive relationship supports the resource dependence theory.
Board independence	2	+	Reject	Reject	Reject	Reject	The proportion of independent non-executive directors had an inverse relationship with ROA during the entire period, pre-crisis period and during the crisis period.	The inverse relationship supports the stewardship theory but rejects the agency and resource dependence theory.
Board committees	3	+	Reject	Reject	Reject	Reject	The presence of audit, risk and nomination committees had an inverse relationship on ROA.	The inverse relationship supports the stewardship theory but rejects the agency theory.
Board activity	4	+	Reject	Reject	Reject	Reject	The frequency of board meetings had an inverse relationship on ROA.	The inverse relationship supports the stewardship theory but rejects the agency theory.
Board diversity	5	+	Reject	Reject	Reject	Reject	The proportion of non-white females had no influence on ROA.	The insignificant relationship rejects the resource dependence theory and agency theory.
Leadership structure	6	+	Reject	Reject	Reject	Reject	Separating the roles of chairman and CEO had no influence on ROA.	The insignificant relationship rejects the agency theory.

	Positively significant
	Negatively significant
	Insignificant

To test for the sensitivity of the regression output to omitted variables, two control variables, namely leverage and company age, are removed from Equation 5.3 and the regression rerun. The objective of this test is to determine if the regression output is the same when leverage and company age are dissociated from the regression. Similar to Tobin's Q, the output indicates that the F-value is statistically significant at the 1% significance level, which means that there is a significant linear relationship between the explanatory variables and ROA (F-value is 140.475 at p-value of 0.000). However, when Equation 5.3 has two control variables as opposed to four, the Adjusted R<sup>2</sup> is exactly the same.

Therefore, the results are not sensitive to the addition or removal of control variables. The direction or signs of the coefficients as well as the significance levels do not change when two control variables are added or removed. Therefore, the discussion below is based on the estimated coefficients, which include all four control variables. However, only significant corporate governance variables are discussed.

The statistical *t* and its significance for each coefficient indicate that by rejecting the null hypothesis, the regression coefficient value is zero in the data population. In this analysis, only the null hypothesis for the variables board size (= 0.21195, *t* = 2.628, *p* < 0.01), independent non-executive director (= -3.552, *t* = -2.198, *p* < 0.05) and board activity (= -0.285, *t* = -1.718, *p* < 0.1) is rejected, and therefore, these are the only variables that significantly contribute to explain ROA.

To start with, the coefficient on the first corporate governance variable, board size, is positive and statistically significant over the entire sample period and post-crisis period. This result provides empirical evidence to support Hypothesis 1 (see Column 4, Row 3 of Table 6.7). This result is also in agreement with the studies of Topal and Dogan (2014:77) and Malik and Makhdoom (2016:757), who document a statistically significant and positive nexus between board size and ROA. However, the results differ from prior studies that report that board size is negatively related to ROA (Arora & Sharma, 2016:420) and other studies that posit that board size has no impact on the financial performance of South African companies (Meyer & De Wet, 2013:27; Pamburai *et al.* 2015:127).

The positive impact of the size of the board on company performance is consistent with another performance measure, Tobin's Q, signifying that this finding is robust to alternative proxies of financial performance. This finding also agrees with the prediction of the agency theory. However, board size does not have an impact on ROA during the pre-crisis period and crisis period.

Notwithstanding, between the period 2005 and 2007, which was the period prior to the global financial crisis, referred to as "normal times/non-crisis/steady-state" in this study, the size of the board had no impact whatsoever on ROA. This finding corroborates the study of Van Essen *et al.* (2013:214), who report no relation between the two parameters during "normal time". The results show that the number of directors on a board does not have any impact on ROA during the crisis period. This finding contradicts the study of Van Essen *et al.* (2013:217), who report a significant positive correlation between board size and ROA during crisis time. Therefore, this study does not support the theoretical assumption that through their network and interlocking relationships, larger boards make more effort to reduce uncertainty during a recession period.

Similar to the study of Orazalin *et al.* (2016:806), board size and ROA have a positive relationship after the recession period. The study posits that the size of the board is only significant and positive if the number of board members is greater than four but equal to or less than 14 ( $4 < \text{Board Size} \leq 14$ ) depending on the industry nuances. As is revealed later, this study argues that the optimal size of the board differs not only because of country differences but also industry dynamics.

Contrary to the finding of Malik and Makhdoom (2016:757), who posit a positive relationship between board independence and ROA, Column 4, Row 4 of Table 6.7 reports that higher proportions of independent outside directors on boards lead to lower levels of ROA. This inverse effect is the same during the pre-crisis period as well as during the crisis period. Similar to the studies of Darko *et al.* (2016:266), Ehikioya (2009:231) and Sheikh, Wang and Khan (2013:50), this finding does not support Hypothesis 2 and the theoretical framework which predicted a greater symbiotic relationship between the proportion of independent directors and ROA.



Ehikioya (2009:231) attributes the inverse relationship to a very low representation of independent directors, which may encourage management to expropriate company resources due to poor monitoring for their personal benefits, hence negatively affecting ROA. Lack of adequate knowledge about the business may also be responsible for this negative relationship (Adams, 2012:35). As Rebeiz (2015:750) points out, independent non-executive directors are part-timers to the company and more often than not do not possess requisite knowledge about the internal and external environment of the company to digest large and complex information and to make informed decisions.

Noticeably, the proportion of independent non-executive directors in this study is 44%, which could also mean that the number is too small to make a meaningful and positive contribution to the bottomline. However, simply increasing the number of independent non-executive directors may therefore not be sufficient to improve performance.

Notwithstanding, Rebeiz (2015:748) posits that the association between boardroom independence and company performance remains an elusive conundrum in the corporate governance literature. He attributes the lack of consensus to the following:

- ontological complexities inherent to the very nature of the company
- methodological complexities intrinsic to normative research with large archival data and
- self-serving behavioural motive, which cannot be factored in archival data.

With regard to the mixed results of the relationship between independent directors and company's performance, Sharifah, Syed, Syahrina, Abdul and Julizaerma (2016:464) argue that having independent directors on the board not only leads to better financial performance but also to better corporate governance, including corporate social performance.

In respect of Hypothesis 3, the results indicate that the presence of nomination, remuneration and audit/risk committees is positively related but statistically insignificant to ROA in all periods, except after the crisis period, when it is negatively significant. This does not support Hypothesis 3 (see Column 4, Row 5 of Table 6.7), as well as the recommendations of King III, which call for the establishment of board

committees. Empirically, it also rejects the results of Fauzi and Locke (2012:61), which exhibit a positive relationship between the existence of nomination, remuneration and audit committees and ROA.

Owing to the high adoption rate of these committees since 2002, their insignificance in explaining ROA is not empirically surprising. This could be attributed to variations as only less than 15% of sampled companies did not have these committees. The results are surprising because it can be argued that if all companies fully complied or not completely complied with some of the single corporate governance provisions, there would simply be no cross-sectional variations in the variables for them to be value relevant in any regression and therefore result in an insignificant relationship.

Theoretically, the establishment of board committees can improve the efficacy of the board. First, the nomination committee is responsible for the appointment of board members, succession planning of the CEO as well as ensuring that the board is balanced in terms of skills, experience and diversity. Secondly, the remuneration committee ensures, among others, that long-term incentives seeking to align the interests of shareholders and management are in place. Thirdly, the audit committee is concerned with the internal control and financial reporting quality. Arguably, all these committees have a role to play in ensuring that the board carries out its oversight role.

In respect of Hypothesis 4, it is observed that board activity negatively impacts on ROA during the entire period, crisis period and post-crisis period. The statistically significant and negative ROA and board activity nexus means that Hypothesis 4 (see Column 4, Row 6 of Table 6.7) can be rejected. It also implies that the recommendations of King III, namely that South African corporate boards must hold a minimum of four meetings in a year, are not empirically supported. Empirically, this finding is inconsistent with the result of Ntim and Osei (2013:91), who report a statistically insignificant association between board activity and ROA.

One of the reasons for the inverse relationship could be that during a recession, board meetings are more concerned about the turnaround strategy with the aim of improving performance. In contrast, when performance declines, board meetings are more active to manage performance crisis as opposed to increasing financial performance.

The statistically insignificant relationship between board diversity (in terms of race and gender) and ROA means that Hypothesis 5 (see Column 4, Row 7 of Table 6.7) is rejected. The insignificant nexus is consistent across all periods. However, the finding is less empirically surprising. This is because the number of non-white female representation on South African boards is small such that the female representation may not have any significant impact on board decisions.

Empirically, the insignificant relationship supports the results of South African studies such as those of Taljaard *et al.* (2015:425) and Tshipa and Mokoaleli-Mokoteli (2015a:73), that board diversity in terms of race and gender does not have an influence on South African listed companies. In contrast, the findings contradict the studies of Ayadi *et al.* (2015:743), Julizaerma and Sori (2012:1077), Lückcrath-Rovers (2013:491) and Zhang (2012:686), who found a positive association between gender diversity and financial performance.

The statistically insignificant association between leadership structure and ROA rejects Hypothesis 6 (see Column 4, Row 8 of Table 6.7), namely separating the roles of chairman and CEO is financially beneficial for the company. The results are consistent in all periods. The finding does not lend empirical support to the recommendations of King III that the roles of a chairman and CEO should be split. Empirically, this finding is consistent with the results of Moscu (2013a:165), who reports a statistically insignificant relationship between ROA and leadership structure.

Theoretically, the finding indicates that combining the roles of chairman and CEO may give the CEO autonomy to focus on the objectives of the company without board interference (Haniffa & Cooke, 2002:321). This arrangement may also facilitate quick decision-making, which may improve financial performance.

As mentioned in Section of 1.4 of Chapter 1, corporate governance may differ from industry to industry. The next subsection discusses the descriptive statistics and results of the regression output for each of the five industries. Specifically, the results are based on the pre-crisis, the crisis and post-crisis periods.

## **6.4 IMPACT OF INDUSTRY DYNAMICS ON THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE AND FINANCIAL PERFORMANCE**

The following section discusses the descriptive statistics as well as the regression results for each of the five industries. For ease of comparison, in each industry, two tables are presented for all hypotheses. The first table shows the hypotheses and Tobin's Q and the second table presents the hypotheses and ROA. One of the objectives, as highlighted in Section 1.6 of Chapter 1, is to develop a corporate governance and performance model for each industry. In the light of this objective, the analysis for each industry culminates in a customised corporate governance model for ROA and Tobin's Q.

### **6.4.1 Corporate governance and financial performance nexus in the financials industry**

Appendix 6 presents the descriptive statistics for the financials industry. Notably, the descriptive statistics reveal that both performance measures, Tobin's Q (ROA) dropped from 1.544 (2.355) (pre-crisis) to 0.984 (2.304) (during the crisis) but recovered again after the crisis to 1.097 (3.578). This demonstrates the significant decline in company performance as a result of the financial crisis. The recovery after the crisis indicates the resilience of the financials industry to the aftermath of the global financial crisis. Notably, ROA was higher (3.578) after the crisis than it was before the crisis (2.355) and during the crisis (2.304), implying that the increased corporate governance compliance levels may have acted as a hedging mechanism for the South African financials companies.

The compliance levels in terms of all corporate governance increased during the transition from the pre-crisis to the crisis period. On average, financials companies had 11.1 board members pre-crisis and 12.4 during the crisis, with 16% representation of non-white women before the crisis and 21% after the crisis. There were 45.9% of independent non-executive directors pre-crisis, which increased to 49.4% during the crisis. The number of companies having all three board committees increased from 40% to 60% during the crisis. On average, the board met 5.05 times pre-crisis and

5.18 times during the crisis. Companies that have separated the roles of CEO and chairman increased from 90% to 95% during the crisis

For the pre-crisis period, the size of the board, the presence of board committees and board diversity all had a positive impact on Tobin's Q, while board independence and leadership structure had a negative influence (see Panel A of Table 6.8). However, during the crisis period, board committees, board activity and leadership positively influenced company performance. After the financial crisis, board independence, board committees and board diversity had an inverse relationship, while board size had a positive nexus with Tobin's Q.

Overall, all corporate governance variables, except board independence had a positive influence on Tobin's Q in varying periods. This indicates that corporate governance is contingent on economic periods even during a cross-sectional analysis.

**Table 6.8: Summary of all hypotheses as measured by Tobin's Q and ROA based on the entire period, pre-crisis, during crisis and post-crisis periods for the financials industry**

Table 6.8 presents a summary of all hypotheses and Tobin's Q. Column 1 shows the independent variables for the study. Column 2 is the hypothesis number and Column 3 reports the hypothesised sign. Columns 4, 5, 6 and 7 report the findings based on the entire period, pre-crisis, during crisis and post-crisis. The conclusion of the hypothesis is provided in Column 8.

Panel A – Tobin's Q							
Independent variable	Hypothesis number	Hypothesised sign	Entire period (2002-2014)	Pre-crisis (2005-2007)	During crisis (2008-2010)	Post-crisis (2011-2013)	Conclusion
Board size	1	+	Accept	Accept	Reject	Accept	Board size had a positive influence on Tobin's Q in all periods, except during the crisis period, where the relationship was insignificant. The positive relationship supports the agency and resource dependence theories.
Board independence	2	+	Reject	Reject	Reject	Reject	The proportion of independent non-executive directors had an inverse relationship with Tobin's Q in all periods except during the crisis period, where the relationship was insignificant. The inverse relationship supports the stewardship theory.
Board committees	3	+	Accept	Accept	Accept	Reject	The presence of nomination, remuneration and audit/risk committees had a positive impact on Tobin's Q in all periods except after the crisis period, where the relationship was negative. The positive relationship supports the agency and resource dependence theories.
Board activity	4	+	Reject	Reject	Accept	Reject	The frequency of board meetings had a positive impact on Tobin's Q during the crisis period. The positive relationship supports the agency theory.
Board diversity	5	+	Accept	Accept	Reject	Reject	The proportion of non-white females had a positive influence on Tobin's Q during the entire period and just prior to the financial crisis period. The positive relationship supports the agency theory and resource dependence theory.
Leadership structure	6	+	Reject	Reject	Accept	Reject	Separating the roles of chairman and CEO had a positive impact on Tobin's Q during the crisis period. The positive relationship supports the agency theory.

The table presents a summary of all hypotheses and ROA. Column 1 shows the independent variables for the study. Column 2 is the hypothesis number and Column 3 reports the hypothesised sign. Columns 4, 5, 6 and 7 report the findings based on the entire period, pre-crisis, during crisis and post crisis. The conclusion of the hypothesis is provided in Column 8.

Panel B - ROA							
Independent variable	Hypothesis number	Hypothesised sign	Entire period (2002-2014)	Pre-crisis (2005-2007)	During crisis (2008-2010)	Post-crisis (2011-2013)	Conclusion
Board size	1	+	Reject	Reject	Accept	Accept	The board had a positive impact on ROA, both during the crisis period and post the crisis period. The positive relationship supports the agency and resource dependence theories.
Board independence	2	+	Reject	Reject	Reject	Reject	The proportion of independent non-executive directors had an inverse relationship with ROA. The inverse relationship supports the stewardship theory and rejects agency or resource dependence theories.
Board committees	3	+	Accept	Accept	Reject	Accept	The presence of nomination, remuneration and audit/risk committees had a positive impact on ROA in all periods except during the crisis period. The positive relationship supports the agency theory and resource dependence theory.
Board activity	4	+	Reject	Accept	Reject	Reject	The frequency of board meetings had a positive impact on ROA just before the crisis period. The positive relationship supports the agency theory.
Board diversity	5	+	Reject	Reject	Accept	Reject	The proportion of non-white females had a positive impact on ROA during the crisis period. The positive relationship supports the agency theory and resource dependence theory.
Leadership structure	6	+	Accept	Accept	Accept	Reject	Separating the roles of chairman and CEO had a positive impact on ROA. The positive relationship supports the agency theory.

	Positively significant
	Negatively significant
	Insignificant

With regard to ROA, before the crisis period, board committees, board activities and leadership structure had a positive impact, while the size of the board, board independence and board diversity had a negative impact before the crisis (see Panel B of Table 6.8). During the crisis, the signs of the board size and board diversity changed from negative to positive, indicating that the increase noted in both parameters yielded positive results. Similar to Erkens, Hung and Matos (2012:389), this study found an inverse relationship between the proportion of independent directors and company performance. This indicates that companies that have more independent directors perform worse than their counterparts during the crisis period. After the crisis period, contrary to Orazalin *et al.* (2016:808), who found a negative relationship between board size and ROA for Russian banks, this study documents a positive association.

Similar to Tobin's Q, all corporate governance variables but board independence had a positive influence on ROA in varying periods. This indicates that regardless of the performance measure used, the proportion of independent non-executive director had a detrimental effect on the financial wellbeing of the financials industry.

Therefore, the corporate governance-performance model specific for the financials industry is as follows (see Appendix 5):

Pre-crisis period:  $ROA = -0.5586(BS) - 6.3982(BI) + 4.4321(BC) + 0.1021(BA) - 15.268(BD) + 4.7332(LS)$   
 $Tobin's\ Q = 0.0751(BS) - 1.0817(BI) + 0.4614(BC) - 0.0527(BA) + 0.7191(BD) - 0.7126(LS)$

During-crisis period:  $ROA = 0.4090(BS) - 11.355(BI) + 3.8661(BD) + 3.0567(LS)$   
 $Tobin's\ Q = 0.1341(BC) + 0.0180(BA) + 0.2851(LS)$

Post-crisis period:  $ROA = 0.1126(BS) + 0.6882(BC) - 0.2617(BA) - 5.6558(BD)$   
 $Tobin's\ Q = 0.0155(BS) - 0.1213(BI) - 0.0832(BC) - 0.3182(BD)$

#### **6.4.2 Corporate governance and financial performance nexus in the basic materials industry**

Appendix 10 presents the descriptive statistics for the basic materials industry. The basic materials industry was the most severely hit by the global financial crisis with Tobin's Q plummeting by 87% from 8.76 before the crisis to 1.11 after the crisis. Similarly, ROA plunged by 80% from 14.47 pre-crisis to 2.87 post-crisis.

The descriptive variables also demonstrate that all corporate governance characteristics improved during the three economic periods. In particular, the average leadership structure was 100% during the crisis, indicating that companies within this industry completely complied with the King III of separating the roles of CEO and chairman.

The size of the board had a positive impact on Tobin's Q, before the crisis and after the crisis, indicating that, board size only influenced company performance during non-crisis times (see Panel A of Table 6.9). During crisis times, board committees and board activity had an inverse influence on the market-based performance measures, while board independence had a positive impact, supporting the resource dependence theory, namely that independent non-executive directors are resourceful and assist in reducing the agency costs.

Therefore, of the six corporate governance attributes, only board size, board independence and board committees had a positive impact on the market returns at specific economic periods. This indicates that for the basic materials industry, diversifying the board in terms of race and gender, separating the roles of chairman and CEO, as well as convening at least four times a year did not generate market returns.



**Table 6.9: Summary of all hypotheses as measured by Tobin's Q and ROA based on the entire period, pre-crisis, during crisis and post-crisis periods for the basic materials industry**

Table 6.9 presents a summary of all hypotheses and Tobin's Q. Column 1 shows the independent variables for this study. Column 2 is the hypothesis number and Column three reports the hypothesised sign. Columns, 4, 5, 6 and 7 report the findings based on the entire period, pre-crisis, during crisis and post crisis. The conclusion of the hypothesis is provided in Column 8.

**Panel A - Tobin's Q**

Independent variable	Hypothesis number	Hypothesised sign	Entire period (2002-2014)	Pre-crisis (2005-2007)	During crisis (2008-2010)	Post crisis (2011-2013)	Conclusion
Board size	1	+	Accept	Accept	Reject	Accept	Board size had a positive influence on Tobin's Q during all periods except the crisis period. The positive relationship supports the agency theory.
Board independence	2	+	Accept	Reject	Accept	Accept	The proportion of independent non-executive directors had a positive impact on Tobin's Q during all periods, except the pre-crisis period, when the relationship was insignificant. The positive relationship supports the agency theory.
Board committees	3	+	Accept	Reject	Reject	Reject	The presence of board committees had a positive impact on Tobin's Q during the entire period. The positive relationship during the entire period supports the agency theory.
Board activity	4	+	Reject	Reject	Reject	Reject	The frequency of board meetings had an inverse relationship to Tobin's Q during the entire period and during the crisis period. The insignificant and inverse relationship rejects the agency theory.
Board diversity	5	+	Reject	Reject	Reject	Reject	The proportion of non-white females had an inverse relationship to Tobin's Q during the post-crisis period. The insignificant and inverse relationship rejects the agency and resource dependence theory.
Leadership structure	6	+	Reject	Reject	Reject	Reject	Separating the roles of chairman and CEO had no influence on Tobin's Q during all periods. The insignificant relationship rejects the agency theory.

This table presents a summary of all hypotheses and ROA. Column 1 shows the independent variables for this study. Column 2 is the hypothesis number and Column three reports the hypothesised sign. Columns, 4, 5, 6 and 7 report the findings based on the entire period, pre-crisis, during crisis and post crisis. The conclusion of the hypothesis is provided in Column 8.

**Panel B - ROA**

Board size	1	+	Reject	Reject	Reject	Accept	Board size had a positive impact on ROA during the pre-crisis period. The positive relationship during the post-crisis period supports the agency theory.
Board independence	2	+	Reject	Reject	Accept	Reject	The proportion of independent non-executive directors had a positive impact on ROA during the crisis period but an inverse relationship during the entire period and post-crisis period. The positive relationship during the crisis period supports the agency and resource dependence theories.
Board committees	3	+	Reject	Reject	Reject	Reject	The presence of nomination, remuneration and audit/risk committees had an inverse relationship on ROA during the entire period and post-crisis period. The inverse relationship during the entire period and post-crisis period rejects the agency theory.
Board activity	4	+	Accept	Accept	Reject	Reject	The frequency of board meetings had a positive impact on ROA during the entire period and pre-crisis period. The positive relationship during the entire period and pre-crisis period supports the agency theory.
Board diversity	5	+	Accept	Accept	Accept	Accept	The proportion of non-white females had a positive impact on ROA during all periods. The positive relationship supports the agency theory.
Leadership structure	6	+	Reject	Reject	Reject	Reject	Separating the roles of chairman and CEO had an inverse relationship with ROA during the entire period and pre-crisis period. The inverse and insignificant relationship rejects the agency theory.

	Positively significant
	Negatively significant
	Insignificant

Regarding the accounting-based measure, board size had a negative influence on ROA during the pre-crisis period and during the crisis period, with the direction of influence changing after the crisis period (see Panel B of Table 6.9). Consistent with the resource dependence theory, board independence had a positive impact on company performance during the crisis period. One reason for this result could be that in a recession, independent outside directors, due to interlocking and their web of network, could be providers of timely information and resources which are beneficial to the performance of a company.

In support of the agency theory, board activity had a positive relationship during the entire period and pre-crisis period, while board diversity had a positive association in all intervening periods, which is an indication that diversifying boards in this industry is critical regardless of the period. However, separating the roles of chairman and CEO as well as establishing nomination, remuneration and audit/risk committees did not exhibit positive accounting returns for the basic materials industry.

Therefore, the corporate governance and performance model specific for the basic materials industry is as follows (see Appendix 5):

Pre-crisis period:  $ROA = - 1.0329(BS) + 0.5359(BA) + 6.9678(BD) - 13.107(LS)$   
*Tobin's Q* =  $0.3898(BS)$

During-crisis period:  $ROA = - 3.5881(BS) + 19.029(BI) + 13.899(BD)$   
*Tobin's Q* =  $0.3420(BI) - 0.2505(BC) - 0.0283(BA)$

Post-crisis period:  $ROA = 0.5673(BS) - 6.8687(BI) - 6.8954(BC) + 10.539(BD)$   
*Tobin's Q* =  $0.0327(BS) + 0.1039(BI) - 0.5823(BD)$

### 6.4.3 Corporate governance and financial performance nexus in the consumer services industry

While most industries experienced a drop in terms of performance metrics, in contrast, the consumer services industry seems to have benefitted from the financial crisis (see Appendix 7). Tobin's Q increased by 92% from 1.57 (pre-crisis) to 3.01 (post-crisis). Similarly, ROA increased by 24% from 15.96 (pre-crisis) to 19.81 (post-crisis).

The compliance levels also increased during the transitional periods, with the exception of the board activities. Contrary to the expectations that the board would meet frequently during crisis periods, in this industry, the board met fewer times during the crisis period (4.28 times) than in other periods.

The results show that board size had a positive impact on Tobin's Q regardless of the economic period (see Panel A of Table 6.10). This supports the agency theory, namely that larger boards make more effort to reach consensus and reduce uncertainty during a recession period. In respect of ROA, during normal times (pre- and post-crisis), board size had a positive impact on ROA and inverse relationship during the abnormal times (crisis period) (see Panel B of Table 6.10). Regardless of the performance measure used, the proportion of independent non-executive directors, convening board meetings at least four times a year and separating the roles of chairman and CEO generated negative accounting and market returns for companies in the consumer services industry. Therefore, the corporate governance and performance model specific for the consumer services industry is as follows (see Appendix 5):

Pre-crisis period:  $ROA = 0.6181(BS) - 2.2630(BI) + 3.3026(BC) - 1.8567(BA) + 17.835(BD) - 9.0618(LS)$   
 $Tobin's\ Q = 0.0827(BS) + 0.2169(BC) - 0.1948(BA) + 3.0690(BD) - 0.6286(LS)$

During-crisis period:  $ROA = -0.1800(BS) - 5.0278(BI) + 1.6685(BC) - 13.656(BD) - 5.6960(LS)$   
 $Tobin's\ Q = 0.0252(BS) - 1.2270(BI) + 0.4653(BC) - 0.1109(BA) + 1.0601(BD) - 0.6744(LS)$

Post-crisis period:  $ROA = 0.6494(BS) - 1.5451(BC) - 1.1409(BA) + 7.7731(BD) - 2.4317(LS)$   
 $Tobin's\ Q = 0.1394(BS) - 0.8561(BI) - 0.3502(BC) - 0.2363(BD) - 0.1999(LS)$

**Table 6.10: Summary of all hypotheses as measured by Tobin's Q and ROA based on the entire period, pre-crisis, during the crisis and post-crisis periods for the consumer services industry**

Table 6.10 presents a summary of all hypotheses and Tobin's Q. Column 1 shows the independent variables for this study. Column 2 is the hypothesis number and Column three reports the hypothesised sign. Columns, 4, 5, 6 and 7 report the findings based on the entire period, pre-crisis, during crisis and post crisis. The conclusion of the hypothesis is provided in Column 8.

**Panel A - Tobin's Q**

Independent variable	Hypothesis number	Hypothesised sign	Entire period (2002-2014)	Pre-crisis (2005-2007)	During crisis (2008-2010)	Post crisis (2011-2013)	Conclusion and relevant corporate governance theory
Board size	1	+	Accept	Reject	Accept	Accept	Board size has a positive impact on Tobin's Q during all periods, except the pre-crisis period, where the relationship is negative. The positive relationship supports the agency theory.
Board independence	2	+	Reject	Reject	Reject	Reject	The proportion of independent non-executive directors has an inverse relationship with Tobin's Q. The negative relationship rejects agency and resource dependence theories but supports the stewardship theory.
Board committees	3	+	Accept	Accept	Accept	Reject	The presence of board committees has a positive impact on Tobin's Q during all periods, except post the crisis period, where the relationship is negative. The positive relationship supports the agency theory during the entire period, pre-crisis period and during crisis period.
Board activity	4	+	Reject	Reject	Reject	Reject	The frequency of board meetings has an inverse relationship with Tobin's Q during all periods except the pre-crisis period, where the relationship is insignificant. The inverse and insignificant relationship rejects the agency theory.
Board diversity	5	+	Accept	Accept	Accept	Reject	The proportion of non-white females has a positive influence on Tobin's Q during all periods except the post-crisis period, where the relationship is negative. The positive relationship during the entire period, pre-crisis period and during crisis period supports the agency theory.
Leadership structure	6	+	Reject	Reject	Reject	Reject	Separating the roles of chairman and CEO has an inverse relationship on Tobin's Q during all periods. The inverse relationship rejects the agency theory.

This table presents a summary of all hypotheses and ROA. Column 1 shows the independent variables for this study. Column 2 is the hypothesis number and Column three reports the hypothesised sign. Columns, 4, 5, 6 and 7 report the findings based on the entire period, pre-crisis, during crisis and post crisis. The conclusion of the hypothesis is provided in Column 8.

**Panel B - ROA**

Board size	1	+	Accept	Accept	Reject	Accept	Board size has a positive impact on ROA in all periods except during the crisis. The positive relationship supports the agency theory.
Board independence	2	+	Reject	Reject	Reject	Reject	The proportion of independent non-executive directors has an inverse relationship on ROA during all periods, except the post crisis period, where it is insignificant. The inverse relationship rejects agency and resource dependence theories but supports the stewardship theory.
Board committees	3	+	Accept	Accept	Accept	Reject	The presence of board committees has a positive impact on ROA in all periods, except the post crisis period, where it has a negative impact. The positive relationship supports agency and resource dependence theories.
Board activity	4	+	Reject	Reject	Reject	Reject	The frequency of board meetings has an inverse relationship on ROA in all periods, except during the crisis period, where it is insignificant. The inverse relationship rejects the agency theory.
Board diversity	5	+	Accept	Accept	Reject	Accept	The proportion of non-white females has a positive impact on ROA during all periods except during the crisis period, where the relationship is negative. The positive relationship supports the agency theory.
Leadership structure	6	+	Reject	Reject	Reject	Reject	Separating the roles of chairman and CEO has an inverse relationship on ROA in all periods. The inverse relationship rejects the agency theory but supports the stewardship theory.

	Positively significant
	Negatively significant
	Insignificant

#### 6.4.4 Corporate governance and financial performance nexus in the consumer goods industry

Appendix 8 reveals that while Tobin's Q declined by 28% from 3.11 (pre-crisis) to 2.21 (post-crisis), ROA did not suffer the same feat as it increased by 12% from 15.96 (pre-crisis) to 17.8 (post-crisis). There was an increase in corporate governance compliance levels in all respects. It is noteworthy that after the global crisis, in all companies in this industry, the positions of CEO and chairman were occupied by different people.

Notably, board committees had a positive influence on Tobin's Q throughout the three economic periods, supporting the agency theory that constant monitoring reduces agency costs and improves performance. The committees are important to ensure that the financial procedure is carried out well and the directors are appropriately compensated, hence mitigating any agency problems and therefore improving performance (Fauzi & Locke, 2012:50).

All corporate governance variables except for leadership structure had a positive impact on Tobin's Q in varying periods (see Panel A of Table 6.11). This implies that separating the roles of chairman and CEO does not generate any market returns in any intervening periods.

Considering ROA, board size, board activity and board diversity had a positive correlation with the performance parameter, pre-crisis period (see Panel B of Table 6.11). Notably, board diversity had a positive influence on the accounting-based measure in all economic periods. The positive relationship between board diversity and financial performance is predicted by both the agency theory and the resource dependence theory (Nguyen *et al.*, 2014:5).

Notably, all corporate governance variables except board independence are positively correlated to the accounting returns. The inverse relationship between board independence and ROA supports the stewardship theory, namely that management have the requisite experience and skills more than independent non-executive directors to generate positive returns for the company.

**Table 6.11: Summary of all hypotheses as measured by Tobin's Q and ROA based on the entire period, pre-crisis, during crisis and post-crisis periods for the consumer goods industry**

Table 6.11 presents a summary of all hypotheses and Tobin's Q. Column 1 shows the independent variables for this study. Column 2 is the hypothesis number and Column three reports the hypothesised sign. Columns, 4, 5, 6 and 7 report the findings based on the entire period, pre-crisis, during crisis and post crisis. The conclusion of the hypothesis is provided in Column 8.

**Panel A - Tobin's Q**

Independent variable	Hypothesis number	Hypothesised sign	Entire period (2002-2014)	Pre-crisis (2005-2007)	During crisis (2008-2010)	Post crisis (2011-2013)	Conclusion
Board size	1	+	Accept	Accept	Accept	Reject	The board size has a positive influence on Tobin's Q during all periods except the post-crisis period, where the relationship is insignificant. The positive relationship during all periods but post crisis supports agency and resource dependence theories.
Board independence	2	+	Accept	Reject	Reject	Accept	The proportion of independent non-executive directors has a positive impact on Tobin's Q during the entire period and post-crisis period. The positive relationship during the entire period and post-crisis period supports the resource dependence theory.
Board committees	3	+	Accept	Accept	Accept	Accept	The presence of board committees has a positive influence on Tobin's Q in all periods. The positive relationship supports agency and resource dependence theories.
Board activity	4	+	Reject	Reject	Accept	Reject	The frequency of board meetings has a positive impact on Tobin's Q during the crisis period, while in other periods the relationship is negative. The positive relationship during the crisis period supports the agency theory.
Board diversity	5	+	Reject	Reject	Reject	Accept	The proportion of non-white females has a positive impact on Tobin's Q during the post-crisis period. The positive relationship during the post-crisis period supports agency and resource dependence theories.
Leadership structure	6	+	Reject	Reject	Reject	Reject	Separating the roles of chairman and CEO has no impact on Tobin's Q in all periods. The insignificant relationship rejects the agency theory.

This table presents a summary of all hypotheses and ROA. Column 1 shows the independent variables for this study. Column 2 is the hypothesis number and Column three reports the hypothesised sign. Columns, 4, 5, 6 and 7 report the findings based on the entire period, pre-crisis, during crisis and post crisis. The conclusion of the hypothesis is provided in Column 8.

**Panel B - ROA**

Board size	1	+	Accept	Accept	Reject	Accept	Board size has a positive impact on ROA in all periods except during the crisis period. The positive relationship supports agency and resource dependence theories.
Board independence	2	+	Reject	Reject	Reject	Reject	The proportion of independent non-executive directors has an inverse relationship with ROA during the entire period and pre-crisis period. In other periods, it is insignificant. The inverse relationship rejects the agency theory but supports the stewardship theory.
Board committees	3	+	Accept	Reject	Reject	Reject	The presence of nomination, remuneration and audit/risk committees has a positive impact on ROA during the entire period. The positive relationship during the entire period supports agency and resource dependence theories.
Board activity	4	+	Accept	Accept	Reject	Reject	The frequency of board meetings has a positive impact on ROA during the entire period and pre-crisis period. In other periods, it is insignificant. The positive relationship supports the agency theory.
Board diversity	5	+	Accept	Accept	Accept	Accept	The proportion of non-white females has a positive impact on ROA during all periods. The positive relationship supports agency and resource dependence theories.
Leadership structure	6	+	Reject	Reject	Accept	Reject	Separating the roles of chairman and CEO has a positive impact on ROA during the crisis period. The positive relationship during the crisis period supports the agency theory

	Positively significant
	Negatively significant
	Insignificant

Therefore, the corporate governance and performance model specific for the consumer goods industry is as follows (see Appendix 5):

Pre-crisis period:  $ROA = 0.6755(BS) - 4.4861(BI) + 0.4983(BA) + 12.748(BD) - 7.1772(LS)$   
 $Tobin's Q = 0.1706(BS) + 1.7962(BC) - 0.2575(BA) - 9.8164(BD)$

During-crisis period:  $ROA = -4.9820(BC) + 13.998(BD) + 10.249(LS)$   
 $Tobin's Q = 0.1228(BS) + 1.0213(BC) + 0.1809(BA)$

Post-crisis period:  $ROA = 0.7694(BS) + 13.327(BD)$   
 $Tobin's Q = 0.7935(BI) + 0.2231(BC) - 0.0608(BA) + 1.9226(BD)$

#### 6.4.5 Corporate governance and financial performance nexus in the industrials industry

In terms of Tobin's Q, the industrials companies were modestly affected, with a drop of 3.7% from 1.08 (pre-crisis) to 1.04 (post-crisis) (see Appendix 9). The accounting-based performance measure declined by 37% from 13.58 (pre-crisis) to 8.58 (post crisis). With regard to compliance levels in terms of King III, industrials companies improved their compliance levels, particularly during the crisis period. The average board size increased from 10.34 (pre-crisis) to 10.77 (during the crisis) and went down to 10.45 (post crisis). In the same vein, the board met frequently (5.27 times) during the crisis period and reverted to meeting 4.9 times after the crisis. Companies within this industry also increased the proportion of non-white women representation from 13.8% (pre-crisis) to 27% (during the crisis) and reduced the composition to 19.3% (post-crisis).

Corporate governance variables such as board independence, board committees, board diversity and leadership structure all had a positive impact on Tobin's Q, pre-crisis period (see Panel A of Table 6.12). During the crisis period, board size and board committees had a positive relationship with the performance measure, while after the crisis period, there was a positive nexus between Tobin's Q and both board size and board independence. Notably, during normal times, board independence appears to be positively associated with Tobin's Q, in support of the resource dependence theory.

Interestingly, all corporate governance variables appear to have a positive impact on Tobin's Q in varying periods, an indication that the market sees value in corporate governance structures for the industrials industry (see Panel A of Table 6.12). The findings support the agency and resource dependence theories and imply that corporate governance provides a requisite structure that ensures that the necessary checks and balances are in place for steady times and hostile times.

While the size of the board was positively correlated to ROA during non-crisis periods, it had an inverse relationship during crisis periods (see Panel B of Table 6.12). In support of the stewardship theory, during the crisis period, board independence was negatively correlated with ROA, which indicates that the presence of independent non-executive directors is detrimental to the accounting returns.

All corporate governance variables except for board activity had a positive impact on ROA during varying periods. The board activity had an inverse relationship, which could mean that the frequency of board meetings had a negative impact on accounting returns. This may be because board members are paid for all the extraordinary meetings and more often than not management are removed from their workstations to attend these meetings. This could be opportunity costs for management, which may potentially lead to negative accounting returns.

Therefore, the corporate governance and performance model specific for the industrials industry is as follows (see Appendix 5):

Pre-crisis period:  $ROA = 0.1431(BS) - 1.5514(BC) + 1.5559(LS)$   
 $Tobin's Q = -0.0096(BS) + 0.1867(BI) + 0.0277(BC) + 0.1652(BD) + 0.2652(LS)$

During-crisis period:  $ROA = -0.1097(BS) - 4.4120(BI) + 2.1420(BC) - 0.4913(BA) + 1.8578(BD) - 1.3179(LS)$   
 $Tobin's Q = 0.0067(BS) + 0.1368(BC)$

Post-crisis period:  $ROA = 0.2012(BS) + 4.8484(BI) - 1.7845(BC) - 0.3986(BA)$   
 $Tobin's Q = 0.0049(BS) + 0.5680(BI) - 0.1466(BC) - 0.2498(BD)$



**Table 6.12: Summary of all hypotheses as measured by Tobin's Q and ROA based on the entire period, pre-crisis, during crisis and post-crisis periods for the industrials industry**

This table presents a summary of all hypotheses and Tobin's Q. Column 1 shows the independent variables for this study. Column 2 is the hypothesis number and Column three reports the hypothesised sign. Columns, 4, 5, 6 and 7 report the findings based on the entire period, pre-crisis, during crisis and post crisis. The conclusion of the hypothesis is provided in Column 8.

**Panel A - Tobin's Q**

Independent variable	Hypothesis number	Hypothesised sign	Entire period (2002-2014)	Pre-crisis (2005-2007)	During crisis (2008-2010)	Post crisis (2011-2013)	Conclusion
Board size	1	+	Accept	Reject	Accept	Accept	Board size has a positive impact on Tobin's Q in all periods, except the pre-crisis period, where the relationship is negative. The positive relationship in all periods, except the pre-crisis period, support the agency and resource dependence theories.
Board independence	2	+	Accept	Accept	Reject	Accept	The proportion of independent non-executive directors has a positive impact on Tobin's Q in all periods except during the crisis period, where the relationship is insignificant. The positive relationship in all periods except the crisis period supports the agency and resource dependence theories.
Board committees	3	+	Reject	Accept	Accept	Reject	The presence of board committees has a positive impact on Tobin's Q during the pre-crisis and crisis periods. The relationship is negative in other periods. The positive relationship during the pre-crisis and crisis periods supports the agency theory.
Board activity	4	+	Accept	Reject	Reject	Reject	The frequency of board meetings has a positive impact on Tobin's Q during the entire period. The relationship is insignificant during other periods. The positive relationship during the entire period supports the agency theory.
Board diversity	5	+	Reject	Accept	Reject	Reject	The proportion of non-white females has a positive impact on Tobin's Q during the pre-crisis period. The positive relationship during the pre-crisis period supports the agency and resource dependence theories.
Leadership structure	6	+	Accept	Accept	Reject	Reject	Separating the roles of chairman and CEO has a positive impact on Tobin's Q during the entire period and pre-crisis period. The relationship is insignificant during other periods. The positive relationship during the entire period and pre-crisis period supports the agency theory.

This table presents a summary of all hypotheses and ROA. Column 1 shows the independent variables for this study. Column 2 is the hypothesis number and Column three reports the hypothesised sign. Columns, 4, 5, 6 and 7 report the findings based on the entire period, pre-crisis, during crisis and post crisis. The conclusion of the hypothesis is provided in Column 8.

**Panel B - ROA**

Board size	1	+	Accept	Accept	Reject	Accept	Board size has a positive impact on ROA during all periods except the crisis period, where the relationship is negative. The positive relationship supports the agency and resource dependence theories.
Board independence	2	+	Reject	Reject	Reject	Accept	The proportion of independent non-executive directors has a positive impact on ROA during the post-crisis period. In other periods, it is either negative or insignificant. The positive relationship during the post-crisis period supports the agency and resource dependence theories.
Board committees	3	+	Reject	Reject	Accept	Reject	The presence of board committees has a positive impact on ROA during the crisis period. In other periods, the relationship is negative. The positive relationship during the crisis period supports the agency and resource dependence theories.
Board activity	4	+	Reject	Reject	Reject	Reject	The frequency of board meetings has an inverse relationship on ROA during all periods, except the pre-crisis period, where the relationship is insignificant. The inverse and insignificant relationship in all periods rejects the agency theory.
Board diversity	5	+	Reject	Reject	Accept	Reject	The proportion of non-white females has a positive impact on ROA during the crisis period. In other periods, the relationship is insignificant. The positive relationship during the crisis period supports the agency and resource dependence theories.
Leadership structure	6	+	Reject	Accept	Reject	Reject	Separating the roles of chairman and CEO has a positive impact on ROA during the pre-crisis period. The relationship is either negative or insignificant during other periods. The positive relationship during the pre-crisis period supports the agency theory.

	Positively significant
	Negatively significant
	Insignificant

## 6.5 TESTING FOR ROBUSTNESS

It is possible that companies may modify their corporate governance structure in response to past or future anticipated performance. To test for evidence of this, a series of robustness checks is conducted. These checks will ensure that the results are rigorous and immune from sensitivities. First, both the companies and corporate governance used in the study may be affected by the financial crisis that started in 2007. To resolve this, the study divided the sample into three periods: pre-recession (2005-2007), during the recession (2008-2010) and after the recession (2011-2013). As already reported in Table 6.5 and Section 6.3, corporate governance is indeed affected by the financial crisis.

Secondly, corporate governance may differ based on whether the company makes a profit or not. Simply put, there could be reverse causality, where company performance influences corporate governance structures. Therefore, the sample is split into two based on whether a company makes a profit or loss in a particular year, using ROA as a performance metric.

In the main, the results presented in Table 6.13 are not significantly different across all scenarios. The results show that past performance, board size and board committees had a positive influence on Tobin's Q regardless of the profitability of the company, dispelling any suspicion of reverse causality. The coefficient of board activity was negative in all scenarios but only significant for companies with a positive ROA and for the entire sample. Therefore, no clear pattern emerged to provide evidence that companies are changing their corporate governance arrangements as a result of prior performance or profitability.

**Table 6.13: Segmented regression results for both profitable and unprofitable companies for all firm-year observations**

Table 6.13 presents regression results of running the model for both profitable and unprofitable observations for the period 2002 to 2014. Column 1 reflects corporate governance variables. Column 2 reflects profitable observations, while Column 3 reflects unprofitable observations. Column 4 shows the results of all companies regardless of positive or negative ROA. T-statistics are in parentheses and \*\*\*, \*\* and \* denote significance at the 0.01, 0.05 and 0.1 levels respectively. Due to space, control variables are not reported but are available on request. N/S denotes no statistical significance. The abbreviations and definitions of the independent and control variables presented in this table are contained in Table 5.2.

	Entire period (2002 – 2014) – Tobin's Q		
	Positive ROA	Negative ROA	All sample
Perf (-1)	(0.6876)***	(0.0986)***	
Board Size	(0.0604)***	(0.1608)***	(0.0593)***
Board Independence	(0.5572)**	N/S	N/S
Board Committees	(0.1899)*	(0.9328)***	(0.2536)***
Board Activity	(-0.0881)***	(-0.0448)	(-0.0808)**
Board Diversity	N/S	(2.1211)**	N/S
Leadership Structure	N/S	(-1.4065)***	N/S

### 6.5.1 Potential endogeneity problems

As already mentioned in Section 1.4 of Chapter 1, literature attributes the mixed results of the corporate governance and performance nexus to potential endogeneity problems, which can significantly affect empirical corporate governance findings (Afrifa & Tauringana, 2015:730). Generally, endogeneity problems arise in three different ways:

- correlation with the error term (Wooldridge, 2002:50);
- omitted variable bias; and
- simultaneity (Larcker & Rusticus, 2010:186).

A typical method of sanitising the endogenous data is with carefully selected instrumental variables using more exotic regression models, such as two-stage or three-stage or generalised moment of method (GMM) estimation techniques (Dam & Scholtens, 2012:240). However, the selection of credible instrumental variables often is questionable, unreliable and flawed (French & Popovici, 2011:127).

Consequently, this study attempts to reduce the potential endogeneity problem of simultaneity by lagging the independent variables and investigating the association between changes in the independent variables and the dependent variable (Afrifa & Tauringana, 2015:730). The results presented in Table 6.14 reflect that the coefficient

signs of all variables are the same. In the same vein, the significance levels of all variables except for board committees and board size are similar. This pattern indicates that the findings of the study are generally robust.

**Table 6.14: Effect of lagged independent variables on current company performance for the entire period**

*In this table, results from the GLS estimation model are reported. The model specification for the study is as follows:*

$$Y_{it} = \alpha_0 + \beta_1 BS_{it-1} + \beta_2 BI_{it-1} + \beta_3 PC_{it-1} + \beta_4 BA_{it-1} + \beta_5 BD_{it-1} + \beta_6 CD_{it-1} + \beta_7 AGE_{it-1} + \beta_8 SIZE_{it-1} + \beta_9 LEV_{it-1} + \beta_{10} G_{it-1} + \varepsilon_{it-1}$$

*$Y_{it}$  is the performance measure, ROA and Tobin's Q,  $\alpha_0$  is the coefficient,  $BS_{it-1}$  is the board size in the previous year,  $BI_{it-1}$  is the board independence in the previous year,  $PC_{it-1}$  is the board committees in the previous year,  $BA_{it-1}$  is the board activity in the previous year,  $BD_{it-1}$  is the board diversity in the previous year,  $CD_{it-1}$  is the leadership structure in the previous year,  $AGE_{it-1}$  is the company age in the previous year,  $SIZE_{it-1}$  is the company size in the previous year,  $LEV_{it-1}$  is the leverage in the previous year,  $G_{it-1}$  is the growth prospects in the previous year and  $\varepsilon_{it-1}$  is the error term. All variables are fully defined in Table (4.1). These models provide t-statistics, which are in parentheses. \*\*\*, \*\* and \* denote significance at the 0.01, 0.05 and 0.1 levels respectively. Due to space, control variables are not reported but are available on request. N/S denotes no statistical significance.*

	Entire period (2002 – 2014)	
	Tobin's Q	ROA
Adj R <sup>2</sup>	0.4674	0.5687
Observations	1163	1163
Perf (-1)	(0.6702)***	(0.7415)***
Board Size (-1)	(0.0256)**	(0.1058)
Board Independence (-1)	N/S	(-2.1955)*
Board Committees (-1)	N/S	N/S
Board Activity (-1)	(-0.0645)	(-0.0842)
Board Diversity (-1)	N/S	N/S
Leadership Structure (-1)	N/S	N/S

### 6.5.2 Sensitivity analyses

To check the sensitivity of the results to omitted variables, first, the regression was run with all control variables, company size, growth prospects, leverage and company age (see Columns 4 and 5 of Table 6.15). The second regression was run having removed all control variables (see Columns 6 and 7). The third regression was run having only added AGE as a control variable (see Columns 8 and 9). The regression outputs were the same in terms of coefficient signs and significance levels. Only the results of ROA are presented. Tobin's Q also presents the same pattern.

**Table 6.15: Effect of removing or adding of control variables**

Table 6.15 presents the effect of removing or adding control variables to the estimation model. Column 1 presents the independent variables. Column 2 presents the hypothesis number. Column 3 reports the hypothesised sign and columns 4 and 5 present the coefficient sign and significance level when all control variables are included. Columns 6 and 7 report the coefficient sign and significance level when all control variables are removed and columns 8 and 9 report the coefficient sign and significance level when only AGE control variable is removed. Column 10 presents the conclusion with regard to the sensitivity of the regression results.

Independent variable	Hypothesis number	Hypothesised sign	ROA						
			With all control variables (Company size, Growth prospects, Leverage and Company age) <b>included</b>		With all control variables <b>removed</b>		Only Company age removed as a control variable		Conclusion
			Coefficient sign	Significance level	Coefficient sign	Significance level	Coefficient sign	Significance level	
Board size	1	+	+	Significant(0.01)	+	Insignificant	+	Significant (0.01)	Coefficient signs are the same in all scenarios. Significant levels are the same in all but one scenario. Therefore regression results are generally not sensitive to control variables.
Board independence	2	+	-	Significant(0.01)	-	Significance(0.01)	-	Significant (0.01)	Coefficient signs and significant levels are the same in all scenarios. Therefore regression results are generally not sensitive to control variables.
Board committees	3	+	+	Insignificant	+	Insignificant	+	Insignificant	Coefficient signs and significant levels are the same in all scenarios. Therefore regression results are not sensitive to control variables.
Board activity	4	+	-	Significant (0.1)	-	Significance (0.1)	-	Significant (0.1)	Coefficient signs and significant levels are the same in all scenarios. Therefore regression results are not sensitive to control variables.
Board diversity	5	+	+	Insignificant	+	Insignificant	+	Insignificant	Coefficient signs and significant levels are the same in all scenarios. Therefore regression results are not sensitive to control variables.
Leadership structure	6	+	-	Insignificant	-	Insignificant	-	Insignificant	Coefficient signs and significant levels are the same in all scenarios. Therefore regression results are not sensitive to control variables.

	Positively significant
	Negatively significant
	Insignificant

## 6.6 CHAPTER SUMMARY

Assuming that the implementation of King II in 2002 and King III in 2009 in the South African market would lead to better performance, the study first examined the effects of the governance variables on financial performance for the entire period. It would appear that the relationship between corporate governance and financial performance is crowded out by the financial crisis periods. Therefore, the second analysis concerned the three economic periods, the pre-financial, during and post financial periods. The findings indicate that corporate governance had some impact on financial performance before the crisis. However, better governance practices did not generate higher performance during and after the crisis. It would appear though that South African industries were able to mitigate the adverse effects of the crisis after the market turmoil, as they showed better financial performance almost immediately after the crisis. Thus the study found supporting empirical evidence that improved governance structures led to a better performance in the South African context, especially during non-crisis periods. Further, compliance to corporate governance best practices could act as a hedging mechanism during financial crisis.

The next chapter concludes the thesis, clarifies the limitations and provides recommendations for potential future research. It also provides recommendations to policymakers, academics and other stakeholders.

## CHAPTER 7

# CONCLUSIONS, IMPLICATIONS AND LIMITATIONS

### 7.1 INTRODUCTION

This chapter presents a summary of the empirical findings, reported in Chapter 6, concerning the relationship between corporate governance mechanisms and company performance for South African listed companies. Key findings and the study summary are noted in Section 7.2. Sections 7.3, 7.4 and 7.5 present corporate governance in pre-crisis conditions, post-crisis conditions and crisis conditions, respectively. Findings based on industry and period dynamics are discussed in Section 7.6 while Section 7.7 report findings based on robustness analyses. Section 7.8 discusses the policy implications of the research findings and makes recommendations. A summary of the research contributions of the study are presented in Section 7.9. Section 7.10 highlights limitations of the study and Section 7.11 identifies potential avenues for future research and improvement. The chapter is summarised in Section 7.12.

### 7.2 RESEARCH FINDINGS

The subject of corporate governance and corporate performance has been widely discussed and examined over the last two decades. A great deal of change has been noted within South African boardrooms since the King I report in 1992. South African corporate governance reforms over the years have been consistently developed where an increase in compliance was evident throughout the development of these reports.

Although it has been evident that the level of compliance by South African listed companies has increased, the relationship between company performance and corporate governance has been contrasting and inconclusive in prior studies. A large number of empirical work found no clear link between company performance and corporate governance. An argument by scholars posits that better company

performance is achieved in well-governed companies (Nguyen *et al.*, 2015b:148). However, Wintoki *et al.* (2012:581) found no causal relationship between corporate governance and company performance.

Therefore, the main question in this research was whether a relationship existed between internal corporate governance mechanisms and performance of South African companies listed on the Johannesburg Stock Exchange (JSE) for the period 2002 to 2014. The study drew upon the agency, resource dependence and stewardship theories to test whether the hypothesised relationships existed between company performance and corporate governance mechanisms in South Africa during three economic periods. By focusing on three distinct economic periods, this study examined the impact of corporate governance on performance in the midst of the exogenous shock posed by the 2007 to 2008 global financial crisis. The global financial crisis, which is generally thought of as the most serious crisis since the Great Depression, represented an exogenous shock to most individual companies (Francis, Hasan & Wu, 2012:3). Therefore, by examining the impact of corporate governance immediately before, during and after the financial crisis, mitigated to a large extent the endogeneity concerns raised in the literature. Further, the industry nuances were taken into account in order to appreciate the dynamics within the five major industries.

As far as the literature review is concerned, this study is the first of its kind in the South African market to investigate the impact of corporate governance on company performance in three economic periods by applying a dynamic model approach to a data set that included five major South African industries. The study aimed to complement the governance literature by providing new evidence of the effect of corporate governance on company performance before, during and after the financial crisis.

The data used in the study to investigate the impact of corporate governance on company performance was sourced from the INET BFA database. The study ended with a sample of 90 companies consisting of five major industries covering the period 2002 to 2014. This number of companies and the period of examination translated into 1 170 firm-year observations. The examination period of 2002 to 2014 was critical to the study because during this period, King II, King III and the Companies Act No. 71



of 2008 were implemented. In addition, the global financial crisis occurred. Consequently, companies that made the sample needed to have been exposed to all the domestic reforms as well as the global financial crisis.

To this end, similar to the study of Vintilă & Gherghina (2013:896), the unbalanced multiple regression panel data analysis was used as the main tool. Three estimation methods, the generalised moment of methods (GMM), two-stage least squares (2SLS) and generalised least squares (GLS) fixed effects were considered. Similar to the study of Habib (2016:16), among others, GLS emerged as the preferred statistical method based on the explanatory power and the goodness of fit.

The corporate governance variables chosen were based on prior studies as well as the JSE Listing Requirements as recommended by King III. The independent variables were:

- board size,
- board independence,
- board committees,
- board diversity,
- board activity and
- leadership structure.

The dependent variables initially chosen were EVA, Tobin's Q, ROE and ROA. Similarly, based on explanatory power and the goodness of fit, EVA and ROE were dropped. Nonetheless, the study still had one accounting-based measure, ROA and one market-based measure, Tobin's Q. The choice of the two performance measures, ROA and Tobin's Q, was aligned to studies such as those of Adewuyi and Olowookere (2013:175), Habib (2016:15) and Shahwan (2015:650).

In the main, five key findings established from the study were as follows:

- South African listed companies did comply with King III
- compliance levels to King Code increased during the crisis period
- corporate governance had an impact on company performance only during the non-crisis period

- robust corporate governance structures provided a hedge during the crisis period and
- corporate governance differed from industry to industry and economic period to period.

The following subsection provides findings on each of the hypotheses highlighted in Section 4.3 of Chapter 4. The analyses of the hypotheses were based on the full sample (2002 to 2014). However, the three periods, pre-crisis, during the crisis and post-crisis, were used to provide the contrast of the timelines on the relationship between corporate governance and company performance.

### **7.2.1 Board size and financial performance**

According to the South African Companies Act No. 71 of 2008, all public companies must have a minimum of three directors, while the JSE's Listings Requirements mandate listed companies to have a minimum of four directors. None of these set a maximum board size. King III does not specify the exact number of directors that should form a board, but it sets out a general principle that every board must consider whether its size makes it effective or not. This suggests that even though King III admits that a company's board size may affect its performance, it allows companies to determine the actual board size.

The average board size of a South African company was 10.65, but this mean differed from industry to industry, with the financials industry having the largest board size of 11.72 and the consumer goods having the smallest board size of 9.92. All South African companies within the five industries increased the size of their boards during the financial crisis.

The first hypothesis tested was that there was a statistically significant and positive relationship between board size and company performance (both ROA and Tobin's Q). The statistically significant positive coefficient on board size under ROA and Tobin's Q meant that Hypothesis 1 was supported. Empirically, the statistically significant and positive relationship between board size and performance offers

empirical support to the results of Arora and Sharma (2016:428), Shukeri *et al.* (2012:123) and Zakaria *et al.* (2014:10). This is in line with the prediction of the agency theory, which states that corporate governance seeks to ensure that management maximises shareholders' wealth by reducing agency loss, thus improving performance (Adebite *et al.*, 2012:389; Bonazzi & Islam, 2007:7).

However, the finding was not in line with prior studies that recorded a negative relationship between board size and company performance (Garanina & Kaikova, 2016:347; Samuel, 2013:88). Contrary to the study of Afrifa and Tauringana (2015:729), the positive relationship was also noted during the pre-crisis period. However, similar to the study of Sardar, Devendra and Martin (2016:32), board size had no impact during the crisis period.

### **7.2.2 Board independence and financial performance**

The South African Companies' Act No. 71 of 2008 requires every public company to appoint at least three outside directors. King III and the JSE Listings Requirements also require South African corporate boards of directors to consist of a majority of non-executive directors. King III further recommends a majority of non-executive directors, most of whom should be independent of management.

Board composition, which is the proportion of independent non-executive directors on the boards, shows that in 2002, the number of independent non-executive directors was a maximum mean of 27% and in 2014, the maximum mean was 53%, which almost doubled, an indication that South African companies saw the need to increase the representation of non-executive directors. The steady increase from 2010 could be attributed to the implementation of King III, which requires boards to be comprised of a majority of non-executive directors, of whom the majority should be independent. This suggests that King III assisted in making South African corporate boards more independent. Notwithstanding, the mean of 44% for the pooled sample was still below the threshold of King III, which requires the majority of the board members to be independent.

Prior to the global financial crisis, the representation of independent non-executive directors was 42% and increased to 46% after the crisis. As expected, the financials industry reported larger boards and a bigger proportion of independent non-executive directors. This could mean that the complexity and nature of the business required larger boards that were independent. All industries increased their composition of independent directors after the global financial crisis. Notably, all industries but industrials had a majority of independent non-executive directors on their boards, in agreement with the King III, which recommends that the board composition should have a majority of independent directors.

The second hypothesis tested was that there was a statistically significant and positive association between the proportion of independent non-executive directors and company performance (i.e. both ROA and Tobin's Q). The findings indicated that the percentage of non-executive directors was statistically significant and negatively related to ROA, but insignificant with Tobin's Q. This implied that Hypothesis 2 was not empirically supported. The results were consistent during the pre-crisis and during the crisis periods, which indicated that having more independent non-directors has a detrimental effect on accounting returns. This could either mean that South African companies were better off with fewer independent board members in their boardrooms or that the nominations committees appointed inexperienced independent non-executive directors to the boards.

The result also contradicts the recommendations of King III and the JSE Listings Requirements, which encourage a higher proportion of INEDs on South African boards. This finding is aligned to the stewardship theory, which posits that executive management are stewards whose interests are aligned with those of the owners (shareholders). Therefore, managers are motivated to make decisions that resonate with the shareholders.

However, agency theorists state that a higher proportion of independent non-executive directors leads to greater monitoring by the board (Nicholson & Kiel, 2007:587). They argue that if the monitoring functions of the board were implemented effectively, the probability of management to embark on selfish activities would be minimised. This perspective is compatible with the view of resource dependence theorists, who posit

that non-executive directors provide a conduit to vital resources required by companies.

Interestingly, for the pre-crisis period, board independence had a positive impact on Tobin's Q, implying that the market perceived the presence of independent board members as providing the necessary resources to reduce agency costs and increase the market value of the company.

### **7.2.3 Board committees and financial performance**

The South African Companies' Act No. 71 of 2008 requires every public company to establish an audit committee, which must consist of at least two outside directors. Similarly, King III and the JSE's Listings Requirements require South African listed companies to institute audit, remuneration and nomination committees. King III recommends that risk/audit, remuneration and nomination committees be established as standing committees of the board. This study is only limited to the establishment of the three board committees and did not examine whether the chairman of the remuneration and nominations committee was an independent non-executive director in terms of the guideline of King III. The three committees assist the board in the discharge of its duties and responsibilities in respect of risk management, setting and administering remuneration policies and onboarding of board members respectively.

Overall, 65% of companies commissioned all committees (remuneration, audit/risk and nomination). In 2002, a meagre 31% of companies had all committees. This figure increased to 86% in 2014, which showed that the number of companies complying with the King III Code of best practice on corporate governance was more than double.

The main contributor to the high compliance levels was the industrials industry with 71% of companies within that industry having established all three board committees. The opposite of the industrials industry was the financials industry, of which 56.6% companies were compliant. The rest of the industries had compliance levels of about 60%. All industries increased the presence of all three committees after the global financial crisis.

The third hypothesis tested was that there was a statistically significant and positive relationship between the presence of audit/risk, nomination and remuneration committees and company performance (i.e. both ROA and Tobin's Q). The findings regarding the nexus between the existence of board committees and company performance were generally mixed. On the one hand, the results showed that the establishment of all board committees was statistically significant and positively related to Tobin's Q. Similar to Fauzi and Locke (2012:61), this implied that Hypothesis 3 was empirically supported, also supporting the recommendation of King III for South African companies to set up nomination, remuneration and audit/risk committees. In addition, it implied that the establishment of these committees provided another monitoring mechanism, which further reduced agency costs on behalf of the board thus improving the sampled companies' market returns. The results were robust for the pre-crisis period; however, the signs changed after the crisis period, and were consistent with ROA, which recorded a negative significant after the crisis. This could mean that the impact of the recession was so huge that companies had not fully recovered at this time.

On the other hand, while the results indicated that the presence of all committees was positively related to Tobin's Q, there was no statistical significance for ROA. Where there was a significant relationship, it was negative during the post-crisis period.

#### **7.2.4 Board diversity and financial performance**

King III and the JSE's Listings Requirements do not set any specific targets for companies. However, it is recommended that each company should consider whether its board is diverse enough in terms of skills (profession and experience) and demographics (age, ethnicity and gender). This is intended to ensure that the composition of South African corporate boards reflects the diverse South African population, as well as making them effectual.

The mean percentage of female non-executive directors on South African boards was 16%, which was low but still better than in other countries such as China (8.50%), Hong Kong (9%), Indonesia (4.50%), Japan (0.90%), Malaysia (7.80%), Singapore (6.90%), South Korea (1.90%) and Thailand (8.70%) as reported by Catalyst

(2012a:1). Only Norway (40.5%), Sweden (27%), Finland (26.8%), France (18.3%), UK (20.7%) and Denmark (17.2%) were above South Africa in terms of board seats held by women (Catalyst, 2012a:1).

Noteworthy was that the number of non-white women on South African boards increased significantly up to 2011. However, there was a significant decrease from 23% in 2011 to 12% in 2012. As previously noted, all industries increased the size of their boards after the financial crisis. It appeared from the findings that the increase in board size commensurated with an increase in the representation of women in South African boardrooms. The industrials industry contributed the most to the overall representation of 22.2% of women after the global financial crisis with the financials industry only marginally increasing the cohort of women by a meagre 0.97% from 19.66% to 19.85%.

The fourth hypothesis tested was that there was a statistically significant and positive relationship between board diversity and company performance (i.e. both ROA and Tobin's Q). Similar to Garanina and Kaikova (2016:358), Jhunjhunwala and Mishra (2012:71), Mahadeo *et al.* (2012:375) and Taljaard *et al.* (2015:444), the study found no relationship between race and company performance.

The coefficient on board diversity under the ROA was positive, but statistically insignificant. This is inconsistent with the recommendations of King III, which encourages diversity among South African corporate boards. Interestingly, the association was also insignificant before and during the financial crisis and had an inverse relationships after the crisis.

Evidence of a statistically insignificant relationship between board diversity and company performance is not surprising. The no-impact relationship may be attributed to the proportion of non-white females on South African boards. The representation of women in the boardroom was substantially small such that it could barely make a contribution.

With regard to the industries, the hypothesis was only supported by the consumer services industry. The rest of the industries provided mixed results.

## 7.2.5 Board activity and financial performance

King III and the JSE's Listings Requirements task each South African listed company to have in place a policy for frequency, purpose, conduct and duration of the meetings of the board of directors and the board subcommittees. Specifically, King III recommends that the board of directors should sit at least once a quarter although frequency of meetings should be determined by specific circumstances within the company.

On average, South African companies met 5.04 times during 2002 and 2014, with some companies having not met at least once during the study period and others having met 18 times. The mean of board meetings held five times a year is aligned to King III, which recommends a minimum of four annual meetings per year.

Overall, during the financial crisis, all industries but consumer services increased the number of times the board met. Incidentally, the consumer services industry was the only industry that had a relatively small board (9.92), indicating that the smaller the board size, the fewer the board meetings.

The fifth hypothesis analysed was that there was a statistically significant and positive relationship between board activity and company performance (i.e. both ROA and Q-ratio). The findings indicated that there was a statistically significant and negative relationship between the frequency of board meetings and both ROA and Tobin's Q.

This meant Hypothesis 5 was rejected. It also implied that the recommendation of King III, namely that South African corporate boards must hold a minimum of four meetings in a year, was not empirically supported. Empirically, this finding is inconsistent with the result of Ntim and Osei (2013:83), who report a statistically significant and positive association between the frequency of board meetings and company performance, implying that South African boards that meet more frequently tend to generate higher financial performance. Notably, the frequency of board meetings also had an inverse relationship with ROA during the financial crisis and no impact on either ROA or Tobin's Q in other periods.



Ironically, board activity also had an inverse relationship with both accounting and market measures for the consumer services industry. For other results, it provided mixed results for ROA and Tobin's Q.

### **7.2.6 Leadership structure and financial performance**

Analysis of the leadership structure for the study period reported that 93% of the companies separated the leadership roles, where it was 80% in 2002 and increased to 96% in 2014. The upward trend is in agreement with the views of Chen *et al.* (2008:61), who note the recent trend of an increasing number of companies converting from a dual to a non-dual CEO structure. Only 6% of the sampled companies did not separate the position of chairman and CEO and consequently did not comply with the King III Code of best practice. Interestingly, after the global financial crisis, all companies within the basic materials, industrials and consumer goods industries converted to 100% compliance in terms of leadership structure.

The sixth and final hypothesis investigated was that there was a statistically significant positive relationship between leadership structure (CEO-non duality) and company performance (i.e. both ROA and Tobin's Q). The findings indicated that separating the roles of the CEO and chairman had no impact on the company performance (for both Tobin's Q and ROA) during non-crisis times. This meant that Hypothesis 6 could be rejected and was inconsistent with the agency theory. It also did not lend empirical support to the recommendations of King III that the roles of board chairman and CEO should be split. However, the findings are in agreement with the stewardship theory, which states that the benefits of separating the chairman and CEO roles are not so clear cut. The stewardship theory argues that having clear and unambiguous authority concentrated in one person is essential to effective management.

Empirically though, this finding differs from the results of Mesut *et al.* (2014:149), who assert that CEO duality impacts negatively on company performance, and those of Al-Matari *et al.* (2012:311), Arora and Sharma (2016:435) and Gill and Mathur (2011:83), who show that CEO duality positively impacts profitability. During the crisis period, only the leadership structure had an impact on Tobin's Q. This indicated that separating the roles of the CEO and chairman had a positive effect on the market returns only

during crisis periods. This is also in support of King III and the JSE Listings Requirements, which explicitly state that the positions of the chairman and the CEO should not be held by the same individual. King III also states that the chairman should be independent, as defined in Section 3.3.3.2 of Chapter 3 of the King III. The chairman is responsible for the effective functioning of the board and the CEO is responsible for the running of the company's business. There should be a clear distinction between these roles.

Both academic papers and practitioner-oriented literature routinely call for the separation of the chairman and CEO roles, as do a variety of best practice codes and guidelines such as King III, UK Corporate Governance Code and JSE Listings Requirements as well as the listings requirements of numerous international stock exchanges. However, some corporate leaders and associations have responded to the debate about the advantages and disadvantages of role separation, often resisting a mandated separation or a 'one-size-fits-all' approach.

In the most common argument based on the agency theory, the separation of the chairman and CEO roles increases the board's independence from management and thus leads to better monitoring and oversight. Because the CEO manages the company and the chairman leads the board in overseeing the CEO on behalf of shareholders, holders of this view see a conflict of interest if one person occupies both the CEO and chairman roles.

Interestingly, the leadership structure prior to the global financial crisis was 93% and increased to 95% after the crisis. In some cases, it could be that the arrangement was on a temporary acting appointment while the recruitment of a CEO was underway. The consumer goods and industrials industries recorded 100% of CEO non-duality after the global crisis. All other industries increased their leadership proportions. Further analysis of the data revealed that the consumer goods industry also had the highest number of independent non-executive directors in its fold, which could indicate that independent decision-making was brought about by independent directors and the separation of the roles of CEO and chairman.

### **7.3 CORPORATE GOVERNANCE IN PRE-CRISIS CONDITIONS**

Taking into account the period leading to the financial crisis, the board size, board independence and board committees were significant and positively related to company performance, in particular, the market returns. This was an indication that the market perceived the three to provide adequate monitoring mechanisms to reduce agency costs and increase company market valuation. The results support both the resource dependence and agency theories, namely that the board and independent directors bring with them skills and resources that management do not have. However, accounting returns were negatively affected when the board was more independent during this period, which supports the stewardship theory, namely that management knows more than independent directors. This may point out a lack of training or recruitment flaws.

In accordance with Rebeiz (2015:751), the relationship between board independence and performance might not be linear in nature but curvilinear with a negative concavity, thus beyond a certain threshold the relationship starts to erode. Therefore, a balance should be struck.

Based on the aforementioned, some corporate governance attributes such as board size, board committees and board independence had an influence on company performance. Importantly, a balancing act in terms of the number of independent directors is required.

### **7.4 CORPORATE GOVERNANCE IN POST-CRISIS CONDITIONS**

Considering the period after the global financial crisis, it was observed that only the board size was positively correlated to both performance returns. However, the presence of board committees had a negative effect on the accounting and market returns. In addition, board diversity had an inverse relationship with market returns. This result contradicts the agency and resource dependence theories, which state that increased levels of female representation can lead to increased board independence and broader network of different perspectives (Taljaard *et al.*, 2015:443). However, as

already mentioned, the non-white representation of women is still very low in South Africa. As a result, it is premature and myopic to expect a positive performance return at this stage.

## **7.5 CORPORATE GOVERNANCE IN CRISIS CONDITIONS**

The differences in results between crisis and normal periods were striking. Of all the corporate governance characteristics, only the leadership structure was significant and positively related to the market performance measure. The results indicated that the market valued the separation of roles of CEO and chairman, especially during turbulent times.

Board activity and board independence were significant but negative, indicating that overly vigilant boards and independent non-executive directors were not helpful during a crisis. Instead, the board should meet less and in line with the stewardship theory, management should be given the scope and latitude for managerial discretion.

Taken together, these findings did not provide a ringing endorsement of the impact of corporate governance on company performance during a crisis period, but indicated that some level of flexibility and entrepreneurship was needed during these times. For instance, during this period, companies needed more executive management involvement to steer the ship than they needed independent board members. Further, increasing the number of board meetings did not yield any positive returns for the company.

The next section discusses the influence of industry dynamics on the relationship between corporate governance and company performance. The discussion is in line with the three economic periods.

## 7.6 FINDINGS BASED ON INDUSTRY AND PERIOD DYNAMICS

As discussed in Chapter 1, another secondary objective of the study was to investigate the impact of corporate governance on company performance, cognisant of the industry dynamics. The study attempted to ascertain whether corporate governance differed from industry to industry as well as to identify specific requisite corporate governance characteristics for each industry.

A number of interesting findings emerged when the five industries were compared. Because it was already established that the timing had an impact on the corporate governance and performance relationship, the following analysis only compares the pre-crisis, during and post-crisis periods and ignores the entire period (2002-2014).

### 7.6.1 Findings specific to the financials industry

Before the global financial crisis, board independence and board committees appeared to be the only corporate governance variables that were consistent for both accounting and market measures. While the other variables, board size, board activity, board diversity and leadership structure provided contrasting signs in terms of coefficients, the difference in signs could be attributed to the shortcomings of each performance metric. It is interesting to see that all six corporate governance variables were significant in this industry during this period.

During the crisis period, both accounting and market returns were positive when the roles of the CEO and chairman were separated. Otherwise, the rest of the corporate governance variables were significant in one performance metric and insignificant in the other. Hence the conclusion is that, during crisis periods, it is only the leadership structure that is vital for company performance.

After the crisis, only the board size had an impact on both Tobin's Q and ROA. Board diversity had an inverse relationship to both measures and the rest of the variables were inconsistent.

## **7.6.2 Findings specific to the basic materials industry**

Between 2005 and 2007, prior to the global financial crisis, the board size was negative for accounting returns, while positive for market returns. Board activity, board diversity and leadership structure were only significant for ROA but insignificant for Tobin's Q. Thus prior to the crisis, only the board size was important to the company in terms of performance. However, the direction of the relationship depended on the performance indicator.

In this industry, only the proportion of independent non-executive directors mattered during the crisis, regardless of the performance measure. After the crisis, only board size had a positive impact on both returns, while board independence and board diversity relied on the performance indicator.

## **7.6.3 Findings specific to the consumer services industry**

Just before the global financial crisis, board size, board committees and board diversity were the only corporate governance attributes that were positively related to both Tobin's Q and ROA. Leadership structure had an inverse relationship, indicating that separating the roles of the CEO and the chairman was detrimental to the financial well-being of the company. Further, too many board meetings during this period resulted in negative returns.

During the global financial crisis, establishing all board committees and diversifying the board in terms of race and gender, provided positive returns. The size of the board was dependent on the performance metrics used, while CEO non-duality and board independence were inversely related to company performance.

Only the board size had a positive impact on both accounting and market-based returns after the global financial crisis. The presence of board committees and leadership structure had an inverse nexus, while board diversity was contingent on the performance indicator used.

#### **7.6.4 Findings specific to the consumer goods industry**

In the period leading to the financial crisis, board size was positively correlated with both accounting and market returns, while the frequency of board meetings and board diversity depended on which performance metrics was used for the analysis. During the global crisis, no corporate governance variable was positively or negatively linked to both performance measures. Board committees had an influence that was contingent on the performance measure used. After the crisis period, more non-white board members generated positive returns for the company from both performance perspectives.

#### **7.6.5 Findings specific to the industrials industry**

During the period leading to the global financial crisis, separating the roles of the CEO and chairman generated positive returns in terms of accounting and market indicators. The coefficient signs of the board size and board committees depended on whether an accounting measure or market measure was used.

During the crisis, the presence of nomination, remuneration and audit/risk committees generated positive returns for Tobin's Q and ROA, while board size depended on the performance measure used. After the global crisis, board size and board independence were positively associated with both returns, while board committees were inversely related to both Tobin's Q and ROA.

### **7.7 FINDINGS BASED ON THE ROBUSTNESS ANALYSES**

Recently, a large body of empirical literature has raised questions about endogeneity, which makes interpreting the governance and performance relationship difficult (Afrifa & Tauringana, 2015:730; Lacker & Rusticus, 2010:186; Nguyen *et al.*, 2014:2; Schultz *et al.*, 2010:146). Generally, endogeneity problems arise in three different ways:

- correlation with the error term (Wooldridge, 2002:50);
- omitted variable bias; and
- simultaneity (Larcker & Rusticus, 2010:186).

Consequently, as discussed in Chapter 5 and reported in Chapter 6, following the study of Afrifa and Tauringana (2015:730) and Orazalin *et al.* (2016:809), four main robustness or sensitivity tests were carried out to solve potential endogeneity problems. The objective of the tests was to ascertain the extent to which the results reported in Chapter 6 were robust or sensitive to alternative empirical and theoretical explanations, as well as estimations. These analyses included estimating a one-year lagged performance and corporate governance structure.

First, similar to the study of Nguyen *et al.* (2015b:148), this study used the one-year lagged Tobin's Q and ROA to capture all impact of the past on the current performance to ensure that Equation 5.1 was not misspecified (i.e. there could be an omitted variable). This approach alleviated the issue of omitted variable bias in the current study, as recommended by Wintoki *et al.* (2012:593). In addition, four control variables, namely leverage, company age, company size and growth prospects were included in the regression analysis. The coefficient signs and significance levels were the same for all variables when four control variables were used as when two (company size and growth prospects) were used - an indication that the results were robust in terms of control variables.

In order to deal with the issue of simultaneity, following Afrifa and Tauringana (2015:730) and Mina *et al.* (2013:15), this study lagged independent variables and investigated the association of the changes in the independent variables and the dependent variable. The coefficient signs and the significance levels were the same for the independent lagged and the original regression results, implying that the issue of simultaneity was obviated.

The influence of corporate governance on company performance may differ based on whether a company is making a profit or loss (Afrifa & Tauringana, 2015:729). The purpose of this analysis was to determine whether there was a significant relationship between corporate governance and South African listed companies for unprofitable or profitable observation. The results indicated that one-year performance lag, board size, board committee and board activity had a similar influence on company performance irrespective of whether a company made a profit or not. However, additionally, board diversity had a positive and significant relationship with company



performance for unprofitable companies and a negative and insignificant relationship for profitable companies.

In the same vein, profitable companies valued the presence of board independence more than their counterparts did. Based on the preceding, the results indicated that there was no reverse causality, where company performance influenced corporate governance structure. The findings indicated that, depending on the level of performance, additional corporate governance structures could be put in place, while the minimum checks and balances such as board size, board committee and board activity were similar irrespective of performance.

The next section discusses policy implications of the research findings summarised above. Also, and where applicable, recommendations expected to bring about improvements are made.

## **7.8 POLICY IMPLICATIONS**

The implications of the study findings are manifold. First, all South African companies listed on the JSE are legally required to report on the application of the King III on corporate governance, as required by Section 8.63 of the JSE Listings Requirements. To this end, several implications can be drawn from the level of compliance by South African listed companies to the King III and JSE Listings Requirements.

The analyses of the levels of corporate governance compliance indicated that corporate governance standards generally improved over the period of examination, specifically during the crisis period. Incidentally, the crisis period coincided with the implementation of King III in South Africa. This implies that concerted effort of improving corporate governance in South Africa by the various stakeholders, notably the Institute of Directors of South Africa (IoDSA), FSB and the JSE, among others, has yielded some benefits. However, this study cautions the move from “apply or explain” by King III to “apply and explain”, as advocated by the recently published King IV, because the study showed that compliance levels and performance differed on the basis of the timing and the industry classification. For instance, during the crisis periods, board independence was vital for the basic materials industry and detrimental

for the consumer services industry. Hence it would be detrimental to prescribe to the consumer services industry to have more independent non-executive directors in their boardroom.

Secondly, corporate governance had an influence on company performance during non-crisis periods. This finding is in agreement with numerous studies that showed that good corporate governance practices improved company performance under stable economic conditions and provided a shield against the adverse effects of financial crises and turbulent economic situations (Erkens *et al.*, 2012:389; Orazalin *et al.*, 2016:810). Similar to Peni and Vähämaa (2012:19), the study found that good governance could have reduced vulnerability and mitigated the adverse influence of the crisis on companies. Therefore, companies could gain from implementing the recommended governance policies, mindful that it is not a one-size-fits-all situation. In addition, South African companies should maintain a culture of flexible corporate governance compliance. Those companies operating outside the borders should also encourage the same culture, mindful of differing national cultures.

Thirdly, the results also indicated that South African companies with a greater number of board members exhibited higher accounting and market returns during non-crisis periods. However, the study found that the maximum board size should be 14 board members with the minimum being four, depending on the economic period and industry type. Therefore, regulators should give companies latitude in terms of the size of the board.

Fourthly, the findings also indicated that during crisis periods, only the leadership structure generated higher market returns. In the main, during this period, corporate governance did not necessary influence company performance but rather provided a hedging mechanism to companies. The findings revealed that even though only leadership structure was positive and significant, the coefficients of board size, board independence, board committees and board gender were also positive but insignificant. The insignificance levels could be attributed to the severity of the global financial crisis. Therefore, policymakers, the JSE and the King Committee should reconsider the policy of encouraging optimal board size, separating the roles of CEO

and chairman, board independence and board diversity, especially during the crisis periods.

Fifthly, the study also noted that during the crisis periods, board independence and board activity generated lower accounting returns. This could be a question of chasing the quantities as opposed to the quality. Nomination committees, which are tasked with the recruitment of board members, should be trained to ensure good board hires. Independent non-executive directors should have adequate skills and requisite experience. The introduction of Chartered Director South Africa (CD(SA)) designation by the Institute of Directors South Africa (IoDSA) is a step in the right direction, which could ensure that independent non-executive directors have the right skills and experience to make a difference in the boardroom. The CD(SA) is designed to enhance directorship as a profession, assess and credit the mastery of directors, enhance the skill set of directors and further promote sound corporate governance in South Africa. This is a new IoDSA initiative, which started in 2016.

Sixthly, for both shareholders and managers of companies who are concerned about company performance, the findings indicated that the adoption of flexible good corporate governance practices by South African companies assisted in reducing agency cost, which, in turn, resulted in performance improvement for companies and shareholders alike. Therefore, organisations such as Brand South Africa which are tasked with marketing the country should be aware of the compliance levels by South African companies and communicate such to potential investors. Platforms such as the World Economic Forum (WEF) could be leveraged to communicate the high compliance levels of South African listed companies to King III Code of good corporate governance practices. This could lure investors who normally place a premium on well-governed companies. In addition, both board of directors and managers should be keen to adopt good corporate governance structures in order to reduce agency costs.

Finally, in relation to board activity, perhaps regulators could ensure that board meeting documents reach board members sufficiently in advance, at least 10 days before the board meeting. This will ensure that board members have sufficient time to analyse the material received and prepare adequately for the meetings.

In summary, the results revealed that corporate governance impacted company performance only in the period before the crisis and to some extent after the financial crisis, but no significant impact was found during the crisis period, except for leadership structure. These findings point to a central issue, which is the need to re-evaluate corporate governance not only in steady periods but also during non-steady financial periods, and to evaluate its ability to weather the storm in such testing conditions.

The next section summarises the contributions of the study to the extant global corporate governance literature. It also highlights the unique contributions to the South African market.

## 7.9 RESEARCH CONTRIBUTIONS

The contribution of this study to the corporate governance empirical literature is fourfold. First, unlike most studies (Fallatah & Dickins, 2012:10025; Habib, 2016:11 Orazalin *et al.*, 2016:798), and in particular South African studies (Mans-Kemp & Viviers, 2015b:20; Meyer & De Wet, 2013:28; Muchemwa *et al.*, 2016:497; Pamburai *et al.*, 2015:115; Taljaard *et al.*, 2015:425; Tshipa & Mokoaleli-Mokoteli, 2015b:149), which investigated the relationship between corporate governance and company performance in a static perspective, this study, consistent with Arora and Sharma (2016:430), Nguyen *et al.* (2015b:148) and Wintoki *et al.* (2012:581), employed a dynamic model approach, within which the potential impact of past performance on current performance and corporate governance mechanism was fully controlled. Similar to Nguyen *et al.* (2015b:148), by taking into account the dynamic endogeneity and other potential sources of endogeneity, the study expected robust and credible inferences on the causal nexus between corporate governance and company performance.

Secondly, by providing robust empirical evidence that corporate governance and company performance were contingent on economic periods, this study provides a South African contribution to the global literature, namely that some corporate governance variables had a different impact on the performance of companies during different periods, because different governance mechanisms were suitable for

different periods and industries. These findings support the global studies of Desender *et al.* (2013:834), Dowell *et al.* (2011:1025), Erkens *et al.* (2012:404) and Van Essen *et al.* (2013:201).

Thirdly, this study established that, in the main, corporate governance structures did not necessarily depend on whether the company made a profit or loss. There are fundamental corporate governance attributes, such as board size, board committees and board activity that all companies, regardless of profit, should institutionalise. This finding eliminates the possibility of reverse causality, which stipulates that good performance has an impact on corporate governance structures.

Finally, and uniquely, the study considered the impact of the industry nuances on the relationship between corporate governance and company performance. To this end, the study cautions the King IV philosophy of “apply and explain”. King IV assumes application of all principles, and requires companies to explain how the principles are applied. The caveat in this approach, based on the findings of the study, is that what is applicable to one industry might not necessarily be applicable to another. For instance, board activity had a positive impact on performance for the basic materials industry, while it had a negative effect for the consumer services industry. As a result, the board of the former industry met 5.54 times on average to 4.34 of the consumer services industry. However, the situation reversed when the economic periods were considered.

## **7.10 LIMITATIONS**

Despite the findings, this study, like any other study, had limitations. First, the results were based on South African listed companies covering only the five major industries. While focusing on South Africa is beneficial in giving more detailed results on the relationship between corporate governance and company performance, these results may not be generalisable as they are only specific to South Africa and to the five industries. Consequently, future studies should focus on other African countries to be useful in terms of global comparability.

Even though EVA measures for companies listed on the JSE are readily available on the INET BFA database, most companies still do not use and report EVA. This resulted in losing many companies due to the unavailability of EVA data for some companies. This is because in South Africa, EVA is only applicable to industrial companies. Financials, mining and investment companies do not provide the type of financial information required in the annual statements.

Few studies that look at the impact of corporate governance and performance during crisis and non-crisis only consider the financial sector. To enrich the empirical literature and allow for comparison, similar studies to this study should be replicated on a global scale.

Arguably, excluding other companies introduces survivorship bias. However, as explained in Section 1.4 of Chapter 1, the criteria generated comparatively larger firm-year observations in relation to those of prior South African studies to the extent that the generalisation of the research results may not be substantially impaired. Notwithstanding, these weaknesses could potentially limit the generalisation of the research findings.

Therefore, the research findings must be interpreted in the light of the above limitations. Also, these limitations potentially represent avenues for future research. Therefore, the next section points out potential avenues for future research and improvements.

## **7.11 AVENUES FOR FURTHER STUDIES**

Based on the results of this study, some future research work is recommended. First, this study examined the effect of corporate governance on company performance from the perspective of agency, resource dependence and stewardship theories.

The fundamental theories in corporate governance began with the agency theory, expanded into stewardship theory and stakeholder theory and evolved to resource dependency theory, transaction cost theory, political theory and ethics related theories such as business ethics theory, virtue ethics theory, feminists ethics theory, discourse

theory and postmodernism ethics theory (Abdullah & Valentine, 2009:88; Taljaard *et al.*, 2015:425). This study was limited to only three, namely, agency, stewardship and resource dependence theories. Hence, this study could be enriched by investigating the relationship between corporate governance and company performance using other established corporate governance theories such as human capital, signalling and institutional theories.

The media play an important role in corporate governance promotion (Lauterbach & Pajuste, 2017:17) and market returns are sensitive to public opinion. Future research could consider how the media also play a monitoring role to curb agency costs.

Most corporate governance studies produce inconclusive results. To obviate this, future studies could employ other methodologies such as triangulation. Mixing hermeneutic and quantitative methods could mitigate methodological artifacts and assist in establishing a clear link between corporate governance and company performance (Rebeiz, 2015:748).

The low explanatory power obtained from this study and many other prior studies with regard to EVA and ROE necessitates the importance of examining which performance measures are influenced by corporate governance attributes. The study of Prusty (2013:346) observes that good corporate governance could improve corporate performance by adopting EVA reporting, which is important for investment decision-making and internal corporate governance. A study that could examine the reasons why ROE and EVA almost always exhibit low explanatory power compared with their counterpart, ROA and Tobin's Q respectively, could shed some light on the extant literature.

Finally, a small but yet noteworthy body of literature suggests that the nexus between boardroom independence and financial performance is not linear in nature, but rather curvilinear with a negative concavity (Rebeiz, 2015:751). To this end, future studies are encouraged to explore the hypothesis. Further, the study has also established that the relationship between board size and performance is not perennially positive – the findings of this study concluded that the size of the board is only significant and positive if the number of board members is greater than four but equal to or less than 14.

Therefore, future studies could investigate whether the relationship between board size and performance is “n” or “u” shape.

## 7.12 CHAPTER SUMMARY

This is the final chapter of the thesis. The thesis examined the relationship between corporate governance mechanisms and company performance through listed companies in South Africa. The study also mitigated potential endogeneity issues by various means as recommended by the literature.

The study found that a number of corporate governance mechanisms had significant effects on company performance, while some variables did not have any significant effect. However, the impact differed from crisis to non-crisis period as well as from industry to industry.

As proposed by the agency theory, the study provided evidence showing the positive impact of board effective monitoring on company performance during non-crisis periods. It also provided support for the stewardship view that management is a critical resource during crisis periods. Further, it lends support to the resource dependence theorists, namely that board independence provides requisite skills and knowledge prior to the financial crisis.

Accounting returns appear to be in favour of the stewardship theory, while market returns seem to favour the agency and resource dependence theory. This indicates that accounting returns see independent boards as adding no value, while market returns see independent boards as a means of bringing adequate resources to the company. Secondly, the market perceives larger boards, board activity, board committees and leadership structure to be structures that could provide adequate monitoring and reduce agency costs. It presumes that managers are disingenuous and will embark on malpractices of personal embezzlement at the expense of the shareholders.



Similar to most studies in corporate governance that record mixed results for accounting and market measures (Arora & Sharma, 2016:427; Gherghina, 2015:97; Meyer & De Wet, 2013:27; Pamburai *et al.*, 2015:115), this study posited that it was not surprising that in some instances accounting and market measures provided contrasting results as the two indicators measure performance from different perspective (Rebeiz, 2015:753). However, no performance metric is without flaws, in particular accounting measures, which could be impacted by potential managerial manipulations and lack of timeliness (O'Connell & Cramer, 2010:395).

South African companies recorded high levels of corporate governance compliance especially during the crisis period, in all aspects. One implication is that the authorities should encourage listed companies to invest in corporate governance structures, mindful of their circumstances and industry classification. Such investment could substantially improve attracting investors (Pae & Choi, 2011:338).

The “apply and explain” approach, as advocated by the recently published King IV, could be problematic because it limits flexibility. As observed with industries, corporate governance structures should be adaptive. Companies should be given the latitude to apply **or** explain non-application as opposed to the rigid apply **and** explain. This study proved that corporate governance structures differed from industry to industry. What works for one industry might not necessarily work for another. In essence, corporate governance structures cannot be replicated.

Importantly, the regression results indicated that the relationship between corporate governance and company performance was of a dynamic nature and robust for all estimation techniques such as two-stage least squares (S2SLS), generalised method of moments (GMM) and generalised least squares (GLS). This finding corroborates the studies of Ayadi *et al.* (2015:742), Nguyen *et al.* (2014:1), Schultz *et al.* (2010:145) and Wintoki *et al.* (2012:583), among others, which state that the relationship between corporate governance and company performance should be investigated in a dynamic framework. This implies that past performance should be part of the independent variables to control for potential effects of unobserved historical dynamics on the current performance.

The results indicated that one-year performance lag, board size, board committee and board activity had similar influence on company performance irrespective of whether a company made a profit or not. However, additionally, board diversity had a positive and significant relationship with company performance for unprofitable companies and a negative and insignificant relationship for profitable companies. In the same vein, profitable companies valued the presence of board independence more than their counterparts did. Based on the preceding, the results indicated that there was no reverse causality, where company performance influenced corporate governance structure. The findings indicated that, depending on the level of performance, additional corporate governance structures could be put in place, while the minimum checks and balances such as board size, board committee and board activity were similar irrespective of performance.

## REFERENCES

- Abdioglu, N., Khurshed, A. and Stathopoulos, K. (2013): "Foreign institutional investment: Is governance quality at home important?", *Journal of International Money and Finance*, 32, pp. 916-940.
- Abdo, A. and Fisher, G. (2007): "The impact of reported corporate governance disclosure on financial performance of companies", *Investment Analysts Journal*, 36(66), pp. 43-56.
- Abdullah, H. and Valentine, B. (2009): "Fundamental and ethics theories of corporate governance", *Middle Eastern Finance and Economics*, 4, pp. 88-96.
- Abels, P. B. and Martelli, J. T. (2013): "CEO duality: how many hats are too many?", *Corporate Governance: The International Journal of Business Society*, 13(2), pp. 135-147.
- Abor, J. and Biekpe, N. (2007): "Corporate governance, ownership structure and performance of SMEs in Ghana: Implications for financing opportunities", *Corporate Governance*, 7(3), pp. 288-300.
- Abzari, M., Fathi, S. and Torosian, A. (2012): "Inter-industry differences in capital structure and product market competition: Evidence from Iranian companies", *Interdisciplinary Journal of Contemporary Research in Business*, 3(9), pp. 395-402.
- Adams, R. B. (2012): "Governance and the financial crisis", *International Review of Finance*, 12(1), pp. 7-38.
- Adams, R. and Ferreira, D. (2009): "Women in the boardroom and their impact on governance and performance", *Journal of Financial Economics*, 94(2), pp. 291-309.
- Adegbite, E. (2012): "Corporate governance regulation in Nigeria", *Corporate Governance: The International Journal of Business in Society*, 12(2), pp. 257-276.
- Adegbite, E., Amaeshi, K. and Amao, O. (2012): "The politics of shareholder activism in Nigeria", *Journal of Business Ethics*, 105(3), pp. 389-402.
- Adewuyi, A. O and Olowookere, A. E. (2013): "New corporate code and immediate performance change of the Nigerian companies", *Corporate Governance*, 13(3), pp. 169-183.
- Aduda, J., Chogii, R. and Magutu, P. O. (2013): "An empirical test of competing corporate governance theories on the performance of companies listed at the Nairobi securities exchange", *European Scientific Journal*, 9(13), pp. 107-137.

- African Business Magazine (2013): *African Business' Top 250 rankings*. 14 June 2013. Available from: <http://africanbusinessmagazine.com/uncategorised/african-business-top-250-rankings/> [Accessed: 2014-02-02].
- African Corporate Governance Network (2016): *State of corporate governance in Africa: An overview of 13 countries*. Available from: <https://www.afcgn.org/acgn-corporate-governance-report-2016/> [Accessed: 2016-07-25].
- Afrifa, G. A, and Tauringana, V. (2015): "Corporate governance and performance of UK listed small and medium enterprises", *Corporate Governance*, 15(5), pp. 719-733.
- Agrawal, A. and Knoeber, C. R. (1996): "Firm performance and mechanism to control agency problems between managers and shareholders", *Journal of Financial and Quantitative Analysis*, 31(3), pp. 377-397.
- Aguilera, R. V. and Cuervo-Cazurra, A. (2009): "Codes of good governance", *Corporate Governance: An International Review*, 17(3), pp. 376–387
- Aguilera, R. V. and Jackson, G. (2010): "Comparative and international corporate governance", *Academy of Management Annals*, 4(1), pp. 485-556.
- Agyemang, O. S., Aboagye, E., Antwi, S. and Frimpong, J. (2014): "Board of directors and firm performance of banking institutions: A Ghanaian experience", *European Journal of Economics, Finance and Administrative Sciences*, 67, pp. 45-59.
- Agyemang, O. S. and Castellini, M. (2015): "Corporate governance in an emergent economy: a case of Ghana", *Corporate Governance*, 15(1), pp. 52-84.
- Ahsan, A. M. (2012), "Can ROE be used to predict portfolio performance?", *Economics, Management and Financial Markets*, 2, pp. 132-148.
- Akpan, E. O. and Amran, N. A. (2014): "Board characteristics and firm performance: Evidence from Nigeria", *Journal of Finance and Accounting*, 2(3), pp. 81-89.
- Alalade, Y. S. A., Onadeko, B. B. and Okezie, O. F. (2014): "Corporate governance practices and companies' financial performance of selected manufacturing companies in Lagos State, Nigeria", *International Journal of Economics, Finance and Management Sciences*, 2(5), pp. 285-296.
- Aldamen, H., Duncan, K., Kelly, S., McNamara, R. and Nagel, S. (2012): "Audit committee characteristics and firm performance during the global financial crisis", *Accounting and Finance*, 54(4), pp. 971-1000.
- Alexandra, D., Britton, A. and Jorissen, A. (2007): *International financial and analysis*, 3<sup>rd</sup> Edition, London: Thomson Learning.

- Aliyu, A. A., Bello, M. U., Kasim, R. and Martin, D. (2014): "Positivist and non-positivist paradigm in social science research: Conflicting paradigms or perfect partners?", *Journal of Management and Sustainability*, 4(3), pp. 79-95.
- Al-Matari, Y. A., Al-Swidi, A. K., Bt-Fadzil, F. H. B. F. H., Al-Matari, E. M. (2012): "The impact of board characteristics on company performance: Evidence from non-financial listed companies in Kuwaiti Stock Exchange", *International Journal of Accounting and Financial Reporting*, 2(2), pp. 310-332.
- Alzharani, A. M., Che-Ahmad, A. and Aljaaidi, K. S. (2012): "Factors associated with firm performance: Empirical evidence from the kingdom of Saudi Arabia", *Accounting and Taxation*, 4(2), pp. 49-56.
- Amba, S. M. (2013): "Does CEO duality enhance firms business performance? Empirical evidence from Bahrain", *International Journal of Business and Social Science*, 4(6), pp. 88-95.
- Amer, M., Ragab, A. A. and Shehata, S. E. (2014): *Audit committee characteristics and financial performance: Evidence from Egyptian listed companies*, Paper presented at the 2014 Proceedings of 6<sup>th</sup> Annual American Business Research Conference, pp. 1-25. Available from: [http://wbiworldconpro.com/uploads/new-york-conference-2014/accounting/1401859517\\_116-Mrwan.pdf](http://wbiworldconpro.com/uploads/new-york-conference-2014/accounting/1401859517_116-Mrwan.pdf)[Accessed: 2016-01-01].
- Ammann, M., Oesch, D. and Schmid, M. M. (2011): "Corporate governance and firm value: International evidence", *Journal of Empirical Finance*, 18(1), pp. 36-45.
- Ammann, M., Oesch, D. and Schmid, M. M. (2013): "Product market competition, corporate governance and firm value: Evidence from the EU area", *European Financial Management*, 19(3), pp. 452-469.
- Appiah, K. O and Chizema, A. (2015): "Remuneration committee and corporate failure", *Corporate Governance*, 15(5), pp. 623-640.
- Ararat, M., Aksu, M. and Cetin, A. T. (2015): "How board diversity affects firm performance in emerging markets: Evidence on channels in controlled companies", *Corporate Governance: An International Review*, 23(2), pp. 83-103.
- Ararat, M., Black, B. S. and Yurtoglu, B. B. (2017): "The effect of corporate governance on firm value and profitability: Time-series evidence from Turkey", *Emerging Markets Review*, 30, pp. 113-132.
- Armstrong, P., Segal, N. and B. Davis, B. (2005): *Corporate Governance: South Africa, a Pioneer in Africa*, The South African Institute of International Affairs, Global Best

- Practice. report no. 1, 2005. Available from: [https://www.saiia.org.za/images/upload/Corporate\\_Gov\\_3May12005final.pdf/](https://www.saiia.org.za/images/upload/Corporate_Gov_3May12005final.pdf/) [Accessed: 2015-07-16].
- Armstrong, P., Segal, N., and Davis, B. (2006): “*Corporate governance in South Africa*”, Handbook on international corporate governance, pp. 210-230.
- Arora, A. and Sharma, C. (2016), “Corporate governance and firm performance in developing countries: evidence from India”, *Corporate Governance*, 16(2), pp. 420-436.
- Arosa, B., Iturralde, T. and Maseda, A. (2013), “The board structure and firm performance in SMEs: Evidence from Spain”, *Investigaciones Europeas de Dirección Economía de la Empresa*, 19, pp. 127-135.
- Arslan, M., Zaman, R., Malik, R. K. and Mehmood, A. (2014), “Impact of CEO duality and audit committee on firm performance: A study of Oil & Gas listed firms of Pakistan”, *Research Journal of Finance and Accounting*, 5(17), pp. 151-157.
- Aslam, M. and Pasha, G. R. (2007), “Adaptive estimation of heteroscedastic money demand model of Pakistan”, *Pakistan Journal of Statistics and Operation Research*, 3(2), pp. 109-115.
- Ayadi, O. F., Ojo, A. T., Ayadi, M. F. and Adetula, D. T. (2015), “Gender diversity in the governance of the Nigerian securities market”, *Corporate Governance*, 15(5), pp. 734-746.
- Babatunde, M. A. and Olaniran, O. (2009), “The effect of internal and external mechanism on governance and performance of corporate firms in Nigeria”, *Corporate Ownership and Control*, 7(2), pp. 330-344.
- Balasubramanian, N., Black, B. S. and Khanna, V. (2010): “The relations between firm-level corporate governance and market value: A case of India”, *Emerging Markets Review*, 11(4), pp. 319-340.
- Bamber, R., Falkena, H., Llewellyn, D. T. and Store, T. (2001), *Financial Regulation in South Africa*, SA Financial Sector Forum. Available from: [http://www.finmark.org.za/sites/wp-content/uploads/pubs/Rep\\_FinancialReginSA\\_2005.pdf](http://www.finmark.org.za/sites/wp-content/uploads/pubs/Rep_FinancialReginSA_2005.pdf) [Accessed: 2015-12-09].
- Baranchuk, N. and Dybvig, P. H. (2009): “Consensus in diverse corporate boards”, *Review of Financial Studies*, 22(2), pp. 715-747.
- Barrier, M. M. (2003): “Principles not rules”, *Internal Auditor*, 60(4), pp. 68-73.
- Baysinger, B. D. and Butler, H. N. (1985): “Corporate governance and the board of directors: Performance effects of changes in board composition”, *Journal of Law, Economics and Organization*, 1(1), pp. 101-124.

- Beattie, V. and Thomson, S. J. (2007): "Lifting the lid on the use of content analysis to investigate intellectual capital disclosures", *In Accounting Forum*, 31(2), pp. 129-163.
- Bebchuk, L. A. and Hamdani, A. (2009): "The elusive quest for global governance standards", *University of Pennsylvania Law Review*, 157(5), pp. 1263-1317.
- Bezemer, P. J., Peij, S., De Kruijs, L. and Maassen, G. (2014): "How two-tier boards can be more effective", *Corporate governance*, 14(1), pp. 15-31.
- Bhagat, S. and Bolton, B. (2008): "Corporate governance and firm performance", *Journal of Corporate Finance*, 14(3), pp. 257-273.
- Bhagat, S. and Black, B. (2002): "The non-correlation between board independence and long-term firm performance", *Journal of Corporation Law*, 27(2), pp. 231-273.
- Black, B. S., Jang, H. and Kim, W. (2006): "Does corporate governance predict company's market values? Evidence from Korea", *Journal of Law, Economics and Organisation*, 22(2), pp. 366-413.
- Blair, M. M. (1995): *Ownership and control: Rethink corporate governance for the twenty-first century*, Washington: The Brookings Institution.
- Böhren, O. and Ström, R. O. (2010), "Governance and politics: Regulating independence and diversity in the board room", *Journal of Business Finance & Accounting*, Vol. 37 No. 9, pp. 1281-1308.
- Bonazzi, L. and Islam, S. M. (2007): "Agency theory and corporate governance: A study of the effectiveness of board in their monitoring of the CEO", *Journal of Modelling in Management*, 2(1), pp. 7-23.
- Bond Exchange of South Africa (BESA) (2008): *Introducing BESA*. Available from: <http://www.bondexchange.co.za/besa/view/besa/en/page109/>[Accessed: 2015 -08-15].
- Börsch-Supan, A. and Köke, J. (2002): "An applied econometricians' view of empirical corporate governance studies", *German Economic Review*, 3(3), pp. 295-326.
- Bozec, R., Dia, M. and Bozec, Y. (2010): "Governance-performance relationship: A re-examination using technical efficiency measures", *British Journal of Management*, 21(3), pp. 684-700.
- Brick, I. E. and Chidambaran, N. K. (2010): "Board meetings, committee structure, and firm value", *Journal of Corporate Finance*, 16(4), pp. 533-553.
- Brown, P., Beekes, W. and Verhoeven, P. (2011): "Corporate governance, accounting and finance: a review", *Accounting & Finance*, 51(1), pp. 96-172.

- Bruno, V. and Claessens, S. (2010): "Corporate governance and regulations: Can there be too much of a good thing?", *Journal of Financial Intermediation*, 19(4), pp. 461-482.
- Bryman, A. and Bell, E. (2007): *Business research methods*, 2<sup>nd</sup> Edition, Oxford: University Press.
- Business Day, Liberty and Alexander Forbes named in complaint against FSB 29 February 2016 - 07:55 AM Carol Paton. Available from: [https://www .businesslive .co.za/bd/companies/financial-services/2016-02-29-liberty-and-alexander-forbes-named -in-complaint-against-fsb/](https://www.businesslive.co.za/bd/companies/financial-services/2016-02-29-liberty-and-alexander-forbes-named-in-complaint-against-fsb/) [Accessed: 2016-11-11].
- Burton, P. (2000): "Antecedents and consequences of corporate governance structures", *Corporate Governance: An International Review*, 8(3), pp. 194-203.
- Bussin, M. and Modau, M. F. (2015): "The relationship between chief executive officer remuneration and financial performance in South Africa between 2006 and 2012", *SA Journal of Human Resource Management*, 13(1), pp. 1-18.
- Cadbury Report (1992): *Report of the committee on the financial aspects of corporate governance: The code of best practice*, London: Gee Publishing.
- Campbell, K. and Mínguez-Vera, A. (2008): "Gender diversity in the boardroom and firm financial performance", *Journal of Business Ethics*, 83(3), pp. 435-451.
- Carrillo, E. F. P. (2007): "Corporate governance: shareholders' interests' and other stakeholders' interests", *Corporate Ownership and Control*, 4(4), pp. 96-102.
- Carter, D. A., Simkins, B. J. and Simpson, W. G. (2003): "Corporate governance, board diversity and firm value", *Financial Review*, 38(1), pp. 33-53.
- Carter, D. A., D'Souza, F., Simkins, B. J. and Simpson, W. G. (2010): "The gender and ethnic diversity of US boards and board committees and firm financial performance", *Corporate Governance: An International Review*, 18(5), pp. 396-414.
- Catalyst (2012a): *Global women on board*. Available from: <http://www.catalyst.org/knowledge/women-boards/>[Accessed: 2016-07-26].
- Chan, L. K. C., Megadeath, N. and Lakonishok, J. (1996): "Momentum strategies", *Journal of Finance*, 51, pp. 1681-1713.
- Chatterjee, S. and Hadi, A. S. (2012): *Regression analysis by example*. New Jersey: John Wiley & Sons.
- Chen, K., Chen, Z. and Wei, K. (2009): "Legal protection of investors, corporate governance and the cost of equity capital", *Journal of Corporate Finance*, 15(3), pp. 273-289.
- Chen, S. and Dodd, J. L. (2001): "Operating income, residual income and EVA: Which metric is more value relevant?", *Journal of Managerial Issues*, 13(1), pp. 65-86.



- Chen, C-W., Lin, B. J. and Yi, B. (2008): "CEO duality and firm performance: An endogenous issue", *Corporate ownership and Control*, 6(1), pp. 58-65.
- Chen, C. X., Lu, H. and Sougiannis, T. (2012): "The agency problem, corporate governance and the asymmetrical behavior of selling, general and administrative costs", *Contemporary Accounting Research*, 29(1), pp. 252-282.
- Chhaochharia, V. and Grinstein, Y. (2009): "CEO compensation and board structure", *The Journal of Finance*, 64(1), pp. 231-261.
- Chhillar, P. and Lellapalli, R. V. (2015): "Divergence or convergence: paradoxes in corporate governance?", *Corporate Governance*, 15(5), pp. 693-705.
- Chidambaran, N. K., Palia, D. and Zheng, Y. (2007): "Does better corporate governance 'cause' better firm performance?", Working paper, Ruitgers Business School, Newark, NJ. 23(3), pp. 70-74.
- Chung, K. H. and Pruitt, S. W. (1994), "A simple approximation of Tobin Q", *Financial Management*, 23(3), pp. 70-74.
- Claessens, S. and Yurtoglu, B. B. (2013): "Corporate governance in emerging markets: A survey", *Emerging Markets Review*, 15, pp. 1-33.
- Clarke, T. (1998): "Research on corporate governance", *Corporate Governance: An International Review*, 6(1), pp. 57-66.
- CLSA (2000): *The Tide's Gone Out: Who's Swimming Naked?*, Credit Lyonnais Securities Asia. Emerging Markets.
- Cohen, J. R., Krishnamoorthy, G. and Wright, A. M. (2008): "Form versus substance: The implications for auditing practice and research of alternative perspectives on corporate governance", *Auditing: A Journal of Practice and Theory*, 27(2), pp. 181-198.
- Collier, P. M. (2009): *Fundamentals of risk management for accountants and managers*. 1<sup>st</sup> Edition, New York: Routledge
- Conger, J. A., Finegold, D. and Lawler, E. E. (1998): "Appraising boardroom performance", *Harvard Business Review*, 76(1), pp. 136-148.
- Cooper, S. M. and Owen, D. L. (2007): "Corporate social reporting and stakeholder accountability: The missing link", *Accounting, Organizations and Society*, 32(7), pp. 649-667.
- Copeland, T. E., Koller, T. and Murrin, J. (1996): *Valuation: measuring and managing the value of companies*. 2<sup>nd</sup> Edition, New York: Wiley & Sons.
- Corfield, A. (1998): "The stakeholder theory and its future in Australian corporate governance: A preliminary analysis", *Bond Law Review*, 10(2), pp. 213-240.

- Correia, C., Flynn, D. U., & Uliana, E. E. and Wormald, M. (2003): *Financial management*. 5<sup>th</sup> Edition. Cape Town: Juta.
- Creswell, J. (2003): *Research design: Qualitative, quantitative and mixed methods Approaches*. 2<sup>nd</sup> Edition, London: SAGE Publications.
- Cuomo, F., Mallin, C. and Zattoni, A. (2016): "Corporate governance codes: A review and research agenda", *Corporate Governance: An International Review*, 24(3), pp. 222-241.
- Cutler, D. M., Poterba, J. M. and Summers, L. H. (1989): "What moves stock prices?", *The Journal of Portfolio Management*, 15(3), pp. 4-12.
- Dahawy, K. (2009): *Developing nations and corporate governance. The story of Egypt*, Available from: [www.ifc.org/ifcext/cgf.nsf/Content/ResearchPublications/](http://www.ifc.org/ifcext/cgf.nsf/Content/ResearchPublications/) [Accessed: 2015-10-10].
- Daily, C. M., Dalton, D. R. and Cannella, A. A. (2003): "Corporate governance: Decades of dialogue and data", *Academy of Management Review*, 28(3), pp. 371-382.
- Dalton, D. R., Daily, C. M., Johnson, J. L. and Ellstrand, A. E. (1998): "Meta-analytic reviews of board composition, leadership structure and financial performance", *Strategic Management Journal*, 19(3), pp. 269-290.
- Dalton, D. R., Daily, C. M., Johnson, J. L. and Ellstrand, A. E. (1999): "Number of directors and financial performance: A meta-analysis", *The Academy of Management Journal*, 42(6), pp. 674-686.
- Dam, L. and Scholtens, B. (2012): "Does ownership type matter for corporate social responsibility?", *Corporate Governance: An International Review*, 20(3), pp. 233-252.
- Danbolt, J. and Rees, W. (2008): "An experiment in fair value accounting: UK investment vehicles", *European Accounting Review*, 17(2), pp. 271-303.
- Danielson, M. G. and Press, E. (2003): "Accounting returns revisited: Evidence of their usefulness in estimating economic returns", *Review of Accounting Studies*, 8(4), pp. 493-530.
- Darko, J., Aribi, A. A. and Uzonwanne, G. C. (2016): "Corporate governance: The impact of director and board structure, ownership structure and corporate control on the performance of listed companies on the Ghana stock exchange", *Corporate Governance*, 16(2), pp. 259-277.
- Darmadi, S. (2013): "Do women in top management affect firm performance? Evidence from Indonesia", *Corporate Governance: The International Journal of Business in Society*, 13(3), pp 288-304.

- Davis, J. H., Schoorman, F. D. and Donaldson, L. (1997): "Davis, Schoorman and Donaldson reply: The distinctiveness of agency theory and stewardship theory", *The Academy of Management Review*, 22(3), pp. 611-613.
- Demzet, D. R. and Lehn, K. (1985): "The structure of corporate ownership: causes and consequences", *The Journal of Political Economy*, 93(6), pp. 1155-1177.
- Denis, D. K and McConnell, J. J. (2003): "International corporate governance", *Journal of Financial and Quantitative Analysis*, 38(1), pp. 1-36.
- Denzin, N. K. and Lincoln, Y. S. (1994): *Introduction: Entering the field of qualitative research*, In NK Denzin and YS Lincoln (Eds.) *Handbook of Qualitative Research* (pp. 1-17). Thousand Oaks: Sage Publications.
- Department of Trade and Industry (DTI) (2004): *South African Company Law for the 21<sup>st</sup> Century. Guidelines for Corporate Law Reform*, Republic of South Africa.
- Desender, K. A., Aguilera, R. V., Crespi, I. and Garcia-Cestona, M. (2013): "When does ownership matter? Board characteristics and behavior", *Strategic Management Journal*, 34(7), pp. 823-842.
- De Wet, J. and Du Toit, E. (2007): "Return on equity: A popular, but flawed measure of corporate financial performance", *South African Journal of Business Management*, Vol. 38(1), pp. 59-69.
- Diebold, F. X. (2016): *Time series econometrics*. Available from: <http://www.ssc.upenn.edu/~fdiebold/Textbooks.html>[Accessed: 2015-10-21].
- Donaldson, L. (1990): "The Ethereal hand: Organisational economics and management theory", *Academy of Management Review*, 15(3), pp. 369-381.
- Donaldson, L. and Davis, (1991): "Stewardship theory or agency theory: CEO governance and shareholder returns", *Australian Journal of Management*, 16(1), pp. 49-64.
- Donaldson, T, and Preston, L. E. (1995): "The stakeholder theory of the corporation: Concepts, evidence and implications", *Academy of Management Review*, 20(1), pp. 65-91.
- Dowell, G. W., Shackell, M. B. and Stuart, N. V. (2011): "Boards, CEOs, and surviving a financial crisis: Evidence from the internet shakeout", *Strategic Management Journal*, 32(10), pp. 1025-1045.
- Durisin, B. and Puzone, F. (2009): "Maturation of corporate governance research, 1993-2007: An assessment", *Corporate Governance: An international Review*, 17(3), pp. 266-291.

- Durnev, A. and Kim, E. H. (2005): "To steal or not to steal: Company attributes, legal environment, and valuation", *Journal of Finance*, 60(3), pp. 1461-1493.
- Edvinsson, L. and Malone, M. S. (1997): *Intellectual capital: The proven way to establish your company's real value by finding its hidden brainpower*. 1<sup>st</sup> Edition, New York: Harper Collins.
- Ehikioya, B. I. (2009): "Corporate governance structure and firm performance in developing economies: evidence from Nigeria", *Corporate Governance*, 9(3), pp. 231-243.
- El Mehdi, I. K. (2007): "Empirical evidence on corporate governance and corporate performance in Tunisia", *Corporate Governance: An International Review*, 15(6), pp. 1429-1441.
- Epps, R. W. and Cereola, S. J. (2008): "Do institutional shareholder services (ISS) corporate governance ratings reflect a company's operating performance?", *Critical Perspectives on Accounting*, 19(8), pp. 1135-1148.
- Erhardt, N. L., Werbel, J. D. and Shrader, C. B. (2003): "Board of director diversity and firm financial performance", *Corporate governance: An international review*, 11(2), pp. 102-111.
- Erkens, D., Hung, M. and Matos, P. (2012): "Corporate governance in the 2007-2008 financial crisis: evidence from financial institutions worldwide", *Journal of Corporate Finance*, 18(2), pp. 389-411.
- Euromoney (2007): "The track record of corporate governance in the Middle East", *Euromoney*, 38, pp. 11-12.
- European Commission (2011): *Promoting a European framework for corporate social responsibility*. Available from: <http://www.social-protection.org/gimi/gess/ShowRessource.action?ressource.ressourceId=33473>[Accessed: 2016-10-11].
- Fallatah, Y. and Dickins, D. (2012): "Corporate governance and firm performance and value in Saudi Arabia", *African Journal of Business Management*, 6(36), pp. 10025-10034.
- Farebrother, R. W. (1980): "The Durbin-Watson test for serial correlation when there is no intercept in the regression", *Journal of the Econometric Society*, 48(6), pp. 1553-1563.
- Farrell, K. A. and Hersch, P. L. (2005): "Additions to corporate boards: the effect of gender", *Journal of Corporate Finance*, 11(1), pp. 85-106.
- Fauzi, F and Locke, S. (2012): "Board structure, ownership structure and firm performance: A study of New Zealand listed firms", *Asian Academy of Management Journal of Accounting & Finance*, 8(2), pp. 43-67.

- Feizizadeh, A. (2012): "Corporate governance: Frameworks", *Indian Journal of Science and Technology*, 5(9), pp. 3353-3361.
- Fich, E. M. and Shivdasani, A. (2006): "Are busy boards effective monitors", *Journal of Finance*, 61(2), pp. 689-724.
- Filatotchev, I. and Boyd, B. K. (2009): "Taking stock of corporate governance research while looking to the future", *Corporate Governance: An International Review*, 17(3), pp. 257-265.
- Financial Services Board Act 97 of 1990. Available from: <http://www.bu.edu/bucflp/files/2012/01/Financial-Services-Board-Act-No.-97-of-1990.pdf> [Accessed: 2014-11-09].
- Financial Services Board Annual Report (2013): Available from: <https://www.fsb.co.za/departments/communications/documents/fsb%20annual%20report%202013.pdf> [Accessed: 2014-11-09].
- Finegan, P. T. (1991): "Maximising shareholder value at the private company", *Journal of Applied Corporate Finance*, 4(1), pp. 30-45.
- Fisher, F. M. and McGowan, J. J. (1983): "On the misuse of accounting rates of return to infer monopoly profits", *The American Economic Review*, 73(1), pp. 82-97.
- Flannery, M. J., and Hankins, K. W. (2013): "Estimating dynamic panel models in corporate finance", *Journal of Corporate Finance*, 19(C), pp. 1-19.
- Francis, B., Hasan, I. and Wu, Q. (2012): "Do corporate boards affect firm performance? New evidence from the financial crisis", *Bank of Finland Research Discussion Papers No. 11*, page 1-55.
- Francoeur C., Labelle, R. and Sinclair-Desgagné, B. (2008): "Gender diversity in corporate governance and top management", *Journal of Business Ethics*, 81(1), pp. 83-95.
- French, M. and Popovici, I. (2011): "That instrument is lousy! In search of agreement when using instrumental variables estimation in substance use research", *Health Economics*, 20(2), pp. 127-146.
- Gamble, A. and Kelly, G. (2001), "Shareholder value and the stakeholder debate in the UK", *Corporate Governance: An International Review*, 9(2), pp. 110-117.
- Garanina, T. and Kaikova, E. (2016): "Corporate governance mechanisms and agency costs: cross-country analysis", *Corporate Governance*, 16(2), pp. 347-360.
- Garcia-Torea, N., Fernandez-Feijooa, B. and De la Cuesta, M. (2016): "Board of director's effectiveness and the stakeholder perspective of corporate governance: Do effective

- boards promote the interests of shareholders and stakeholders?”, *Business Research Quarterly*, 19(4), pp. 246-260.
- Gartenberg, C. and Pierce, L. (2017): “Subprime governance: agency costs in vertically integrated banks and the 2008 mortgage crisis”, *Strategic Management Journal*, 38(2), pp. 300-321.
- Ghabayen, M. A. (2012): “Board characteristics and firm performance: Case of Saudi Arabia”, *International Journal of Accounting and Financial Reporting*, 2(2), pp. 168-200.
- Ghuri, P. and Gronhaug, K. (2005): *Research Methods in Business Studies*. 3<sup>rd</sup> Edition, New York: Prentice Hall.
- Gherghina, S. C. (2015): “Corporate governance ratings and firm value: Empirical evidence from the Bucharest Stock Exchange”, *International Journal of Economics & Financial Issues*, 5(1), pp. 97-110.
- Giannetti, M. and Koskinen, Y. (2010): “Investor protection, equity returns and financial globalization”, *Journal of Financial and Quantitative Analysis*, 45(1), pp. 135-168.
- Giannetti, M. and Simonov, A. (2006): “Which investors fear expropriation? Evidence from investors’ portfolio choices”, *Journal of Finance*, 61(3), pp. 1507-1547.
- Gill, A. and Mathur, N. (2011): “The impact of board size, CEO duality and corporate liquidity on the profitability of Canadian service companies”, *Journal of Applied Finance and Banking*, 1(3), pp. 83-95.
- Gillan, S. L. (2006): “Recent developments in corporate governance: An overview”, *Journal of Corporate Finance*, 12(3), pp. 381-402.
- Gompers, P., Ishii, J. and Metrick, A. (2003): “Corporate governance and equity prices”, *Quarterly Journal of Economics*, 118(1), pp. 107-155.
- Goodstein, J., Gautum, K. and Boeker, W. (1994): “The effects of board size and diversity on strategic change”, *Strategic Management Journal*, 15(3), pp 241-250.
- Gorton, G. (2009): *Slapped in the face by the invisible hand: Banking and panic of 2007*. Available from: <http://dx.doi.org/10.2139/ssrn.1401882> [Accessed: 2016-01-06].
- Graham, J. R. (1999): “Herding among investment newsletters: Theory and evidence”, *The Journal of Finance*, 54(1), pp. 237-268.
- Greene, W. H. (2002): *Econometric Analysis*. 5<sup>th</sup> Edition, New Jersey: Prentice-Hall.
- Grinblatt, M., Titman, S. and Wermers, R. (1995): “Momentum investment strategies, portfolio performance, and herding: A study of mutual fund behaviour”, *The American Economic Review*, 85(5), pp.1088-1105.

- Guest, P.M. (2009): "The impact of board size on firm performance: Evidence from the UK", *The European Journal of Finance*, 15(4), pp. 385-404.
- Gujarati, D. N. (1995): *Basic Economics*. 3<sup>rd</sup> Edition, New York: McGraw-Hill.
- Gujarati, D. N. (2004): *Basic econometrics*. 4<sup>th</sup> Edition, New York: McGraw-Hill
- Gujarati, D. N. and Porter, D. C. (2009): *Basic econometrics*. 5<sup>th</sup> Edition, Boston: McGraw-Hill.
- Gupta, M. and Fields, L. P. (2009): "Board independence and corporate governance: Evidence from director resignations", *Journal of Business Finance and Accounting*, 36(1-2), pp. 161-184.
- Habib, M. A. (2016): "Relationship between corporate governance and firm performance: A case study in Bangladesh", *International Scholar Journal of Accounting and Finance*, 2(1), pp. 11-20.
- Hafsi, T. and Turgut, G. (2013): "Boardroom diversity and its effect on social performance: Conceptualization and empirical evidence", *Journal of Business Ethics*, 112(3), pp. 463-479.
- Han, C. and Phillips, P. C. B. (2010): "GMM estimation for dynamic panels with fixed effects and strong instruments at unity", *Econometric Theory*, 26(1), pp. 119-151.
- Haniffa, R. M. and Cooke, T. E. (2002): "Culture, corporate governance and disclosure in Malaysian corporations", *Abacus*, 38(3), pp.317-349.
- Haniffa, R. and Hudaib, M. (2006): "Corporate governance structure and performance of Malaysian listed companies", *Journal of Business Finance and Accounting*, Vol. 33(7-8), pp. 1034-1062.
- Hansen, B. E. (2017): *Econometrics*, University of Wisconsin pp. 1-444. Available from: <http://www.ssc.wisc.edu/~bhansen/econometrics/> [Accessed: 2017-01-02]
- Henry, D. (2008): "Corporate governance structure and the valuation of Australian firms: Is there value in ticking the boxes", *Journal of Business Finance and Accounting*, 35(7-8), pp. 912-942.
- Henwood, D. (1997): *Wall Street*, New York: Verso.
- Herzberg, M. M. (1998): "Implementing EBO/EVA analysis in stock selection", *The Journal of Investing*, 7(1), pp. 45-53.
- Heugens, P. P. M. A. R., Van Essen, M. and Van Oosterhout, J. (2009): "Meta-analyzing ownership concentration and company performance in Asia: Towards a more fine-grained understanding", *Asia Pacific Journal of Management*, 26(3), pp. 481–512.

- Hill, C. W. L. and Jones, T. M. (1992): "Stakeholder-agency theory", *Journal of Management Studies*, 29(2), pp. 131-154.
- Hillman, A. J and Dalziel, T. (2003): "Boards of directors and firm performance: Integrating agency and resource dependence perspectives", *Academy of Management Review*, 28(3), pp. 383-396.
- Holst, E. and Schimeta, J. (2011): "Twenty-nine women to 906 men: Continuing gender inequality on the boards of Germany's top companies", *Weekly Report, DIW Berlin*, 7(4), pp. 19-27.
- Humphries, S. A. and Whelan, C. (2017): "National culture and corporate governance codes", *Corporate Governance: The International Journal of Business in Society*, 17(1), pp. 1-16.
- Hung, H. (1998): "A typology of the theories of the roles of governing boards", *Corporate Governance*, 6(2), pp. 101-111.
- Huse, M. (2007): *Boards, governance and value creation: The human side of corporate governance*. Cambridge: Cambridge University Press.
- Idowu, S. O. and Louche, C. (2011): "Theory and practice of corporate social Responsibility", *Springer Science and Business Media*, pp 1-284.
- Im, K. S., Pesaran, M. H. and Shin, Y. (2003): "Testing for unit roots in heterogeneous panels", *Journal of Econometrics*, 115, pp. 53-74.
- INET BFA (2016): *Research domain*. Software and database. Johannesburg.
- Institute of Directors in Southern Africa (IoDSA) (2002): *King Report on Corporate Governance for South Africa*, King Committee, Johannesburg, South Africa.
- Institute of Directors in Southern Africa (IoDSA) (2009): *King Report on Corporate Governance for South Africa*, King Committee, Johannesburg, South Africa.
- Jackling, B. and Johl, S. (2009): "Board structure and firm performance: Evidence from India's top companies", *Corporate Governance: An International Review*, 17(4), pp. 492–509.
- Jacobson, R. (1990): "Unobservable effects and business performance", *Marketing Science*, 9(1), pp. 74-85.
- Jamali, D., Safieddine, A. M. and Rabbath, M. (2008): "Corporate governance and corporate social responsibility synergies and interrelationships", *Corporate Governance: International Review*, 16(5), pp. 443-459.
- Javed, M., Saeed, R., Lodhi, R. N. and Malik, Q. U. Z. (2013): "The effect of board size and structure on firm financial performance: A case of banking sector in Pakistan", *Middle-East Journal of Scientific Research*, 15(2), pp. 243-251.



- Jensen, M. C. (1993): "The modern industrial revolution, exit and the failure of internal control systems", *Journal of Finance*, 48(3), pp. 831-880.
- Jensen, M. and Meckling, W. (1976): "Theory of the firm: Managerial behaviour, agency cost and ownership structure", *Journal of Financial Economics*, 3(4), pp. 305-360.
- Jhunjhunwala, S. and Mishra, R. K. (2012): "Board diversity and corporate performance: The Indian evidence", *IUP Journal of Corporate Governance*, 11(3), pp. 71-79.
- Johl, S. K, Kaur, S. and Cooper, B. J. (2015): "Board characteristics and firm performance: Evidence from Malaysian public listed companies", *Journal of Economics*, 3(2), pp. 239-243.
- Jones, I. and Pollitt, M. (2004): "Understanding how issues in corporate governance develop: Cadbury report to Higgs review", *Corporate Governance: An International Perspective*, 12(2), pp 162-171.
- Joshi, P. L. and Wakil, A. (2004): "A study of the audit committees' functioning in Bahrain: Empirical findings", *Managerial Auditing Journal*, 19(7), pp. 832-858.
- JSE Listings Requirements (2007): *The JSE Ltd*, Johannesburg, South Africa.
- JSE Ltd. (2008): *History and organisation*, Available from: [http://www.jse.co.za/information/aguideti/1\\_history/](http://www.jse.co.za/information/aguideti/1_history/) [Accessed: 2015-05-01].
- Julizaerma, M. K and Sori, Z. M. (2012): "Gender diversity in the boardroom and firm performance of Malaysian public listed companies", *International Congress on Interdisciplinary Business and Social Sciences*, 65, pp. 1077-1085.
- Jusoh, R. and Parnell, J. A. (2008), "Competitive strategy and performance measurement in the Malaysian context: An exploratory study", *Management Decision*, 46(1), pp. 5-31.
- Kakabadse, A. and Korac-Kakabadse, N. (2002): "Corporate governance in South Africa: Evaluating the King 2 Report", *Journal of Change Management*, 2(4), pp. 305-317.
- Keasey, K., Thompson, S. and Wright, M. (1997): *Corporate governance: Economic management and financial issues*, Oxford: Oxford University Press.
- Keats, B. W. (1988): "The vertical construct validity of business economic performance measures", *The Journal of Applied Behavioral Science*, 24(2), pp. 151-160.
- Khan, H. (2011): *A Literature Review of Corporate Governance*, International Conference on E-business, Management & Economics, Singapore: IACSIT Press. Available from: <http://www.ipedr.com/vol25/1-ICEME2011-A10015.pdf/> [Accessed: 2015-03-09].
- Kiefer, M., Jones, E. A. and Adams, A. T. (2017): "Shareholders and managers as principal-agent hierarchies and cooperative teams", *Qualitative Research in Financial Markets*, 9(1), pp. 48-71.

- Kim, I., Pantzalis, C. and Park, J. C. (2013): "Corporate boards' political ideology diversity and firm performance", *Journal of Empirical Finance*, 21, pp. 223-240.
- King I Report on Corporate Governance for South Africa, 1994 (South Africa).
- King II Report on Corporate Governance for South Africa, 2002 (South Africa).
- King III Report on Corporate Governance for South Africa, 2009 (South Africa).
- King IV Report on Corporate Governance for South Africa, 2016 (South Africa).
- Kirkpatrick, G. (2009): "Corporate governance lessons from the financial crisis", *Financial Market Trends*, 3(1), pp. 1-30.
- Klapper, L. F. and Love, I. (2004): "Corporate Governance, investor protection, and performance in emerging markets", *Journal of Corporate Finance*, 10(5), pp. 703-728.
- Klock, M., Thies, C. F. and Baum, C. F. (1991): "Tobin's Q and measurement error: Caveat investigator", *Journal of Economics and Business*, 43(3), pp. 241-252.
- Koerniadi, H. and Tourani-Rad, A. (2012): "Does board independence matter? Evidence from New Zealand", *Australasian Accounting, Business and Finance Journal*, 6(2), pp. 3-18.
- KPMG (2009): South Africa.
- KPMG (2016): King IV summary guide.
- Krivogorsky, V. (2006): "Ownership, board structure, and performance in Continental Europe", *The International Journal of Accounting*, 41(2), pp. 176-197.
- Kumar, N. and Singh, J. P. (2013a): "Effect of board size and promoter ownership on firm value: some empirical findings from India", *Corporate Governance: The International Journal of Business in Society*, 13(1), pp. 88-98.
- Kumar, N. and Singh, J. P. (2013b): "Outside directors, corporate governance and firm performance: Empirical evidence from India", *Asian Journal of Finance and Accounting*, 4(2), pp. 39-55.
- Kumar, P. and Zattoni, A. (2016): "Corporate governance, board gender diversity and firm Performance", *Corporate Governance: An International Review*, 24(4), pp. 388-389.
- La Porta, R. F., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. W. (2002): "Investors protection and corporate valuation", *Journal of Finance*, 57(3), pp. 1147-1170.
- La Porta, R. F., Lopez-De-Silanes, F., Shleifer, A. and Vishny, R. W. (1998): "Law and finance", *Journal of Political Economy*, 106(6), pp. 1113-1155.
- Larcker, D. F. and Rusticus, T. O. (2007): "Endogeneity and empirical accounting research", *European Accounting Review*, 16(1), pp. 207-215.

- Larcker, D. F. and Rusticus, T. O. (2010): "On the use of instrumental variables in accounting research", *Journal of Accounting and Economics*, 49(3), pp. 186-205.
- Lauterbach, B. and Pajuste, A. (2017), "The media and firm reputation roles in corporate governance improvements: Lessons from European dual class share unifications", *Corporate Governance: An International Review*, 25(1), pp. 4-19.
- Leedy, P. and Ormrod, J. (2001): *Practical research: Planning and design*. 7<sup>th</sup> Edition, New Jersey: SAGE Publications.
- Lehn, K. and Makhija, A. K. (1997): "EVA, accounting profits, and CEO turnover: An empirical examination, 1985–1994", *Journal of Applied Corporate Finance*, 10(2), pp. 90-97.
- Lehn, K. and Makhija, A. K. (1996): "EVA and MVA as performance measures and signals for strategic change", *Strategy & Leadership*, 24(3), pp. 34-38.
- Letza, S., Sun, X. and Kirkbride, J. (2004): "Shareholding versus stakeholding: A critical review of corporate governance", *Corporate Governance: An International Review*, 12(3), pp. 242-262.
- Lev, B. and Sunder, S. (1979): "Methodological issues in the use of financial ratios", *Journal of Financial Economics*, 44(1), pp. 187-210.
- Levin, A., Lin, C. F. and Chu C. (2002): "Unit root tests in panel data: Asymptotic and finite-sample properties", *Journal of Econometrics*, 108, pp. 1-24.
- Lewellen, W. G, and Badrinath, S. G. (1997): "Measurement of Tobin's Q", *Journal Financial Economics*, 44(1), pp. 77-122.
- L'Huillier, B. M. (2014): "What does corporate governance actually mean?", *Corporate Governance*, 14(3), pp. 300-319.
- Lin, T. Y and Chang, M. Y. (2014): "Impact of an independent director system on a board of directors and the system's relation to corporate performance: Case study of listed firms in Taiwan", *Investment Management and Financial Innovations*, 11(1), pp. 56-69.
- Li, W., Chen, C. and French, J. (2012): "The relationship between liquidity, corporate governance, and firm valuation: Evidence from Russia", *Emerging Markets Review*, 13(4), pp. 465-477.
- Lin, C. J. and Jen, F. (2011): "An examination of board and firm performance: Evidence from Taiwan", *The International Journal of Business and Finance Research*, 5(4), pp. 17-34.
- Lipton, M. and Lorsch, J. (1992): "A modest proposal for improved corporate governance", *Business Lawyer*, 48(1), pp. 59-77.

- Lone, E. J., Ali, A. and Khan, I. (2016): "Corporate governance and corporate social responsibility disclosure: evidence from Pakistan", *Corporate Governance: The International Journal of Business in Society*, 16(5), pp. 785-797.
- Lückerath-Rovers, M. (2013): "Women on boards and firm performance", *Journal of Management and Governance*, 17(2), pp. 491-509.
- Luu, T. V., Kim, S. Y., Cao, H. L. and Park, Y. M. (2008): "Performance measurement of construction firms in developing countries", *Construction Management and Economics*, 26(4), pp. 373-386.
- Mace, M. (1971): *Directors: Myth and reality*. Boston: Harvard Business School Press.
- Macey, J. and O'Hara, M. (2003): "The corporate governance of banks", *FRBNY Economic Policy Review*, 9(1), pp. 91-107.
- Maddala, G. S and Lahiri, K. (2009): *Introduction to econometrics*. 4<sup>th</sup> Edition, New Jersey: Wiley.
- Mahadeo, J., Soobaroyen, T. and Hanuman, V. (2012): "Board composition and financial performance: Uncovering the effects of diversity in an emerging economy", *Journal of Business Ethics*, 105(3), pp. 375-388.
- Maher, M. and Andersson, T. (2000): "Corporate governance: Effects on firm performance and economic growth. Available from SSRN: <https://ssrn.com/abstract=218490> or <http://dx.doi.org/10.2139/ssrn.218490> [Accessed: 2015-08-09].
- Main, B. G. M. and Johnston, J. (1993): "Remuneration committees and corporate governance", *Accounting & Business Research*, 23(91A), pp. 351-362.
- Malherbe, S. and Segal, N. (2001): *Corporate governance in South Africa*. Paper presented at 2011 policy dialogue meeting on corporate governance in developing countries and emerging economies, organised by the OECD Development Centre and the European Bank for Reconstruction and Development, at OECD headquarters, Paris, 23–24 April 2001.
- Malherbe, S., & Segal, N. (2003): *South Africa: after apartheid*. Available from: [http://ebook.unived.ac.id/Fakultas%20Ilmu%20Sosial/Administrasi%20Publik/EBook/%5BCharles\\_P.\\_Oman%5D\\_Corporate\\_Governance\\_In\\_Developm\(BookFi\).pdf#page=171](http://ebook.unived.ac.id/Fakultas%20Ilmu%20Sosial/Administrasi%20Publik/EBook/%5BCharles_P._Oman%5D_Corporate_Governance_In_Developm(BookFi).pdf#page=171) [Accessed: 2015-07-10].
- Malik, M. S. and Makhdoom, D. D. (2016): "Does corporate governance beget firm performance in Fortune Global 500 companies?", *Corporate Governance*, 16(4), pp. 747-764.

- Malkiel, B. G. (2003): "The efficient market hypothesis and its critics", *The Journal of Economic Perspectives*, 17(1), pp. 59-82.
- Mallin, C. A. (2007): *Corporate Governance*. 2<sup>nd</sup> Edition, Oxford: Oxford University Press.
- Mangena, M. and Chamisa, E. (2008), "Corporate governance and incidences of listings suspension by the JSE securities exchange of South Africa: An empirical analysis", *The International Journal of Accounting*, 43(1), pp. 28-44.
- Mangena, M. and Tauringana, V. (2008): *Corporate boards, ownership structure and company performance in an environment of severe political and economic uncertainty*, Paper Presented at the British Accounting Association Conference, April 2008, Blackpool, pp. 14.
- Mans-Kemp, N. and Viviers, S. (2015a): "Investigating board diversity in South Africa", *Journal of Economic & Financial Sciences*, Vol. 8 No. 2, pp. 392-414.
- Mans-Kemp, N. and Viviers, S. (2015b): "The relationship between corporate governance and dividend payout ratios: A South African study", *Management Dynamics*, 24(2), pp. 20-35.
- Martin-Ugedo, J. F. and Minguez-Vera, A. (2014): "Firm performance and women on the board: Evidence from Spanish small and medium-sized enterprises", *Feminist Economics*, 20(3), pp. 136-162.
- McClenahen J. S. (1998): "Accounting for change", *Industry Week*, 247(17), pp. 63-67.
- Mehran, H. (1995): "Executive compensation structure, ownership and firm performance", *Journal of Financial Economics*, 38(2), pp. 163-184.
- Mela, C. F. and Kopalle, P. K. (2002): "The impact of collinearity on regression analysis: the asymmetric effect of negative and positive correlations", *Applied Economics*, 34(6), pp. 667-677.
- Mesut, D., Leyli, E. B., Veysel, A. and Serdar, O. (2014): "The impact of CEO duality on firm performance: Evidence from Turkey", *International Journal of Business and Social Science*, 4(2), pp. 149-167.
- Meyer, E. and De Wet, J. H. (2013): "The impact of board structure on the financial performance of listed South African companies", *Corporate Board: Role, Duties & Composition*, 9(3), pp. 19-31.
- Milunovich, S. and Tsuei, A. (1996): "EVA in the computer industry", *Journal of Applied Corporate Finance*, 9(1), pp. 104-116.
- Mina, A., Lahr, H. and Hughes, A. (2013), "The demand and supply of external finance for innovative firms", *Industrial and Corporate Change*, 22(4), pp. 1-33.

- Mohammed, A., Che-Ahmad, A. and Aljaaidi, K. S. (2012): "Factors associated with firm performance: empirical evidence from the kingdom of Saudi Arabia", *Accounting & Taxation*, 4(2), pp. 49-56.
- Money, K. and Schepers, H. (2007): "Are CSR and corporate governance converging?: A view from boardroom directors and company secretaries in FTSE100 companies in the UK", *Journal of General Management*, 33(2), pp. 1-11.
- Monks, R. A. G. and Minow, N. (2001): *Corporate Governance*. 2<sup>nd</sup> Edition, UK: Blacwell Publishers
- Morck, R., Shleifer, A. and Vishny, R. W. (1988): "Management ownership and market valuation: An Empirical Analysis", *Journal of Financial Economics*, 20(1), pp. 293-315.
- Moscu, R. G. (2013a): "Does CEO duality really affect corporate performance?", *International Journal of Academic Research in Economics and Management Sciences*, 2(1), pp. 156-166.
- Moscu, R. G. (2013b): "The relationship between firm performance and board characteristics in Romania", *International Journal of Academic Research in Economics and Management Sciences*, 2(1), pp. 22-31.
- Muchemwa, M. R., Padia, N. and Callaghan, C. W. (2016): "Board composition, board size and financial performance of Johannesburg Stock Exchange companies", *SAJEMS*, 19(4), pp. 497-513.
- Muller, C. and Ward, M. (2013): "Style-based effects on the Johannesburg Stock Exchange: A graphical time-series approach", *Investment Analysts Journal*, 77, pp. 1-16.
- Munisi, G. and Randoy, T. (2013): "Corporate governance and company performance across sub-Saharan African countries", *Journal of Economics and Business*, 70, pp. 92-110.
- Muth, M. and Donaldson, L. (1998): "Stewardship theory and board structure: A contingency approach", *Corporate Governance: An International Review*, 6(1), pp. 5-28.
- Nakano, M and Nguyen, P. (2013): *Why do firms with larger boards have lower market values? Evidence from the investment behavior of Japanese companies*. Available from: <http://dx.doi.org/10.2139/ssrn.2409882>[Accessed: 2014-02-18].
- Nath, S. D., Islam, S. and Saha, A. K. (2015): "Corporate board structure and firm performance: The context of pharmaceutical industry in Bangladesh", *International Journal of Economics and Finance*, 7(7), pp. 106-115.
- Nelson, T., Singh, K., Elenkov, D., Ma, R., Krug, J. and Davis, B. (2013): "Theoretical contributions to governance of smaller firms", *Journal of Business and Entrepreneurship*, 25(1), pp. 21-41.

- Nguyen, T., Locke, S. and Reddy, K. (2014): "A dynamic estimation of governance structures and financial performance for Singaporean companies", *Economic Modelling*, 40(C), pp. 1-11.
- Nguyen, T., Locke, S. and Reddy, K. (2015a): "Does boardroom gender diversity matter? Evidence from a transitional economy", *International Review of Economics and Finance*, 40(C), pp. 184-202.
- Nguyen, T., Locke, S. and Reddy, K. (2015b): "Ownership concentration and corporate performance from a dynamic perspective: Does national governance quality matter?", *International Review of Financial Analysis*, 41, pp. 148–161.
- Nicholson, G. J. and Kiel, G. C. (2007): "Can directors impact performance? A case-based test of three theories of corporate governance", *Corporate Governance: An International Review*, 15(4), pp. 585-608.
- Nielsen, B. B. and Nielsen, S. (2013): "Top management team nationality diversity and firm performance: A multilevel study", *Strategic Management Journal*, 34(3), pp. 373-382.
- 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. 307-466.
- Ntim, C. G. (2011): "The King Reports, independent non-executive directors and company valuation on the Johannesburg Stock Exchange", *Corporate Ownership and Control*, 9(1), pp. 428-440.
- Ntim, C. G. and Osei, K. A. (2013): "The impact of corporate board meetings on corporate performance in South Africa", *African Review of Economics and Finance*, 2(2), pp. 83-103.
- Ntim, C. G., Opong, K. K., Danbolt, J. and Thomas, D. A. (2012): "Voluntary corporate governance disclosures by post-apartheid South African corporations", *Journal of Applied Accounting Research*, 13(2), pp. 122-144.
- Oba, C. V. and Fodio, M. I. (2013): "Boards' gender mix as a predictor of financial performance in Nigeria: An empirical study", *International Journal of Economics and Finance*, 5(2), pp. 170-178.
- O'Connell, V. and Cramer, N. (2010): "The relationship between firm performance and board characteristics in Ireland", *European Management Journal*, 28(5), pp. 387-399.
- OECD (1999): *OECD Principles of Corporate Governance*, Paris: OECD. Available from: [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=C/MIN\(99\)6&docLanguage=En/\[Accessed: 2016-09-09\]](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=C/MIN(99)6&docLanguage=En/[Accessed: 2016-09-09]).

- OECD (2004): *OECD Principles of Corporate Governance*, Paris: OECD. Available from: <https://www.oecd.org/corporate/ca/corporategovernanceprinciples/31557724.pdf>/[Accessed: 2016-09-10].
- Okeahalam, C. C. (2004): "Corporate governance and disclosure in Africa: Issues and challenges", *Journal of Financial Regulations and Compliance*, 12(4), pp 359-370.
- Olsson, U.H., Foss, T., Troye, S. V. and Howell, R. D. (2000): "The performance of ML, GLS and WLS estimation in structural equation modeling under conditions of misspecification and non-normality", *Structural Equation Modeling*, 7(4), pp. 557-595.
- Orazalin, N., Mahmood, M. and Lee, K. J. (2016): "Corporate governance, financial crises and bank performance: Lessons from top Russian banks", *Corporate Governance*, 16(5), pp. 798-814.
- O'Sullivan, M. (2000): "The innovative enterprise and corporate governance", *Cambridge Journal of Economics*, 24(4), pp. 393-416.
- Pae, J and Choi, T. H. (2011): "Corporate governance, commitment to business ethics, and firm valuation: Evidence from the Korean stock market", *Journal of Business Ethics*, 100(2), pp. 323-348.
- Pamburai, H. H., Chamisa, E., Abdulla, C. and 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.
- Pande, S. and Ansani, V. A. (2014): "A theoretical framework for corporate governance", *Indian Journal of Corporate Governance*, 7(1), pp. 56-72.
- Peck, R., Olsen, C. and Devore, J. (2009): *Introduction to Statistics and Data Analysis*. 3<sup>rd</sup> Edition, California: Thompson.
- Peni, E. and Vähämaa, S. (2012): "Did good corporate governance improve bank performance during the financial crisis?", *Journal of Financial Services Research*, 41(1), pp. 19-35.
- Perfect, S. B. and Wiles, K. W. (1994): "Alternative constructions of Tobin's Q: An empirical comparison", *Journal of Empirical Finance*, 1(3-4), pp. 313-341.
- Petersen, M. (2009): "Estimating standard errors in France panel data sets: Comparing approaches", *Reviews of Financial Studies*, Vol. 22(1), pp. 435-480.
- Petra, S. T. (2006): "Corporate governance reforms: fact or fiction?", *Corporate Governance: The International Journal of Business in Society*, 6(2), pp. 107-115.
- Pfeffer, J. (1972): "Size and composition of corporate boards of directors: The organization and its environment", *Administrative Science Quarterly*, 17(2), pp. 218-228.



- Ping, Z. and Andy, C. W. W. (2011): "Corporate governance: A summary review on different theory approaches", *International Research Journal of Finance and Economics*, 5(68), pp. 7-13.
- Portes, R (1999): *An analysis of financial crisis: Lessons for the international financial system*. 4<sup>th</sup> Edition, Norwell: Kluwer Academic Publishers.
- Prusty, T. (2013): "Corporate governance through the EVA tool: A good corporate performance driver", *Journal of Asian Business Strategy*, 3(12), pp. 340-348.
- Rad, S. A. (2014): *The relationship between corporate governance practices and cost of capital in large listed companies of New Zealand and Singapore*, Unpublished doctoral thesis. New Zealand: University of Waikito.
- Rana, S. and Al Amin, M. M. (2015): "An alternative method of estimation of SUR model", *American Journal of Theoretical and Applied Statistics*, 4(3), pp. 150-155.
- Rani, N., Yadav, S., and Jain, P. (2014): "Impact of corporate governance score on abnormal returns of mergers and acquisitions", *Decision*, 41(4), pp. 371-398.
- Rappaport, A. (1986): *Creating shareholder value: A guide for managers and investors*, New York: The Free Press.
- Rashid, K. and Islam, S. M. N. (2013): "Corporate governance, complementarities and the value of a firm in an emerging market: the effect of market imperfections", *Corporate Governance: The International Journal of Business in Society*, 13(1), pp. 70-87.
- Rebeiz, K. S. (2015): "Boardroom's independence and corporate performance: the ever-elusive conundrum", *Corporate Governance*, 15(5), pp. 747-758.
- Richard, P. J., Devinney, T. M., Yip, G. S. and Johnson, G. (2009): "Measuring organizational performance: Towards methodological best practice", *Journal of Management*, 35(3), pp. 718-804.
- Roberts, M. R. and Whited, T. M. (2013): "Endogeneity in empirical corporate finance", In M. H. Goerge M. Constantinides and M. S. Rene (Eds), *Handbook of the economics of finance*, Vol 2 Part A, pp. 493-572. Saint Louis, USA: Elsevier.
- Rodriguez-Fernandez, M., Fernandez-Alonso, S. and Rodriguez-Rodriguez, J. (2014): "Board characteristics and firm performance in Spain", *Corporate Governance*, 14(4), pp. 485-503.
- Roll, R. (1988): "The international crash of October 1987", *Financial Analysts Journal*, 44(5), pp. 19-35.

- Rose, C. (2007): "Does female board representation influence firm performance? The Danish evidence", *Corporate Governance: An International Review*, 15(2), pp. 404-413.
- Rose, C., Munch-Madsen, P. and Funch, M. (2013): "Does board diversity really matter? Gender does not, but citizenship does", *International Journal of Business Science & Applied Management*, 8(1), pp. 15-27.
- Ross, S., Ross, S. A., Westerfield, R. and Jordan, B. D. (1998): *Essentials of corporate finance*. 1<sup>st</sup> Edition, UK: McGraw-Hill Education.
- Rossouw, G. J., Van der Watt, A. and Rossouw, D. M. (2002): "Corporate governance in South Africa", *Journal of Business Ethics*, 37(3), pp. 289-302.
- South African Futures Exchange (SAFEX) (2008): *Welcome to SAFEX*. Available from: <http://www.safex.co.za/> [Accessed: 2008-07-16].
- Sami, H., Wang, J., and Zhou, H. (2011): "Corporate governance and operating performance of Chinese listed firms", *Journal of International Accounting, Auditing and Taxation*, 20(2), pp. 106-114.
- Samuel, E.A. (2013): "The impact of bigger board size on financial performance of companies: The Nigerian example", *Journal of Research in International Business and Management*, 3(3), pp. 85-90.
- Sardar, A., Devendra, K. and Martin, U. (2016): *Does governance make a difference to corporate performance in the financial crisis? UK Evidence*. Paper presented at the British Accounting and Finance Association Annual Conference, 21-23 March 2016, University of Bath, Bath, UK.
- Sarra, J. (2004): *Strengthening domestic corporate activity in global capital markets: A Canadian perspective in South Africa's corporate governance*, Working Paper, No.118, The George Washington University Law School, October 2004. Available from: <http://www.ssrn.com/abstract=628702> [Accessed: 2014-07-19].
- Schilling, F. (2001): "Corporate governance in Germany: The move to shareholder value", *Corporate Governance: An International Review*, 9(3), pp. 148-151.
- Schils, T. (2005): *Early retirement patterns in Europe: A comparative panel study*. Available from: [https://books.google.co.za/books?hl=en&lr=&id=7V42qE\\_6XWsC&oi=fnd&pg=PA1&dq=panel+data%2BSchils&ots=vNfG7o\\_4sQ&sig=0Rr6WL2DdKNhLsP5DvmnTO6bF2U#v=onepage&q=panel%20data%2BSchils&f=false](https://books.google.co.za/books?hl=en&lr=&id=7V42qE_6XWsC&oi=fnd&pg=PA1&dq=panel+data%2BSchils&ots=vNfG7o_4sQ&sig=0Rr6WL2DdKNhLsP5DvmnTO6bF2U#v=onepage&q=panel%20data%2BSchils&f=false) [Accessed: 2016-04-25].
- Schultz, E. L., Tan, D. T. and Walsh, K. D. (2010): "Endogeneity and the corporate governance-performance relation", *Australian Journal of Management*, 35(2), pp. 145-163.

- Schwartz, D. E. (1983): "Shareholder democracy: A reality or chimera?" *California Management Review*, 25(3), pp. 53-67.
- Schwarz, C. J. (2015): *Detecting trends over time. In course notes for beginning and intermediate statistics.* Available from: <http://www.stat.sfu.ca/~cschwarz/CourseNotes/>[Accessed: 2014-06-06].
- Semosa, S. B. (2012): *Impact of board composition on performance in the South African platinum mining industry*, Working paper, Gordon Institute of Business Science, University of Pretoria.
- Shabbir, A. and Padgett, C. (2008): "The UK code of corporate governance: Relationship between compliance and company Performance, *Cranfield Management Research Paper Series*, 2(8), pp. 1-19.
- Shahwan, T. M. (2015): "The effects of corporate governance on financial performance and financial distress: Evidence from Egypt", *Corporate Governance*, 15(5), pp. 641-662.
- Shank, T., Hill, R. P. and Stang, J. (2013): "Do investors benefit from good corporate governance?", *Corporate Governance: The International Journal of Business in Society*, 13(4), pp. 384-396.
- Sharifah, F., Syed, F., Syahrina, A., Abdul, H. and Julizaerma, M. K. (2016): "Board independence and firm performance", *Procedia Economics and Finance*, 37, pp. 460-465.
- Sheikh, N. A. and Wang, Z. (2012): "Effects of corporate governance on capital structure: Empirical evidence from Pakistan", *Corporate Governance*, 12(5), pp. 629-641.
- Sheikh, N. A., Wang, Z. and Khan, S. (2013): "The impact of internal attributes of corporate governance on firm performance: Evidence from Pakistan", *International Journal of Commerce and Management*, 23(1), pp. 22-41.
- Shiller, R. J. (1989): "Comovements in stock prices and comovements in dividends", *The Journal of Finance*, 44(3), pp. 719-729.
- Shleifer, A. and Vishny, R. W. (1997): "A survey of corporate governance", *The Journal of Finance*, 52(2) , pp. 737-783.
- Shrader, C. B., Blackburn, V. B. and Iles, P. (1997): "Women in management and financial firm performance: An exploratory study", *Journal of Managerial Issues*, 9(3), pp. 355-372.
- Shropshire, C. (2010): "The role of interlocking director and board receptivity in the diffusion of practices?", *Academy of Management Review*, 35(2), pp. 355-372.

- Shukeri, S. N., Shin, O. W. and Shaari, M. S. (2012): "Does board of director's characteristics affect firm performance? Evidence from Malaysian public listed firms", *International Business Research*, 5(9), pp. 120-127.
- Siddiqui, S. S. (2015): "The association between corporate governance and firm performance - a meta-analysis," *International Journal of Accounting and Information Management*, 23(3), pp. 218-237.
- Silber, K. H. and Foshay, W. R. (2010): *Handbook of improving performance in the workplace: Industrial design and training delivery*. 2<sup>nd</sup> Edition, San Francisco: Pfeiffer.
- Solomon, J. (2007): *Corporate governance and accountability*. 2<sup>nd</sup> Edition, New Jersey: Wiley.
- Sonnenfeld, J. A. (2002), "What makes great boards great", *Harvard Business Review*, Vol. 80 No. 9, pp. 106-113.
- Sori, Z. M., Mohamad, S. and Karbhari, Y. (2006): *Auditor reputation and auditor independence: Evidence from an emerging market*, Working paper. Available from: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=895484/](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=895484/)[Accessed: 2014-06-10].
- Spira, L.F. and Bender, R. (2004): "Compare and contrast: Perspective on board committees", *Corporate Governance: An International Review*, 12(4), pp. 489-499.
- Spisto, M. (2005): "Unitary or two-tiered board for the new South Africa?", *International Review of Business Research*, 1(2), pp. 84-99.
- Stern, J. M., Stewart, G. B. and Chew, D. H. (1995): "The EVA financial management system", *Journal of Applied Corporate Finance*, 8(2), pp. 32-46.
- Sternberg, E. (1998): *Corporate Governance: Accountability in the Market*. Available from: <https://iea.org.uk/wp-content/uploads/2016/07/upldbook227pdf/>[Accessed: 2015-10-17].
- Sternberg, E. (2004): *Corporate governance: Accountability in the market place*, The Institute of Economic Affairs, UK. Available from: <https://iea.org.uk/wp-content/uploads/2016/07/upldbook227pdf/>[Accessed: 2015-10-10].
- Sternberg, E. (1997): "The defects of stakeholder theory", *Corporate Governance: An International Perspective*, 5(1), pp. 3-10.
- Stewart, G. B. (2002): "Enron signals the end of the earnings management game", *EVALuation*, 4(5), pp. 1-6.
- Stewart, G. B. (1994): "EVA: Fast and fantasy", *Journal of Applied Corporate Finance*, 7(2), pp. 71-84.

- Stiglbauer, M. (2010): "Transparency and disclosure on corporate governance as a key factor of companies' success: a simultaneous equations analysis for Germany", *Problems & Perspectives in Management*, 8(1), pp. 161-173.
- Sun, J. and Cahan, S. (2009): "The effect of compensation committee quality on the association between CEO, cash compensation and accounting performance", *Corporate Governance: An International Review*, 17(2), pp. 193-207.
- Swartz, N. P. and Firer, S. (2005): "Board structure and intellectual capital performance in South Africa," *Meditari Accountancy Research*, 13(2), pp. 145-166.
- Taljaard, C. C. H., Ward, M. J. D. and Muller, C. J. (2015): "Board diversity and financial performance: A graphical time-series approach", *SAJEMS*, 18(3), pp. 425-448.
- Tariq, Y. and Abbas, Z. (2013): "Compliance and multidimensional firm performance: Evaluating the efficacy of rule-based code of corporate governance", *Economic Modelling*, 35, pp. 565-575.
- Teti, A., Dell'Acqua, A., Etro, L. and Resmini, F. (2016): "Corporate governance and cost of equity: empirical evidence from Latin American companies", *Corporate Governance: The International Journal of Business in Society*, 16(5), pp. 831-848.
- Tobin, J. (1969): "A general equilibrium approach to monetary theory", *Journal of Money, Credit and Banking*, 1(1), pp. 15-29.
- Topal, Y. and Dogan, M. (2014): "Impact of board size on financial performance: The case of BIST manufacturing industry", *International Journal of Business Management & Economic Research*, 5(4), pp. 74-79.
- Tornyeva, K and Wereko, T. (2012): "Corporate governance and firm performance: Evidence from the insurance sector of Ghana", *European Journal of Business and Management*, 4(13), pp. 95-112.
- Tornyeva, K. and Wereko, T. (2014): "The impact of ownership structure on the financial performance of listed insurance companies in Nigeria", *International Journal of Academic Research in Accounting, Finance and Management*, 4(1), pp. 409-416.
- Triana, M. C., Miller, T. L. and Trzebiatowski, T. M. (2013): "The double-edged nature of board gender diversity: Diversity, firm performance and the power of women diversity as predictors of strategic change", *Organisational Science*, 25(2), pp. 609-632.
- Tsamenyi, M. Enninful-Adu, E. and Onumah, J. (2007): "Disclosure and corporate governance in developing countries: Evidence from Ghana", *Managerial Auditing Journal*, 22(3), pp. 319-334.

- Tse, T. (2011): "Shareholder and stakeholder theory: after the financial crisis", *Qualitative Research in Financial Markets*, 3(1), pp. 51-63.
- Tshipa, J. and Mokoaleli-Mokoteli, T. (2015a): "The impact of gender diversity in the boardroom on firm performance: A South African perspective", *Corporate Board: Role, Duties and Composition*, 11(1), pp. 74-82.
- Tshipa, J. and Mokoaleli-Mokoteli, T. (2015b): "The South African code of corporate governance: The relationship between compliance and financial performance: Evidence from South African publicly listed companies", *Corporate Ownership and Control*, 12(2), pp. 149-169.
- Tu, Y. K. Kellett, M., Clerehugh, V. and Gilthorpe, M. S. (2005): "Problems of correlations between explanatory variables in multiple regression analyses in the dental literature", *British Dental Journal*, 199(7), pp. 457-461.
- Uadiale, O. M. (2010): "The impact of board structure on corporate financial performance in Nigeria", *International Journal of Business and Management*, 5(10), pp. 155-166.
- Uddin, S. S. and Ahsan, L. (2014): "Impact of Asian-financial crisis in Malaysian economy with special reference to multinational companies", *Research Journal of Management Sciences*, 13(9), pp. 7-12.
- Uddin, S. and Choudhury, J. (2008): "Rationality, traditionalism and the state of corporate governance mechanisms: Illustrations from a less-developed country", *Accounting, Auditing & Accountability Journal*, 21(7), pp. 1026-1051.
- Ujunwa, A., Salami, P. O. and Umar, A. H. (2013): "CEO duality and firm performance: An integration of institutional perceptive with agency theory", *In Proceedings of World Academy of Science, Engineering and Technology*, 73, pp. 1-860.
- Van der Walt, N. and Ingle, C. (2003), "Board dynamics and the influence of professional background, gender and ethnic diversity of directors", *Corporate Governance: An International Review*, 11(3), pp. 218-234.
- Van Essen, M., Engelen, P. J. and Carney, M. (2013): "Does "good" corporate governance help in a crisis? The impact of country-and firm-level governance mechanisms in the European Financial Crisis", *Corporate Governance: An International Review*, 21(3), pp. 201-224.
- Varaiya, N., Kerin, R. A. and Weeks, D. (1987): "The relationship between growth, profitability and firm value", *Strategic Management Journal*, 8(5), pp. 487-497.

- Vaughn, M. and Ryan, L. V. (2006): "Corporate governance in South Africa: A bellwether for the continent?", *Corporate Governance: An International Review*, 14(5), pp. 504-512.
- Vefeeas, N. (1999b): "The nature of board nominating committees and their role in corporate governance", *Journal of Business Finance & Accounting*, 26(1-2), pp. 199-225.
- Veprauskaite, E. and Adams, M. (2013): "Do powerful chief executives influence the financial performance of UK firms?", *The British Accounting Review*, 45(3), pp. 229-241.
- Verbeek, M. (2004): *A Guide to modern econometrics*. 4<sup>th</sup> Edition, U.K: John Wiley and Sons.
- Vinten, G. (2001): "Shareholders versus stakeholders: Is there a governance dilemma?" *Corporate Governance: An international Perspective*, 9(1), pp. 36-47.
- Vinten, G. (2002): "The corporate governance lessons of Enron", *Corporate Governance*, 2(4), pp. 4-9.
- Vintilă, G and Gherghina, S. C. (2013): "Board of directors' independence and firm value: Empirical evidence based on the Bucharest Stock Exchange listed companies", *International Journal of Economics and Financial Issues*, 3(4), pp. 885-900.
- Visser, W. (2005): "Corporate citizenship in South Africa: A review of progress since democracy", *The Journal of Corporate Citizenship*, 18, pp. 29-33.
- Wagana, D. M. (2016): "Corporate governance, board gender diversity and corporate performance: A critical review of literature", *European Scientific Journal*, 12(7), pp. 221-233.
- Wachudi, E. J. and Mboya, J. (2009): "Effect of board gender diversity on the performance of commercial banks in Kenya", *European Scientific Journal*, 8(7), pp. 128-148.
- Wahba, H. (2015): "The joint effect of board characteristics on financial performance: Empirical evidence from Egypt", *Review of Accounting and Finance*, 14(1), pp. 1-37.
- Wang, W. (2014): "Independent directors and corporate performance in China: A meta-empirical study", *International Journal of Business and Management*, 2(3), pp. 145-171.
- Wang, W., Lu, W. and Lin, Y. (2012): "Does corporate governance play an important role in BHC performance? Evidence from the U.S", *Economic Modelling*, 29(3), pp. 751-760.
- Waweru, V. M. (2014): "Determinants of quality corporate governance in sub-Saharan Africa: Evidence from Kenya and South Africa", *Managerial Auditing Journal*, 29(5), pp. 455-485.
- Weir, C. and Laing, D. (2000): "The performance-governance relationship: The effects of Cadbury compliance on UK quoted companies", *Journal of Management and Governance*, 4(4), pp. 265-281.

- West, A. (2009): "The ethics of corporate governance: A South African perspective", *International Journal of Law and Management*, 51(1), pp. 10-16.
- Whittred, G. (1993): "Donaldson and Davis on CEO governance and shareholder returns: A comment", *Australian Journal of Management*, 18(1), pp. 103-107.
- Williams, C. (2007): "Research methods", *Journal of Business and Economic Research*, 5(3), pp. 65-72.
- Wintoki, M. B., Linck, J. S. and Netter, J. M. (2012): "Endogeneity and the dynamics of internal corporate governance", *Journal of Financial Economics*, 105(3), pp. 581-606.
- Wiwattanakantang, Y. (1999): "An empirical study on the determinants of the capital structure of Thai firms", *Pacific-Basin Finance Journal*, 7(3), pp. 371-403.
- Wooldridge, J. M. (2002): *Econometric analysis of cross section and panel data*. 2<sup>nd</sup> Edition, The Cambridge: The MIT Press.
- World Bank (2013b): *World development indicators*. Available from: <http://databank.worldbank.org/data/download/WDI-2013-ebook.pdf> [Accessed: 2014-06-12].
- Yammeesri, J. and Herath, S. K. (2010): "Board characteristics and corporate value: Evidence from Thailand", *Corporate Governance: The International Journal of Business in Society*, 10(3), pp. 279-292.
- Yang, T and Zhao, S. (2014): "CEO duality and firm performance: Evidence from an exogenous shock to the competitive environment", *Journal of Banking & Finance*, Forthcoming. Available from <http://dx.doi.org/10.2139/ssrn.2177403/> [Accessed: 2015-01-11].
- Yasser, Q. R. and Al Mamun, A. (2015): "The impact of CEO duality attributes on earnings management in the East", *Corporate Governance*, 15(5), pp. 706-718.
- Yasser, Q. R., Entebang, H. and Mansor, S. A. (2011): "Corporate governance and firm performance in Pakistan: The case of Karachi stock exchange (KSE)-30", *Journal of Economics and International Finance*, 3(8), pp. 482-491.
- Yegon, C., Sang, D. J. and Kirui, J. (2014): "The impact of corporate governance on agency cost: Empirical analysis of quoted services firms in Kenya", *Research Journal of Finance and Accounting*, 5(12), pp. 145-154.
- Yermack, D. (1996): "Higher market valuation of companies with a small board of directors", *Journal of Financial Economics*, 40(2), pp. 185-211.



- Zahra, S. A. and Pearce, P. J. (1989): "Board of directors and corporate financial performance: A review and integrative model", *Journal of Management*, 15(2), pp. 291-334.
- Zakaria, Z., Purhanudin, N. and Palanimally, Y. R. (2014): "Board governance and firm performance: A panel data analysis", *Journal of Business Law and Ethics*, 2(1), pp.1-12.
- Zattoni, A., Douglas, T. and Judge, W. (2013): "Developing corporate governance theory through qualitative research", *Corporate Governance: An International Review*, 21(2), pp. 119-122.
- Zhang, L. (2012): "Board demographic diversity, independence, and corporate social performance", *Corporate Governance: The International Journal of Business in Society*, 12(5), pp. 686-700.
- Zu, L. (2008): "Corporate social responsibility, corporate restructuring and firm performance: Empirical evidence from Chinese enterprises", *Springer Science and Business Media*, pp. 1-308.

## APPENDICES

### Appendix 1: Regression results of the impact of corporate governance attributes on Tobin's Q and ROA

Appendix 1 shows regression results of the impact of corporate governance attributes on Tobin's Q and ROA, for the 2002-2014 period, pre-crisis period, during-crisis period and post-crisis period. Column 1 shows control variables. Panel A is for the entire period (2002-2014), Panel B is for the pre-crisis period (2005-2007), Panel C is for the crisis period (2008-2010) and Panel D is for the post-crisis period (2011-2013). Notes: \*\*\*Significant at the 0.01 level; \*\*significant at the 0.05 level; \*significant at the 0.10 level; coefficients are in parentheses. N/S denotes no statistical significance.

*White heteroskedasticity-consistent standard errors and covariance*

<b>Panel A - Entire period (2002 – 2014)</b>		
<i>Control variables</i>	<b>Tobin's Q</b>	<b>ROA</b>
Leverage	N/S	N/S
Firm Age	N/S	N/S
Firm Size	(-0.1409)***	(-0.4701)***
Growth Prospects	(-0.2037)***	N/S
<b>Weighted statistics of Tobin's Q</b>		<b>Weighted statistics of ROA</b>
Adjusted R <sup>2</sup> = 0.4623		Adjusted R <sup>2</sup> = 0.5645
S.E of regression = 0.683		S.E of regression = 0.993
F-Statistics = 99.227		F-Statistics = 140.475
Prob (F-statistics) = 0.000		Prob (F-statistics) = 0.000
Mean dependent var = 0.591		Mean dependent var = 1.468
S.D dependent var = 0.993		S.D dependent var = 1.659
Sum squared residual = 538.254		Sum squared residual = 1135.78
Durbin-Watson statistics = 1.848		Durbin-Watson statistics = 2.197
<b>Panel B - Pre-financial crisis period (2005 -2007)</b>		
<i>Control variables</i>	<b>Tobin's Q</b>	<b>ROA</b>
Leverage	N/S	N/S
Firm Age	N/S	N/S
Firm Size	(-0.3226)***	N/S
Growth Prospects	(-0.5688)***	N/S
<b>Weighted statistics of Tobin's Q</b>		<b>Weighted statistics of ROA</b>
Adjusted R <sup>2</sup> = 0.387		Adjusted R <sup>2</sup> = 0.374
S.E of regression = 0.626		S.E. of regression = 1.000806
F-Statistics = 31.594		F-Statistics = 29.950
Prob (F-statistics) = 0.000		Prob (F-statistics) = 0.000
Mean dependent var = 0.394		Mean dependent var = 1.437
S.D dependent var = 0.802		S.D dependent var = 1.459
Sum squared residual = 204.933		Sum squared residual = 521.84
Durbin-Watson statistics = 1.719		Durbin-Watson statistics = 1.845
<b>Panel C - During the crisis period (2008 – 2010)</b>		
<i>Control variables</i>	<b>Tobin's Q</b>	<b>ROA</b>
Leverage	N/S	N/S
Firm Age	N/S	N/S
Firm Size	N/S	N/S
Growth Prospects	N.S	N/S
<b>Weighted statistics of Tobin's Q</b>		<b>Weighted statistics of ROA</b>
Adjusted R <sup>2</sup> = 0.752		Adjusted R <sup>2</sup> = 0.692
S.E of regression = 0.983		S.E of regression = 0.946
F-Statistics = 75.381		F-Statistics = 56.035
Prob (F-statistics) = 0.000		Prob (F-statistics) = 0.000
Mean dependent var = 2.619		Mean dependent var = 1.897
S.D dependent var = 2.041		S.D dependent var = 1.828
Sum squared residual = 249.513		Sum squared residual = 231.0034
Durbin-Watson statistics = 2.095		Durbin-Watson statistics = 2.272



## Appendix 1: Regression results of the impact of corporate governance attributes on Tobin's Q and ROA

Appendix 1 shows regression results of the impact of corporate governance attributes on Tobin's Q and ROA for South African listed companies, for the 2002-2014 period, pre-crisis period, during-crisis period and post-crisis period. Column 1 shows the control variables.. Panel A is for the entire period (2002-2014), Panel B is for the pre-crisis period (2005-2007), Panel C is for the crisis period (2008-2010) and Panel D is for the post-crisis period (2011-2013). Notes: \*\*\*Significant at the 0.01 level; \*\*significant at the 0.05 level; \*significant at the 0.10 level; coefficients are in parentheses. N/S denotes no statistical significance.

*White heteroskedasticity-consistent standard errors and covariance*

<b>Panel D - After the crisis period (2011 – 2013)</b>		
<i>Control variables</i>	<b>Tobin's Q</b>	<b>ROA</b>
Leverage	N/S	N/S
Firm Age	N/S	N/S
Firm Size	(-0.0224)**	(-0.4951)**
Growth Prospects	N/S	N/S
<b>Weighted statistics of Tobin's Q</b>		<b>Weighted statistics of ROA</b>
Adjusted R <sup>2</sup> = 0.920		Adjusted R <sup>2</sup> = 0.798
S.E of regression = 0.979		S.E of regression = 0.998
F-Statistics = 376.282		F-Statistics = 130.181
Prob (F-statistics) = 0.000		Prob (F-statistics) = 0.000
Mean dependent var = 4.827		Mean dependent var = 1.803
S.D dependent var = 3.298		S.D dependent var = 2.258
Sum squared residual = 336.673		Sum squared residual = 345.857
Durbin-Watson statistics = 1.817		Durbin-Watson statistics = 2.186



## Appendix 2: Panel data unit root test

Appendix 2 presents Levin, Lin and Chu unit root test.						
Variable	Assumes common unit root process (Level)			Assumes individual unit root process (First difference)		
	t- statistic	Probability	Stationary	t-statistic	Probability	Stationary
Firm Size	-1.07844	0.140	No	-5.36396	0.000	Yes
				54.6621	0.000	Yes
				59.8155	0.000	Yes
Board Size	-5.23307	0.000	Yes	-8.12905	0.000	Yes
				92.0798	0.000	Yes
				90.5345	0.000	Yes
Firm Age	-0.30999	0.378	No	-4.78991	0.000	Yes
				44.5351	0.000	Yes
				48.3096	0.000	Yes
Board Diversity	-3.98648	0.000	Yes	-9.72508	0.000	Yes
				121.421	0.000	Yes
				112.708	0.000	Yes
Leadership structure	-3.65440	0.000	Yes	-7.09752	0.000	Yes
				74.5262	0.000	Yes
				91.0565	0.000	Yes
EVA	-6.21392	0.000	Yes	-10.9774	0.000	Yes
				148.122	0.000	Yes
				388.045	0.000	Yes
Board Activity	-10.4407	0.000	Yes	-12.1502	0.000	Yes
				167.670	0.000	Yes
				220.443	0.000	Yes
Firm Size	-2.14577	0.016	No	-6.00552	0.000	Yes
				61.6229	0.000	Yes
				65.6393	0.000	Yes
Growth Prospects	-7.018	0.000	Yes	-10.9835	0.000	Yes
				147.502	0.000	Yes
				259.000	0.000	Yes



Appendix 2 presents Levin, Lin and Chu unit root test.						
Variable	Assumes common unit root process (Level)			Assumes individual unit root process (First difference)		
	t- statistic	Probability	Stationary	t-statistic	Probability	Stationary
Board Independence	-14.0439	0.000	Yes	-13.8355	0.000	Yes
				194.825	0.000	Yes
				194.925	0.000	Yes
Leverage	-34.9346	0.000	Yes	-31.7642	0.000	Yes
				511.375	0.000	Yes
				513.652	0.000	Yes
Board Committees	-7.26838	0.000	Yes	-9.20283	0.000	Yes
				110.149	0.000	Yes
				110.714	0.000	Yes
ROE	-26.7577	0.000	Yes	-23.5905	0.000	Yes
				380.598	0.000	Yes
				457.490	0.000	Yes
ROA	-10.5410	0.000	Yes	-12.3790	0.000	Yes
				168.270	0.000	Yes
				206.275	0.000	Yes



### Appendix 3: Effect of past performance on estimation models

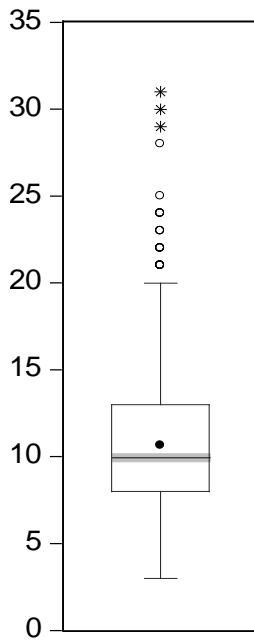
Appendix 3 presents the effect of past performance on the estimation models, GLS, GMM and 2SLS estimators. Each dependent variable shows the effect of excluding past performance (Static) as well as the effect of including past performance (Dynamic) on the explanatory power of the model. The abbreviations and definitions of the independent and control variables presented in the table are contained in Table 5.1. Notes: \*\*\*Significant at the 0.01 level; \*\*significant at the 0.05 level; \*significant at the 0.10 level; coefficients are in parentheses. N/S denotes no statistical significance. N/S refers to no statistical significance.

GLS ESTIMATOR								
	Tobin's Q		EVA		ROA		ROE	
	Static	Dynamic	Static	Dynamic	Static	Dynamic	Static	Dynamic
Performance lag (-1)	N/S	(0.6725)***	N/S	(0.4987)***	N/S	(0.738095)***	N/S	(0.229917)***
BS	(0.0925)***	(0.0573)***	N/S	N/S	(0.247524)*	(0.207475)*	(0.735077)*	(0.656056)*
BI	N/S		N/S	N/S	(-5.063747)**	(-2.728265)*	N/S	N/S
BC	(0.4560)***	(0.2513)**	N/S	N/S	N/S	N/S	N/S	N/S
BA	(-0.1657)***	(-0.0792)**	(-65960.02)*	(-44148.40)*	(-0.594813)**	(-0.332465)*	(-1.181701)*	(-0.910682)*
BD	N/S	N/S	N/S	N/S	N/S	N/S	(23.91817)***	(20.67649)***
LS	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
FS	(-0.2340)***	(-0.1386)***	N/S	N/S	(-0.461676)*	(-0.462384)**	N/S	N/S
GP	(-0.3579)**	(-0.1964)**	N/S	N/S	N/S	N/S	N/S	N/S
LEV	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
AGE	N/S	N/S	N/S	N/S	(0.038881)**	N/S	N/S	N/S
Adjusted R-squared	0.043938	0.489672	0.004532	0.247858	0.023755	0.570288	0.023561	0.078487
Residual	161.89	94.054	4.12E13	2.45E13	181.196	95.23	1309.139	1274.695
GMM ESTIMATOR								
	Tobin's Q		EVA		ROA		ROE	
	Static	Dynamic	Static	Dynamic	Static	Dynamic	Static	Dynamic
Performance lag (-1)	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
BS	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
BI	(1.8508)**	(1.7072)*	N/S	N/S	N/S	N/S	N/S	N/S
BC	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
BA	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
BD	(-2.9769)**	(-3.1613)*	N/S	N/S	(8.6150)*	N/S	(42.971)***	(44.134)***
LS	N/S	N/S	N/S	N/S	N/S	(-5.0162)**	(-14.308)**	(-17.346)**
FS	N/S	N/S	N/S	N/S	N/S	N/S	(2.5632)**	N/S
GP	N/S	N/S	(451806.4)***	(445940.5)***	N/S	N/S	N/S	N/S
LEV	(0.0047)***	(0.0049)***	N/S	N/S	N/S	N/S	N/S	N/S
AGE	N/S	N/S	N/S	(-14139.9)*	N/S	N/S	N/S	N/S
Adjusted R-squared	-0.0066	-0.0998	-0.0183	-0.0821	-0.0750	0.3823	-0.0276	-0.0168
Residual	163.85	178.13	4.19E13	4.63E13	199.16	104.32	1370.19	1346.54
2SLS								
	Tobin's Q		EVA		ROA		ROE	
	Static	Dynamic	Static	Dynamic	Static	Dynamic	Static	Dynamic
Performance lag (-1)	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
BS	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
BI	(1.8822)**	(1.7006)*	N/S	N/S	N/S	N/S	N/S	N/S
BC	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
BA	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
BD	(-2.9663)**	(-3.1493)**	N/S	N/S	(8.5767)*	N/S	(42.991)***	(44.157)***
LS	N/S	N/S	N/S	N/S	N/S	(-5.0122)**	(-14.245)**	(-17.354)**
FS	N/S	N/S	N/S	N/S	N/S	N/S	(2.5592)**	N/S
GP	N/S	N/S	(451903.2)***	(446176.8)***	N/S	N/S	N/S	N/S
LEV	(0.0047)***	(0.0049)***	N/S	N/S	N/S	N/S	N/S	N/S
AGE	N/S	N/S	N/S	(-14148.4)*	N/S	N/S	N/S	N/S
Adjusted R-squared	-0.0070	-0.0983	-0.018323	-0.0822	-0.0754	0.3819	-0.0274	-0.0172
Residual	163.79	177.91	4.19E13	4.63E13	199.26	104.41	1370	1347.10

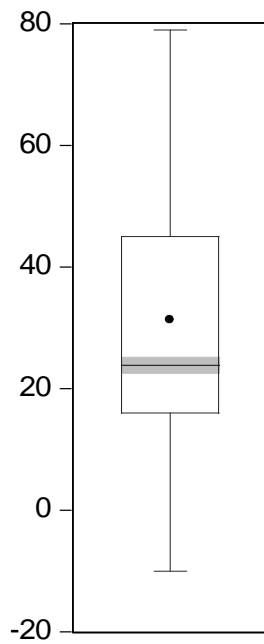
BS – Board Size  
BI – Board Independence  
BC – Board Committees  
BA – Board Activity  
BD – Board Diversity  
LS – Leadership Structure  
FS – Firm Size  
GP – Growth Prospects  
LEV – Leverage  
AGE – Firm Age

### Appendix 4: Identification of outliers using a box-plot

BS

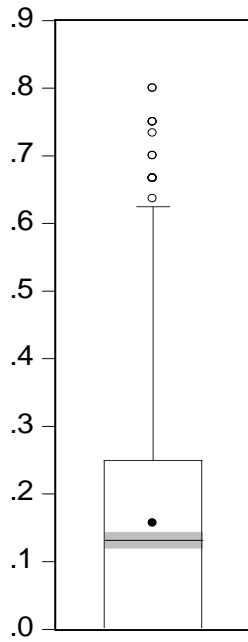


Age

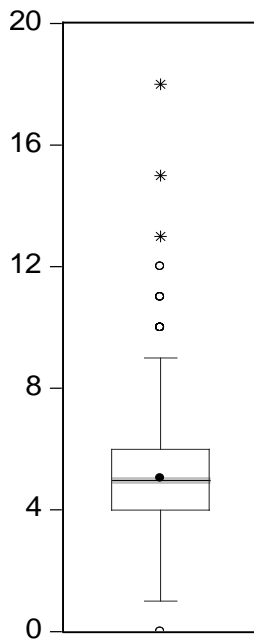




### BDD



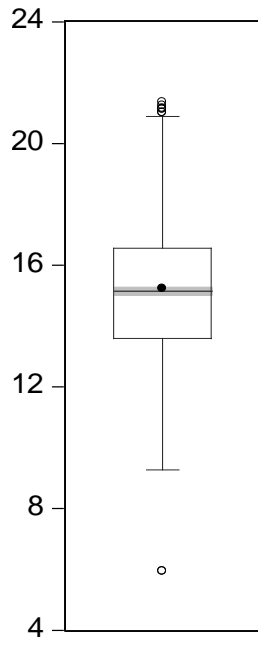
### FBMs



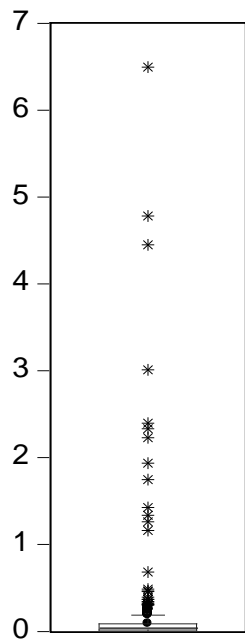




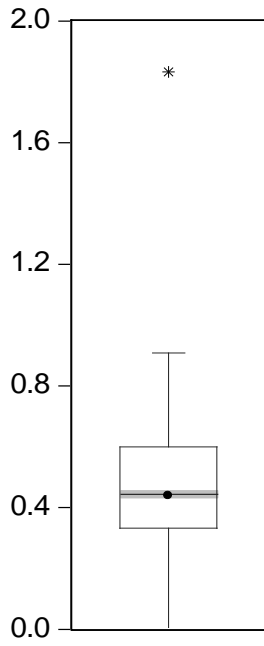
### FS



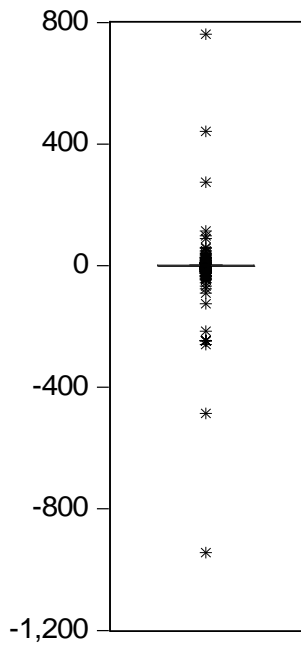
### GP



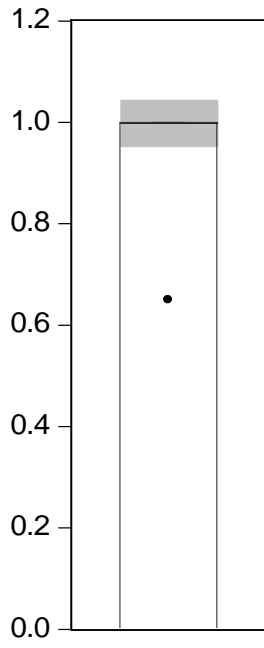
### INEDs



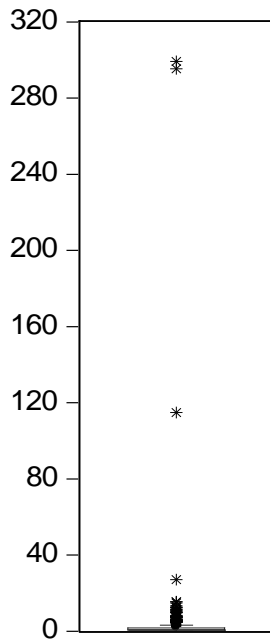
### Leverage



PCom

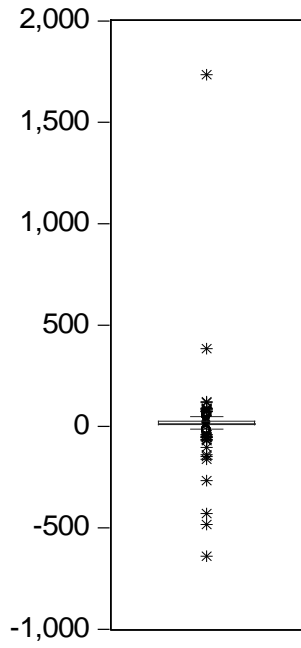


Q-ratio

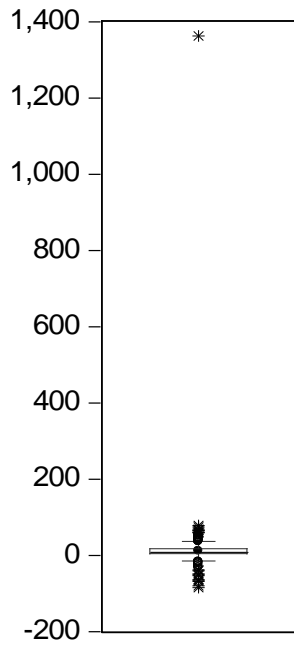




### ROE

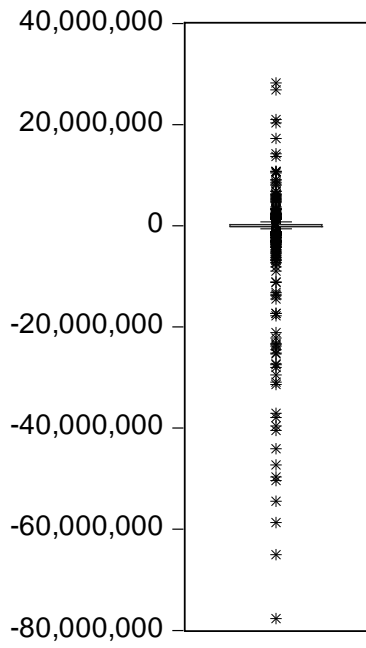


### ROA





### EVA



## Appendix 5: Corporate governance models for each economic period per industry

Industry classification	Model specification
<b>Panel A: Regression equations of performance measure on CG for the period 2002-2014 – Entire period</b>	
Financials	ROA = - 0.1357(BS) - 2.1190(BI) + 1.1450(BC) - 4.8523(BD) + 1.2480(LS) Tobin's Q = 0.0570(BS) - 1.0815(BI) + 0.297334(BC) + 0.5636(BD) - 0.6874(LS)
Basic materials	ROA = - 0.4035(BS) - 9.4246(BI) - 2.4127(BC) + 0.1744(BA) + 7.9258(BD) - 8.8980(LS) Tobin's Q = 0.6755(BS)+ 2.9703(BI)+ 1.7244(BC) -0.1146(BA)
Consumer services	ROA = 0.5015(BS) - 2.9893(BI) + 2.2661(BC) - 0.9965(BA) + 4.8948(BD) - 2.3880(LS) Tobin's Q = 0.0899(BS) - 0.0679(BI) + 0.3221(BC) - 0.1889(BA) + 0.6359(BD) - 0.2929(LS)
Consumer goods	ROA = 0.4039(BS) - 4.2466(BI) + 1.0329(BC) + 0.1687(BA) + 16.099(BD) Tobin's Q = 0.1533(BS) + 1.1751(BI) + 0.8907(BC) - 0.0832(BA) - 4.2714(BD)
Industrials	ROA = 0.1707(BS) - 0.9509(BI) - 1.2120(BC) - 0.0880(BA) - 0.7413(LS) Tobin's Q = 0.0014(BS) + 0.1612(BI) - 0.0171(BC) + 0.0037(BA) - 0.1033(BD) + 0.2193(LS)
<b>Panel B: Regression equations of performance measure on CG for the period 2005 -2007 - Pre-crisis period</b>	
Financials	ROA = - 0.5586(BS) - 6.3982(BI) + 4.4321(BC) + 0.1021(BA) - 15.268(BD) + 4.7332(LS) Tobin's Q = 0.0751(BS) - 1.0817(BI) + 0.4614(BC) - 0.0527(BA) + 0.7191(BD) - 0.7126(LS)
Basic materials	ROA = - 1.0329(BS) + 0.5359(BA) + 6.9678(BD) - 13.107(LS) Tobin's Q = 0.3898(BS)
Consumer services	ROA = 0.6181(BS) - 2.2630(BI) + 3.3026(BC) - 1.8567(BA) + 17.835(BD) - 9.0618(LS) Tobin's Q = 0.0827(BS) + 0.2169(BC) - 0.1948(BA) + 3.0690(BD) - 0.6286(LS)
Consumer goods	ROA = 0.6755(BS) - 4.4861(BI) + 0.4983(BA) + 12.748(BD) - 7.1772(LS) Tobin's Q = 0.1706(BS) + 1.7962(BC) - 0.2575(BA) - 9.8164(BD)
Industrials	ROA = 0.1431(BS) - 1.5514(BC) + 1.5559(LS) Tobin's Q = - 0.0096(BS) + 0.1867(BI) + 0.0277(BC) + 0.1652(BD) + 0.2652(LS)
<b>Panel C: Regression equations of performance measure on CG for the period 2008-2010 – During the crisis period</b>	
Financials	ROA =0.4090(BS) - 11.355(BI) + 3.8661(BD) + 3.0567(LS) Tobin's Q = 0.1341(BC) + 0.0180(BA) + 0.2851(LS)
Basic materials	ROA = - 3.5881(BS) + 19.029(BI) + 13.899(BD) Tobin's Q = 0.3420(BI) - 0.2505(BC) - 0.0283(BA)
Consumer services	ROA = - 0.1800(BS) - 5.0278(BI) + 1.6685(BC) - 13.656(BD) - 5.6960(LS) Tobin's Q = 0.0252(BS) - 1.2270(BI) + 0.4653(BC) - 0.1109(BA) + 1.0601(BD) - 0.6744(LS)
Consumer goods	ROA = - 4.9820(BC) + 13.998(BD) + 10.249(LS) Tobin's Q = 0.1228(BS) + 1.0213(BC) + 0.1809(BA)
Industrials	ROA = - 0.1097(BS) - 4.4120(BI) + 2.1420(BC) - 0.4913(BA) + 1.8578(BD) - 1.3179(LS) Tobin's Q = 0.0067(BS) + 0.1368(BC)
<b>Panel D: Regression equations of performance measure on CG for the period 2011 -2013 – After the crisis period</b>	
Financials	ROA = 0.1126(BS) + 0.6882(BC) - 0.2617(BA) - 5.6558(BD) Tobin's Q = 0.0155(BS) - 0.1213(BI) - 0.0832(BC) - 0.3182(BD)
Basic materials	ROA = 0.5673(BS) - 6.8687(BI) - 6.8954(BC) + 10.539(BD) Tobin's Q = 0.0327(BS) + 0.1039(BI) - 0.5823(BD)
Consumer services	ROA = 0.6494(BS) - 1.5451(BC) - 1.1409(BA) + 7.7731(BD) - 2.4317(LS) Tobin's Q = 0.1394(BS) - 0.8561(BI) - 0.3502(BC) - 0.2363(BD) - 0.1999(LS)
Consumer goods	ROA = 0.7694(BS) + 13.327(BD) Tobin's Q = 0.7935(BI) + 0.2231(BC) - 0.0608(BA) + 1.9226(BD)
Industrials	ROA = 0.2012(BS) + 4.8484(BI) - 1.7845(BC) - 0.3986(BA) Tobin's Q = 0.0049(BS) + 0.5680(BI) - 0.1466(BC) - 0.2498(BD)

## Appendix 6: Descriptive statistics for the financials industry

Appendix 6 presents summary statistics for industrial classifications used in the regression analysis. Reported are means, with standard deviation, minimum and maximum value for the full period of time and three sub-periods, pre-crisis, during and post-crisis periods. N/S indicates no statistical significance between the variables. The summary statistics are shown for the financials industry. The abbreviations and definitions of the independent and control variables presented in this table are contained in Table 5.2.

<b>Financials</b>	<b>Tobin's Q</b>	<b>ROA</b>	<b>BS</b>	<b>BI</b>	<b>BC</b>	<b>BA</b>	<b>BD</b>	<b>LS</b>
<b>Entire period (2002 – 2014)</b>								
Mean	1.2776	2.7203	11.723	0.4829	0.5653	5.1346	0.1614	0.9384
Standard deviation	1.6087	13.564	4.9155	0.1633	0.4966	1.9215	0.1608	0.2407
Minimum	0.0900	-79.31	5.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	15.490	33.500	25.000	0.7857	1.0000	13.000	0.6666	1.0000
Observation	260	260	260	260	260	260	260	260
<b>Pre-financial crisis period (2005 -2007)</b>								
Mean	1.5446	2.3558	11.100	0.4597	0.4083	5.0583	0.1633	0.9000
Standard deviation	2.2547	18.208	5.1112	0.2053	0.4935	2.1897	0.1655	0.3012
Minimum	0.0900	-79.31	5.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	15.490	33.500	25.000	0.7727	1.0000	13.000	0.6363	1.0000
Observation	120	120	120	120	120	120	120	120
<b>During the crisis period (2008 – 2010)</b>								
Mean	0.9841	2.3046	12.416	0.4942	0.6000	5.1833	0.2123	0.9500
Standard deviation	0.4976	8.5183	4.9755	0.1203	0.4940	1.5567	0.1842	0.2197
Minimum	0.1100	-25.86	5.0000	0.2500	0.0000	2.0000	0.0000	0.0000
Maximum	2.7300	20.750	23.000	0.7857	1.0000	11.000	0.6666	1.0000
Observation	60	60	60	60	60	60	60	60
<b>After the crisis period (2011 – 2013)</b>								
Mean	1.0972	3.5787	12.137	0.5092	0.7750	5.2125	0.1204	0.9875
Standard deviation	0.6599	6.9649	4.4996	0.1075	0.4202	1.74	0.1204	0.1118
Minimum	0.1200	-9.72	5.0000	0.2857	0.0000	2.0000	0.0000	0.0000
Maximum	3.6800	25.490	21.000	0.7777	1.0000	10.000	0.6000	1.0000
Observation	80	80	80	80	80	80	80	80

## Appendix 7: Descriptive statistics for the consumer services industry

Summary statistics for industrial classifications used in the regression analysis. Reported are means, with standard deviation, minimum and maximum value for the full period of time and three sub-periods, pre-crisis, during and post-crisis periods. N/S indicates no statistical significance between the variables. The summary statistics are shown for the consumer services industry. The abbreviations and definitions of the independent and control variables presented in this table are contained in Table 5.2.

<b>Consumer Services</b>	<b>Tobin's Q</b>	<b>ROA</b>	<b>BS</b>	<b>BI</b>	<b>BC</b>	<b>BA</b>	<b>BD</b>	<b>LS</b>
<b>Entire period (2002 – 2014)</b>								
Mean	2.0718	17.801	9.9230	0.4276	0.6315	4.3400	0.1153	0.9230
Standard deviation	1.7814	13.984	2.7611	0.2403	0.4833	1.1069	0.1087	0.2670
Minimum	0.0400	-8.75	4.0000	0.0000	0.0000	2.0000	0.0000	0.0000
Maximum	11.700	78.420	17.000	0.9090	1.0000	9.0000	0.4666	1.0000
Observation	247	247	247	247	247	247	247	247
<b>Pre-financial crisis period (2005 -2007)</b>								
Mean	1.5755	15.962	9.2631	0.3805	0.5087	4.5087	0.0719	0.9210
Standard deviation	1.0837	10.138	2.7038	0.2679	0.5021	1.2846	0.0795	0.2708
Minimum	0.0400	-3.51	4.0000	0.0000	0.0000	2.0000	0.0000	0.0000
Maximum	5.0100	46.180	15.000	0.8333	1.0000	9.0000	0.3000	1.0000
Observation	114	114	114	114	114	114	114	114
<b>During the crisis period (2008 – 2010)</b>								
Mean	1.8080	18.788	10.017	0.4156	0.6842	4.2807	0.1538	0.9649
Standard deviation	1.2183	13.110	2.6287	0.2474	0.4689	1.1915	0.1084	0.1856
Minimum	0.0800	-1.82	5.0000	0.0000	0.0000	2.0000	0.0000	0.0000
Maximum	5.6900	65.720	16.000	0.9090	1.0000	8.0000	0.4000	1.0000
Observation	57	57	57	57	57	57	57	57
<b>After the crisis period (2011 – 2013)</b>								
Mean	3.0142	19.819	10.842	0.5074	0.7763	4.1315	0.1516	0.8947
Standard deviation	2.4908	18.661	2.7033	0.1601	0.4194	0.6184	0.1231	0.3089
Minimum	0.1100	-8.75	6.0000	0.0000	0.0000	3.0000	0.0000	0.0000
Maximum	11.700	78.420	17.000	0.8750	1.0000	6.0000	0.4666	1.0000
Observation	76	76	76	76	76	76	76	76



## Appendix 8: Descriptive statistics for the consumer goods industry

Summary statistics for industrial classifications used in the regression analysis. Reported are means, with standard deviation, minimum and maximum value for the full period of time and three sub-periods, pre-crisis, during and post-crisis periods. N/S indicates no statistical significance between the variables. The summary statistics are shown for the consumer goods industry. The abbreviations and definitions of the independent and control variables presented in this table are contained in Table 5.2.

<b>Consumer Goods</b>	<b>Tobin's Q</b>	<b>ROA</b>	<b>BS</b>	<b>BI</b>	<b>BC</b>	<b>BA</b>	<b>BD</b>	<b>LS</b>
<b>Entire period (2002 – 2014)</b>								
Mean	2.4858	16.791	11.529	0.4872	0.6752	5.1965	0.1461	0.9316
Standard deviation	3.4316	6.8161	3.7636	0.2193	0.4703	1.2610	0.1226	0.2534
Minimum	0.4400	3.3600	5.0000	0.0000	0.0000	4.0000	0.0000	0.0000
Maximum	27.130	36.140	20.000	0.8888	1.0000	9.0000	0.4285	1.0000
Observation	117	117	117	117	117	117	117	117
<b>Pre-financial crisis period (2005 -2007)</b>								
Mean	3.1151	15.962	10.611	0.4661	0.5185	4.8518	0.1361	0.8888
Standard deviation	4.8840	6.4856	3.6570	0.2538	0.5043	1.1559	0.1178	0.3172
Minimum	0.4400	3.3600	5.0000	0.0000	0.0000	4.0000	0.0000	0.0000
Maximum	27.130	36.140	18.000	0.8750	1.0000	8.0000	0.3636	1.0000
Observation	54	54	54	54	54	54	54	54
<b>During the crisis period (2008 – 2010)</b>								
Mean	1.5848	17.105	11.925	0.4647	0.6666	5.4444	0.2004	0.9259
Standard deviation	0.7561	7.2527	3.2924	0.2170	0.4803	1.2810	0.1354	0.2668
Minimum	0.4500	4.5100	5.0000	0.0000	0.0000	4.0000	0.0000	0.0000
Maximum	3.3200	34.710	16.000	0.8888	1.0000	9.0000	0.4285	1.0000
Observation	27	27	27	27	27	27	27	27
<b>After the crisis period (2011 – 2013)</b>								
Mean	2.2177	17.799	12.611	0.5356	0.9166	5.5277	0.1204	1.0000
Standard deviation	1.0826	7.0018	4.0019	0.1531	0.2803	1.2980	0.1101	0.0000
Minimum	0.4800	6.0400	6.0000	0.1666	0.0000	4.0000	0.0000	1.0000
Maximum	3.8200	31.070	20.000	0.8333	1.0000	9.0000	0.4166	1.0000
Observation	36	36	36	36	36	36	36	36

## Appendix 9: Descriptive statistics for the industrials industry

Summary statistics for industrial classifications used in the regression analysis. Reported are means, with standard deviation, minimum and maximum value for the full period of time and three sub-periods, pre-crisis, during and post-crisis periods. N/S indicates no statistical significance between the variables. The summary statistics are shown for the industrials industry. The abbreviations and definitions of the independent and control variables presented in this table are contained in Table 5.2.

<b>Industrials</b>	<b>Tobin's Q</b>	<b>ROA</b>	<b>BS</b>	<b>BI</b>	<b>BC</b>	<b>BA</b>	<b>BD</b>	<b>LS</b>
<b>Entire period (2002 – 2014)</b>								
Mean	1.0607	11.743	10.482	0.4032	0.7170	5.0868	0.1879	0.9228
Standard deviation	0.6342	8.2713	4.5627	0.1961	0.4511	1.3966	0.1671	0.2672
Minimum	0.2200	-21.72	4.0000	0.0000	0.0000	3.0000	0.0000	0.0000
Maximum	4.8700	51.580	31.000	0.8000	1.0000	11.000	0.8000	1.0000
Observation	311	311	311	311	311	311	311	311
<b>Pre- financial crisis period (2005 -2007)</b>								
Mean	1.0835	13.580	10.349	0.3330	0.5384	5.0629	0.1382	0.8461
Standard deviation	0.6313	8.4703	5.2851	0.2160	0.5002	1.4785	0.1478	0.3620
Minimum	0.2200	-16.88	4.0000	0.0000	0.0000	3.0000	0.0000	0.0000
Maximum	4.3800	46.560	31.000	0.7500	1.0000	11.000	0.8000	1.0000
Observation	143	143	143	143	143	143	143	143
<b>During the crisis period (2008 – 2010)</b>								
Mean	1.0425	12.310	10.777	0.4376	0.7638	5.2777	0.2790	0.9722
Standard deviation	0.7330	7.4528	4.0253	0.1621	0.4276	1.3450	0.1817	0.1654
Minimum	0.4800	2.9400	6.0000	0.1666	0.0000	3.0000	0.0000	0.0000
Maximum	4.8700	51.580	24.000	0.7500	1.0000	10.000	0.7500	1.0000
Observation	72	72	72	72	72	72	72	72
<b>After the crisis period (2011 – 2013)</b>								
Mean	1.0404	8.5811	10.458	0.4820	0.9479	4.9791	0.1936	1.0000
Standard deviation	0.5602	7.6853	3.7386	0.1468	0.2233	1.3056	0.1540	0.0000
Minimum	0.2500	-21.72	6.0000	0.2500	0.0000	3.0000	0.0000	1.0000
Maximum	3.4000	32.410	24.000	0.8000	1.0000	10.000	0.7333	1.0000
Observation	96	96	96	96	96	96	96	96

## Appendix 10: Descriptive statistics for the basic materials industry

Summary statistics for industrial classifications used in the regression analysis. Reported are means, with standard deviation, minimum and maximum value for the full period of time and three sub-periods, pre-crisis, during and post-crisis periods. N/S indicates no statistical significance between the variables. The summary statistics are shown for the basic materials industry. The abbreviations and definitions of the independent and control variables presented in this table are contained in Table 5.2.

<b>Basic Materials</b>	<b>Tobin's Q</b>	<b>ROA</b>	<b>BS</b>	<b>BI</b>	<b>BC</b>	<b>BA</b>	<b>BD</b>	<b>LS</b>
<b>Entire period (2002 – 2014)</b>								
Mean	4.7651	9.7828	10.069	0.4326	0.6580	5.5367	0.1624	0.9653
Standard deviation	28.472	16.300	2.9406	0.2399	0.4754	2.1238	0.1769	0.1832
Minimum	0.0900	-84.01	4.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	299.37	61.790	20.000	1.8333	1.0000	18.000	0.8000	1.0000
Observation	231	231	231	231	231	231	231	231
<b>Pre-financial crisis period (2005 -2007)</b>								
Mean	8.7630	14.477	9.8785	0.3501	0.5794	5.2523	0.1498	0.9345
Standard deviation	41.555	13.793	3.4687	0.2678	0.4959	2.0004	0.1775	0.2484
Minimum	0.0900	-26.14	4.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	299.37	61.790	20.000	1.8333	1.0000	12.000	0.7000	1.0000
Observation	107	107	107	107	107	107	107	107
<b>During the crisis period (2008 – 2010)</b>								
Mean	1.5866	9.5545	10.018	0.4594	0.6603	5.7358	0.2213	1.0000
Standard deviation	1.7268	21.933	2.2402	0.1938	0.4781	2.7326	0.2047	0.0000
Minimum	0.3800	-84.01	6.0000	0.0000	0.0000	3.0000	0.0000	1.0000
Maximum	10.7300	54.890	15.000	0.8461	1.0000	18.000	0.8000	1.0000
Observation	53	53	53	53	53	53	53	53
<b>After the crisis period (2011 – 2013)</b>								
Mean	1.1128	2.8781	10.394	0.5370	0.7746	5.8169	0.1374	0.9859
Standard deviation	0.9426	12.058	2.5098	0.1748	0.4207	1.7263	0.1431	0.1186
Minimum	0.2800	-40.5	5.0000	0.2000	0.0000	1.0000	0.0000	0.0000
Maximum	6.5200	32.070	16.000	0.9000	1.0000	11.000	0.7500	1.0000
Observation	71	71	71	71	71	71	71	71

### Appendix 11: Summary of the hypotheses tests for the entire period, pre-crisis period, crisis period and post-crisis period

Appendix 11 presents a summary of hypotheses tests for the entire period, pre-crisis period, crisis period and post-crisis period									
Entire examination period (2002-2014)									
Dependent variable	Return on assets (ROA)					Tobin's Q			
Independent variable	Hypothesis number	Hypothesised sign	Actual sign of result	Statistical significance of result	Conclusion (Hypothesis)	Hypothesised sign	Actual sign of result	Statistical Significance of result	Conclusion (Hypothesis)
Board size	1	+	+	Significant(0.01)	Accept	+	+	Significant (0.05)	Accept
Board independence	2	+	-	Significant (0.01)	Reject	+	-	Insignificant	Reject
Board committees	3	+	+	Insignificant	Reject	+	+	Significant (0.01)	Accept
Board activity	4	+	-	Significant (0.1)	Reject	+	-	Significant (0.1)	Reject
Board diversity	5	+	+	Insignificant	Reject	+	+	Insignificant	Reject
Leadership structure	6	+	-	Insignificant	Reject	+	-	Insignificant	Reject
Pre-crisis period (2005-2007)									
	Return on assets (ROA)					Tobin's Q			
Independent variable	Hypothesis number	Hypothesised sign	Actual sign of result	Statistical significance of result	Conclusion (Hypothesis)	Hypothesised sign	Actual sign of result	Statistical Significance of result	Conclusion (Hypothesis)
Board size	1	+	-	Insignificant	Reject	+	+	Significant (0.01)	Accept
Board independence	2	+	-	Significant (0.05)	Reject	+	+	Significant (0.05)	Accept
Board committees	3	+	+	Insignificant	Reject	+	+	Significant (0.01)	Accept
Board activity	4	+	+	Insignificant	Reject	+	-	Insignificant	Reject
Board diversity	5	+	-	Insignificant	Reject	+	+	Insignificant	Reject
Leadership structure	6	+	+	Insignificant	Reject	+	+	Insignificant	Reject
During-crisis period (2008-2010)									
	Return on assets (ROA)					Tobin's Q			
Independent variable	Hypothesis number	Hypothesised sign	Actual sign of result	Statistical significance of result	Conclusion (Hypothesis)	Hypothesised sign	Actual sign of result	Statistical Significance of result	Conclusion (Hypothesis)
Board size	1	+	-	Insignificant	Reject	+	-	Insignificant	Reject
Board independence	2	+	-	Significant (0.1)	Reject	+	+	Insignificant	Reject
Board committees	3	+	+	Insignificant	Reject	+	+	Insignificant	Reject

Appendix 11 presents a summary of hypotheses tests for the entire period, pre-crisis period, crisis period and post-crisis period									
Entire examination period (2002-2014)									
Dependent variable	Return on assets (ROA)					Tobin's Q			
Board activity	4	+	-	Significant (0.1)	Reject	+	-	Insignificant	Reject
Board diversity	5	+	+	Insignificant	Reject	+	+	Insignificant	Reject
Leadership structure	6	+	+	Insignificant	Reject	+	+	Significant (0.05)	Accept
Post-crisis period (2011-2013)									
	Return on assets (ROA)					Tobin's Q			
Independent Variable	Hypothesis number	Hypothesised sign	Actual sign of result	Statistical significance of result	Conclusion (Hypothesis)	Hypothesised sign	Actual sign of result	Statistical Significance of result	Conclusion (Hypothesis)
Board size	1	+	+	Significant (0.01)	Accept	+	+	Significant (0.05)	Accept
Board independence	2	+	-	Insignificant	Reject	+	+	Insignificant	Reject
Board committees	3	+	-	Significant (0.1)	Reject	+	-	Significant (0.1)	Reject
Board activity	4	+	-	Significant (0.1)	Reject	+	+	Insignificant	Reject
Board diversity	5	+	+	Insignificant	Reject	+	-	Significant (0.05)	Reject
Leadership structure	6	+	-	Insignificant	Reject	+	-	Insignificant	Reject

Positively significant	Accept
Negatively significant	Reject
No significance	Reject



## Appendix 12: A list of the names and industries of the 90 sampled companies

JSE Code	Full company name	Sector	Industry
AFE	AECI Limited	Chemicals	Basic Materials
ARI	African Rainbow Min Ltd	Basic Resources	Basic Materials
AMS	Anglo American Plat Ltd	Basic Resources	Basic Materials
ACL	ArcelorMittal SA Limited	Basic Resources	Basic Materials
ART	Argent Industrial Ltd	Industrial Goods & Services	Industrials
ASR	Assore Ltd	Basic Resources	Basic Materials
APK	Astrapak Limited	Industrial Goods & Services	Industrials
AVI	AVI Ltd	Food & Beverage	Consumer Goods
BAW	Barloworld Ltd	Industrial Goods & Services	Industrials
BSR	Basil Read Holdings Ltd	Construction & Materials	Industrials
BVT	Bidvest Ltd	Industrial Goods & Services	Industrials
BDM	Buildmax Ltd	Basic Resources	Basic Materials
CPI	Capitec Bank Hldgs Ltd	Banks	Financials
CRG	Cargo Carriers Ltd	Industrial Goods & Services	Industrials
CSB	Cashbuild Ltd	Retail	Consumer Services
CAT	Caxton CTP Publish Print	Media	Consumer Services
CLH	City Lodge Hotels Ltd	Travel & Leisure	Consumer Services
CLS	Clicks Group Ltd	Retail	Consumer Services
CMH	Combined Motor Hldgs Ltd	Retail	Consumer Services
CFR	Compagnie Fin Richemont	Personal & Household Goods	Consumer Goods
CKS	Crookes Brothers Ltd	Food & Beverage	Consumer Goods
CUL	Cullinan Holdings Ltd	Travel & Leisure	Consumer Services
DTA	Delta EMD Ltd	Chemicals	Basic Materials
DST	Distell Group Ltd	Food & Beverage	Consumer Goods
DAW	Distr and Warehousing	Construction & Materials	Industrials
ELR	ELB Group Ltd	Industrial Goods & Services	Industrials
FBR	Famous Brands Ltd	Travel & Leisure	Consumer Services
FSR	Firststrand Ltd	Banks	Financials
GND	Grindrod Ltd	Industrial Goods & Services	Industrials
GRF	Group Five Ltd	Construction & Materials	Industrials
GRT	Growthpoint Prop Ltd	Real Estate	Financials
HAR	Harmony GM Co Ltd	Basic Resources	Basic Materials
HCI	Hosken Cons Inv Ltd	Investment Instruments	Financials
HPB	Hospitality Prop Fund B	Real Estate	Financials
HWN	Howden Africa Hldgs Ltd	Industrial Goods & Services	Industrials
HDC	Hudaco Industries Ltd	Industrial Goods & Services	Industrials
HYP	Hyprop Inv Ltd	Real Estate	Financials
IMP	Impala Platinum Hlgs Ltd	Basic Resources	Basic Materials
IPL	Imperial Holdings Ltd	Industrial Goods & Services	Industrials
IPF	Investec Property Fund Ltd	Real Estate	Financials
IVT	Invicta Holdings Ltd	Industrial Goods & Services	Industrials
ITE	Italtile Ltd	Retail	Consumer Services
MRF	Merafe Resources Ltd	Basic Resources	Basic Materials
MTA	Metair Investments Ltd	Automobiles & Parts	Consumer Goods



JSE Code	Full company name	Sector	Industry
MRP	Mr Price Group Ltd	Retail	Consumer Services
MUR	Murray & Roberts Hldgs	Construction & Materials	Industrials
NPK	Nampak Ltd	Industrial Goods & Services	Industrials
NPN	Naspers Ltd -N-	Media	Consumer Services
NED	Nedbank Group Ltd	Banks	Financials
NCS	Nictus Ltd	Retail	Consumer Services
NHM	Northam Platinum Ltd	Basic Resources	Basic Materials
NWL	Nu-World Hldgs Ltd	Personal & Household Goods	Consumer Goods
OCE	Oceana Group Ltd	Food & Beverage	Consumer Goods
OCT	Octodec Invest Ltd	Real Estate	Financials
OMN	Omnia Holdings Ltd	Chemicals	Basic Materials
PET	Petmin Ltd	Basic Resources	Basic Materials
PIK	Pick n Pay Stores Ltd	Retail	Consumer Services
PPC	PPC Limited	Construction & Materials	Industrials
PMV	Primeserv Group Ltd	Industrial Goods & Services	Industrials
PSG	PSG Group Ltd	Financial Services	Financials
PPR	Putprop Ltd	Real Estate	Financials
RDF	Redefine Properties Ltd	Real Estate	Financials
RLO	Reunert Ltd	Industrial Goods & Services	Industrials
RTO	Rex Trueform Cloth Co Ld	Retail	Consumer Services
RMH	RMB Holdings Ltd	Banks	Financials
SAC	SA Corp Real Estate Ltd	Real Estate	Financials
SBV	Sabvest Ltd	Investment Instruments	Financials
SLM	Sanlam Limited	Insurance	Financials
SNT	Santam Limited	Insurance	Financials
SNV	Santova Logistics Ltd	Industrial Goods & Services	Industrials
SAP	Sappi Ltd	Basic Resources	Basic Materials
SFN	Sasfin Holdings Ltd	Financial Services	Financials
SOL	Sasol Limited	Chemicals	Basic Materials
SNU	Sentula Mining Ltd	Basic Resources	Basic Materials
SHP	Shoprite Holdings Ltd	Retail	Consumer Services
SPA	Spanjaard Limited	Chemicals	Basic Materials
SEA	Spear REIT Limited	Real Estate	Financials
SUR	Spur Corporation Ltd	Travel & Leisure	Consumer Services
SBK	Standard Bank Group Ltd	Banks	Financials
SUI	Sun International Ltd	Travel & Leisure	Consumer Services
TFG	The Foschini Group Limited	Retail	Consumer Services
TBS	Tiger Brands Ltd	Food & Beverage	Consumer Goods
TDH	Tradehold Ltd	Real Estate	Financials
TSX	Trans Hex Group Ltd	Basic Resources	Basic Materials
TPC	Transpaco Ltd	Industrial Goods & Services	Industrials
TMT	Trematon Capital Inv Ltd	Investment Instruments	Financials
TRE	Trencor Ltd	Industrial Goods & Services	Industrials
TRU	Truworths Int Ltd	Retail	Consumer Services
VLE	Value Group Ltd	Industrial Goods & Services	Industrials



<b>JSE Code</b>	<b>Full company name</b>	<b>Sector</b>	<b>Industry</b>
WBO	Wilson Bayly Hlm-Ovc Ltd	Construction & Materials	Industrials
WNH	Winhold Ltd	Industrial Goods & Services	Industrials
WHL	Woolworths Holdings Ltd	Retail	Consumer Services





**Appendix 13: Industrial composition of all JSE listed companies on 26/02/2015**

<b>Industry</b>	<b>Sector</b>	<b>No. of firms per sector to be sampled</b>	<b>Number of firms per industry</b>
Basic Material	Chemicals	06	69
	Basic Resources	63	
Consumer Goods	Automobiles and Parts	01	23
	Food and Beverages	17	
	Personal and Household goods	05	
Consumer Services	Retail	28	43
	Media	04	
	Travel and Leisure	11	
Financials	Banks	07	91
	Insurance	08	
	Real Estate	45	
	Financial Services	22	
	Investment Instruments	09	
HealthCare	HealthCare	07	07
Industrials	Construction and Materials	20	69
	Industrial Goods and Services	49	
Oil and Gas	Oil and Gas	05	05
Technology	Technology	13	13
Telecommunications	Telecoms	04	04
<b><i>TOTAL NUMBER OF FIRMS LISTED ON THE JSE</i></b>			<b>324</b>