

**CAPITAL STRUCTURE, CORPORATE GOVERNANCE AND FINANCIAL
PERFORMANCE: AN EMPIRICAL STUDY OF THE SOUTH AFRICAN RETAIL SECTOR**

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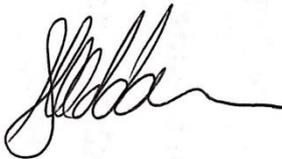
SECTOR

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ABSTRACT

Capital structure has been a subject of debate for a number of decades. Extensive research explaining various theories of capital structure can be found. The most notable theories are the Modigliani and Miller capital structure irrelevance propositions; the trade-off theory, and the pecking order theory. Corporate governance is a topic that has also been investigated for decades; and in recent years, plenty of corporate scandals, environmental problems and globalisation as a whole have impacted the awareness of corporate governance in firms. The wholesale and retail sector accounts for a large portion of South Africa's Gross Domestic Product, which signifies that the retail sector is worth exploring in order to obtain an overview of their capital structure, corporate governance and financial performance. Therefore, due to inconsistent findings in earlier studies this study attempted to determine the relationships between capital structure, corporate governance and financial performance within the retail industry in South Africa.

This study comprised of 18 South African firms in the wholesale and retail sector listed on the JSE. The data was extracted for a ten-year period ranging from 2009 to 2018. Panel data econometric techniques were used to conduct the analysis.

The first objective was to determine the relationship between capital structure and financial performance of South African retail firms. The second objective was to determine if corporate governance practices of South African retail firms had an impact on their financial performance. Firstly, the study found a negative relationship between capital structure and financial performance of South African retail firms. Secondly, the study documented that board size and institutional ownership were negatively related to financial performance. Thirdly, the study found that board independence and firm size were positively related to financial performance. The study concluded that the corporate governance practices and capital structure choices influenced the financial performance of South African retail firms for the period of this study. Comparatively, capital structure had a higher impact on financial performance than corporate governance practices. It is recommended that South African retail firms observe good corporate governance practices as well as prudent capital structure policies as these have a significant impact on their financial performance.

Keywords: capital structure, corporate governance, financial performance, retail sector, South Africa.

OPSOMMING

Kapitaalstruktuur is reeds vir baie jare 'n onderwerp van bespreking. Omvattende navorsing verduidelik verskillende teorieë van kapitaalstruktuur, waarvan Modigliani en Miller se kapitaalstruktuur van irrelevante proposisies, die kompromisteorie en die rangordeteorie die prominentste is. Die onderwerp van korporatiewe beheer word ook reeds vir dekades ondersoek; en die afgelope paar jaar het baie korporatiewe skandale, omgewingsprobleme en globalisering as geheel, die bewustheid van korporatiewe beheer in firmas beïnvloed. Die groot- en kleinhandelsektor vorm 'n groot deel van Suid-Afrika se bruto binnelandse produk, wat daarop dui dat dit die moeite werd is om die handelsektor te ondersoek om 'n oorsig van hul kapitaalstruktuur, korporatiewe beheer en finansiële prestasie te kry. Na aanleiding van inkonsekwente bevindinge van vroeëre studies, poog hierdie studie om die verhouding tussen kapitaalstruktuur, korporatiewe beheer en finansiële prestasie in die Suid-Afrikaanse handelindustrie te bepaal.

Hierdie studie beslaan 18 Suid-Afrikaanse firmas in die groot- en kleinhandelsektor wat op die JSE gelys is. Die data vir tien jaar, van 2009 tot 2018, is onttrek. Deursnitdata-ekonometriese tegnieke is gebruik om die ontleding te doen.

Die eerste doelwit was om die verhouding tussen kapitaalstruktuur en finansiële prestasie van Suid-Afrikaanse handelsfirmas te bepaal. Die tweede doelwit was om te bepaal of korporatiewebeheerpraktyke van Suid-Afrikaanse handelsfirmas 'n invloed op hul finansiële prestasie het. Die studie het eerstens bevind dat daar 'n negatiewe verhouding tussen kapitaalstruktuur en finansiële prestasie van Suid-Afrikaanse handelsfirmas is. Die studie beweer tweedens dat die grootte van die direksie en institusionele eienaarskap negatief verwant aan finansiële prestasie is. Dertens het die studie bevind dat direksie-onafhanklikheid en firmagrootte positief verwant aan finansiële prestasie is. Die studie het tot die gevolg gekom dat keuses van korporatiewebeheerpraktyke en kapitaalstruktuur die finansiële prestasie van Suid-Afrikaanse handelsfirmas vir die tydperk van hierdie studie beïnvloed het. In vergelyking, het kapitaalstruktuur 'n groter invloed op finansiële prestasie as korporatiewebeheerpraktyke gehad. Dit is aanbeveel dat Suid-Afrikaanse handelsfirmas goeie korporatiewebeheerpraktyke en verstandige kapitaalstruktuurbeleide volg omdat dit 'n beduidende invloed op hul finansiële prestasie het.

Sleutelwoorde: kapitaalstruktuur, korporatiewe beheer, finansiële prestasie, handelsektor, Suid-Afrika.

NGOBUFITJHAZANA

Emasumini ambalwa weminyaka, isakhwo sezeemali, kukade siyindaba esematheni kukulumopikiswano. Irhubhululo elinabileko lihlahlathulula amathiyori ahlukehlukeneko wesakhiwo sekhaphithali, kanti amathiyori atjhejeke khulu ziintjhukumiso zokungasebenzisani ze-*Modigliani* kanye neze-*Miller capital structure*, ithiyori ye-*trade-off*, kanye nethiyori ye-*pecking order*. isihloko segavanensi yezerhwebo (*corporate governance*) kukade siphenywa emasumini weminyaka; neminyakeni yagadesi, iimpoyilo ezinengi kezerhwebo, imiraro yezebhoduluko kanye nehlelo loke letuthuko efanako yephasi loke (*globalisation*) koke lokhu kube nomthelela phezu kokuyeleliswa ngokwegavanensi yezerhwebo emafemini. Umkhakha werhwebo le-holiseyila kanye neritheyila zenza ingcenywe ekulu yomkhiqizo wo ke wenarha (GDP) eSewula Afrika, lokhu okuyinto etjengisa ukuthi umkhakha wezeritheyila ukuphenywa kwawo kunenzuzo yokobana kutholakale isakhiwo sawo sekhaphithali ngobufitj hazana, igavanensi yezerhwebo kanye nobujamo bezeemali. Yeke-ke, ngenca yelwazi elitholakeleko elingafaniko emarhubhululweni wokuthoma, leli rhubhululo belizama ukuthola ubudlelwano obuphakathi kwesakhiwo sekhaphithali, igavanensi yezerhwebo kanye nobujamo bezeemali ngaphakathi kwebubulo leritheyila eSewula Afrika.

Leli rhubhululo lifaka phakathi amafema weSewula Afrika ali-18 emkhakheni weholiseyila kanye neritheyila atloliswe ku-JSE. Idatha ikhithelwe isikhathi seminyaka elisumi, ukuthoma ngo-2009 ukufikela ku-2018. Iindlela ze-*panel data econometric* zisetjenzisiwe ukwenza itsengo.

Umnqopho wokuthoma bekukuthola ubudlelwano obuphakathi kwesakhiwo sekhaphithali kanye nobujamo bezeemali emafemini weritheyila eSewula Afrika. Umnqopho wesibili bekukuthola ukuthi ngabe mhlambe iinkambiso zegavanensi yezamarhwebo kumafema weritheyila eSewula Afrika zibe nomthelela na phezu kobujamo beemali. Kokuthoma, irhubhululo lifumene bona kunobudlelwano obumbi phakathi kwesakhiwo sekhaphithali kanye nebujameni beemali emafemini weritheyila eSewula Afrika. Kwesibili, irhubhululo litole ukobana ubukhulu bebhodo kanye nobunikazi beziko zikhombise zinobudlelwano obumbi phezu kobujamo bezeemali. Kwesithathu, irhubhululo lifumene bona ukuzijamela kwebhodo kanye nobukhulu befema zikhombise zinobudlelwano obuhle ebujameni bezeemali. Irhubhululo liphethe ngokuthi amahlelo akhethwe yigavanensi yezerhwebo kanye nesakhiwo sekhaphithali abe nomthelela ebujameni bezeemali emafemini wezeritheyila eSewula Afrika

esikhathini serhubhululo. Nakumadaniswako, isakhiwo sekhaphithali sibe nomthelela ophezulu ebujameni bezeemali ukudlula iinkambiso zegavanensi yezerhwebo. Kunconywe ukobana amafema wezeritheyila eSewula Afrika alandela iinkambiso ezifaneleko zegavanensi yezamarhwebo kanye nemithethomgomo emihle yesakhiwo sekhaphithali, njengombana lokhu kube nomthelela obonakalako phezu kobujamo bawo wezeemali.

Amagama aqakathekileko: isakhiwo sekhaphithali, igavanensi yezerhwebo/yezebhizinisi, ubujamo bezeemali, umkhakha weritheyila, iSewula Afrika.

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LIST OF ACRONYMS

BIN	Board independence
BSZ	Board size
COSO	Committee of sponsoring organisations
DDE	Debt-to-capital ratio
DOE	Debt-to-equity ratio
EPS	Earnings per share
FE	Fixed model
FSZ	Firm size
G7	Group of 7
GDP	Gross domestic product
INSO	Institutional ownership
ISO	Risk management framework
JSE	Johannesburg Stock Exchange
LM	Lagrange Multiplier
LSDV	Least square dummy variable
MM	Modigliani and Miller
OLS	Ordinary least squares
RE	Random model
ROA	Return on assets
ROE	Return on equity
UK	United Kingdom
USA	United States of America
WACC	Weighted cost of capital

CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1 Introduction

South Africa's economic sector is sophisticated and provides a full range of services from finance to manufacturing (Young, 2010: 136). In earlier years, South Africa's economy was heavily reliant on the primary sectors, but in the 90s, due to the decline in primary sector outputs, the tertiary sector experienced positive economic growth (Du Plessis & Smit, 2006: 6). Wholesale and retail are categorised as tertiary sectors and account for 15% of South Africa's GDP (Statistics SA, 2018). South Africa, in comparison to other African countries, shows a great deal of economic growth and development. Firms play a large role in the economy of a country and have a significant impact on the environment, and it is worth examining the governance of these firms (Correia, Flynn, Uliana, Wormald & Dillon, 2015: 1-27). Additionally, because the trade sector accounts for a huge part of GDP, it is worth analysing their corporate governance and capital structure policies.

Corporate governance can be defined as the relationships between management, directors, shareholders and stakeholders, and it includes the policies and procedures through which a firm is managed (Correia, *et al.*; 2015: 1-31). South Africa is a sophisticated and diverse emerging market and it is therefore important to understand the relationship that capital structure and corporate governance has on a firm's performance. South Africa has had a number of corporate scandals such as the Fidentia scandal in 2007 and more recently, the KPMG and Steinhoff incidents in 2017 (Conway-Smith, 2017). Even though these scandals are associated with weak corporate governance, the relationship between corporate governance and financial performance remains unclear (Tshipa & Mokoteli, 2015: 149). Adekunle and Aghedo (2014: 58) and Ochola (2013: 40) concluded that there is a relationship between good corporate governance practice and a firm's performance, while Manafi, Mamoudian and Zabihi (2015: 60) concluded that there is no significant relationship between corporate governance and financial performance. Corporate governance has been a subject of research by academics, firms, policy makers and investors. Some have seen corporate governance as a solution to the successful management of a firm, while others have considered that there are inadequacies in the corporate governance practices which can be

attributed to the 2008 global financial crisis (Kirkpatrick, 2009: 1). To date, research into the impact and effects of corporate governance has been inconclusive; it is therefore crucial to understand the link between corporate governance and financial performance. The study attempts not only to determine the relationship between corporate governance and financial performance, but also to ascertain the relationship between corporate governance and capital structure as well.

Like corporate governance, capital structure has also been a subject of debate for a number of decades. Extensive research explaining the importance of capital structure decisions to enhancing firm value can also be found. For instance, Harris and Raviv (1991: 350) have delved into the various theories of capital structure, and what constitutes as the possible optimal capital structure. They have concluded that stock prices increase as leverage changes. Ogbulu and Emeni (2012: 256) have explored capital structure and firm value using evidence from Ghana and have found that there is a relationship between capital structure and the value of a firm. Ayeni and Olaoye (2015: 635) have also analysed theoretical, empirical and conceptual research and have affirmed that the optimal capital structure does have an effect on firm value. Capital structure is thus an extensive theoretical concept and can be measured differently, as the studies above conclude.

Delving into the definition, Correia et al (2015: 14-2) have described capital structure as the way in which a firm finances itself using debt (long or short term) and equity (common stock, preference shares and retained earnings) financing options. Over the years, many theories have been advanced to describe what constitutes the optimal capital structure. The most notable theories are the Modigliani and Miller capital structure irrelevance propositions; the trade-off theory, and the pecking order theory. The Modigliani and Miller (1958: 261) theory states that the optimal capital structure is irrelevant in determining a firm's value under certain assumptions. Modigliani and Miller (1963: 434) then further developed a more practical approach called the trade-off theory in which taxes are included. Similarly, Frank and Goyal (2003: 218) have tested the effectiveness of the pecking order theory in which order firms should use retained earnings, debt and equity.

Myers (2001: 81) has surmised that no single theory can be applied to explain a firm's performance, and that no general theory exists. Likewise, Barker and Wurgler (2002: 29) explored the effect of market timing and capital structure and have concluded that equity market timing is important to financial decisions. Financing decisions over time then become

the capital structure guidelines that firms use. Conversely, Datta, Chowdhury and Mohajan (2013: 2) have proposed that theories should be reassessed, and more research should be conducted in order to find a more consistent theoretical explanation. Therefore, due to inconsistent findings the study will attempt to determine the relationships between capital structure, corporate governance and financial performance within the retail industry in South Africa.

1.2 Background

Capital structure and corporate governance are topics that have been investigated for decades; and in recent years, plenty of corporate scandals, environmental problems and globalisation as a whole have impacted the awareness of corporate governance in firms. More crucially, corporate governance is a useful tool in developing countries such as South Africa, as good corporate governance practices can lead to increased foreign trade which essentially leads to economic growth (Vaughn & Ryan, 2006: 504).

In comparison to other African countries such as Ghana, Nigeria, Kenya and Zimbabwe, South Africa has had a more competitive market when comparing their trade sector market shares and overall retail sales offering a compelling research context. Unlike these other countries, South Africa's implementation of corporate governance practices and standards are above other emerging markets (Gwatidzo & Ojah, 2009: 7). In addition, South Africa also has one of the largest equity markets in Africa, with the majority of the top 100 firms in Africa being listed on the Johannesburg Stock Exchange (JSE) (African Corporate Governance Network, 2016: 69). Despite the unstable economic conditions, South Africa's trade sector has experienced growth; more specifically the retail sector, that continues to grow steadily owing to urbanisation and e-commerce (Conlumino, 2014: 4). The wholesale and retail sector accounts for 15% of South Africa's GDP (Statistics SA, 2018: 2), which signifies that the retail sector is worth exploring in order to obtain an overview of their capital structure, corporate governance and financial performance. South Africa's retail sector is fairly large, with a number of competitors, large number of employees, increasing annual sales and vast number of outlets across South Africa. Notable retail firms in South Africa are Pick n Pay Holdings Ltd (roughly 80 000 employees), Woolworths Holdings Ltd (roughly 16 000 employees), Shoprite Holdings Ltd (roughly 130 000 employees) and Steinhoff Holdings Ltd (roughly 90 000 employees, before their accounting scandal in 2017). These firms are popular throughout the whole of South Africa

and analysing their capital structure, corporate governance and financial performance will provide knowledge as to how these firms remain competitive and successful and will help set guidelines for firms to perform at an optimal level. The table below shows the retail sales for a 5-year period from 2013 to 2017 which shows a substantial increase over the period of time and indicates that the sector is favourable. As result, due to South Africa's prospering emerging market, retail firms in South Africa are worth studying.

Table 1.1: Retail sales of South Africa over a 5-year period

Year	2013	2014	2015	2016	2017
Retail sales (R Million)	R 752 540	R 807 870	R 869 176	R 939 250	R1 005 961
Year-on-Year % change	6.7%	7.4%	7.6%	8.1%	7.1%

Source: Statistics SA (2018: 7).

Table 1.1 shows an increase in retail sales over a 5-year period and signifies steady growth in the retail sector. Retail sales grew by 6.7% in 2013, increased to 7.4% in 2014 and remained steady in 2015 by increasing slightly to 7.6%. Retail sales in 2016 increased to 8.1%. However, in 2017 the year-on-year percentage change was minor in comparison to 2016 with a mere 7.1% increase.

This study shall investigate the relationship between corporate governance, capital structure and financial performance of the 17 retail firms listed on the JSE over a ten-year period ranging from 2009 to 2018 using the data from the respective financial statements of the companies.

1.3 Problem statement

Prior studies have that have been conducted on capital structure and financial performance, have produced mixed results. For instance, Ogbulu and Emeni (2012: 256) concluded that there is a significant relationship between capital structure and financial performance, whereas Manafi, Mamoudian and Zabihi (2015: 60) have found no significant relationship between

capital structure and performance. Despite exhaustive mixed results on the relationship between capital structure and financial performance, a gap in research regarding the relationship between corporate governance and financial performance can be found, especially within the retail sector. Moreover, a few studies such as Muazeib, Chairiri and Ghozali (2015: 29) and Bertus, Jahera and Yost (2008: 12) have explored the relationship between corporate governance and capital structure. Additionally, there is a gap in research regarding the relationship between corporate governance and capital structure within the context of South African retail firms.

The retail sector accounts for a significant part of South Africa's GDP, and the relationship between capital structure, corporate governance and financial performance of these firms are worth examining. Therefore, the problem to be investigated is the relationship between capital structure, corporate governance and financial performance of retail firms in South Africa. The relationship between these three variables is important because good corporate governance practices facilitate capital structure decisions, which in turn affects financial performance (Hamdan & Al Mubarak, 2017: 128). Determining the effect of this relationship can provide firms with guidelines on optimal capital structures and good corporate governance practices.

1.4 Aim of the study

The broad aim of this study is to determine the relationship between capital structure, corporate governance and financial performance of the South African retail trade sector.

1.5 Research questions:

This study will attempt to answer the following questions:

1. What is the relationship between capital structure and financial performance of the South African retail firms?
2. Do the corporate governance practices of South African retail firms have an impact on their financial performance?

1.6 Research objectives:

The main objectives of this study are to:

1. investigate the relationship between capital structure and financial performance of South African retail firms;
2. determine if corporate governance practices of South African retail firms have an impact on their financial performance.

1.7 Significance of the study:

There are a number of theories regarding the optimal capital structure. It is worth undertaking the study in order to analyse the relationship between capital structure and financial performance. The study aims to provide a deeper understanding of the dynamics that drive the capital structure choices; corporate governance practices, and financial performance of the South African retail trade sector. There is a vast amount of research available on capital structure and performance, but many findings of these studies have rendered mixed results. For example, Salim and Yadav (2012: 163) measured financial performance by analysing four main accounting principles, namely Return on Assets (ROA), Return on Equity (ROE), Earnings per share (EPS) and Tobin's Q. Rashid (2008: 149) completed an empirical study on Malaysian listed firms and the study concluded that there is a negative relationship between capital structure and financial performance. Other studies showed contradictory results: Mbugua (2014: 35) and Rouf (2015: 31) concluded that there is a positive relationship between capital structure and financial performance. Additionally, Appiadjei (2014:42) analysed listed firms in Ghana and found that capital structure has little explanatory power on financial performance.

There is, however, scant research available on the relationship between corporate governance and capital structure in South Africa. A study by Muazeib, Chairiri and Ghozali (2015: 29) investigated the effect of corporate governance factors on the capital structure of 71 listed firms on the JSE and concluded that there is a negative relationship between corporate governance and capital structure—where corporate governance variables are measured by board size, independent audit and institutional ownership. Tshipa and Mokoteli (2015: 149) investigated the empirical insights on the impact of corporate governance firms and financial performance. The panel data study was conducted with 137 firms listed on the JSE and found that corporate governance compliance levels have improved and that there is a relationship between corporate governance and financial performance.

present the empirical results. Further, explores the empirical results for testing the relationship between capital structure and financial performance of South African retail firms. Lastly, discusses the empirical results of the relationship between corporate governance practices and financial performance.

Chapter 5

Conclusion

This chapter summarizes the main findings of the thesis and on the significant relationships between capital structure, corporate governance and financial performance in South African retail trade firms. The chapter concludes by discussing the limitations of the study and identifies gaps in existing markets for further research.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The main aim of this chapter is to delve into capital structure and corporate governance theories in order to answer the research questions. The literature review will be divided into two sections; namely the theoretical literature and empirical literature. This study will, firstly examine the key theoretical concepts of capital structure, corporate governance practices and financial performance in firms; and secondly, the study will examine the empirical evidence from developed and developing countries. The in-depth review will position the study within the existing literature and explain its contribution to the existing literature and body of knowledge.

The chapter is organised as follows: Section 2.2 reviews capital structure and corporate governance theories. Section 2.3 examines empirical studies on the relationships between financial performance, capital structure and corporate governance. Section 2.4 presents the chapter summary and concludes the chapter.

2.2 THEORETICAL LITERATURE

This section will be reviewing a number of capital structure theories; namely the Modigliani and Miller approach, the pecking order theory, as well as the agency cost theory. Modigliani and Miller (1958: 290) argued that capital structure is irrelevant in the value of a firm, whereas pecking order and agency theories both use a hierarchy to determine capital structure practices. Capital structures can affect financial performance negatively or positively owing to the types of financing decisions that are made.

2.2.1 Outline of capital structure theory

Myers (1984: 575) describes the capital structure puzzle by asking important questions “How do firms choose their capital structures?” and “What should corporations do about dividend policy?” The capital structure puzzle is slightly tougher than the dividend puzzle because there are several dividend models that are used such as the Walter’s model, Gordon’s model and

the Modigliani and Miller hypothesis. In contrast, there is less information regarding capital structure, as the capital structure of firms is determined by the interplay of a number of factors. It is difficult to determine an optimal capital structure because it is not known how firms choose their debt or equity. Myers (1984: 575) maintains that corporate financing behaviour of firms are unpredictable. Managers and stockholders could consider models that are beneficial for them and not base financial decisions on existing evidence or strategies.

Myers (1984: 576) explains two ways of thinking about capital structure. The first framework is called the static trade-off framework, where the firm sets a target debt-to-value ratio and gradually works towards it similar to how a firm adjusts dividends to achieve their target payout ratio. The second framework is called the pecking order framework, where a firm prefers internal financing before considering external financing and prefers debt to equity with no targeted debt-to-value ratio.

The static trade-off hypothesises that the firm's optimal debt ratio is determined by trade-off between the costs and benefits of borrowing, where assets remain constant. If a firm finance itself through equity, there is a tax shield, but essentially a firm is supposed to substitute debt for equity and equity for debt until the firm value is maximised, which is thus called the debt-equity trade-off.

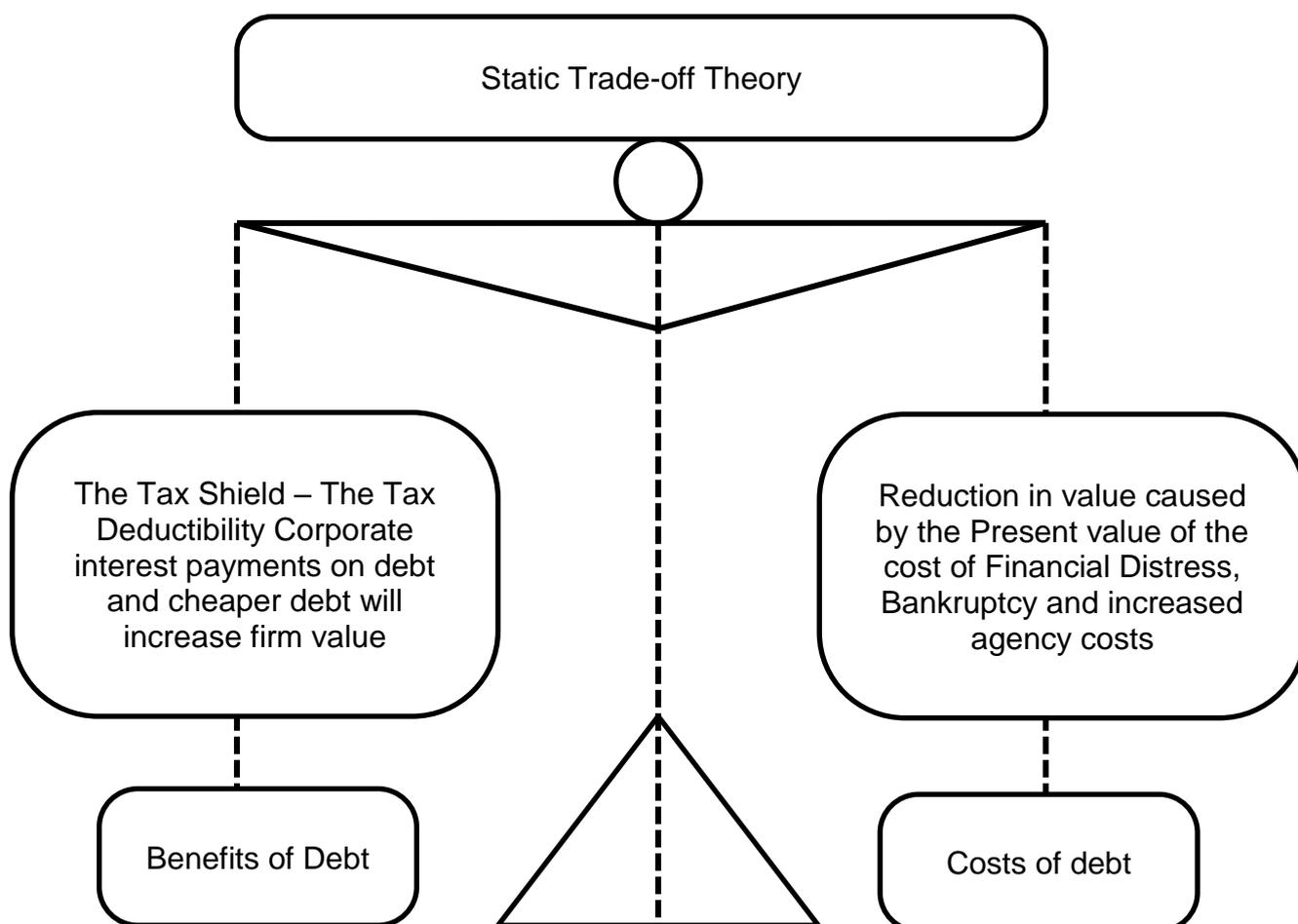


Figure 2.1: Static trade-off framework

Source: Kaplan Financial Knowledge Bank

The optimum capital structure is where the value of the firm is maximised at the trade-off between the tax shield and the financial distress costs.

The pecking order framework, in contrast, finances based on a pecking order. A firm will first use internal finance, secondly, change their dividend pay-out ratios and lastly use external financing, debt, such as bonds and securities.

There are two schools of thought on capital structure theory. The first school argues the irrelevance of capital structure. More specifically, Modigliani and Miller (1958: 270) argued that capital structure is an irrelevant factor in determining the value of the firm. The Modigliani and Miller (1958: 271) approach is the foundational theory regarding capital structure. The second school which was advanced by Titman and Wessels (1988: 2), who argued that cost of capital determines the composition of capital structure, and that the optimal capital structure is where

the WACC (weighted average cost of capital), advanced by Miles and Ezzell (1980: 720), is at the lowest level. Accordingly, the overall capital structure (debt to equity ratio) contributes to the value of the firm (Datta, Chowdhury & Mohajan, 2013: 2).

2.2.1.1 MM theory

Modigliani and Miller (1958: 271) argued that capital structure is an irrelevant factor in determining the value of the firm and theorists view this as the traditional view on capital structure theory. This approach, however, is subject to certain assumptions: namely, that no taxes; no transaction costs; no agency costs; and no costs associated with financial distress are to be factored in when assessing a firm's performance. It assumes that firms and investors can borrow on the same terms. A fundamental principle of the Modigliani and Miller approach is that the value of a firm is determined by its assets and not in the manner in which it is financed (Correia, et al; 2015: 14-8). Furthermore, the theory states that a firm should finance its assets through debt and equity; and choose the optimal combination of debt and equity that will maximise the value of a firm. The optimal capital structure is where weighted cost of capital (WACC) is at its lowest and the value of a firm is maximised.

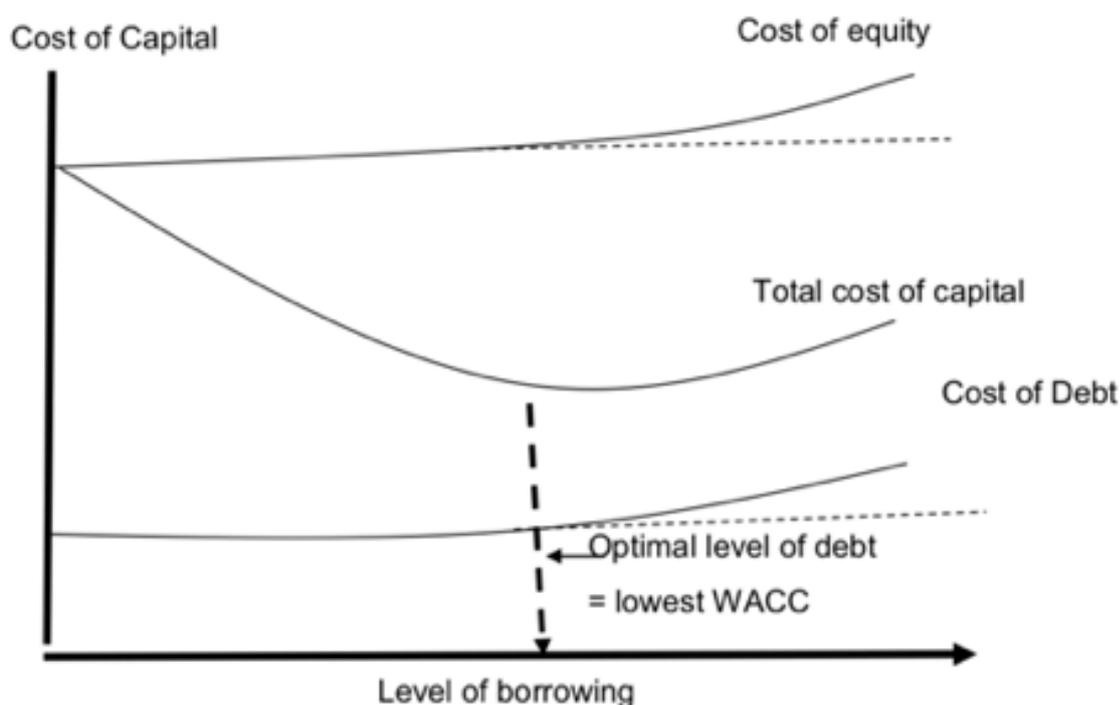


Figure 2.2: Capital structure: Traditional view

Source: Atrill (2009: 343)

As the cost of debt rises, so does the cost of equity, and in turn, the value of a firm decreases. The higher the debt levels of a firm the more financial risk there is, which leads to shareholders requiring greater rates of return. Therefore, the cost of equity increases. In addition, the traditional theory states that the interest of debt remain constant and the rate of equity can remain constant or increase gradually (Atrill, 2009: 343).

Modigliani and Miller (1963: 433) elaborated on their theory, including the assumptions, and contended that the value of a leveraged firm (debt and equity mixed ratio) is equivalent to an unleveraged firm (a firm wholly financed by equity) if the operating profits and future prospects are the same.

Modigliani and Miller (1963: 433) further developed the model to include the effect of taxes to bring the theory closer to reality (Ahmeti & Prenaj, 2016: 916). Modigliani and Miller (1963: 433) developed three important propositions which form the base of their theorem, namely:

- Proposition I – A firm's market value is independent of its capital structure.
- Proposition II – The cost of equity increases with its debt-equity ratio.
- Proposition III – A firm's total market value is independent of its dividend policy.

Modigliani and Miller (1958: 261) theory states that the value of a leveraged firm is equivalent to the value of an unleveraged firm, if their profits and future forecasts are equivalent. A leveraged firm is financed through a mix between debt and equity and an unleveraged firm is wholly financed by equity. Thus, if an investor purchases shares, the cost of both leveraged and unleveraged firm shares should be the same and additionally, financial leverage does not affect the market value of a firm. According to Modigliani and Miller (1958: 261) first proposition, the value of the firm is determined by its assets and income from business operations; and therefore if frictionless markets existed, there would not be an optimal capital structure. However, since no country is tax-free, this assumption does not account for the real-world markets. South Africa, similarly to other countries, also incurs transaction costs such as brokerage, consultation, agency and underwriting fees on occurring transactions. Thus, when analysing the optimal capital structure, it is important to include taxes and transaction costs in order to acquire accurate knowledge of the optimal capital structure.

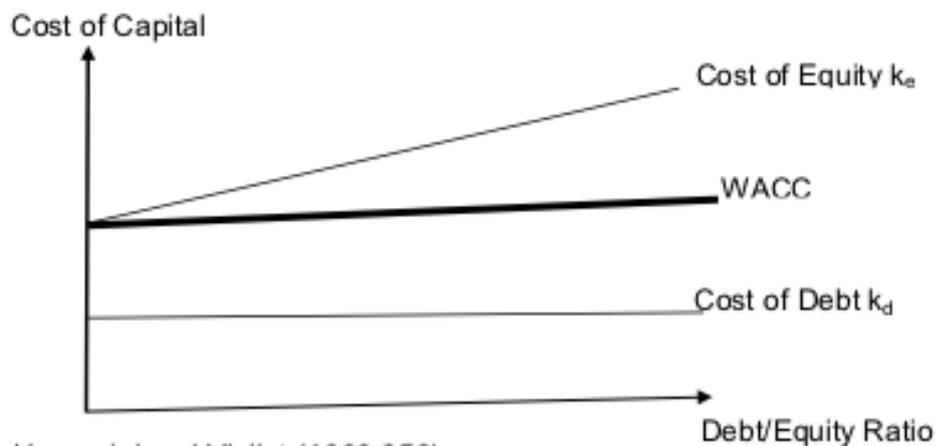


Figure 2.3: Modigliani and Miller's theory: Capital structure without taxes or transaction costs

Source: Atrill (2009: 344)

As the cost of equity increases, the debt-equity ratio increases while the WACC remains constant. The reason why WACC remains constant is because the increase in the cost of equity is offset by the cheaper cost of debt (Atrill, 2009: 344).

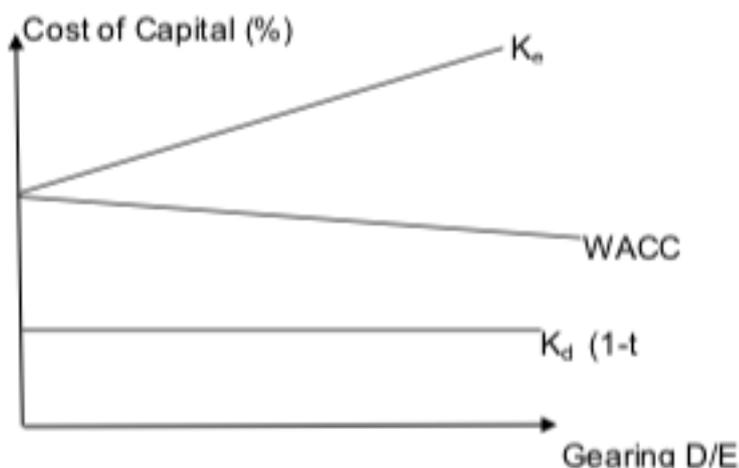


Figure 2.4: Modigliani and Miller's theory: Includes taxes

Source: Atrill (2009: 349)

Modigliani and Miller (1963: 441) revised their first proposition where capital structure is

irrelevant and included tax benefits as a determinant of capital structure. According to the revised proposition, financing through debt is now relevant in determining the firm's profitability as interest costs are tax deductible, thus decreasing the firm's tax amount and in turn saving on equity. Thus, the tax advantage increases the return on equity and the value of the firm. Income tax lowers the cost of debt and in turn lowers the WACC. When disregarding financial distress costs, financing through debt only is the best option, but realistically, having excessive debt will lead to bankruptcy (Atrill, 2009: 349).

Modigliani and Miller's (1963: 441) theory still faced criticism as it still does not account for the real-world markets as the proposition assumed that there are no transaction and brokerage costs. Despite the criticisms, Modigliani and Miller (1958: 262) pioneered the study of capital structure and provided a benchmark for other theories on capital structure such as the trade-off theory, pecking order and agency cost theory.

2.2.1.2 Trade-off theory

The trade-off theory is a more practical approach to capital structure and recognises taxes, and the cost of financial distress and related costs, and takes these assumptions such as tax into consideration. It is found that borrowing provides a tax advantage (tax shield) which reduces the cost of capital and increases the firm's performance (Abeywardhana, 2017:1 34). This theory is called the trade-off theory, and is an extension of the Modigliani and Miller approach. The trade-off theory states that firms are more likely to choose more debt in order to benefit from the tax shield that debt financing offers (Nassar, 2016: 2). Kraus and Litzenberger (1973: 912) explored the effect of taxation and concluded that there is a tax advantage when using debt financing because interest payments are tax deductible. The trade-off theory proposed by Kraus and Litzenberger (1973: 912) incorporated tax shields with debt and financial distress into a model. Myers (1984: 577) further developed the theory and hypothesised that a firm's optimal capital structure is at the point where there is a trade-off between debt financing and the costs of such as financial distress and bankruptcy costs.

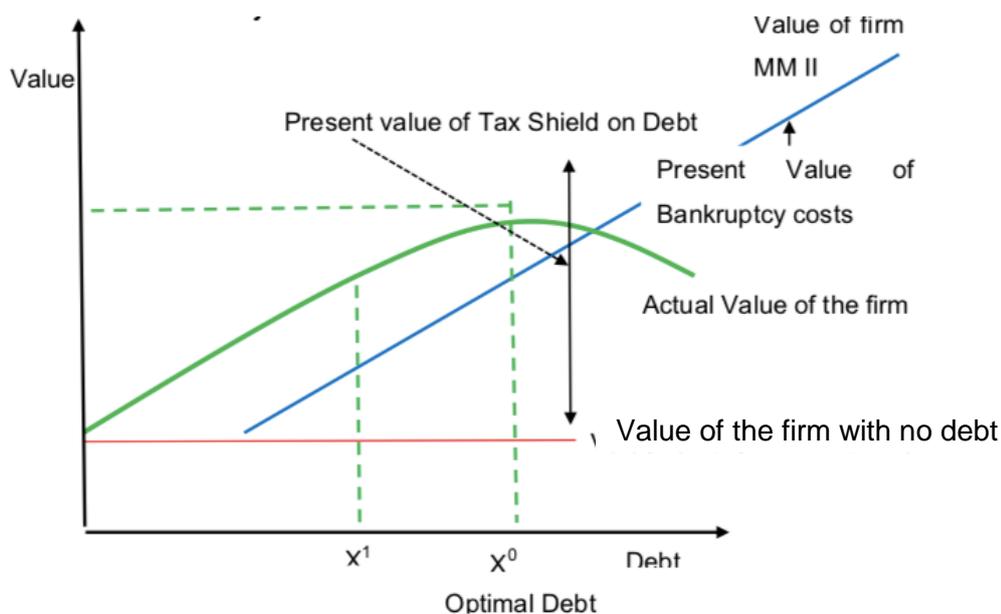


Figure 2.5: Trade-off theory illustrated

Source: Hawawini and Viallet (1999: 36)

The optimal debt is shown at X^0 the trade-off between debt financing and the costs associated. The red line shows the value of the firm is lower when it wholly financed by equity but when you include debt as a source of financing, the value of the firm increases and the optimal capital structure is where the debt to equity ratio is maximized and the WACC is minimized (Hawawini and Viallet, 1999: 36).

The trade-off between debt financing and the costs can become excessive as debt increases; the interest payable increases as well, which decreases the cash flow of the firm. If the firm is over-leveraged and cannot meet its financial obligations, the firm will go into a financial distress and this could lead to bankruptcy. When a firm experiences financial distress, some employees might leave, sales can be negatively impacted, the growth of the business will decline, and suppliers might refuse credit. This negatively affects the financial performance of the firm and thus, decreases the value of the firm (Hove, 2017: 14).

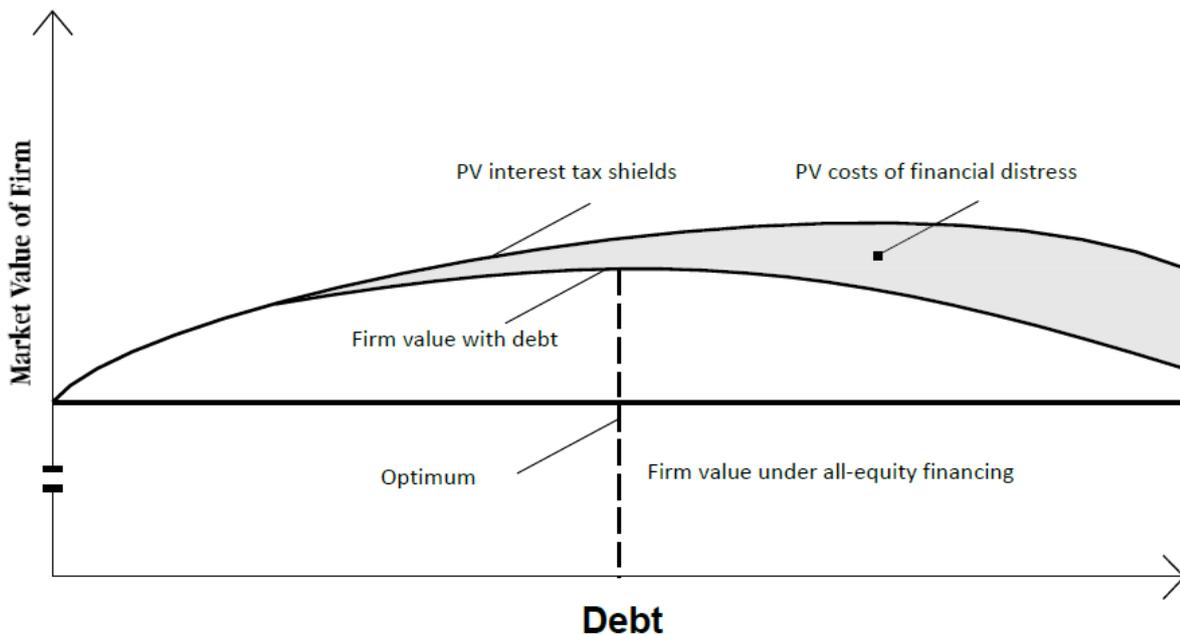


Figure 2.6: Static trade-off theory

Source: Myers (1984: 577)

The optimum capital structure is where the value of the firm is maximised at the trade-off between debt to equity. The optimal level is the trade-off between tax shield and the costs of financial distress. Figure 2.6 shows that when the present value of financial distress is larger than the present value of tax shield benefit, the firm will adjust their debt levels (Myers, 1984: 577). If the present value of the tax shield is greater than the present value of financial distress, the firm will increase their debt levels to improve the overall value of the firm and improve financial performance. The trade-off theory demonstrates that the financial performance of a firm is related to the debt ratio and the study will determine if there is a positive relationship between profitability and the debt ratio.

In addition, the trade-off theory shows that higher tax rates lead to a higher leverage and this deductible expense is valuable to firms with high tax rates. Frank and Goyal (2003: 218) and Graham (1996: 41) find that there is a positive relationship between a high level of debt and a high tax rate. The higher tax rates make it more lucrative for firms to finance using debt in order to benefit from the tax shield.

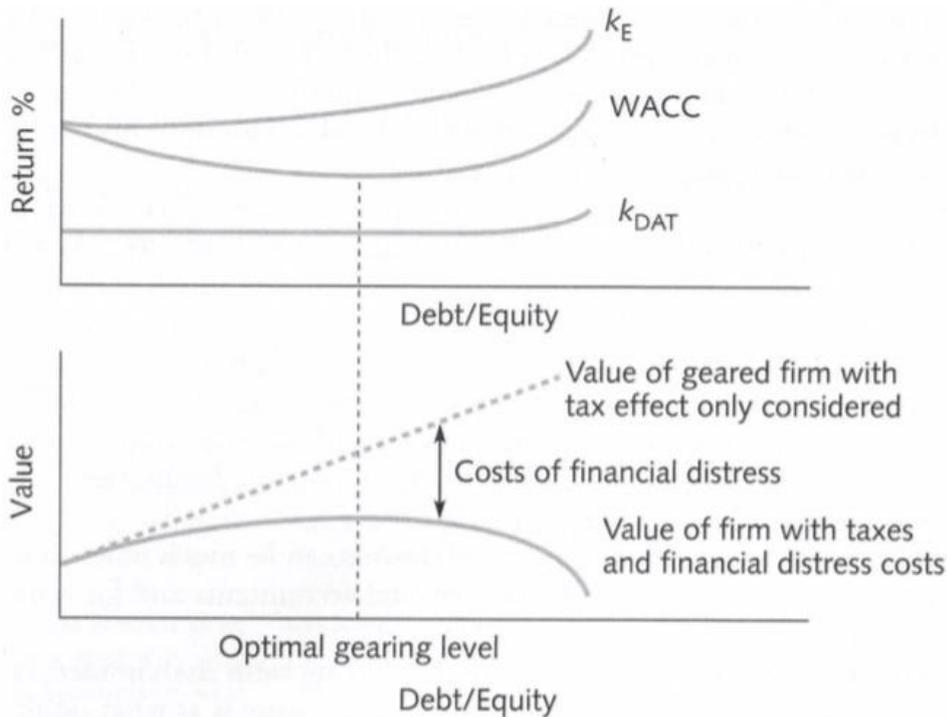


Figure 2.7: Trade-off theory: relationship between the debt and value of the firm

Source: Arnold (2005: 381)

Figure 2.7 illustrated by Arnold (2008: 381) shows how the increase in debt affects the value of the firm, and that as the debt increases, the WACC decreases until it reaches the optimal level of debt-to-equity ratio, and that the cost of financial distress increases with the debt level. Miller (1988: 100) contended that the optimal level of debt-to-equity is at the highest tax shield so a firm will issue more debt in order to maximise their tax shield, which reduces tax payments and increases profitability.

Furthermore, the trade-off theory predicts that a firm with tangible assets is associated with less financial distress costs than firms with intangible assets, as tangible assets are seen as more secure by creditors, thus lowering the risk and cost of debt. Frank and Goyal (2009: 26) concluded the same result a study of non-financial firms in the United States of America (USA).

The trade-off theory can be written in the form of an equation below:

$$V = V_u + PV_t - PV_{fd}$$

Where:

V = Value of the firm

V_u = Value of ungeared firm

PV_t = Present value of tax shield

PV_{fd} = Present value of financial distress costs

Source: Kraus and Litzenberger (1973: 912)

Subsequently, there are some limitations in the theory, similar to Modigliani and Miller (1963: 434). Some criticisms are made even though the theory contributes significantly to capital structure existing literature. Shyam-Sunder and Myers (1999: 220) argues that the theory is poorly explained and only provides some information of financing behaviour and the theory demonstrates that higher debt ratios lead to high financial performance. Empirical evidence, however, shows highly profitable firms with lower debt ratios and this theory does not account for these firms (Chen & Strange, 2005: 29).

2.2.1.3 Pecking order theory

The Pecking order theory was advanced by Myers and Majluf (1984: 190). It does not discuss the optimal capital structure but uses a preferred hierarchy to finance a firm. This theory utilises the two sources of funding—internal and external—in order to determine how investments should be funded. Internally generated funding (retained earnings and excess liquid assets) is first factored in, followed by external funding wherein which debt is first considered; followed by preferred stock, and lastly, common stock (Nassar, 2016: 2). Retained earnings do not bear any transaction or floatation costs as the capital is provided internally. The pecking order theory is based on a hierarchy and therefore requires management to make financing decisions based on this preferred hierarchy. The theory thus follows a behavioural approach and management will seek to fund operations with the lowest cost of financing (Hove, 2017: 17).

Due to information symmetries between both entities, firm and investors, a firm will prefer retained earnings over debt, then prefer short-term debt over long term debt and lastly, prefer debt over equity (Chen, Jung, & Chen, 2011: 2). Myers and Majluf (1984) further contend that if a firm does not issue new securities and only uses retained earnings to finance future investments, then the asymmetric information can be resolved. Based on this assumption, the

issuing of equity then becomes more expensive as asymmetric information increases and firms with high information asymmetry should use more debt as a source of funding in order to avoid selling under-priced securities. New debt in this scenario is a good indication that the firm has positive prospects.

The trade-off theory recognises transaction costs as it plays an important role in determining the optimal capital structure. The pecking order theory also recognises transaction costs that occur: the cost of obtaining internal financing is less than that of obtain external financing and in fact, internal funds do not have any transaction costs and are thus preferred, which is consistent with the theory.

The pecking order theory also postulates that there is a negative relationship between debt and financial performance. According to the pecking order theory, leverage is positively related to capital expenditure, dividends and firm growth. Shyam-Sunder and Myers (1999: 221) stated that profitable firms are less leveraged as they have more internal funds (retained earnings) to finance their investments or projects. Using the hierarchy, if a firm requires external financing it will use debt over equity as debt is regarded as cheaper. Fama and French (2002: 2) and Sheikh, Wajid, Waheed and Muhammad (2012: 93) both conclude that there is a negative relationship between leverage and profitability and confirm that the leverage is lower for firms that perform better which is consistent with the pecking order theory predictions.

There are some limitations to the pecking order theory. Firstly, this theory does not explain the effect of taxes and financial distress costs. Secondly, trade-off theory does a better job of explaining the benefits of tax shields. Thirdly, the pecking order theory ignores the agency costs. Pecking order theory is one of the common theories of corporate leverage and Frank and Goyal (2003: 218) analysed if the hierarchy mentioned above is sufficient in financing debt. Frank and Goyal (2003: 241) found that internal funding is not always sufficient in covering investment spending, and subsequently, external finance is relied upon to supplement internal funding. Frank and Goyal (2003: 241) do however state that debt does not dominate equity financing, and as such, they track each other closely.

2.2.1.4 Agency cost theory

Jensen and Meckling (1976: 308) put forward the agency cost theory which refers to the conflict of interest between shareholders and decision-makers of the firm. The conflict arises when the

agent (manager) is more likely to look after his/her own interests rather than maximising benefits of the shareholders. Shareholders thus need to ensure that the agent (manager) does not invest the free cash flow in non-profitable projects (Nassar, 2016: 2).

Conflict can arise between shareholders and managers because managers do not bear the costs of their business activities. Therefore, managers may manage the firm's resources with less effort and might transfer resources for their own personal benefit rather than maximising the firm's value. Jensen (1986: 323) stated that debt requires the firm to pay out cash, which in turn reduces the amount of cash available for managers to use resources for their own benefit. If there is minimal conflict between managers and shareholders, then debt financing is beneficial. Jensen and Meckling (1976: 117) argued that an optimal capital structure is at the trade off point of agency cost of debt and the benefit of debt.

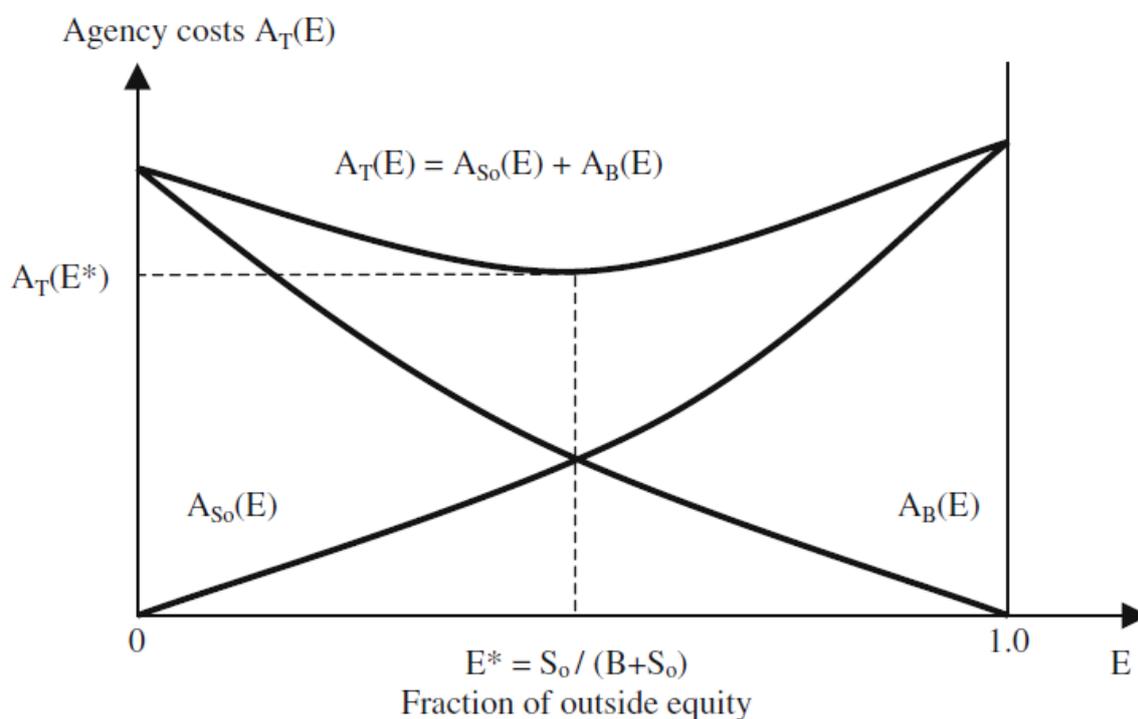


Figure 2.8: Agency Theory: Optimal capital structure

Source: Chen and Strange (2005: 17)

Figure 2.8 shows that the line $A_{S_o}(E)$ is the agency costs associated with outside equity and $A_B(E)$ is the agency costs associated with debt. The optimal capital structure is at point E^* and $A_T(E^*)$ is the minimum total agency costs that corresponds with E^* (Chen & Strange, 2005: 16).

Jensen and Meckling (1976: 120) advanced the principal agent theory which states that managers will not always act in the best interest of the shareholders and may, in fact, pursue their own agendas, instead of maximising shareholder returns. An example of such a scenario would be where managers could use the excess cash flows to invest in short term projects that yield high profits, in order to award themselves with large bonuses, instead of acting the interest of shareholders, to increase shareholder returns. The owners and management are separate and therefore agency costs arise in the principal agent conflict. Monitoring costs, bonding costs and residual losses all form part of agency costs. Additionally, agency cost theory predicts that firms with higher the levels of debt is predicted to perform better (Gwatidzo & Ojah, 2008: 86).

Further, Jensen (1986: 323) proposed that increasing the ownership of managers in the firm would lead to ownership and managers having aligned interests, thus, reducing high agency costs. Agrawal and Mandelker (1987: 824) tested the relationship between managers holding common stock and options and found that debt levels increased as the level of insider ownership increased, thus showing a positive relationship between debt and insider ownership. There is, however, an explanation, as managers will now profit from high returns and thus will decide to use debt instead of equity because using equity as a form of funding would reduce their shareholder returns. Similarly, this would reduce agency costs, as management now forms part of ownership and will therefore make decisions that are profitable to the firm, in order to be paid dividends.

Pinegar and Wilbricht (1989: 83) also established another way to reduce the agency problem. They concluded that it could be dealt with by using capital structure to increase debt levels. Essentially, managers will be expected to work efficiently in order to service the debt obligation, thereby making leveraged firms better for shareholders as debt levels can be used for monitoring managers' efficiency.

Berger and Bonaccorsi di Patti (2006: 1069) tested agency theory and its application in the banking industry and concluded that firms that are higher leveraged are positively related to profitable financial performance. This is thus consistent with the agency cost theory where higher the levels of debt are positively related to firm profitability.

The debate on capital structure theories remains unresolved and regardless of the schools of thought surrounding capital structure and how a firm is valued, capital structure is important in

determining profitability. Capital structure is one of the most essential financial decisions a firm needs to make in order to remain competitive, to grow and to be profitable (Nassar, 2016: 1). The agency cost theory suggests that the appropriate mix of debt and equity is also an important matter for corporate governance. Moreover, corporate governance, which is the system by which firms are directed and controlled, also plays a role in the decision making of the optimal capital structure, in turn leading to firm profitability, and there are of corporate governance theories which can be employed by firms.

2.2.2 Corporate governance theory

This section will review the fundamental theories of corporate governance, namely: The Stewardship theory, resource-dependency theory, shareholder theory and stakeholder theory. Agency cost theory can be applied to both, capital structure and corporate governance and has already been considered in the above foregoing.

2.2.2.1 Corporate governance

More studies situated around corporate governance have been conducted in the academic world, with various scholars having different views on corporate governance. Cadbury (1992: 15) formally defines corporate governance as a system by which firms are directed and controlled. Similar to capital structure, Wilson (2006: 3) stated that corporate governance remains an unclear concept, but it involves how firms are directed, controlled and held accountable, and is also concerned with effective leadership to lead a firm in a sustainable and profitable way. Coleman (2010) avers that corporate governance describes a system, procedure and structure a firm uses to convey authority, responsibility and accountability among stakeholders. Therefore, corporate governance administers the interest of all parties such as firm employees, owners, creditors and customers to ensure the success of a firm. The shareholders are the primary stakeholders and depend on profitability and sustainability of the firm to receive their dividends. Essentially, good corporate governance practices include transparent relationships between the owners and management.

Kabir (2009: 74) furthered on Cadbury's (1992: 15) corporate governance definition and surmised that corporate governance consists of two dimensions: direction and control. Direction refers to the responsibility of the board to plan and enhance the performance and sustainability of the firm. Control refers to the responsibility of the board to ensure that

management executes the plans and strategies accordingly. Thus, corporate governance is a system by which firms are governed and controlled to increase shareholders value and, simultaneously, ensuring that all other stakeholders benefit. Firms should adhere to the following principles of transparency, accountability, and integrity. Corporate governance is when a firm make decisions in line with international and national practices in order for the firm to be sustainable and profitable (Cadbury, 1992: 16).

2.2.2.2 Stewardship theory

Davis, Schoorman and Donaldson (1997: 612) argued that the executives of a firm are stewards working for the shareholders and that stewards will maximise shareholder wealth to maximise their shareholder profits. Contrary to the agency theory, stewardship theory postulates that stewards and executives share common goals to do what is best for the firm and leads to higher performance (Abdullah & Valentine, 2009: 90). The executives aim to do work effectively and efficiently and to be great stewards of the assets they are controlling within the firm. The theory assumes that there are no disputes or lack of motivation within management.

Stewardship theory is relevant to corporate governance as managers need to be given a clear and unambiguous role. The firm structure should give authority, worth and power to the management to use in the best interest of the firm (Abdullah & Valentine, 2009: 90). This is why the stewards are executives committed to the firm and acts in the interest of the firm.

2.2.2.3 Resource-dependency theory

Resource-dependency theory states that the board of directors provides resources to the firm through their external relationships. Hillman, Canella and Paetzold (2000: 240) observed that the board of directors provides a variety of resources such as skills and information pertaining to suppliers, buyers, public policies and social groups. Therefore, this theory is in support of the importance of having directors on the board because they provide greater resources and information beneficial to the firm (Yusoff & Alhaji, 2012: 57).

Resources originate from the environment around them which consists of other firms. Therefore, firms are dependent on each other in order to exchange resources; and resources are valuable, costly to imitate, rare and not substitutable (Abid, Rafiq, Khan & Ahmed, 2014: 172). Resources and power are directly linked, and firms who have more resources are more

powerful when compared to competitors who do not have access to the resources.

2.2.2.4 Shareholder theory

Shareholder theory was advanced by Friedman (1970: 250) and the theory states that the fundamental role of a firm’s manager is to maximise shareholder wealth. Essentially, a firm’s managers will ultimately do anything to increase and ensure the profitability of a firm. However, shareholder theory has been criticised as being short-sighted, focusing on short-term profits and overlooks unethical behaviour (Danielson, Heck & Shaffer, 2008: 1).

2.2.2.5 Stakeholder theory

The stakeholder theory was advanced by Freeman (1984: 365) and focuses on groups outside of the firm. The assumption is that shareholders are not the only ones with a stake in the company; firms must thus take an interest in all other stakeholders. The stakeholder theory identifies, analyses, develops and manages the interactions among the stakeholders. Abdullah and Valentine (2009: 91) described the stakeholders as a group or individual that is affected by a firm’s objectives. This theory however, opposes shareholder theory and firms include suppliers, customers, employees, communities and business partners when making decisions.

The stakeholder theory is widely recognised because it takes all parties in account and not just the shareholders. This theory suggests that the performance of a firm cannot be measured by shareholder returns alone and that all stakeholders must be considered (Jensen 2001: 10).

2.2.2.6 Comparing corporate governance theories

The main differences among the corporate governance theories are tabulated below:

Table 2.1: Comparison of corporate governance theories

	Stewardship theory	Shareholder theory	Stakeholder theory	Resource-dependency theory
Focus	Shareholder’s interest	Shareholder’s interest	Stakeholder’s interest	Firm resources and power

Objective	Maximize Productivity	Maximize Productivity	Long term relationships	Acquire and exploit resources
Base	Classical idea	Normative	Normative	Classical idea
Model	Collective	Individual	Collective	Collective
Time horizon	Long term	Short term	Long term	Long term
Theory originated	Law	Management	Management	Sociology and management
Behaviour	Pro-organizational	Opportunistic	Pro-social	Pro-organizational
Approach	Sociological and psychological	Sociological and psychological	Societal	Strategic
Main goal	Goal alignment	Goal alignment	Goal alignment	Goal congruence
Motivated by	Principal's objectives	Self-objectives	Shareholder and other stakeholder's objectives	
Structure	Facilitation and empowerment	Monitor and Control	Facilitation and empowerment	Monitor and Control
Need	Growth and achievement	Economic need	Economic and long term firm growth	Economic and long term firm growth

Source: Researcher's own compilation

2.2.3 Corporate governance practices

Corporate governance is a guideline firms use in managing a company. Corporate governance practices are the application the different abovementioned theories. Firms with poor corporate governance practices may make bad debt decisions by taking on too much debt, thus becoming too leveraged. A notable example in this situation is the Global Financial Crisis of 2007 where firms took on too much debt and housing prices fell because banks gave loans to homeowners with bad credit ratings who were unable to repay their loans (Tshipa & Mokoteli, 2015: 151).

When analysing the relationship between capital structure and profitability, it is important to take note of a firm's corporate governance practices. South African firms use the Companies Act 2008; the King Report on Corporate Governance (2009) King codes I, II, III and IV; Committee of Sponsoring Organisations (COSO) and ISO 31000 framework as guidelines which outline the requirements of the governance practices that companies should fulfil (Tshipa & Mokoteli, 2015: 151).

The Companies Act of 2008 sets out a guideline to promote transparency and accountability in South African firms, and provides firms with rules to which they must adhere. The Companies Act specifies that in private companies there must be a minimum of one board director, and in a public company, a minimum of three. It also stipulates that directors are to execute decisions in good faith and that directors may be held liable for breaching their fiduciary duty to do so (Walker & Mokoena, 2011: 277). The Companies Act of 2008 has several other regulations regarding the auditing committee and corporate responsibilities that firms should adhere to and follow through.

A code of conduct was developed and was introduced in South Africa to strengthen corporate governance practices. The King reports on Corporate Governance is called King Codes, published in 1992. King I was issued in 1994, publishing finalised legislation pertaining to corporate governance procedures. King I was restricted to firms listed on the Johannesburg Stock Exchange; government and state-owned companies; as well as banks and insurance companies (Walker & Mokoena, 2011: 275). Thereafter, in 2002, King II code was developed with the aim of expanding on King I and the characteristics of good corporate governance were introduced: such as discipline, transparency, independence, accountability, responsibility, fairness and social responsibility. King III was introduced alongside the new Companies Act

and replaced King II in 2010. King III incorporated leadership, sustainability and corporate citizenship into the report and the King III codes apply to any firm, private or public. More recently, King IV was released in 2016 and focuses on transparency and refines the codes between good practice and principles. King IV is centred around leadership and is applicable to any firm, namely: public or private, big or small firms and non-profit or profit firms (Walker & Mokoena, 2011: 276-277). Furthermore, the COSO and ISO31000 are both frameworks for establishing good corporate governance, whereby ISO31000 pertains to international risk management standards, and COSO provides a model to assess the control models of a firm (Karanja, 2017: 278).

There are numerous ways to measure corporate governance. The first method is board size. Board size can be defined as the total number of directors on the board of a firm. Board size has been a longstanding issue of debate, and there are still conflicting theories regarding board size and its effect on financial performance (Tshipa & Mokoteli, 2015: 151). Zakaria, Purhanudin and Palanimally (2014: 3) concluded that board size has a positive effect on financial performance; while Johl, Kaur, and Cooper's (2015: 242) findings are inconclusive in determining the relationship between board size and financial performance.

The second method in measuring corporate governance is institutional ownership. Arora and Sharma (2016: 423) state that ownership control and institutional ownership are important when considering financial performance as they enhance market valuation, because the board of directors play a huge role in the operations and decisions making process. Mashayekhi and Bazaz (2008: 161) found that institutional investors do not relate positively to financial performance, because institutional investors are big companies such as retirement funds, banks and hedge funds and they do not always consider the firms interest first. In reference to the stewardship theory, the board of directors must ensure that management acts in the best interest of the firm. The board of directors needs to examine capital structure and determine the most appropriate debt-to-equity ratio for firms to finance their assets, remain competitive, and meet daily operations and future growth (Correia, et al, 2015: 1-31).

The third method in used to measure corporate governance is board independence. Board independence measures how much of the firm's management are shareholders. Arora and Sharma (2016: 424) state that if the board has more non-executive directors then the board is more independent. They also found a negative relationship between board independence and financial performance. Findings by Hamdan and Al Mubarak (2017: 128) show that board

independence slightly affects financial performance. However, Fuzi, Halim and Khudzari (2016: 464) found a positive relationship between financial performance and board independence. There are conflicting arguments regarding board independence, but in accordance with the King III guidelines, a board should be comprised of the majority of non-executive directors who should be independent of the firm. This guideline ensures that the interests of the shareholders and management are aligned, resulting in the smooth running of the firm; thus positively affecting financial performance (Tshipa & Mokoteli, 2015: 162).

2.2.4 Financial performance in firms

When measuring the performance of a firm, profitability is the main tool used in determining whether a firm has the ability to maximise its profits, and simultaneously minimise its costs (Nassar, 2016: 3). In the current competitive business environment, the optimal capital structure is a crucial tool needed for a firm to be profitable. This objective is taken into consideration when firms intend to invest in other projects that require them to fund these projects, either through the firm's debt or through its equity. Capital structure sets the foundation of the firm's ability to be profitable, since profitability is affected by the different financing decisions (Mashavave & Tsaurai, 2015: 82). Yusuf, Al Attar and Al Shattarat (2015: 157) conducted a study—whereby their aim was to find a relationship between capital structure and performance—that states that the capital structure a firm uses either affects the firm negatively or positively. A good capital structure decision can affect the performance and value of the firm positively; whereas a bad financing decision may lead to financial distress and ultimately bankruptcy. The corporate governance of a firm can also impact its ability to maximise its profits. Bad corporate governance practices can lead to financial tragedies such as a board of directors acting in their own interests and not that of the firm. Conversely, if the board of directors act in the best interests of the firm then the firm will be more profitable (Muazeib, Chairiri & Ghozali, 2015: 24).

The most effective way to measure financial performance is by analysing the ROA and ROE as it captures the accounting performance of a firm (Le and Phan, 2017: 714). ROA measures the return on assets and the ratio provides details on how efficiently a firm uses its assets to generate earnings. To generalise, the higher the ROA ratio, the better. However, the context and history of a firm can influence the ratio (Appiadjei, 2014: 28). ROE measures the return on equity and the ratio determines how effective a firm is using their equity to generate earnings.

The ROE ratio is often watched by analysts and investors as a high ROE ratio is seen as a reason to purchase a firm's stock. Firms with a high return on equity ratio are usually more capable of generating cash internally and, as a result, are less dependent on debt financing.

2.2.4.1 Relationship between capital structure and financial performance

Modigliani and Miller (1958: 263) state that a firm's value is dependent on profitability rather than its capital structure, under perfect market conditions. In a later paper, Modigliani and Miller (1963: 441) stated that when taxes are included, then interest payments are tax deductible and that financing through debt is the optimal capital structure. Thus, a firm's value will increase as debt levels increase.

However, some studies revealed opposing results between the relationship of capital structure (debt financing) and financial performance. Champion (1999: 22) and Hadlock and James (2002: 390) found a positive relationship between capital structure and financial performance. Simerly and Li (2000: 46) and Ebaid (2009: 481) found negative, weak or no relationship between financial performance and capital structure.

Moreover, Myers (2001: 86) argued that capital structure is not the only technique that can be used in making financial decisions. Myers' (2001: 100) theory might explain the contradictory results found from the empirically tested studies explaining the relationship between capital structure and financial performance. A number of prior studies have been conducted regarding financial performance; see for instance, Salim and Yadaf (2012: 168), Appiadjei (2014: 42) and Rashid (2008: 113). However, there are fewer studies on leverage and financial performance. More research can be done to determine other factors that play a role in financial performance such as competitive intensity, business strategy and corporate governance.

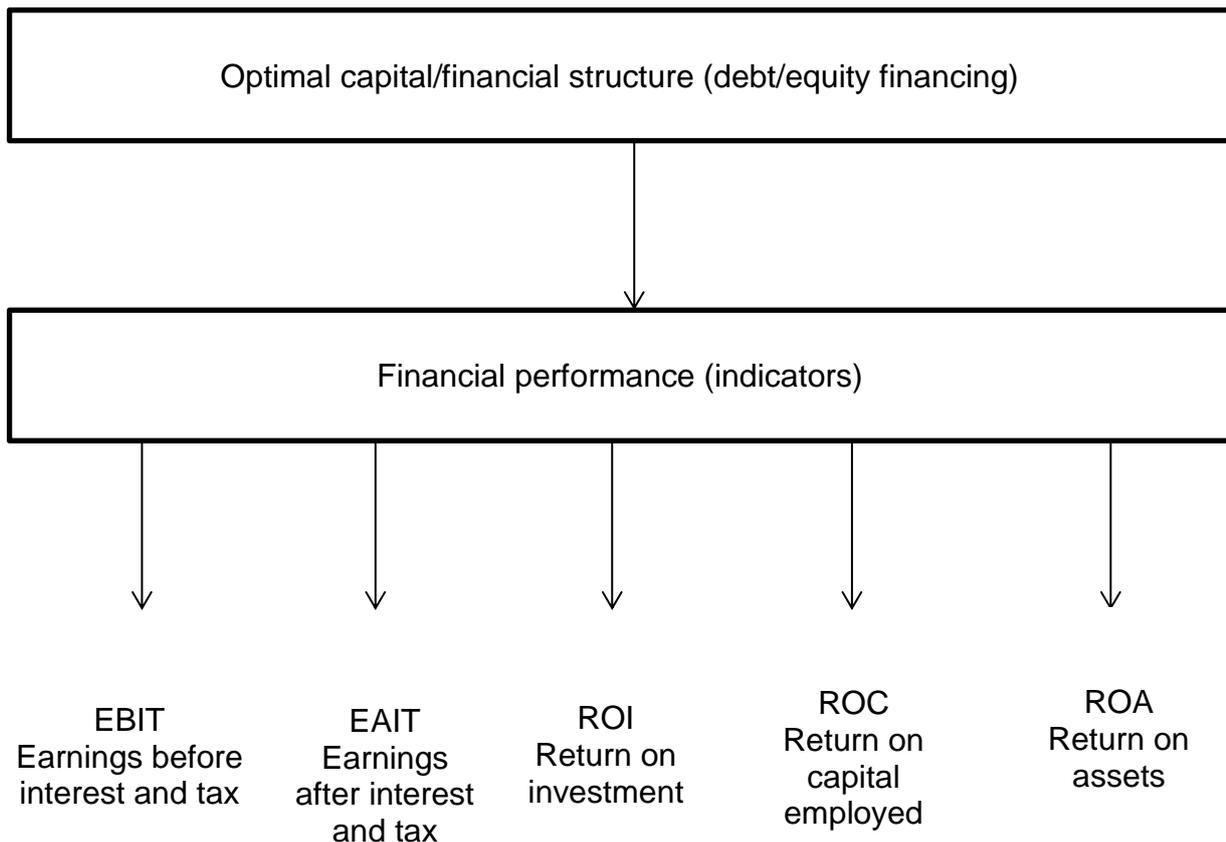


Figure 2.9: Relationship between capital structure and financial performance

Source: Obim, Anake and Awara (2014: 75)

Figure 2.9 illustrates the relationship between capital structure and financial performance. The optimal capital structure is determined by the ratio of debt to equity financing and the optimal debt to equity ratio should, in turn, reflect how profitable a firm is and the financial performance can be measured using the following indicators: Earnings before interest and tax, earnings after interest and tax, return on investments, return on capital employed and return on assets. If these ratios are above the norm, then these firms are profitable.

There is a positive relationship between capital structure and financial performance. It is therefore worth exploring this in order to determine whether there is a positive relationship between corporate governance and financial performance. Does corporate governance then act as a mediating factor in the relationship between capital structure and financial performance? Furthermore, is there a relationship capital structure and corporate governance? (Detthamronga, Chancharata & Vithessonthic, 2017: 690). Both capital structure and corporate

governance influence financial performance, and it is thus worthwhile to determine the relationship between capital structure and corporate governance as well as financial performance.

2.2.4.2 Relationship between corporate governance and financial performance

Most studies reveal that good corporate governance practices enhance a firm's performance while few studies have found a negative or no relationship between corporate governance and financial performance (Hutchinson, 2002: 20; Young, 2003: 138). The contradicting results can be attributed to the fact that some of the data is not publicly available or that the surveys are restricted. The performance indicators are accounting-based and as such have a limited use. There are various indicators of corporate governance, but studies do not use them all. This can change the results of the relationship between corporate governance and financial performance (Coleman, 2007: 6). Further industry-specific studies need to be employed and a multivariate approach to determine the correlation between corporate governance and financial performance must be taken.

2.3 EMPIRICAL LITERATURE REVIEW

There are a number of studies that have been conducted to find the relationship between capital structure and financial performance on a global and national scale, but the results remain inconclusive. In addition, there are a number of studies regarding corporate governance and financial performance. However, there are fewer studies on the relationship between corporate governance and capital structure. Cook and Tang (2010: 86) state that the contradictory findings could be attributed to country specific, industry and firm specific factors. This section will review previous empirical studies conducted on capital structure, corporate governance and financial performance. Empirical evidence from developed countries will be discussed, followed by empirical evidence from developing countries. This will provide a global perspective and will find existing relationships between these concepts. Thereafter, this study will review studies from a South African perspective and determine whether there is a relationship between capital structure, corporate governance and financial performance.

2.3.1 Empirical evidence from the developed countries

2.3.1.1 Capital Structure and financial performance

The studies that have been conducted in developed countries have similar findings and the results show that developed markets rely on retained earnings as a source of finance. Mayer (1988: 1172) conducted a study on non-financial firms in the United Kingdom (UK) and found that retained earnings contributed to a large portion of their investments. Corbett and Jenkinson (1996: 71) conducted a study on capital structures on five countries: Japan, Germany, France, UK and the United States of America (USA). The findings also concluded that retained earnings are used as the main source of funding. These findings support the pecking order theory which states that a firm will first use internal generated funding (retained earnings) which bear no external costs.

The G7 countries are considered to be the most advanced economies in the world. The G7 countries are Canada, Italy, United Kingdom, United States of America (USA), Germany, Japan and France. Van Esch (2011: 16) described these countries as having similar capital structures and profitability. He concluded that the difference between developed and emerging markets is small in terms of the leverage ratio, where developing countries have a higher leverage ratio than developed countries owing to developing countries having slightly more debt, due to countries being in an emerging phase, as well as the fact that they still need to industrialise. Van Esch (2011: 23) further documented a negative relationship between capital structure and financial performance, which shows that more debt does in fact decrease a firm's performance. Conversely, a study by He (2013: 32) found out that European countries, more specifically Sweden and Germany, have higher debt levels than that of a developing country—China, for instance—and concludes that debt levels positively affect financial performance.

De Jong, Kabir and Nguyen (2008: 1956) analysed the long-term leverage of firms from 42 countries and showed that the debt ratios varied from country to country, but that these countries overall had low debt ratios. This confirmed that these countries use more of their retained earnings.

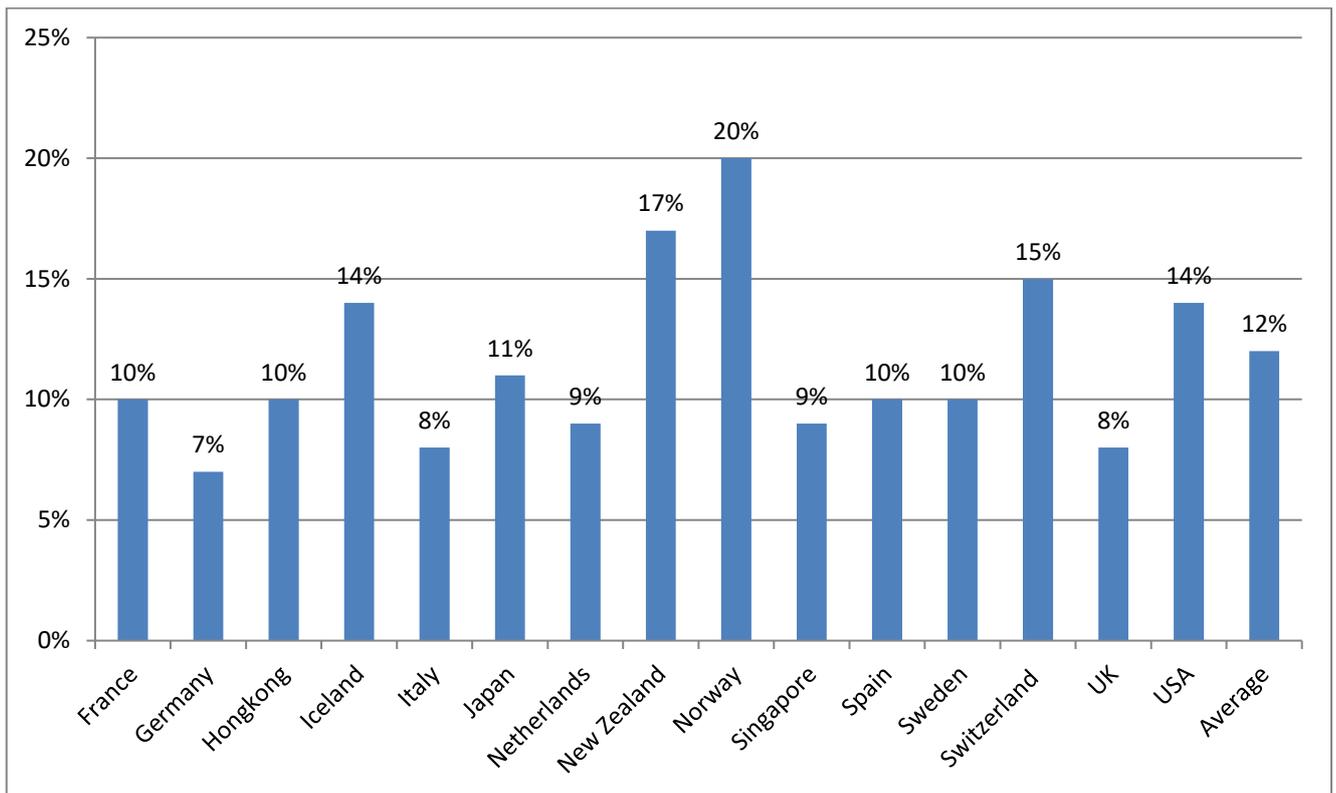


Figure 2.10: Long-term debt ratios for some developed countries

Source: Hove (2017: 23)

Figure 2.10 shows that the average long-term debt ratio is 12% and most of the developed countries lie within that range. However, Norway and New Zealand have slightly higher debt ratios but these are still considered to be good debt ratios (De Jong, Kabir and Nguyen, 2008: 1957).

USA adopted the Sarbanes-Oxley Act of 2002 as a corporate governance guideline. Bertus, Jahera and Yost (2008: 12) found significant changes in leverage and governance variables, indicating that corporate governance decisions impact capital structure. Cole, Yam and Hemley (2015: 57) researched the effect of capital structure on financial performance in the industrial, healthcare, and energy sectors in USA and found a negative relationship between capital structure and financial performance. The negative relationship indicates that the firms should not take on as much debt, but do so because of the tax breaks afforded to them resulting from their debt.

Overall, most studies concluded that retained earnings are used as the main source of funding in developed countries and these findings support the pecking order theory which states that

a firm will first use retained earnings, which bear no external costs, and will thereafter consider external financing. Firm managers will use their remaining retained earnings to avoid the external costs (information asymmetry) associated with external financing.

Table 2.2: Summary of previous studies on the relationship between capital structure and financial performance

Author (year)	Unit of Analysis and period	Key Findings
Abor (2005: 435)	Listed firms in Ghana over a five year period between 1998 and 2002	Short-term and total debt are positively related to the firms ROE and long-term debt is negatively related to firms.
Corbett and Jenkinson (1996: 71)	Japan, Germany, France, UK and the United States of America (USA). From 1970-1989	Retained earnings used as the main source of funding and supports the pecking order theory.
Cole, Yam and Hemley (2015: 57)	industrial, healthcare, and energy sectors in USA from 2004 to 2013.	A negative relationship between capital structure and financial performance.
Chen and Strange (2004: 30)	Chinese listed firms for the year 2003.	A negative relationship between a firm's profitability and its level of debt.
De Jong, Kabir and Nguyen (2008: 1956)	42 countries for the year of 2007.	Debt ratios varied from country to country, but overall have low debt ratios and can confirm that these countries use retained earnings.
Kasozi and Ngwenya (2010: 632)	Listed firms on the Johannesburg Stock	The study found that listed firms follow the trade-off

	Exchange (JSE) in South Africa during the period 1999 to 2005	theory, rather than the pecking order theory
Nassar (2016: 1)	136 industrial firms listed on the Istanbul Stock Exchange (ISE) from 2005 to 2012.	A negative relationship between capital structure and financial performance.
Singh and Hamid (1992: 1)	50 manufacturing companies in nine developing countries for the year 1987.	The study found that firms do not rely on retained earnings but use more external funding.

Source: Researcher's own compilation

2.3.1.2 Corporate governance and financial performance

Akbar, Hughes, Shah and El Faitouri (2016: 24) conducted a study in the UK determining the relationship between corporate governance and financial performance and found that there is no significant relationship between the two variables. Sisoiu (2016: 9) conducted a study to determine whether corporate governance affects financial performance using board size, board independence and the percentage shares held by person in management. There was a positive relationship between the variables and financial performance, indicating that corporate governance has an effect on financial performance. Sisoiu (2016: 12) concluded that corporate governance is a form of management where decisions are made by consulting with shareholders and by taking into account their will and their interests. Shareholders are also willing to pay extra to implement good corporate governance models because this will render fair and efficient decisions synonymous with the Stewardship theory.

Rashid (2008: 113) conducted a study determining the relationship between corporate governance and financial performance in Malaysia and Australia from the period 2000 to 2003, and the results suggested that market capitalisation and price to book value ratio had a positive relationship with the value of a firm. Board size, however, had a negative relationship with the value of a firm. The results were contradictory to the resource-dependency theory, where the board size positively affects the financial performance of a firm.

Wu, Lin, Lin and Lai (2010: 13) conducted a study on firms in Taiwan from 2001 to 2008 and concluded that board structure and board size is negatively related to financial performance. A larger board size will thus have a negative impact on the decision making and will impact financial performance negatively. However, board independence was positively related to financial performance, meaning that the more independent a board is, the better the firm will perform. Furthermore, inside ownership also had an effect on financial performance as the owner makes decisions that will benefit the shareholders' interest and will, therefore, increase financial performance.

Merendino (2014: 194) analysed the relationship between board mechanisms and financial performance in an Italian context and concluded that there is a relationship between the board of directors and financial performance. Their reason attributed to this is because the board is faced with multifaceted tasks and needs to consider all the stakeholders. It can therefore be assumed that these decisions will affect financial performance.

Overall, the evidence from previous studies suggests that there is a relationship between corporate governance and financial performance. Some studies found a positive relationship and other studies found a negative or insignificant relationship between corporate governance and financial performance. Some studies conformed to prior expectations such as the resource-dependency theory while other studies found contradictory results. The results vary, but some corporate governance variables affected financial performance more than others, such as board size and board independence.

2.3.1.3 Corporate governance and capital structure

A study on Canadian firms conducted by King and Santor (2008: 92) concluded that there was a positive relationship between capital structure and corporate governance in private and public firms. The study, however, separated family ownership firms to other corporate firms and found that family ownership firms exhibit higher accounting profits relative to size when compared to other firms. This could have been due to corporate governance practices that family owners employed. Additionally, their study established that overall financial performance was positively related to capital structure by which family ownership has a greater positive relationship than corporate firms.

Stiglbauer (2011: 20) examined the relationship between corporate governance and capital

structure in a German context and found that good compliance to corporate governance does not impact capital structure, and thus does not affect the decision to use debt as a financing option. This could be owing to the fact that the rules implemented in Germany have lost their effect and firms will do anything to differentiate itself from their competitors, and will therefore consider all forms of financing.

Overall, there are few studies available that explain the relationship between corporate governance and capital structure. Table 2.3 summarises the studies that have been conducted below.

Table 2.3: Summary of other studies conducted on the relationship between corporate governance and capital structure

Author (year)	Unit of Analysis and period	Key Findings
King and Santor (2008: 92)	613 Canadian firms that were members of the TSX 300 and the S&P TSX Composite Index from 1998 to 2005.	A positive relationship between capital structure and corporate governance in private and public firms.
Kumar (2015: 20)	Listed Indian companies from 1994 to 2000.	Corporate governance, in a particular role of ownership structure can affect financial performance.
Nyakundi (2014: 32)	Kenya listed non-financial firms from 2008 to 2012.	Corporate governance measures such as board size and non-executive directors are negatively correlated to capital structure.

Okiro, Aduda and Omoro (2015: 528)	East African countries (listed companies in Kenya, Tanzania, Uganda, Rwanda and Burundi) from 2009 to 2013	There was a positive relationship between the effect of capital structure on the relationship between corporate governance and financial performance.
Stiglbauer (2011: 20)	80 German listed firms in HDAX index of Deutsche Börse Group for the year 2007.	Corporate governance does not impact capital structure, thus does not affect the decision to use debt as a financing option.
Uddin, Khan and Hosen (2019: 49)	Bangladesh listed firms from 2003 to 2017.	Corporate governance structure influences the leverage decisions (capital structure).

Source: Researcher's own compilation

2.3.2 Empirical evidence from the developing countries

2.3.2.1 Capital Structure and financial performance

The evidence from other countries shows no accurate answer regarding the relationship between capital structure and financial performance. China, for example, is one of the most researched markets owing to the competitive nature of its market. Chen and Strange (2004: 30) analysed and concluded that there is a negative relationship between a firm's profitability and its level of debt. In turn, the more debt a firm has, the less profitable the firm is. Another emerging market is Iran: when investigating the relationship between capital structure and performance, Pouraghajan, Malekian, Emamgholipour, Lotfollahpour and Bagheri (2012: 174) concluded that firms can improve their performance by reducing the debt ratio. This results in firms using more retained earnings and equity to fund new projects. Similar to China, Iran's financial performance is also dependent on capital structure. The leverage (debt-equity ratio)

is thus negatively correlated to return on assets.

Turkey, much like South Africa, exhibits characteristics of both developed as well as developing markets, but is viewed as a developing market when compared to other global markets. Nassar (2016: 1) conducted a study on the impact of capital structure on financial performance of firms listed on the Istanbul Stock Market. Nassar (2016: 3) used the debt ratio to measure capital structure and ROA, ROE and EPS to measure firm profitability. When analysing the earnings per share, return on assets and equity ratios, Nassar (2016: 4) found that there is a negative relationship between capital structure and financial performance.

Kasozi and Ngwenya (2010: 632) investigated whether capital structure theories are aligned with capital structure practices by testing the pecking order and trade-off theories of listed firms on the Johannesburg Stock Exchange (JSE) in South Africa during the period 1999 to 2005. Their study concluded that listed firms follow the trade-off theory, rather than the pecking order theory. Muazeib, Chairiri and Ghozali (2015: 26) sought to determine whether corporate governance drives capital structures of listed firms on the JSE for the year 2010. Their study used institutional ownership, independent audit committee and external auditor size as corporate governance measures. The study further used the debt to equity ratio to measure capital structure. Muazeib, Chairiri and Ghozali (2015: 29) concluded that institutional ownership, independent audit committee and external auditor size negatively affects the debt to equity ratio; thus affecting capital structure.

Abor (2005: 436) conducted a study on listed firms in Ghana over a five-year period between 1998 and 2002, and concluded that short-term and total debt are positively related to the firm's ROE and that long-term debt is negatively related to firms. Zeitun and Tian (2007: 59) conducted a study to determine the relationship between capital structure and financial performance in non-financial Jordan firms and the findings reflected that the debt level is negatively related to financial performance, with the indicators being ROA and ROE. Abor (2007: 371) examined small and medium enterprises in Ghana and South Africa and concluded that there is a negative relationship between long-term and total debt, and financial performance. A study by Ebaid (2009: 480) on non-financial Egyptian listed firms showed that capital structure decisions have a little effect on firm's performance and shows the weak relationship between the two.

De Jong, Kabir and Nguyen (2008: 1956) found that developing countries have higher debt ratios, and thus use more long-term debt in comparison to developed countries. Similarly, Singh and Hamid (1992: 1) analysed 50 manufacturing companies in nine developing countries and found that firms do not rely on retained earnings but use more external funding. Singh and Hamid (1992: 1) further concluded that the reason for using external funding is because these firms are low profitability firms and do not have monies, or they are to set aside from their retained earnings.

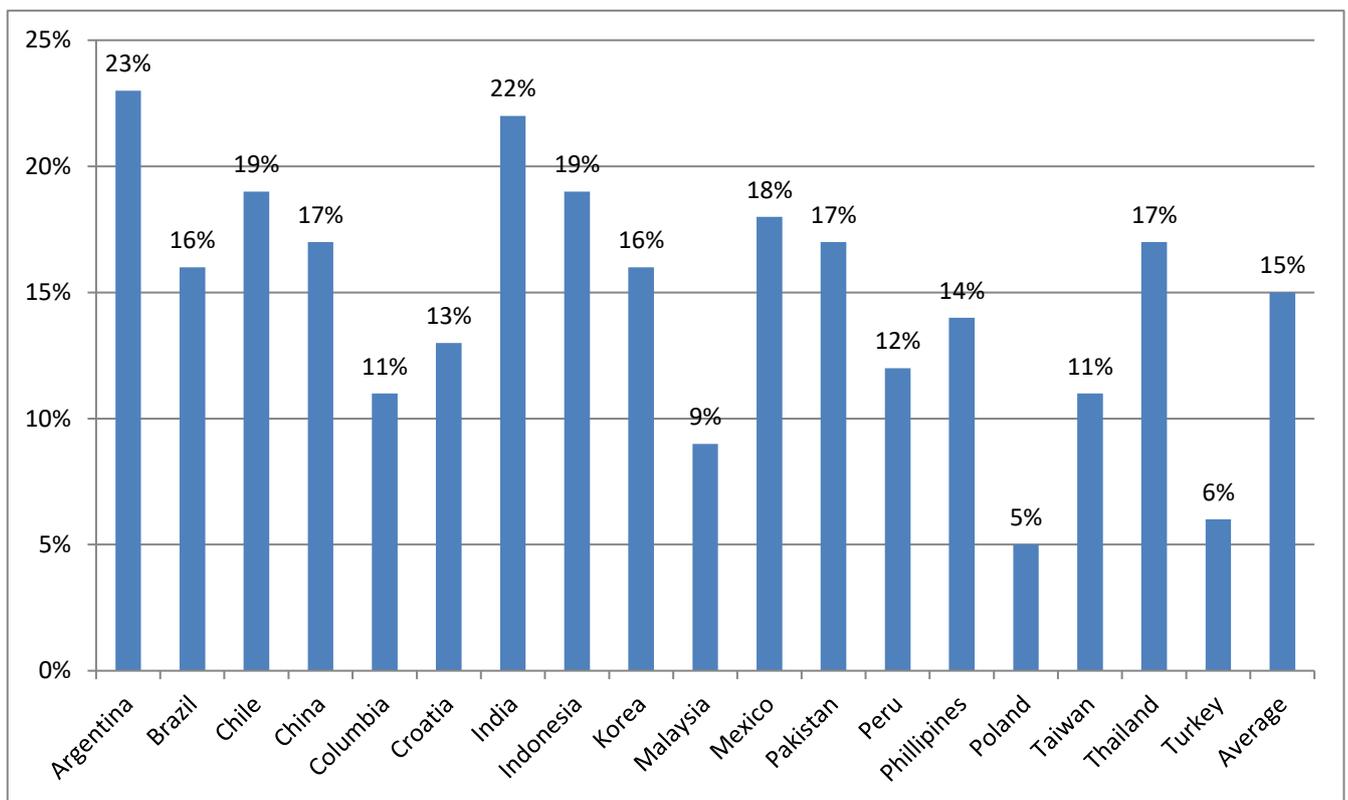


Figure 2.11: Long-term debt ratios of developing countries

Source: Hove (2014: 24)

Figure 2.11 shows that the average long-term debt ratio is 15%. Most of the developing countries have a higher debt-ratio than the average, but Poland (5%) and Turkey (6%) have significantly low debt-ratios which indicate that these countries use internal funding over debt financing (De Jong, Kabir and Nguyen, 2008: 1957).

Gwatidzo and Ojah (2009: 17) conducted a study on five African countries to determine how leveraged the countries are. The results of the study by Gwatidzo and Ojah (2009: 17) found that the debt levels of the five African countries are on par with that of other developing

countries such as Mexico, Jordan, Thailand and Malaysia. The evidence supports the pecking order theory where these African firms choose internal financing before external debt and using short-term debt to finance projects. Moreover, profitability is negatively related to leverage, thus a more profitable firm will use retained earnings before considering debt.

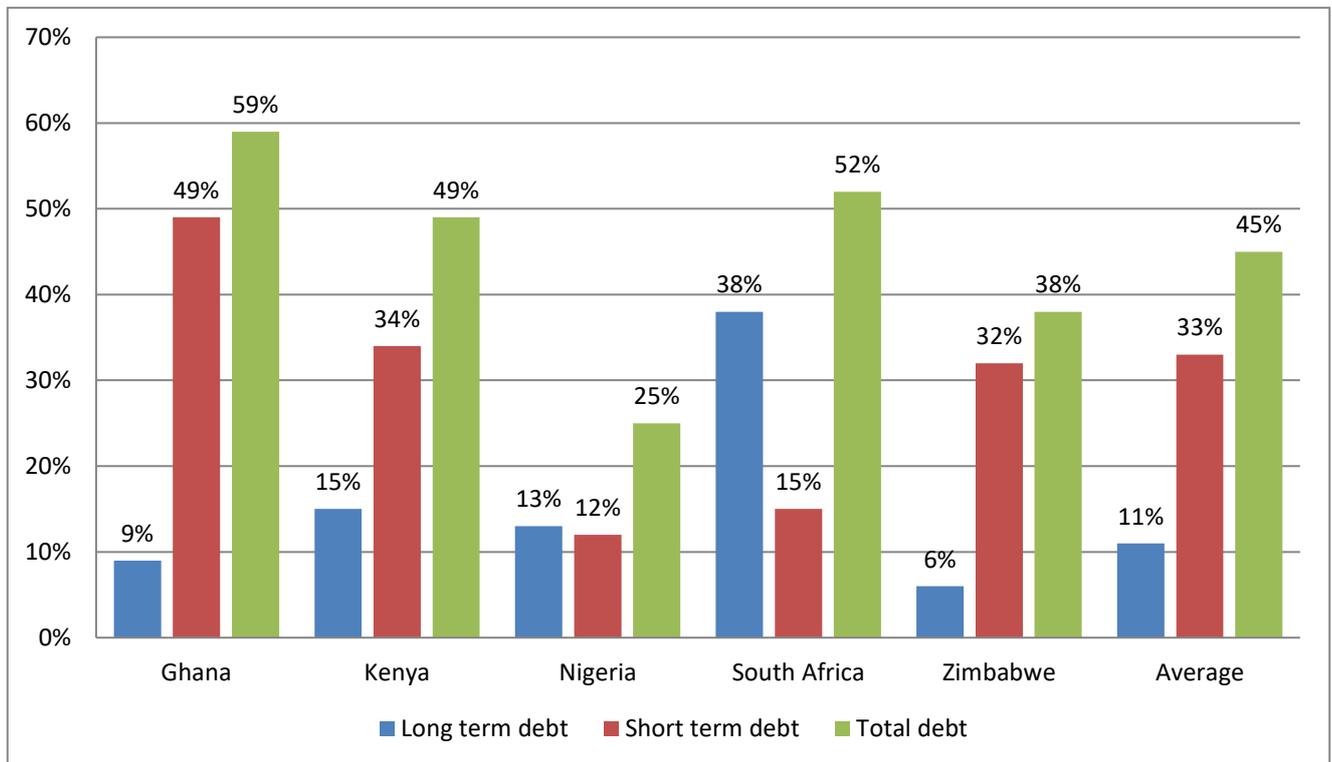


Figure 2.12: Debt ratios for five African countries

Source: Gwatidzo and Ojah, (2009: 7)

The average debt among the five countries was rather high (45%) and most of them used short-term debt funding to fund projects. However, South Africa made more use of long-term debt (38%) which is significantly higher than the other countries. This can be explained because South Africa has a more developed financial system and has more access to long-term debt. The other African countries have short-term markets and thus rely more on short-term debt because long-term financing is less available (Gwatidzo and Ojah, 2009: 9).

On the basis of the evidence reviewed in the above foregoing, it would seem as if firms in developing countries are higher leveraged and rely on external financing, especially when these firms are growing and they need more capital, and internal funding will not be sufficient

to cover all the costs. External financing has a tax advantage and reduces the tax cost, thus increasing profits. Each country is unique and there are no uniform patterns of financing in developed markets as well as developing markets; thus the relationship between capital structure and financial performance cannot be generalised and must be examined country by country.

2.3.2.2 Corporate governance and financial performance

Coleman (2007: 19) analysed the relationship between corporate governance and financial performance in Africa from 1997 to 2001. The study employed market-based and accounting-based performance measures, ROA and Tobin's Q, and tested the relationship between performance and corporate governance variables and found a positive relationship.

Arora and Sharma's (2016: 431) study was based on Indian firms, and the results of the study show that there was a relationship between corporate governance and performance, but not a very strong one. This result could be attributed to Indian firms not following the guidelines and regulations. The main findings reflected that board size was negatively related to ROA and that board meetings had a positive relationship to financial performance. However, ROE, profitability, and stock returns were not related to corporate governance indicators, and the outcomes indicated that firms who comply with good corporate governance practices perform better. In theory, good corporate governance practices lead to reduced agency costs. This thus implies that firms in developing countries can improve their performance by implementing good corporate governance practices.

Naimah and Hamidah (2017: 5) examined firms in an Indonesian context and the study concluded that board size, audit size and outside director does not significantly affect firm profitability. However, board independence had a negative effect on firm profitability. Moreover, the number of audit committee meetings and audit quality had a positive effect on profitability. Corporate governance principles have significant effects on profitability and leverage and firm size have a negative effect on firm profitability and performance.

Hove-Sibanda, Sibanda and Pooe (2017: 8) analysed the impact of corporate governance and performance of small and medium enterprises in South Africa. The main findings were that the implementation of corporate governance had a positive relationship with financial performance.

2.3.2.3 Corporate governance and capital structure

Nyakundi (2016: 32) examined listed firms on the Nairobi Stock Exchange and tested corporate governance indicators and their effects on capital structure. Nyakundi (2016: 38) concluded that board size was negatively correlated to the debt ratio. A larger board size thus results in the corporate board encouraging managers pursue a lower leverage to increase financial performance. There is was a negative relation between non-executive directors and capital structure; therefore, independent directors take on less debt for effective monitoring and control. Government ownership was positively related to capital structure and indicated that firms with a high percentage of government ownership were able to force management to use more debt than equity. Managerial ownership was negatively related to capital structure which revealed that with increased managerial ownership, the interest of the manager aligns with the interest of outside shareholders and reduces the need for debt financing, and decreasing agency costs.

Rashid (2008: 149) tested the relationship between corporate governance and financial performance in Malaysian firms from 2000 to 2003 and found that a larger board size is negatively related to the value of the firm and within a developing market context harms the shareholders interest. The role of the CEO was positively related to financial performance as effective management and powerful leadership leads to better financial performance. Managers also affected the value of a firm and firm managers that follow the corporate governance practices will make decisions that will improve firm profitability.

Hafez (2017: 126) tested the following variables: board size, institutional investors, managerial ownership and governmental ownership, to determine their relationship with capital structure in listed firms in Egypt from 2007 to 2016. The variables showed a significant relationship between long-term debt and capital structure decisions. Furthermore, the study revealed that the differences in corporate governance frameworks in each country played an important role in determining the effect of corporate governance practices on capital structure decisions in the different countries.

Muazeib, Chairiri and Ghozali (2015: 29) investigated the effect of corporate governance on capital structure of Johannesburg listed firms for the year 2010. Their findings revealed that institutional ownership influences the debt-to-equity ratio and that independent audit and external auditor size showed a significant influence in the debt-to-equity ratio. Therefore,

corporate governance practices do affect capital structure and, in turn, firm profitability.

2.4 CHAPTER SUMMARY

In this chapter, the theories of capital structure and corporate governance have been discussed and empirical studies have been analysed and discussed. The first theory discussed was Modigliani and Miller (1958: 268) theory stating the irrelevance of capital structure. Later, other theories were developed such as trade-off, pecking order and agency cost theory. The validity of these theories was tested through empirical studies rendering mixed results. The different results depend on the market conditions, country and industries.

Capital structure and financial performance has been discussed in developed and developing countries along with empirical evidence showing the different relationships. There are different patterns in financing options in developed and developing markets, but the general conclusion is that firms in developing countries rely more on external financing compared to firms in developed countries.

Corporate governance and financial performance have also been discussed and it can be found that board size, institutional ownership, managerial ownership and audit quality all affect the firm's decision making and financial performance and profitability. The relationship between corporate governance and capital structure has also been discussed where there is a relationship between corporate governance indicators and the debt to equity ratio.

However, there is still no precise conclusion on the optimal capital structure even though there are a number of theories that seek to address this. Therefore, more empirical research needs to be conducted to provide more evidence on the ideal capital structure. That being said, the research should be tailored to specific industries in order to determine more accurate results.

The next chapter will present the research methodology to execute this study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter describes the research design, description of the data, model specification and the estimation methods. The chapter begins by discussing the empirical framework of this study. Thereafter, the research design and econometric methods will be outlined. Further, the chapter will define the variables used and the data will be tested through the static panel data model. The data will be analysed to discover significant relationships between capital structure, corporate governance and financial performance. Finally, the chapter will discuss the specification tests in order to determine the most suitable panel data model.

The rest of the chapter is organized as follows: Section 3.2 outlines the empirical framework. Section 3.3 discusses the research design. Section 3.4 describes the estimations method used in this study. Section 3.5 describes the formal tests to of specifications be employed on the panel data of this study and section 4.6 concludes the chapter.

3.2 EMPIRICAL FRAMEWORK

The study examines the relationship between capital structure, corporate governance and financial performance. The main objective is to determine the relationship between capital structure and financial performance of South African retail firms.

The econometric models of this study have been based on previous studies regarding capital structure, corporate governance and financial performance. Previous studies provide a guideline as to which variables are to be considered and which should be excluded. Essentially, a panel data analysis will be employed to analyse the financing behaviour of firms in the retail sector. The study uses leverage as the determinant of capital structure; while financial performance will be measured through ROA (measures how efficiently a firm uses its assets to generate earnings) and ROE (measures how effectively a firm is using their equity to generate earnings) ratios and corporate governance practices will be measured by board size, board independence, institutional ownership and size.

The first objective is to determine the relationship between capital structure and financial performance of South African retail firms. Capital structure is measured by leverage which is the debt to asset ratio. According to Modigliani & Miller's (1963: 433) (henceforth "MM") proposition a firm's value is maximised as debt levels increase as the overall cost of capital is lower owing to cheaper debt levels (Modigliani & Miller, 1963: 435). Similarly, as expressed by Kraus and Litzenberger (1973: 912) the trade-off theory also suggests that firms using debt as a source of finance are highly profitable. Essentially, profitable firms find it easy to borrow and repay monies. Conversely, the pecking order theory states that there is a negative relationship between debt and financial performance, as debt leads to interest expenses and less excess returns. The theory further suggests internal funds are less costly and thus lead to higher financial performance.

The second objective is to determine if corporate governance practices of South African retail firms have an impact on their financial performance. The stewardship theory argues that stewards and executives share common goals to do what is best for the firm which then leads to higher performance (Abdullah & Valentine, 2009: 90). The study attempts to determine the impact that corporate governance measures have on profitability measured by ROA and ROE.

3.3 RESEARCH DESIGN

There are several research methods available namely: qualitative, quantitative and a mixed method approach. Qualitative methods use non-numerical data and quantitative methods use numerical data to determine statistical relationships. More specifically, qualitative research is conducted by gathering, analysing and making inferences about the data observed (Tran, 2016: 8). The findings of qualitative research are mainly definitions, concepts and descriptions which are advantageous when undertaking research regarding humans and their behaviour. However, qualitative research can be subjective, depending on the sample size; focus group, and open and closed ended questions used during interviews (Yin, 2016: 9).

Unlike quantitative research that uses hard data and statistical tools (descriptive, multivariate and inferential statistics) to answer research questions (Tran, 2016: 7), a mixed method research approach uses a combination of qualitative and quantitative data. This method is employed when either qualitative or quantitative data does not render adequate results. In this

study the two databases need to be merged in order to render a holistic view that enables us to arrive at conclusive results (Tran, 2016: 12). This mixed method is advantageous in determining statistical relationships as well as the reasoning behind these relationships. However, a disadvantage to this method is that mixed methods are more time-consuming.

This study follows a quantitative approach. The aim of this study is to determine the relationship between capital structure, corporate governance and financial performance in South African retail firms. Exploratory techniques use descriptive statistics such as mean, median, standard deviation and correlation coefficients to describe the data. This will be used to analyse firms' corporate governance practices as well as their capital structure choices and how they impact the financial performance of South African retail firms.

The advantages of quantitative research are that it is less time-consuming, and that the findings can be generalised for the whole population (Rahman, 2016: 106). The limitation of quantitative research is that it only states whether a relationship between variables can be found, but it fails to provide deeper explanations that can be provided through qualitative research (Rahman, 2016: 106). This study, however, is concerned with determining the relationship between capital structure, corporate governance and financial performance; an empirical quantitative approach is thus the most suitable using panel data techniques. This study will employ econometric models, namely panel data methods.

3.3.1 Sample description and Data Sources

The Johannesburg Stock Exchange (henceforth "JSE") consists of 472 listed firms and 56 wholesale and retail listed firms. This study focuses on the retail sector specifically, hence the population of this study comprises of all South African firms in the wholesale and retail sector. The sample comprises of all those 18 retail firms listed on the JSE. There are 180 observations for the retail sample. The list of companies is provided in Table 3.1:

Table 3.1: List of companies

Number	Company	Specialisation
1	SHOPRITE HOLDINGS LIMITED	Food retailer, supermarkets RSA, supermarkets non-RSA, furniture and other operating segments.
2	PICK N PAY STORES LIMITED	Supermarkets and other grocery (except Convenience) stores
3	MASSMART HOLDINGS LIMITED	Convenience stores, Massdiscounters, Masswarehouse, Massbuild and Masscash.
4	WOOLWORTHS HOLDINGS LIMITED	Department stores
5	PEPKOR HOLDINGS LIMITED	Discount, value and specialised goods that retails general merchandise, clothing, household goods, furniture, appliances, consumer electronics, building materials, cellular products and services and financial services.
6	FOSCHINI GROUP LIMITED (THE)	Retail operating divisions, retail clothing, jewellery, accessories, cosmetics, sporting and outdoor apparel and equipment, and homeware and furniture to the broad public.
7	CLICKS GROUP LIMITED	Retail brands Clicks, GNC, The Body Shop, Claire's, Musica and pharmaceutical wholesaler.
8	MR PRICE GROUP LIMITED	Retail chains focusing on clothing, footwear, sportswear, sporting goods, accessories and homeware.
9	TRUWORTHS INTERNATIONAL LIMITED	Department stores

10	CASHBUILD LIMITED	Retail of building materials and associated products and services.
11	ITALTILE LIMITED	Retailing of imported and local ceramic tiles, sanitary ware, bathroom accessories and other related products.
12	KAAP AGRI LIMITED	Retail supplies a variety of products and services mainly to the agricultural sector.
13	LEWIS GROUP LIMITED	Retail furniture credit market.
14	WESCOAL HOLDINGS LTD	Mining, processing, sale and distribution of steam coal.
15	TRADEHOLD LIMITED	Miscellaneous store retailers.
16	PBT GROUP LIMITED	Information management and data analytics services.
17	NICTUS LIMITED	Retailer of household furniture, electrical appliances and home electronics.
18	IMBALIE BEAUTY LIMITED	Marketing and distribution company.

Source: Orbis database

This study uses secondary data, sourced from the Orbis database. The Orbis database provides audited and published financial statements of the companies listed on the JSE. The data is extracted from income statements, balance sheets and uses financial ratios of the firms to analyse the relationship between capital structure, corporate governance and financial performance. The data extracted is over a ten-year period ranging from 2009 to 2018.

3.3.2 Variable Definition

This study employs two dependent variables that measures financial performance. The independent variables are corporate governance measures and capital structure. The most effective way to measure financial performance is by analysing the ROA and ROE as it captures the accounting performance of a firm. Le and Phan (2017: 714) as well as Tshipa and

Mokoteli (2015: 157) used ROA and ROE as dependent variables. Furthermore, Ochola (2013: 30) used ROE to measure financial performance.

Capital structure is measured by the leverage ratio. Previous studies by Nassar (2016: 3) and Kasozi and Ngwenya (2010: 628) also used leverage as an independent variable.

Corporate governance is measured by board size, board independence, institutional ownership and size. Previous studies by Muazeib, Chairiri and Ghozali (2015: 28), and Arora and Sharma (2016:425) have also used similar variables. Hamdan and Al Mubarak (2017: 128) and Mashayekhi and Bazaz (2008: 158) have used board independence as a corporate governance measuring tool.

3.3.2.1 Dependent variables

The dependent variables are the profitability ratios to determine financial performance. These are computed as follows:

- *Return on Asset (ROA)*

$$\text{ROA} =: \frac{\text{Net income after tax}}{\text{Total book value of assets}} \times 100$$

ROA measures the financial performance of a firm. This ratio provides details on how efficiently a firm uses its assets to generate earnings.

- *Return on Equity (ROE)*

$$\text{ROE} =: \frac{\text{Net income after tax}}{\text{Total book value of equity}} \times 100$$

ROE also measures the profitability of a firm. The ratio determines how effectively a firm is using their equity to generate earnings.

3.3.2.2 Independent variables

Corporate governance measures are used as the independent variables. These variables are used to determine the effect of corporate governance practices on capital structure and financial performance

- *Board size*

This is the total number of directors on the board. Vo and Nguyen (2014: 6), and Bhagat and Bolton (2008: 59) consider board size to be important to financial performance.

Board Size (BSZ) = Total number of Directors.

- *Board independence*

Board independence is proxied by the ratio of the number non-executive board members to the total number of board members.

Board independence (BIN) = $\frac{\text{Number of non-executive board members}}{\text{Total number of board members}}$

- *Institutional ownership*

Institutional ownership is proxied by the percentage of a firm's shares owned by institutional owners. Institutional shareholders are companies such as banks, credit unions, pension funds, insurance companies, and so forth.

Institutional ownership (INSO) = $\frac{\text{Institutional shares}}{\text{Total shares}} \times 100$

- *Size*

The size of a firm is calculated using the natural logarithm of total assets. Larger firms are expected to have more assets; hence there is a direct relationship between firm size and assets.

Firm Size (FSZ) = natural logarithm of total assets.

For robustness, two proxies are employed to measure leverage. These are the Debt-to-Equity and Debt-to-Capital ratios.

- *Leverage (Debt: Equity):*

Debt:Equity ratio (DOE) =: $\frac{\text{Total debt}}{\text{Book value of equity}}$

Leverage is a dependent variable in the second equation, since the relationship between capital structure and corporate governance is being tested.

- *Leverage (Debt:Capital):*

$$\text{Debt-to-Capital (DDE)} = \frac{\text{Total Debt}}{\text{Book value of equity} + \text{total debt}} \times 100$$

The leverage ratio measures the value of equity in a firm by analysing the debt levels.

3.4 PANEL DATA ANALYSIS

This study employs panel data econometric analysis to determine the relationship between capital structure, corporate governance and financial performance. This section outlines the panel data estimations and the model specifications.

3.4.1 Panel data estimations

Panel data techniques will be employed in this study, since it displays data of the firms over a period of time. The ordinary least squares (OLS), fixed effects and random effects statistical estimations will be used to determine the relationships between capital structure, corporate governance and financial performance. OLS multivariate regression is an accurate way of determining relationships by analysing the collinearity, variation and homoscedasticity. Panel data analysis is a superior method of analysis because it is a combination of cross-sectional and time-series data analysis. Baltagi (2005: 1) defines panel data as “the pooling of observations on a cross-section of households, countries, firms and other factors over several time periods”. This study will use panel data of eighteen firms over a ten-year period.

The advantages of using panel data are that the data is more informative and there is more variability and less collinearity among the variables, providing more efficiency and more degrees of freedom. Time-series and cross-sectional data have a risk of obtaining biased results but panel data has control regarding individual heterogeneity. Panel data is thus able to better identify and measure effects that are not detectable by other types of data analyses, and is thus able to better study the dynamic of adjustment (Baltagi, 2005: 6).

Conversely, the limitations of using panel data are that there can be design and data collection errors, such as incomplete reportage of the population, or nonresponses because of measurement errors that can occur due to ambiguous questions or due to deliberate distortions of data or memory errors. Panel data may distort measurement errors that arise from unclear questions or memory errors. Cross-section dependence is another limitation as it may lead to misleading inferences (Baltagi, 2005: 7).

The general panel data model is identified as:

$$Y_{it} = \alpha + \beta X_{it} + \mu_i + v_{it} \dots\dots\dots \text{Equation (1)}$$

Where:

Y_{it} = dependent variable

X_{it} = independent/explanatory variables

μ_i = unobservable effects

v_{it} = homoscedastic

i = firms and t = time in years

3.4.1.1 Fixed effects (FE) model

The FE panel regression model parameters are fixed or non-random quantities that assume that the individual firm specific effects (unobservable factors) are correlated with the independent variables (Wooldridge, 2008: 456).

Therefore: $\text{Cov}(X_{it}, \mu_i) \neq 0$.

The fixed effects essentially, use the within-group variation by holding the average effects of each firm constant. Additionally, it controls the other characteristics of firms that might affect the dependent variables (board size, board independence, institutional ownership and size of the firm). The FE model decreases the omitted variable bias and controls for unobservable factors that are correlated with the independent variables. The FE model also deals with

heterogeneity bias, and the model helps to control for individual heterogeneity which may be present among firms.

3.4.1.2 Random effects (RE) model

The RE model parameters are random variables and it assumes that the unobservable factors are not correlated to the dependent variables (Wooldridge, 2008: 489).

Therefore: $Cov(X_{it}, \mu_i) = 0$.

Wooldridge (2008:289) states that the estimators between unobserved heterogeneity and observed explanatory variables are uncorrelated, suggesting that individual specific effects are uncorrelated to the independent variables. The unobservable factors are known as the random variables.

The estimator is regarded as biased if $Cov(Cov(X_{it}, \mu_i)) \neq 0$.

The individual differences in the firm intercepts are captured by the error term. The RE model is more suitable when estimations are done with a randomly selected large sample or where individual specific effects are considered to be uncorrelated. Furthermore, the RE model can include the invariant variables, as opposed to the FE model, where the invariant variables are absorbed by the intercept.

The general RE model can be identified as:

$$Y_{it} = \beta X_{it} + \alpha + u_{it} + \varepsilon_{it} \dots\dots\dots \text{Equation (2)}$$

where:

Y_{it} = dependent variable

β = regression co-efficient of independent variable

X_{it} = independent variables

u_{it} = between entity error

ε_{it} = within entity error

3.4.1.3 Pooled ordinary least squares (OLS) model

OLS models are the most restrictive model as pooled models assume that regressors are exogenous and the pooled OLS model assumes that there are no unobservable effects. The OLS model excludes the u_i variables in the estimations (Wooldridge, 2008: 680).

The general OLS model can be estimated as:

$$Y_{it} = \alpha + \beta X_{it} + v_{it} \dots\dots\dots \text{Equation (3)}$$

where:

Y_{it} = dependent variable

β = regression co-efficient of explanatory variable

X_{it} = explanatory variable in period i

v_{it} = disturbance term in period i

3.4.2 Model specification

In the first instance, to test the relationship between financial performance, corporate governance and capital structure the following static panel data model is going to be specified with return on assets (ROA) as the dependent variable:

$$ROA_{i,t} = DOE_{i,t}\beta_1 + DDE_{i,t}\beta_2 + BSZ_{i,t}\beta_3 + BIN_{i,t}\beta_4 + INSO_{i,t}\beta_5 + FSZ_{i,t}\beta_6 + \alpha_i + \epsilon_{i,t} \dots\dots\dots \text{Equation (4)}$$

where:

$ROA_{i,t}$ = Return on assets for firm i at time t

$DOE_{i,t}$ = Debt-to-Equity ratio for firm i at time t

$DDE_{i,t}$ = Debt-to-Capital ratio for firm i at time t

$BSZ_{i,t}$ = Board size for firm i at time t

$BIN_{i,t}$ = Board independence for firm i at time t

$INSO_{i,t}$ = Institutional ownership for firm i at time t

$FSZ_{i,t}$ = Firm size of firm i at time t

β = slope parameter

α_i = group-specific constant term that embodies all the observable effects

$\varepsilon_{i,t}$ = composite error term that also takes care of other explanatory variables that equally determine financial performance but were not included in the model.

In the second instance, for robustness checks to test the relationship between financial performance, corporate governance and capital structure the following static panel data model is going to be specified with return on equity (ROE) as the dependent variable:

$$ROE_{i,t} = DOE_{i,t}\beta_1 + DDE_{i,t}\beta_2 + BSZ_{i,t}\beta_3 + BIN_{i,t}\beta_4 + INSO_{i,t}\beta_5 + FSZ_{i,t}\beta_6 + \alpha_i + \varepsilon_{i,t} \dots \dots \dots \text{Equation (5)}$$

where:

$ROE_{i,t}$ = Return on equity for firm i at time t

$DOE_{i,t}$ = Debt-to-Equity ratio for firm i at time t

$DDE_{i,t}$ = Debt-to-Capital ratio for firm i at time t

$BSZ_{i,t}$ = Board size for firm i at time t

$BIN_{i,t}$ = Board independence for firm i at time t

$INSO_{i,t}$ = Institutional ownership for firm i at time t

$FSZ_{i,t}$ = Firm size of firm i at time t

β = slope parameter

α_i = group-specific constant term that embodies all the observable effects

$\varepsilon_{i,t}$ = composite error term that also takes care of other explanatory variables that equally determine financial performance but were not included in the model.

The above models will be estimated using the ordinary least squares (OLS), fixed effects and random effects model. Pre-estimation tests will be conducted to establish that the estimated model is stable and not mis-specified.

3.5 FORMAL TESTS OF SPECIFICATION FOR PANEL DATA

Formal tests are carried out in order to ensure that the most accurate panel data model is applied which best suits the data of the study. The tests of specification are conducted in order to ensure that the estimation methods are consistent and reliable. This study will employ the following tests of specification:

3.5.1 Multicollinearity tests

Multicollinearity is defined as the state of very high intercorrelations among the independent variables and is seen as an interference in the data. If there is multicollinearity in the data, the statistical inferences may not be reliable. This is caused by inaccurate use of dummy variables and the inclusion of variables which are computed from other variables in the data set. The correlation matrix is used to detect multicollinearity and the correlation matrix determines the variables which in turn detects the degree of multicollinearity.

3.5.2 Hausman specification test

The Hausman (1978: 1251) test is employed to determine whether to select the fixed effects model or random effects model. The null hypothesis of this test is that the preferred model is the random effects model and the alternative hypothesis is the fixed effects model is the preferred model.

The hypotheses are stated as:

$$H_0: E(\mu_{it}|X_{it}) = 0$$

$$H_A: E(\mu_{it}|X_{it}) \neq 0$$

Therefore, if the null hypothesis is true, the random effects model is the most appropriate; but if the null hypothesis is rejected, then the fixed model will be the most appropriate method to use in the study. If the p -value is more than 0.05 then the null hypothesis is accepted and the random effects regression model will be used. If the p -value is less than 0.05 then the fixed effects regression model is accepted.

3.5.3 Applied Chow test

The applied Chow test or F-test is used to test for poolability or individual effects and the validity of the cross-sectional effects of this study. This test is applied to test the poolability of the panel data. The hypotheses of the Chow test are as follows:

$H_0: \alpha_1 = \alpha_2 = \alpha_{n-1} = 0$ (no individual effects: same intercept for all cross-sections)

$H_A: \alpha_1 \neq \alpha_2 \neq \alpha_{n-1} \neq 0$

According to Baltagi (2005: 55) the test statistic is calculated as follows:

$$F = \frac{(RRSS-URSS)/(N-1)}{URSS/(NT-N-K)} \sim F_{(N-1),(NT-N-K)} \quad \text{Equation (6)}$$

where:

RRSS = restricted residual sum of squares being that of OLS on the pooled model;

URSS= unrestricted residual sum of squares being that of the LSDV regression.

The null hypothesis is rejected if $F > F_{crit}$. Therefore, the fixed effects are valid and the firms are heterogeneous and should not be pooled. Furthermore, if the null hypothesis is rejected, we would then reject the pooled OLS estimation framework and proceed to estimate using fixed effects.

3.5.4 Breusch Pagan (1980) LM test for Random Effects

Heteroscedasticity can be defined as data with unequal variability across a set of independent variables. If the data is heteroscedastic then there may be biased coefficients. In a regression model the data should be homoscedastic, meaning the variance of the errors should be constant (Baltagi, 2005: 59). The Breusch Pagan (1980: 239) Lagrange Multiplier (LM) test is used to test for homoscedasticity or serial correlation. The null hypothesis for this test is that the variance of the error term is constant. The alternative hypothesis is that the variance of the error term is not constant.

The hypotheses are stated as:

$$H_0: \delta_{\mu}^2 = 0 \quad (\text{constant variance across firms})$$

$$H_A: \delta_{\mu}^2 \neq 0$$

If the alternate hypothesis is true then the OLS estimation is inappropriate and random effects are present (Baltagi, 2005: 63).

3.5.5. Modified Wald Test for Groupwise heteroscedasticity.

The modified Wald statistic in this test is used to establish if the residual in the estimated fixed effects model is homoscedastic. The model is estimated assuming homoscedasticity of the residual. In the absence of the same, it renders the estimation biased. The estimation must be corrected to obtain heteroscedasticity robust standard errors.

The hypotheses are stated as:

$$H_0: \delta_i^2 = \delta \quad \text{for all } i \quad (\text{constant variance})$$

$$H_0: \delta_i^2 \neq \delta \quad \text{for all } i$$

3.6 CHAPTER SUMMARY

This chapter discussed the research methodology of this study. The chapter first delved into the empirical framework and research design, where the variables and sample description were identified and explained. The chapter then highlighted the use of panel data techniques as it has the ability to combine cross sectional and time-series data. The model specification was discussed in detail, expanding on the panel regression models. Lastly, specification tests were identified in order to choose the most suitable panel data model to be used in the study.

The econometric and estimation models discussed in this chapter will be applied to execute the study. The next chapter presents and discusses the research findings of this study.

CHAPTER 4

EMPIRICAL FINDINGS AND DISCUSSION

4.1 INTRODUCTION

This chapter presents and discusses the empirical results of the study. The study was premised on testing two main objectives. The first objective was to determine the relationship between capital structure and financial performance of South African retail firms. The second objective was to determine whether corporate governance practices of South African retail firms have an impact on their financial performance. The study focused specifically on the South African retail sector. The full sample comprised of 18 retail firms listed on the Johannesburg Stock exchange. There are a total of 160 observations presented. Panel data econometric techniques were used to conduct the analysis.

The rest of the chapter is organized as follows: Section 4.2 presents the descriptive statistics. Section 4.3 presents and discusses the results of the correlation analysis. Section 4.4 presents the empirical findings and describes the steps taken to estimate the results. Section 4.5 discusses the findings of the study in relation to existing studies. Section 4.6 concludes the chapter.

4.2 DESCRIPTIVE STATISTICS

This section presents the summary statistics of all the variables and analyses the trends of the variables over time.

4.2.1 Summary statistics

The descriptive summary statistics includes the central measures of tendency, mean and median, standard deviation, minimum and maximum values for the sample of all 18 retail firms in this study. The descriptive statistics of the variables are presented in Table 4.1.

Table 4.1: Summary Statistics

Variable	Mean	Median	Standard Deviation	Minimum	Maximum
ROA	9.8069	9.1107	18.2013	-52.5596	179.6895
ROE	19.9302	20.6948	27.7750	-129.0716	212.5638
DOE	1.9087	1.2152	2.1818	0.1024	13.9727
DDE	52.5819	54.9334	22.3966	9.2889	93.3212
BSZ	15.6875	14	6.2113	6	29
BIN	63.2761	67.7083	20.4067	17.2413	100
INSO	14.6466	17.7978	7.5555	0	22.2222
FSZ	6.5674	6.8091	0.8293	4.6798	7.8128

ROA and ROE are both financial performance measures. The South African retail firms recorded profits with a mean of 9.8% for the ROA for the period of the study. On the other hand, during the same period, this sample of South African retail firms recorded profits with a median of 9.1% for the ROA metric. The minimum ROA attained by retail firms was minus 52.6% and the maximum ROA attained was 179.7%. The mean is slightly higher than the median so the data is positively skewed. The standard deviation of ROA is 18.2% and does not suggest a wide variation in the distribution of this measure. A similar study by Kasozi (2018: 176) on capital structure and profitability in retail firms recorded a ROA of 14.6% which is not far off from the current study. South African retail firms recorded profits with a mean of 19.9% and a median of 20.7% for ROE for the period of the study. The data is therefore negatively skewed. The standard deviation is 27.8% which does not suggest a wide variation. The minimum ROE attained by retail firms was minus 129.1% and the maximum was 212.6%. The ROA ratio is important for retail firms because it relies on inventory to generate sales. The ROE is larger than ROA, which indicates that investors earn a higher return on their investment (equity). Hove (2017: 52) recorded a ROE of 16.1%, which is relatively close to the ROE in this study.

The debt-to-equity and debt-to-capital ratios are the two leverage indicators. The debt-to-equity average ratio is 1.9 which means that firms are able to cover their debts. The debt-to-equity ratio is relatively stable as reflected by the standard deviation of 2.1%. The debt-to-capital ratio indicates the percentage of capital structure that consists of debt. The average debt-to-capital is 52.6%, which means that 52.6% consists of debt. Thus, these results imply that retail firms are highly leveraged. Kasozi (2018: 176) and Hove (2017: 52) measure debt in terms of long- and short-term debt, but both find that firms are highly leveraged and prefer short-term debt.

The independent variables are board size; board independence; institutional ownership, and firm size, which are used to test if the corporate governance practices affect the financial performance of firms in the retail sector.

Board size has a mean of 15.7 and a median of 14, which indicates that the average number of board members is around 16 people on a board of a retail firm. The mean and the median are relatively close which indicates that the data is reliable with a narrow spread. On average, the South African retail firms have 16 directors sitting on their boards and the minimum value recorded

is 6 and the highest value is 29. Therefore, the number of board members lies between the two values, but close to the mean of 16.

The number of non-executive directors constituting the boards of the South African retail firms was 63.3% of the total board members. Board independence has a mean of 63.3%, a median of 67.7% and a standard deviation is 20.4%. The standard deviation does not suggest a wide variation. The minimum value is 17.2% and the maximum value is 100%. The mean is slightly lower than the median, as such the data is negatively skewed. Board independence has the highest standard deviation 20.4% which indicates that board independence differs a lot in the sample where the other variables have smaller standard deviations indicating most of the firms' data is similar.

Institutional ownership has a mean of 14.6%, a median of 17.8% and a standard deviation of 7.6%. The standard deviation does not suggest a wide variation and the minimum value is 0% and the maximum value is 22.2%. Institutional ownership refers to the ownership stake in the firm that is held by large financial organisations, pension funds or endowments. There are roughly 15 of such firms in every firm that has a stake in the retail firms of this study.

Firm size has a mean of 6.6%, a median of 6.8% and a standard deviation of 4.7%. The minimum value for firm size is 4.7% and the maximum value is 7.8%. The mean shows the relationship between firm size and assets. The mean and median are relatively close which indicates that there is not a wide variation in the data.

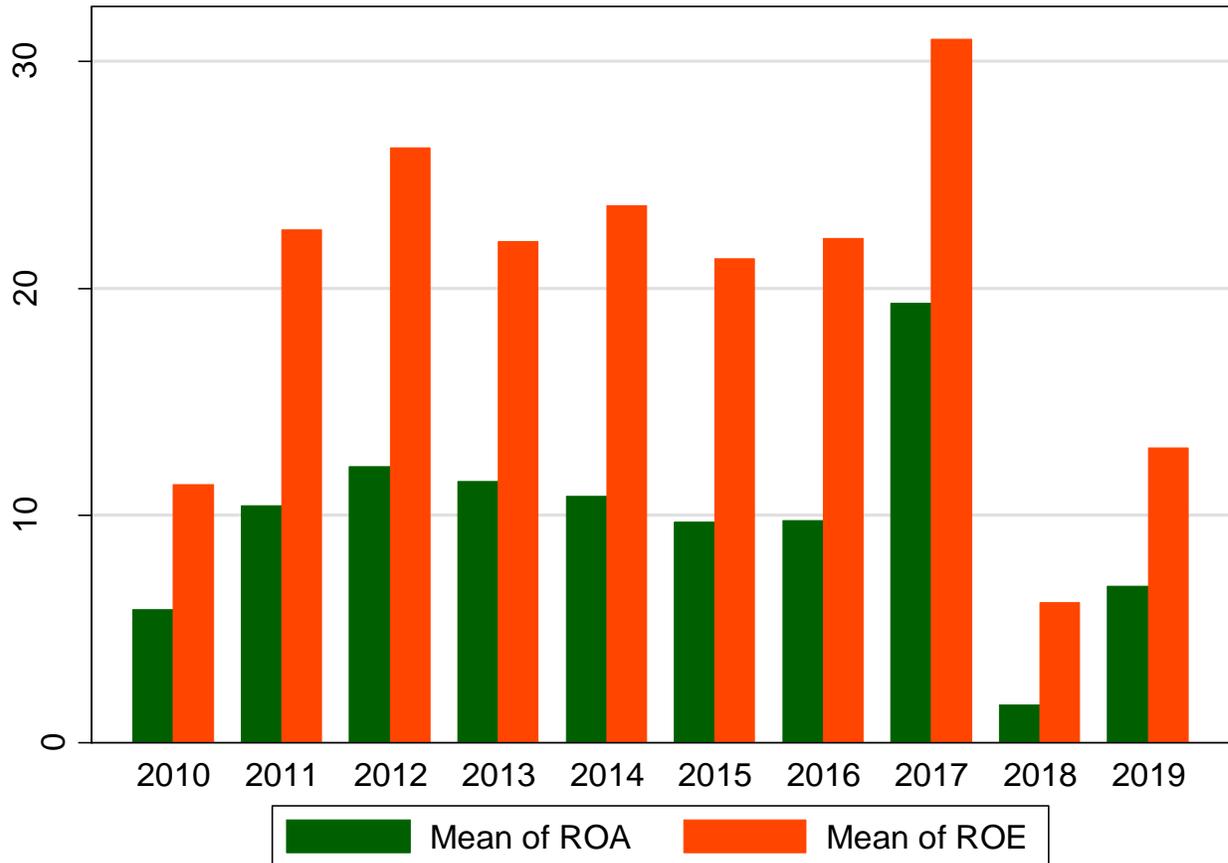


Figure 4.1: Trends in Financial Performance Measures

Source: Researcher’s own compilation

The average financial performance of South African retail firms can be seen from the ROA and ROE. Figure 4.1 explains the relationship between assets, equity and profitability of retail firms in the sample. The ROA increases from 2010 at 6% to 2017 to about 19%. In 2018 the ROA took a massive plunge from 19% to 3% and increased in 2019 to 7%. Over the 10-year period, retail firms were able to utilise assets to generate earnings. ROE over the 10-year period is significantly higher than ROA. The ROE increased from 2010 at 11% to 2017 at 31%. In 2018, similarly to

ROA, the ROE decreased to 6% and increased to 13% in 2019. Overall, retail firms used their equity and used investments to generate growth. These trends are depicted in Figure 4.1.

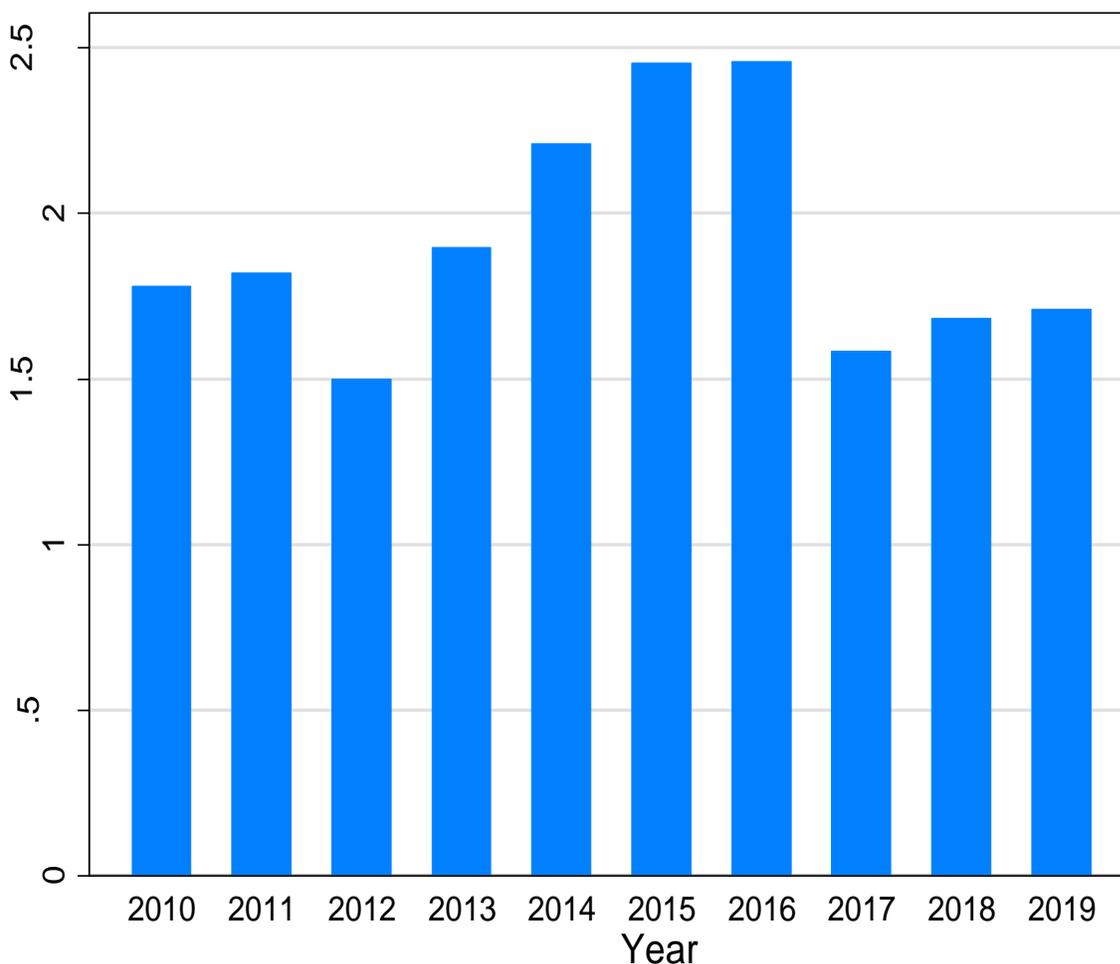


Figure 4.2: Trends in Debt-to-Equity Ratio

Source: Researcher's own compilation

The debt-to-equity ratio measures the degree in which a firm finances its operations through debt or wholly-owned funds and measures leverage. Figure 4.2 depicts the debt-to-equity ratio of retail firms over a 10-year period. In 2010 and 2011, the debt-to-equity ratio remained relatively the same at 1.7 and 1.8, respectively. In 2012, the debt-to-equity ratio was 1.5, and from 2014 to 2016, the debt-to-equity increased, measuring 2.2, 2.4, 2.4, respectively. From years 2017 to

2019, the debt-to-equity ratio decreased to 1.6. The higher debt-to-equity ratio from 2014 to 2016 can be explained by firms that may have been aggressive in financing its growth using more debt.

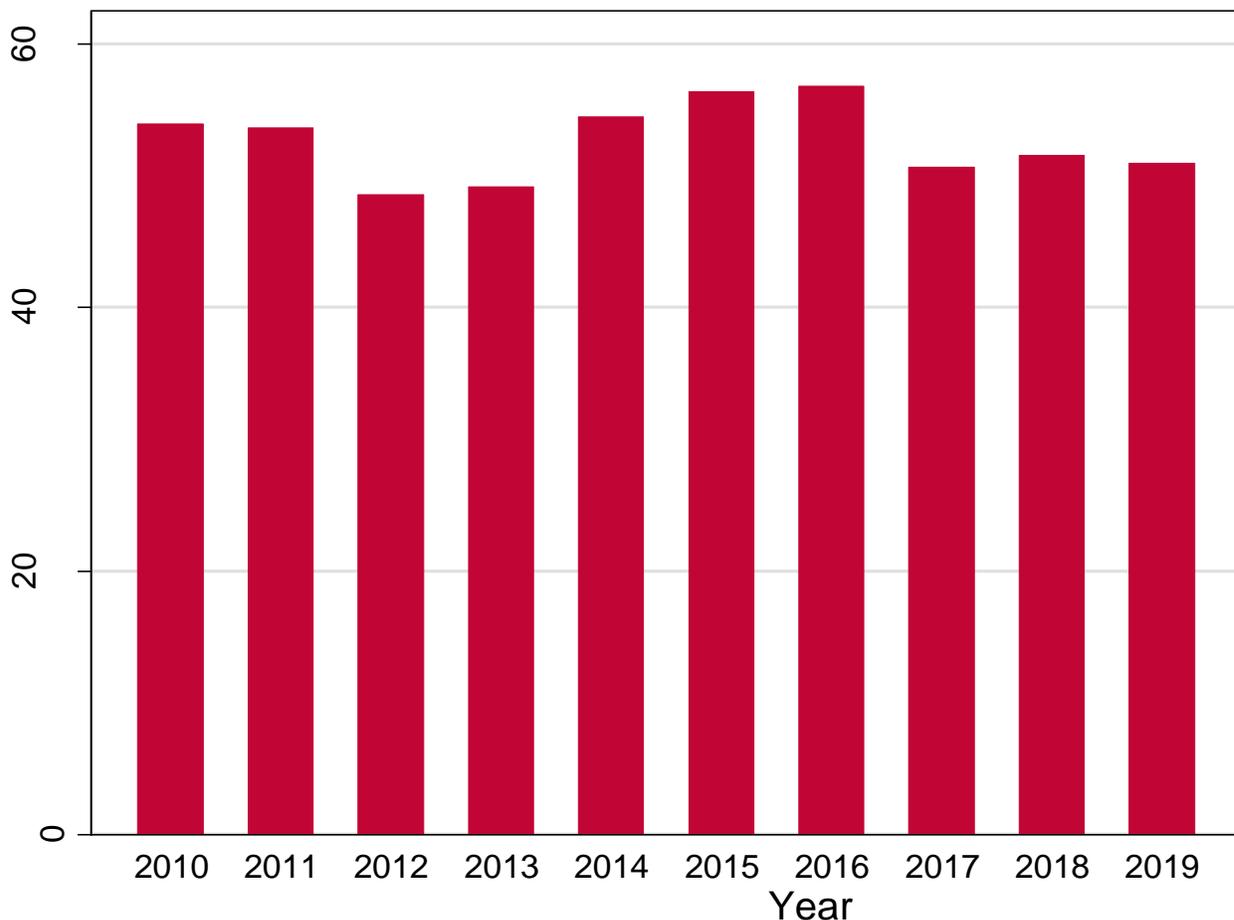


Figure 4.3: Trends in Debt-to-Capital Ratio

Source: Researcher's own compilation

The debt-to-capital ratio is a leverage ratio that measures the value of equity in a firm by analysing the debt levels. The higher the ratio, the riskier the firm. The debt-to-capital ratio from 2010 to 2019 is fairly similar and all lie around 50%. In 2010 the debt-to-capital was 54% and in 2019 the debt-to-capital was 50%. Thus, retail firms fund their projects through debt as the debt-to-capital ratio does not change significantly over the period of 10 years which confirms the trade-off theory. These trends are depicted in Figure 4.3.

Table 4.2: Correlation matrix for the main variables used in this study

	ROA	ROE	DOE	DDE	BSZ	BIN	institutional ownership	FSZ
ROA	1.0000							
ROE	0.8914***	1.0000						
DOE	-0.2186***	-0.0309	1.0000					
DDE	-0.3224***	-0.0562	0.7864***	1.0000				
BSZ	0.0027	0.0364	-0.1706**	-0.0552	1.0000			
BIN	0.1209	0.1017	0.0571	0.0244	-0.6363***	1.0000		
INSO	0.1072	0.2128***	-0.0679	0.0637	0.2797***	-0.0371***	1.0000	
FSZ	0.1975**	0.3586***	0.1474*	0.2104***	0.5286***	0.0634	0.4981***	1.0000

(*) / (**) and (***) indicates the (10%), (5%) and (1%) level of significance respectively

4.3. CORRELATIONAL ANALYSIS

After establishing the summary statistics and trends in the key variables, this section analyses the correlations amongst the key variables. A static model is specified to analyse the relationship between capital structure, corporate governance and financial performance. The main dependent variable used in this study ROA and ROE. The independent variables are debt-to-equity, debt-to-capital which are used for robustness; two proxies are employed to measure leverage. These are the debt-to-equity and debt-to-capital ratios. Other independent variables of the study are board size, board size, institutional ownership, and firm size, which measure corporate governance practices. Table 4.2 shows the bivariate values of correlations between the dependent and independent variables. The cases of multicollinearity were negligible. According to Wooldridge (2008: 96) multicollinearity is considered severe when correlations among particular independent variables are higher than 80%.

The correlation between the dependent and independent variables provide interesting findings. The debt variables are measured by the leverage ratios, debt-to-equity and debt-to-capital, which negatively impact the performance of retail firms because of the negative correlation of between ROA and debt-to-equity, (-0.2186), at the 1% level of significance. There is also a negative correlation of (-0.3224) between ROA and debt-to-capital ratio, at the 1% level of significance. There is also a negative correlation between ROE and the leverage variables. There is a negative correlation between ROE and debt-to-equity ratio with a value of (-0.0309). Additionally, there is a negative correlation between ROE and the debt-to-capital ratio with a value of (-0.0562). Both correlations are statistically significant. These negative correlation coefficients with profitability are similar to the study of Kasozi (2018: 176) and conflicts with the study by Abor (2005: 436). This suggests that are different implications for retail firms in South Africa. The excess levels of debt in the retail sector negatively impact the performance of firms. The negative correlation confirms the pecking order theory which states that there is a negative relationship between debt and profitability.

There are however, positive correlations between capital structure measures and ROA and ROE. The size of the firm (firm size) has the highest correlation to ROE of 0.3586 at the 1% significance level. Thus, the firm size positively affects the firm's performance. Studies by Mashayekhi and

Bazaz (2008: 167) and Abor (2005: 436) provide similar results where the size of the firm positively affects performance.

Institutional ownership (institutional ownership) is positively correlated to ROE with the correlation coefficient of (0.2128) at the 1% significance level. Thus, having institutional shareholder firms such as banks, credit unions, pension funds, insurance companies positively affect performance. Wu, Lin, Lin and Lai (2010: 13) found a positive and significant relationship between institutional ownership and financial performance. Conversely, Muazeib, Chairiri and Ghozali (2015: 29) found a negative relationship between institutional ownership and the debt-to-equity ratio: essentially a performance ratio.

There was a small positive correlation coefficient between board independence (BIN) and ROA, which is equal to 0.1209. Further, there is a small positive relationship between board independence (BIN) and ROE with the value of (0.1017). Both correlation coefficients are statistically significant. As a result, board independence only slightly affects financial performance. Empirical evidence on the correlation between board size and financial performance is mixed. On the one hand, Arora and Sharma (2016: 341) found there to be a negative relationship between board independence and financial performance. On the other hand, Wu, Lin, Lin and Lai (2010: 13) found a positive relationship.

Board size (BSZ) has little significance on ROE with a correlation coefficient of (0.0364) which is relatively small. The correlation coefficient of board size and ROA is relatively small, amounting to (0.0027), which is insignificant. Stewardship theory argues that stewards and executives share common goals to do what is best for the firm which in turn leads to higher performance (Abdullah & Valentine, 2009 :90). The study shows a positive correlation between financial performance and board size, but board size does not affect financial performance significantly. This is inconsistent with the findings of Wu, Lin, Lin and Lai (2010: 13) who found a negative relationship between board size and financial performance.

4.4 EMPIRICAL FINDINGS

This section presents the empirical findings of the study. Firstly, the diagnostic tests that were conducted before estimating the relationship between capital structure, corporate governance and financial performance are reported on. Diagnostic tests were conducted in order to estimate a robust model. Secondly, this section presents the panel regression of estimating the relationship between capital structure, corporate governance and financial performance of South African retail firms.

4.4.1 Diagnostic Tests

A number of tests were conducted on the pooled OLS, fixed effects and random effects models. These included the tests for joint validity of cross-sectional individual effects, Breusch Pagan (1980: 239) LM test for random effects and Hausman (1978: 1251) specification test for heteroscedasticity.

The first test was to test the joint validity of cross-sectional effects by performing the applied Chow test or F-test to test for poolability or individual effects and the validity of the cross-sectional effects. The second test applied was the Breusch Pagan (1980: 239) Lagrange Multiplier (LM) test which tested for homoscedasticity or serial correlation.

The third test that was applied was the Hausman (1978:1251) test, which was employed to determine whether to select the fixed effects model or random effects model. The null hypothesis of this test was that the preferred model is the random effects model and the alternative hypothesis was the fixed effects model is the preferred model. The fixed effects model with Driscoll and Kraay Standard Errors estimator was used as the solution to heteroscedasticity problems.

The diagnostic tests were performed on the different estimation models of the financial performance variables and capital structure variables. The first set of diagnostic tests were conducted on the estimation with ROA as the dependent variable and debt-to-equity as the independent variable. The second diagnostic test was ROA as the debt-to-capital as the independent variable. The third set of diagnostic tests used ROE as the dependent variable and debt-to-equity as the independent variable. Lastly, the diagnostic tests used ROE as the dependent variable and debt-to-capital as the independent variable.

Table 4.3: Diagnostic tests with ROA employed as the dependent variable and DOE as independent variable

Test	Test Statistic	Critical Value	Inference
Joint validity of cross-sectional individual effects $H_0: \alpha_1 = \alpha_2 = \dots \alpha_{N-1} = 0$ $H_A: \alpha_1 \neq \alpha_2 \neq \dots \alpha_{N-1} \neq 0$	F=2.86	p=0.0006	Cross-sectional individual effects are valid.
Breusch Pagan (1980) LM test for random effects $H_0: \delta_\mu^2 = 0$ $H_A: \delta_\mu^2 \neq 0$	LM = 4.91	p=0.0133	Random effects are present. Random effects model is preferred.
Hausman (1978) specification test $H_0: E(\mu_{it} X_{it}) = 0$ $H_A: E(\mu_{it} X_{it}) \neq 0$	m ₃ = 86.61	p=0.0000	Regressors not exogenous. Hence the Fixed effects specification is valid.
Heteroscedasticity $H_0: \delta_i^2 = \delta \text{ for all } i$ $H_0: \delta_i^2 \neq \delta \text{ for all } i$	LM =1200000	p=0.0000	The variance of the error term is not constant. Heteroscedasticity is present.

Table 4.4: Diagnostic tests with ROA employed as the dependent variable and DDE as independent variable

Test	Test Statistic	Critical Value	Inference
Joint validity of cross-sectional individual effects $H_0: \alpha_1 = \alpha_2 = \dots \alpha_{N-1} = 0$ $H_A: \alpha_1 \neq \alpha_2 \neq \dots \alpha_{N-1} \neq 0$	F=1.84	p=0.0345	Cross-sectional individual effects are valid.
Breusch Pagan (1980) LM test for random effects $H_0: \delta_{\mu}^2 = 0$ $H_A: \delta_{\mu}^2 \neq 0$	LM = 0.04	p=0.4246	Random effects are absent. Pooled OLS model is preferred.
Hausman (1978) specification test $H_0: E(\mu_{it} X_{it}) = 0$ $H_A: E(\mu_{it} X_{it}) \neq 0$	m ₃ = 10.56	p=0.0608	Regressors not exogenous. Hence the Fixed effects specification is valid.
Heteroscedasticity $H_0: \delta_i^2 = \delta \text{ for all } i$ $H_0: \delta_i^2 \neq \delta \text{ for all } i$	LM =2200000	p=0.0000	The variance of the error term is not constant. Heteroscedasticity is present.

4.4.1.1 Diagnostic tests with ROA employed as the dependent variable and DOE as independent variable

The results of these tests are reported in Table 4.3. The first test tested for the joint validity of cross-sectional individual effects. The test confirmed the significance of cross-sectional individual effects, as the F-statistic (2.86) is greater than the test statistic (0.0006). This test confirmed that firms are heterogeneous and that capital structure has an effect on financial performance. Therefore, in the presence of fixed effects the pooled OLS estimation method becomes inconsistent and inefficient.

The second test was the Breusch Pagan (1980: 239) LM test and confirmed the presence of random effects, and that the random effects model is preferred.

The third test was the Hausman (1978: 1251) specification test; the results of which favoured the use of the fixed effects specification as valid because regressors are not exogenous. The heteroscedasticity test confirmed that the variance of the error term is not constant and found that heteroscedasticity is present. Using the fixed effects with Driscoll and Kraay Standard Errors estimator was thus the solution to heteroscedasticity problems.

4.4.1.2 Diagnostic tests with ROA employed as the dependent variable and DDE as independent variable

The results of these tests are reported in Table 4.4. The first test tested for the joint validity of cross-sectional individual effects. The test confirmed the significance of cross-sectional individual effects, as the F-statistic (1.84) is greater than the test statistic (0.0345). This test confirmed that firms are heterogeneous and that capital structure has an effect on financial performance. Therefore, in the presence of fixed effects the pooled OLS estimation method becomes inconsistent and inefficient.

The second test was the Breusch Pagan (1980: 239) LM test and confirmed the presence of random effects, and that the random effects model is preferred.

The third test was the Hausman (1978: 1251) specification test and the result favoured the use of the fixed effects specification as valid because regressors are not exogenous. The heteroscedasticity test confirmed that the variance of the error term is not constant and found that heteroscedasticity is present. Using the fixed effects with Driscoll and Kraay Standard Errors estimator was the solution to heteroscedasticity problems.

Table 4.5: Diagnostic tests with ROE employed as the dependent variable and DDE as independent variable

Test	Test Statistic	Critical Value	Inference
Joint validity of cross-sectional individual effects $H_0: \alpha_1 = \alpha_2 = \dots \alpha_{N-1} = 0$ $H_A: \alpha_1 \neq \alpha_2 \neq \dots \alpha_{N-1} \neq 0$	F=3.26	p=0.0001	Cross-sectional individual effects are valid.
Breusch Pagan (1980) LM test for random effects $H_0: \delta_\mu^2 = 0$ $H_A: \delta_\mu^2 \neq 0$	LM = 1.88	p=0.0851	Random effects are present.
Hausman (1978) specification test $H_0: E(\mu_{it} X_{it}) = 0$ $H_A: E(\mu_{it} X_{it}) \neq 0$	m ₃ = 16.24	p=0.0062	Regressors not exogenous. Hence the Fixed effects specification is valid.
Heteroscedasticity $H_0: \delta_i^2 = \delta \text{ for all } i$ $H_A: \delta_i^2 \neq \delta \text{ for all } i$	LM = 89162.64	p=0.0000	The variance of the error term is not constant. Heteroscedasticity is present.

Table 4.6: Diagnostic tests with ROE employed as the dependent variable and DOE as independent variable

Test	Test Statistic	Critical Value	Inference
Joint validity of cross-sectional individual effects $H_0: \alpha_1 = \alpha_2 = \dots \alpha_{N-1} = 0$ $H_A: \alpha_1 \neq \alpha_2 \neq \dots \alpha_{N-1} \neq 0$	F=3.14	p=0.0002	Cross-sectional individual effects are valid.
Breusch Pagan (1980) LM test for random effects $H_0: \delta_\mu^2 = 0$ $H_A: \delta_\mu^2 \neq 0$	LM = 1.88	p=0.0851	Random effects are present. Random effects model is preferred.
Hausman (1978) specification test $H_0: E(\mu_{it} X_{it}) = 0$ $H_A: E(\mu_{it} X_{it}) \neq 0$	m ₃ = 13.90	p=0.0162	Regressors not exogenous. Hence the Fixed effects specification is valid.
Heteroscedasticity $H_0: \delta_i^2 = \delta \text{ for all } i$ $H_0: \delta_i^2 \neq \delta \text{ for all } i$	LM = 80766.08	p=0.0000	The variance of the error term is not constant. Heteroscedasticity is present.

4.4.1.3 Diagnostic tests with ROE employed as the dependent variable and DDE as independent variable

The results of these tests are reported in Table 4.5. The first test tested for the joint validity of cross-sectional individual effects. The test confirmed the significance of cross sectional individual effects as the F-statistic (3.26) is greater than the test statistic (0.0001). This test confirmed that firms are heterogeneous and that capital structure has an effect on financial performance. Therefore, in the presence of fixed effects the pooled OLS estimation method becomes inconsistent and inefficient.

The second test was the Breusch Pagan (1980: 239) LM test and confirmed the presence of random effects, and that the random effects model is preferred.

The third test applied was the Hausman (1978: 1251) specification test and the result favoured the use of the fixed effects specification as valid because regressors are not exogenous. The heteroscedasticity test confirmed that the variance of the error term is not constant and found that heteroscedasticity is present. Using the fixed effects with Driscoll and Kraay Standard Errors estimator was the solution to heteroscedasticity problems.

4.4.1.4 Diagnostic tests with ROE employed as the dependent variable and DOE as independent variable

The results of these tests are reported in Table 4.6. The first test tested for the joint validity of cross-sectional individual effects. The test confirmed the significance of cross sectional individual effects as the F-statistic (3.14) is greater than the test statistic (0.0002). This test confirmed that firms are heterogeneous and that capital structure has an effect on financial performance. Therefore, in the presence of fixed effects the pooled OLS estimation method becomes inconsistent and inefficient.

The second test was the Breusch Pagan (1980: 239) LM test and confirmed the presence of random effects and that the random effects model is preferred.

The third test was the Hausman (1978: 1251) specification test and the result favours the use of the fixed effects specification as valid because regressors are not exogenous. The heteroscedasticity test confirmed that the variance of the error term is not constant, and that heteroscedasticity is present. Using the fixed effects with Driscoll and Kraay Standard Errors estimator was the solution to heteroscedasticity problems

4.4.2 Panel Regression Results

This section presents the regression outputs and results. The first panel regression results use ROA as the dependent variable. Thereafter, the panel regression results with ROE as the dependent variable will be discussed. The pooled OLS and random effects (RE) estimation results are also displayed for comparison. It is worth noting that the estimated coefficients and signs of the RE and FE estimation outputs are comparable for most of the variables. However, this analysis is based on the fixed effects model (FE) with Driscoll and Kraay (1998: 549) estimation results for the reasons explained after running the diagnostic tests. The FE model is a good fit and is well specified.

Table 4.7: Panel regression results with ROA ratio as the dependent variable and DOE as independent variable

Dependent Variable	Pooled OLS ROA	Random Effects ROA	Fixed Effects Driscoll and Kraay (1981) standard errors ROA
DOE	-2.969*** (-3.14)	-3.433*** (-3.90)	-3.918*** (-3.21)
BSZ	-1.166* (-1.97)	-1.102 (-1.64)	-2.202** (-2.02)
BIN	-0.130 (-1.51)	-0.112 (-0.65)	0.624* (1.78)
INSO	-0.143 (-0.39)	-0.116 (-0.36)	-0.269 (-0.80)
FSZ	10.961*** (3.05)	10.054** (2.54)	8.930 (1.49)
constant	-27.863*** (-2.95)	-23.578 (-1.37)	-53.740*** (-3.34)
Number	160	160	160
Adjusted R²	0.1513	0.1473	0.3101
F-statistic			3.75***

(*) / (**) and (***) indicates the (10%), (5%) and (1%) level of significance respectively. The t-statistics for the pooled and fixed effects models as well as the z-statistics for the random effects models are reported in parentheses. Where, DOE is debt-to-equity ratio, BSZ is board size, BIN is board independence, INSO is institutional ownership and FSZ is firm size.

Table 4.8: Panel regression results with ROA ratio as the dependent variable and DDE as independent variable

	Pooled OLS	Random Effects	Fixed Effects Driscoll and Kraay (1981) standard errors
Dependent Variable	ROA	ROA	ROA
DDE	-0.3612*** (-5.80)	-0.368*** (-5.41)	-3.918*** (-3.21)
BSZ	-1.084** (-2.56)	-1.025** (-2.19)	-2.202** (-2.02)
BIN	-0.121 (-1.13)	-0.108 (-0.90)	0.624* (1.78)
INSO	-0.040 (-0.21)	-0.021 (-0.09)	-0.269 (-0.80)
FSZ	11.056*** (4.06)	10.500*** (3.56)	8.930 (1.49)
constant	-18.504 (-1.65)	-16.504 (-1.33)	-53.740*** (-3.34)
Number	160	160	160
Adjusted R²	0.1513	0.2231	0.3101
F-statistic			3.75***

(*) / (**) and (***) indicates the (10%), (5%) and (1%) level of significance respectively. The t-statistics for the pooled and fixed effects models as well as the z-statistics for the random effects models are reported in parentheses. Where, DDE is debt-to-capital ratio, BSZ is board size, BIN is board independence, INSO is institutional ownership and FSZ is firm size.

4.4.2.1 Panel Regression Results with ROA as Dependent Variable

The regression output presented in Table 4.7 uses debt-to-equity as the independent variable. The regression output in Table 4.8 uses debt-to-capital as the independent variable. Analyzing the FE model, the F-statistic value is (3.75) and is statistically significant at the 1% level of significance. The adjusted R-squared correlation is (0.3101) which is statistically significant for both regression outputs in Tables 4.7 and 4.8.

i) Testing the first objective:

The first objective was to determine the relationship between capital structure and financial performance of South African retail firms. The regression model used ROA as the performance indicator and debt-to-equity and debt-to-capital as capital structure (leverage) measures. All the three models predicted a negative relationship between ROA and debt-to-equity and debt-to-capital (refer to Table 4.7 and 4.8.)

The coefficient of debt-to-equity and debt-to-capital is (-3.918) and is negative and significant at a 1% level. This could indicate that the increase in debt is associated with a decrease in profit. The cost of debt impacts and reduces net profits because firms are obligated to the payment of interest. Additionally, highly profitable firms are presumed to generate more retained earnings in accordance with the pecking order theory. Thus, firms are more inclined to fund any project, firstly, through retained earnings. Therefore, pecking order theory predicts a negative relationship between debt and profitability. The estimation results confirm an inverse relationship between capital structure and profitability.

Other studies such as Kasozi (2018: 176) and Hove (2017: 60) also found a negative relationship between debt and financial performance. This observation conflicts with findings by Abor (2005: 441), but only when it considers short-term debt and not total debt as is the case in this study. Abor (2005: 441) found that short-term debt is less expensive and that increasing it leads to less interest payments, which in turn, boosts firm profits.

ii) Testing the second objective:

The second objective of the study was to determine whether corporate governance practices of South African retail firms have had an impact on their financial performance. The regression model uses ROA as the performance indicator and board size, board independence, institutional ownership, firm size as corporate governance measures. All the three models predict similar relationships between ROA and board size, board independence, institutional ownership, as well as firm size (refer to Table 4.7 and 4.8.)

Board size (BSZ):

The coefficient of board size is (-2.202) at a 5% level of significance. This indicated that there is a negative relationship between board size and financial performance. Conversely, Arora and Sharma (2016: 430) finds a positive relationship and have found that larger boards are associated with greater knowledge, which in turn, improves the decision-making process and this translates to higher profits. The study, however, contradicts the resource-dependency theory, in that more resources have a negative influence on financial performance.

Board independence (BIN):

The coefficient of board independence using the fixed effects model is (0.624) at a 10% level of significance. This indicates that there is positive relationship between board independence and financial performance. However, the other two models document a negative relationship, but report a statistically insignificant result. The FE estimator predicts that 1% increase in size will result in a 62.4% increase in financial performance.

Institutional ownership (INSO):

The coefficient of institutional ownership using the fixed effects model is (-0.269). The FE estimator predicts a negative relationship between the institutional ownership and the financial performance variable, though statistically insignificant. Similarly, the pooled OLS and RE estimators predict a negative though statistically insignificant association between institutional ownership and financial performance.

Firm size (FSZ):

The coefficient of firm size using the fixed effects model is (8.930). There is thus a positive relationship, though statistically insignificant. However, the pooled OLS and RE estimators also predict a positive relationship, which is statistically significant at the 1% level of significance.

4.4.2.2 Panel Regression Results with ROE as Dependent Variable

In these set of results, ROE was used as the financial performance indicator. The regression output presented in Table 4.9 uses debt-to-capital as the independent variable. The regression output in Table 4.10 uses debt-to-equity as the independent variable. Analysing the FE model, the F-statistic value is (4.68) and is statistically significant at the 1% level of significance. The adjusted R-squared correlation is (0.2825) which is statistically significant for both regression outputs in Tables 4.9 and 4.10.

Table 4.9: Panel regression results with ROE ratio as the dependent variable and DDE as independent variable

Dependent Variable	Pooled OLS	Random Effects	Fixed Effects Driscoll and Kraay (1981) standard errors
	ROE	ROE	ROE
DDE	-0.273*** (-2.86)	-0.304*** (-2.74)	- 0.417** (-2.12)
BSZ	-2.225*** (-3.43)	-1.922** (-2.48)	-1.225 (-0.96)
BIN	-0.342** (-2.07)	-0.274 (-1.38)	1.175** (2.21)
INSO	0.078 (0.26)	0.176 (0.47)	0.226 (0.39)
FSZ	22.552*** (5.40)	19.716*** (4.13)	7.192 (0.92)
constant	58.370*** (-3.39)	-48.608** (-2.37)	-81.719*** (-3.23)
Number	160	160	160
Adjusted R²	0.1892	0.2111	0.2825
F-statistic			4.68***

(*) / (**) and (***) indicates the (10%), (5%) and (1%) level of significance respectively. The t-statistics for the pooled and fixed effects models as well as the z-statistics for the random effects models are reported in parentheses. Where, DOE is debt-to-capital ratio, BSZ is board size, BIN is board independence, INSO is institutional ownership and FSZ is firm size.

Table 4.10: Panel regression results with ROE ratio as the dependent variable and DOE as independent variable

Dependent Variable	Pooled OLS ROE	Random Effects ROE	Fixed Effects Driscoll and Kraay (1981) standard errors ROE
DOE	-2.677** (-2.57)	-3.206*** (-2.66)	-0.417*** (-2.12)
BSZ	-2.412*** (-3.50)	-2.149** (-2.49)	-1.225 (-0.96)
BIN	-0.372** (-2.18)	-0.310 (-1.43)	1.175** (2.21)
INSO	-0.026 (-0.09)	0.058 (0.14)	0.226 (0.39)
FSZ	23.299*** (5.32)	20.566*** (3.90)	7.192 (0.92)
constant	-66.154*** (-3.82)	-56.501** (-2.58)	-81.719*** (-3.23)
Number	160	160	160
Adjusted R²	0.1812	0.2015	0.2825
F-statistic			4.68***

(*) / (**) and (***) indicates the (10%), (5%) and (1%) level of significance respectively. The t-statistics for the pooled and fixed effects models as well as the z-statistics for the random effects models are reported in parentheses. Where, DOE is debt-to-equity ratio, BSZ is board size, BIN is board independence, INSO is institutional ownership and FSZ is firm size.

i) Testing the first objective:

The first objective is to determine the relationship between capital structure and financial performance of South African retail firms. The regression model uses ROE as the performance indicator and debt-to-equity and debt-to-capital as capital structure (leverage) measures. All the three models predict a negative relationship between ROE and debt-to-equity and debt-to-capital (refer to Tables 4.9 and 4.10.)

The coefficient of debt-to-equity and debt-to-capital is (-0.417), is negative and significant at a 5% level in the regression model using debt-to-capital and 1% significance level in the debt-to-equity output. This gives an indication that debt has a very weak effect on ROE. Similarly, Hove (2017: 63) found an insignificant relationship between capital structure and ROE.

ii) Testing the second objective:

The second objective of the study is to determine whether corporate governance practices of South African retail firms have an impact on their financial performance. The regression model uses ROE as the performance indicator, and board size, board independence, institutional ownership, firm size as corporate governance measures. All the three models predict similar relationships between ROA and board size, board independence, institutional ownership, firm size (refer to Tables 4.9 and 4.10.)

Board size (BSZ):

The coefficient of board size is (-1.225) which indicates that there is a negative relationship between board size and financial performance, though statistically insignificant. However, the results from the pooled OLS regression has a coefficient of (-2.225) at the 1% level of significance. The RE estimator also shows a negative relationship and has a coefficient of (-1.922) at the 5% level of significance. This result contradicts the resource-dependency theory. This theory states that board members play an important role in a firm, as they provide essential resources. Arora and Sharma (2016: 431) found a positive relationship between board size and financial performance, meaning that board members provide resources that contribute to financial performance.

Board independence (BIN):

The coefficient of board independence using the fixed effects model is (1.175) at a 5% level of significance. This indicates that there is positive relationship between board independence and financial performance. However, the other two models show a negative relationship. The RE estimator has a coefficient of (-0.310) using debt-to-equity and (-0.274) using debt-to-capital, which shows a negative relationship, but statistically insignificant. The results using the pooled OLS also shows a negative relationship with a coefficient of (-0.372) using debt-to-equity and (-0.342) using debt-to-capital, statistically significant at the 5% level.

Institutional ownership (INSO):

The coefficient of institutional ownership using the fixed effects model is (0.226). The FE estimator predicts a positive relationship between the institutional ownership and the financial performance variable, though statistically insignificant. Similarly, the pooled OLS and RE estimator predicts a positive though statistically insignificant association between institutional ownership and financial performance when using debt-to-capital as the leverage variable. Using debt-to-equity, the results differ slightly where the FE model shows a positive relationship, and the pooled OLS shows a negative relationship, both of which are statistically insignificant.

Firm size (FSZ):

The coefficient of firm size using the fixed effects model is (7.192). There is thus a positive relationship, though statistically insignificant. Similarly, the pooled OLS and RE estimators also predict a positive relationship and are statistically significant at the 1% level of significance.

4.5 DISCUSSION OF FINDINGS

This section brought together the analysis of results for the whole sample with all the tested variables. The section interpreted and discussed the findings in light of the objectives as follows: The first objective was to determine the relationship between capital structure and financial performance of South African retail firms. The second objective of the study was to determine whether corporate governance practices of South African retail firms have an impact on their financial performance.

i) Objective 1: Determine the relationship between capital structure and financial performance of South African retail firms.

The results from all the regression outputs indicate that debt has a significant negative influence on the retail firm's ROA and ROE. However, ROA has a higher correlation which means that ROA is the better variable to consider as a performance variable. Debt-to-equity and debt-to-capital provide similar results so either variable can be used as a capital structure measure. Thus, there is a relationship between capital structure and financial performance. Studies by Abor (2005: 443) and Obim, Anake and Awara (2014: 74) had the same results and found that debt was negatively related to performance. However, Ebaid (2009: 478) found that the amount debt had weak or no impact on financial performance.

The use of debt results in declining profits in retail firms. These results can imply that debt costs take the tax benefits away. In accordance with the static trade-off theory, the negative effect could be explained by the tax shields on additional debt which is outweighed by the increase in financial distress costs.

Additionally, managers should be indifferent in their choices between debt and equity for financing options because it has a negative effect they have on profitability. These findings suggest that retail firms should consider internally generated funds or equity for as a source of financing as they are also regarded as the safest and cheapest. This furthermore, supports the pecking order theory.

Retail firms should build and financial reserve until they have sufficient internally generated funds to finance new projects. Firms can invest through retained earnings where they will benefit from non-debt tax shields such as depreciation which can substitute the tax shield benefits from debt. Therefore, it can be inferred that the profitability of retail firms in South Africa is not a function of how much debt firms accumulate. Furthermore, the current debt levels in this sector negatively influence the profitability of firms. This result is alignment with the pecking order theory of financing behavior as opposed to the trade-off theory of financing behaviour. Rouf (2015: 30), Kasozi (2018: 176) and Obim, Anake and Awara (2014: 70) also found a negative relationship between capital structure and financial performance. Myers (2001: 85), however, states that capital structure is not the only way to explain financial decisions. Ibrahim (2009) found contradictory results which can be explained through Myers theory. The theory states that internal financing is preferred then debt and equity as a last resort. The study conducted by Ebaid (2009: 478) focused on non-financial Egyptian firms and found a weak or no relationship between debt and financial performance, because these firms used more internal funding.

ii) Objective 2: Determine if corporate governance practices of South African retail firms has an impact on their financial performance

To determine the impact of corporate governance practices, the coefficients of the independent variables were analysed in order to identify the effect on financial performance. Corporate governance practices were measured through the following variables: board size, board independence, institutional ownership and firm size.

Overall, the results suggest that corporate governance variables do not have a significant impact on ROA, as some of the estimated coefficients are found to be statistically insignificant. The regression model was repeated with ROE as the dependent variable and the results also do not appear to be statistically significant, where three out of the four independent variables were found insignificant.

When comparing the study's outcomes to the relevant theories as represented in Table 4.11, both models ROE and ROA are not fully consistent with the theories mentioned in Table 4.11. Only one relationship between ROE and the explanatory variable, board size, is different from the mentioned theory, resource-dependency theory. The other three variables are insignificant. The

model using ROA has two differences in their results when compared to the mentioned theories. The variable board size resulted in a negative relationship which is contradictory to the resource-dependency theory. The institutional ownership variable resulted in a negative relationship which is inconsistent with the pecking-order or trade-off theory.

The model using ROA illustrates a better explanation of sample data as fewer explanatory variables are found to be insignificant. ROA provides better insight with regards to the impact of corporate governance on financial performance in retail firms in South Africa. ROE results might be closer to the theory but found insignificant in the regression outputs of the study.

Results of the study document that the relationship between corporate governance and performance is not very strong among retail firms in South Africa. This could be due to firms not following the guidelines and regulations very strictly in the sample period.

For a more in-depth analysis each corporate governance practice needs to be considered and evaluated. The next section discusses the findings and impact of the explanatory variables individually.

Board size (BSZ):

The study indicated that there is a negative relationship between board size and financial performance. Similarly, Rashid (2008: 113) and Wu, Lin, Lin and Lai (2010: 13) concurred that there is a negative relationship. Inversely, Arora and Sharma (2016 :430) and Merendino (2014: 194) found a positive relationship between board size and financial performance.

The findings are based on ROA as the dependent variable because the regression results using ROE is found to be statistically insignificant to the study.

The resource-dependency theory states that larger boards are associated with greater knowledge, which in turn, improves the decision-making process and thus, translates to better financial performance. Therefore a positive relationship between board size and financial performance can be found. This study, however, contradicts the resource-dependency theory, in that more resources have a negative influence on financial performance. Furthermore, this also indicates that a smaller board size can be associated with a higher financial performance—perhaps due to more closely monitored management.

Board independence (BIN):

The study found a positive relationship between ROA, ROE and board independence. The results are consistent with the Stewardship theory. The theory argued that executives share common goals and will have the best interests of the firm in mind; which in turn, leads to higher performance. Both regression models, using ROA and ROE, are statistically significant and show a positive relationship. Therefore, board independence impacts financial performance in retail firms. This can be attributed to boards making decisions that are best for the firm within the retail sector.

However, Arora and Sharma (2016: 430) found contradictory results. They found a negative relationship between board independence and financial performance. It can be explained by the fact that the concept of board independence is a new phenomenon in developing countries. It might take a few more years for the concept to have an impact on financial performance. Also, Arora and Sharma (2016: 430) observed that boards of many firms in developing countries have independent directors on the boards of many firms. There may be limited people suitable for the position.

It is worth noting that firms need to ensure that the independent directors are not hired for namesake but actually act independently. Therefore, there should be clear criteria when appointing directors. The retail sector in South Africa is well established, and even though South Africa is a developing country, the corporate governance regulations are upheld and the results of this study confirm this.

Institutional ownership (INSO):

The regression model using ROA showed a negative relationship between institutional ownership and ROA. The results using ROE showed a positive relationship, which is in line with the literature. However, both results were insignificant to the study and do not impact financial performance in this study.

Many researchers propose that institutional ownership has a positive effect on financial performance because large institutional investors have the opportunity, resources and ability to monitor, discipline, and influence managers (Mashayekhi & Bazaz, 2008: 167; Hartzell & Starks, 2003: 20).

Mashayekhi and Bazaz (2008: 167) found a positive relationship between institutional ownership and financial performance. Agyemang and Castelleni (2015: 77) focused on firms in Ghana and found a negative relationship between institutional ownership and financial performance. As it is a developing country much like South Africa, the literature should be evaluated. A negative relationship could be attributed to the possibility of some institutional investors being linked to government and acting in the best interest that will benefit other institutions. However, this study shows an insignificant relationship between institutional ownership and financial performance. On the contrary, South Africa has strict corporate governance polices and therefore follows the literature with a positive relationship between institutional ownership and financial performance.

Firm size (FSZ):

The study found a positive relationship between ROA, ROE and firm size. The results were consistent with the trade-off or pecking order theory. Both models found the results statistically insignificant to the study, which means that they do not have an impact on financial performance. The two variables are, however, correlated and are statistically significant at the 5% level in accordance with the correlation matrix.

Frank and Goyal (2003: 218) and Abor (2005: 441) also found a positive relationship between firm size and financial performance. The theory states that large firms should be highly leveraged compared to smaller firms and that larger firms are expected to have more assets. Therefore, a direct relationship between firm size and assets can be seen.

iii) Conclusion

A relationship between capital structure, corporate governance and financial performance can be found. From the regression results, capital structure had a bigger impact on financial performance than corporate governance practices. From the correlation matrix, most of the correlations were statistically insignificant and had very small correlation values. This confirms that capital structure had a more statistically significant relationship to financial performance.

Table 4.11: Summary of empirical results versus theory

Variable	Correlation Analysis	Empirical results of this study		Theory	
		ROA	ROE		
DOE	-	-	-	-	Pecking Order
DDE	-	-	-	-	Pecking Order
BSZ	+ (insignificant)	-	- (insignificant)	+	Resource-dependency
BIN	+ (insignificant)	+	+	+	Stewardship theory
INSO	+ (insignificant)	- (insignificant)	+ (insignificant)	+	n/a
FSZ	+	+ (insignificant)	+ (insignificant)	+	Trade-off or Pecking order theory

Source: Researcher's own compilation

4.5 CHAPTER SUMMARY

In this chapter, the descriptive statistics and empirical findings of the study were presented and discussed. The paper discussed the two objectives the study to found the relationship between capital structure, corporate governance and financial performance. The first objective was to determine the relationship between capital structure and financial performance of South African retail firms. The second objective of the study was to determine whether corporate governance practices of South African retail firms have an impact on their financial performance.

The study used ROA and ROE as the dependent variables to measure financial performance. debt-to-equity and debt-to-capital were the leverage ratios used to measure capital structure. Corporate governance was measured by board size, board independence, intuitional ownership and firm size.

The panel regressions were estimated using three models, namely; pooled OLS, random effects and fixed effects models. Thereafter, three diagnostic tests were done to choose the preferred model. The tests were joint validity of cross-sectional individual effects, Breusch Pagan (1980) LM test for random effects, and Hausman (1978) specification test for heteroscedasticity. Based on the outcomes of the diagnostic test, the analysis was based on the fixed effects model (FE). The FE model was a good fit and was well specified.

Thereafter, the regression outputs and results were discussed. The first panel regression results used ROA as the dependent variable. Thereafter, the panel regression results were done on ROE. The pooled OLS and random effects (RE) estimation results were also displayed for a comparison.

The first objective was to determine the relationship between capital structure and financial performance of South African retail firms. The results from all the regression outputs indicated that debt had a significant negative influence on the retail firm's ROA and ROE. The profitability of retail firms in South Africa is not a function of how much debt firms accumulate. Furthermore, the current debt levels in this sector negatively influenced the profitability of firms and this result corroborates with the pecking order theory.

The second objective was to determine whether corporate governance practices of South African retail firms have an impact on their financial performance. Overall, the results of the study documented that the relationship between corporate governance and financial performance is not very strong among retail firms in South Africa. The study found that there was a negative relationship between board size and financial performance which contradicts the resource-dependency theory. The study found a positive relationship between board independence and financial performance and the results were consistent with the Stewardship theory. There was a negative relationship between institutional ownership and financial performance using the ROA and positive relationship using ROE. However, both results were insignificant to the study and do not impact financial performance.

There was a positive relationship between firm size and financial performance and the results are consistent with the trade-off or pecking order theory. However, the results were statistically insignificant to the study, which means that they do not have an impact on financial performance.

The overall interpretation of the results indicated that there is, in fact, a relationship between capital structure, corporate governance and financial performance. Capital structure has a greater impact on financial performance than corporate governance in retail firms in South Africa. The next chapter concludes the study and highlights the focus of the study, and summarises the results and discusses the direction for future research.

CHAPTER 5

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

Capital structure has been a subject of debate for a number of decades, and extensive research explaining the importance of capital structure decisions to enhancing firm value is available. Corporate governance has also been a subject of research by academics, firms, policy makers and investors; and some have seen corporate governance as a solution to the successful management of a firm while others believe that there are inadequacies in the corporate governance practices. South Africa has a more competitive market when comparing their trade sector market shares and overall retail sales offering a compelling research context. The wholesale and retail sector accounts for 15% of South Africa's GDP (Statistics SA, 2018: 2), which signifies that the retail sector is worth exploring to obtain an overview of their capital structure, corporate governance and financial performance.

Empirical studies have been conducted to test these capital structure and corporate governance theories. However, few have focused exclusively on the retail sector in South Africa. Therefore, the study undertaken investigated the relationship between corporate governance, capital structure and financial performance of the 18 retail firms listed on the JSE over a ten-year period ranging from 2009 to 2019. The study was premised on testing two main objectives. The first research objective was to determine the relationship between capital structure and financial performance and the second research objective was to determine whether corporate governance practices of South African retail firms had an impact on their financial performance.

The results of this study were analysed to determine whether the theory matched up to the results of this study. The main theories that were used to explain the relationship between capital structure and financial performance were the: trade-off, pecking order, and agency cost theory. The main corporate governance theories used were: stewardship theory, resource-dependency theory, shareholder theory and stakeholder theory.

This chapter summarises the main findings of the study and highlights the contribution of the study to the existing body of knowledge regarding the relationship between corporate governance, capital structure and financial performance in the retail sector in South Africa.

The rest of the chapter is organised as follows: Section 5.2 discusses the theoretical and empirical findings on capital structure and corporate governance. Further, this section summarises the results of this study. Section 5.3 provides recommendations for future research and concludes the study.

5.2 SUMMARY OF FINDINGS

5.2.1 Theoretical findings on capital structure and corporate governance

The literature review of capital structure and corporate governance theories conducted in this study offered insights into how to interpret firm financing behaviour and its effect on financial performance. The MM theory of the irrelevance of capital structure was reviewed. The MM theory faces criticisms and does not account for the real-world markets such as taxes and transaction costs. Despite the criticisms, Modigliani and Miller (1958: 265) pioneered the study of capital structure and provided a benchmark for other theories on capital structure such as the trade-off theory, pecking order and agency cost theory.

The trade-off theory proposed by Kraus and Litzenberger (1973: 912) grouped tax shields with debt and financial distress into the aforementioned model. Further, Myers (1984: 577) refined the theory and hypothesised that a firm's optimal capital structure is at the point where there is a trade-off between debt financing and the costs of such as financial distress and bankruptcy costs. Therefore, firms set a target debt-to-value ratio and gradually move towards achieving this target. There is substantial empirical evidence in support of this theory.

The pecking order theory, advanced by Myers and Majluf (1984: 190), hypothesises that a firm that seeks to attain an optimal capital structure uses a preferred hierarchy to source finance. This theory utilises the two sources of funding—internal and external—in order to determine how investments should be funded. Internally generated funding (retained earnings and excess liquid assets) is first factored in; followed by external funding, wherein which debt is first

considered; followed by preference shares, and lastly, ordinary shares. There is significant empirical evidence that supports this theory.

Jensen and Meckling (1976: 308) advanced the principal agent theory which states that managers will not always act in the best interest of the shareholders, and may, in fact, pursue their own agendas, instead of maximising shareholder returns.

Good corporate governance is explained whereby a firm makes decisions in line with international and national best practices in order for the firm to be sustainable and profitable. The fundamental theories of corporate governance that were reviewed in this study include: stewardship theory, resource-dependency theory, shareholder theory and stakeholder theory. However, the agency cost theory can be applied to both capital structure as well as corporate governance.

Davis, Schoorman and Donaldson (1997: 611) proposed the stewardship theory and argued that stewards and executives share common goals to do what is best for the firm which in turn leads to higher performance. Stewardship theory is relevant to corporate governance as managers need to be given a clear and unambiguous role and empirical evidence supports this theory.

The resource-dependency theory advanced by Hillman, Canella and Paetzold (2000: 236) states that the boards of directors provide resources to the firm through their external relationships. Resources and power are directly linked; and firms who have more resources are more powerful when compared to competitors who do not have access to the resources. Empirical evidence thus confirms this theory.

The shareholder theory as advanced by Friedman (1970: 246) states that the fundamental role of a firm's manager is to maximise shareholder wealth. Subsequently, the stakeholder theory was advanced by Freeman (1984: 365) and focuses on groups outside of the firm. The assumption is that shareholders are not the only ones with a stake in the company and thus, firms must take into account the interests of all other stakeholders. This theory is widely recognised as it takes all parties in account and not only shareholders.

Corporate governance practices in South Africa were strengthened through the King reports

on Corporate Governance called King Codes, published in 1992. The application of corporate governance is identified through the characteristics as well as how the firm operates. The different measurements of corporate governance were identified as board size, followed by board independence, institutional ownership and firm size. The study used these as its independent variables.

When measuring the financial performance of a firm, profitability is the main tool used to determine whether a firm has the ability to maximise its profits. This study used return on assets and return on equity to proxy the financial performance of firms. Capital structure sets the foundation of the firm's ability to be profitable, since profitability is affected by the different financing decisions. The corporate governance of a firm can also impact its ability to maximise its profits. Bad corporate governance practices can lead to financial tragedies, such as a board of directors acting in the interest of themselves and not the company and ultimately lead to bankruptcy.

5.2.2 Empirical findings on capital structure, corporate governance and financial performance

A number of studies have been conducted to establish the relationship between capital structure and financial performance; and corporate governance and financial performance. However, the results remain inconclusive. Cook and Tang (2010: 86) have stated that the contradictory findings could be attributed to country specific, industry and firm specific factors. An empirical review on previous studies was conducted on the relationship between capital structure, corporate governance and financial performance.

Evidence from other countries shows no accurate answer regarding the relationship between capital structure and financial performance. Mayer (1988: 1172) and Corbett and Jenkinson (1996: 71) sought to determine the relationship between capital structure and performance on firms in developed countries. They concluded that retained earnings were used as the main source of funding. These findings support the pecking order theory which stated that a firm will first use internal generated funding (retained earnings) which bear no external costs.

Studies relating to capital structure such as Abor (2005: 436) conducted a study on listed firms in Ghana and concluded that short-term and total debt were positively related to the firm's ROE, and long-term debt was negatively related to firms. Zeitun and Tian (2007: 59) conducted

a study to determine the relationship between capital structure and financial performance in non-financial Jordan firms and the findings reflected that the debt level was negatively related to financial performance, with the indicators being ROA and ROE. Nassar (2016:1) sought to find the impact of capital structure on financial performance of firms listed on the Istanbul Stock Market. Nassar (2016:3) used the debt ratio to measure capital structure and ROA, ROE and EPS to measure firm profitability and found that there was a negative relationship between capital structure and financial performance.

Akbar *et al* (2016: 24) sought to determine the relationship between corporate governance and financial performance in the UK and found no significant relationship between the two variables. Sisoiu (2016: 9) conducted a study to determine whether corporate governance affects financial performance using board size, board independence and the percentage shares held by persons in management. A positive relationship was found between the variables and financial performance, thus indicating that corporate governance has an effect on financial performance. Coleman (2007: 19) analysed the relationship between corporate governance and financial performance in Africa and the study employed market-based and accounting-based performance measures, ROA and Tobin's Q's, and tested the relationship between performance and corporate governance variables and found a positive relationship between the two. Arora and Sharma's (2016: 431) study was based on Indian firms and the results of the study show that there is a relationship between corporate governance and performance, but not a very strong one.

This study examined the relationship between capital structure, corporate governance and financial performance in retail firms in South Africa. The econometric models of this study have been based on previous studies mentioned. Previous studies such as Kasozi and Ngwenya (2010: 632), Tsipa and Mokoteli (2015: 168), Nassar (2016: 4) and Arora and Sharma (2016: 434) provided a guideline on which variables to consider and which to exclude. Essentially, a panel data analysis was employed to analyse the financing behaviour of firms in the retail sector. This study used leverage as the determinant of capital structure; financial performance was measured through ROA and ROE ratios and corporate governance practices was measured by board size, board independence, institutional ownership and size.

The first objective was to determine the relationship between capital structure and financial performance of South African retail firms. The second objective was to determine whether corporate governance practices of South African retail firms have an impact on their financial performance. The sample comprised of all 18 retail firms listed on the Johannesburg Stock exchange. There were 160 observations for the retail sample and panel data econometric techniques were used to conduct the analysis.

5.2.2 Summary of Results

The main dependent variables used in this study were ROA and ROE. The independent variables were debt to equity ratio and debt to capital ratio used for robustness. Two proxies were employed to measure leverage. Other independent variables of the study were board size, board independence, institutional ownership, firm size which measured corporate governance practices.

- **Research Finding on Relationship Between Capital Structure and Financial Performance**

The first objective was to determine the relationship between capital structure and financial performance of South African retail firms. A negative relationship between the two was found. The regression results using ROA as the financial performance measurement documented a negative relationship, which confirmed the pecking order theory that predicted a negative relationship between debt and financial performance. The estimation results confirmed an inverse relationship between capital structure and financial performance. The regression results using ROE as the financial performance variable indicated that debt had a very weak effect on ROE.

Therefore, it can be inferred that the profitability of retail firms in South Africa is not a function of how much debt firms have accumulated. The current debt levels in this sector negatively influenced financial performance. This result was in alignment with the pecking order theory of financing behaviour as opposed to the trade-off theory of financing behaviour. Rouf (2015: 30), Kasozi (2018: 176) and Obim, Anake and Awara (2014: 70) also found a negative relationship between capital structure and financial performance.

Furthermore, the results of the correlation analysis provided interesting findings between the dependent and independent variables. The leverage variables of this study were the debt-to-

equity ratio and the debt-to-capital ratio. Both leverage variables negatively impacted the financial performance of retail firms because of the negative correlation of between them. These negative correlation coefficients with financial performance were similar to the study by Kasozi (2018: 176), but conflicted with the study by Abor (2005: 436). This suggests that there are different implications for retail firms in South Africa. The excess levels of debt in the retail sector negatively impacted the performance of firms. This negative correlation confirms the pecking order theory which states that there is a negative relationship between debt and profitability.

- **Research Finding on the Impact of Corporate Governance on Financial Performance**

The second objective of the study was to determine whether corporate governance practices of South African retail firms have an impact on their financial performance. The different explanatory variables rendered mixed results. The results of the corporate governance variables were as follows: a negative relationship was established between board size and financial performance and this is contrary to the resource-dependency theory. The theory states that board of directors provide greater resources and information that are beneficial to the firm (Yusoff & Alhaji, 2012: 57); whereas Rashid (2008: 113) and Wu, Lin, Lin and Lai (2010: 13) found similar results to this study and found that more resources have a negative influence on financial performance.

A positive relationship between board independence and financial performance was found. Arora and Sharma (2016: 430), however, found contradictory results and observed that boards of many firms in developing countries have independent directors on the boards, as there may be limited people suitable for the position within each firm. Further, the results of this study found a negative relationship between institutional ownership and the financial performance variable. Agyemang and Castellani (2015: 77) also found a negative relationship between institutional ownership and financial performance. The negative relationship could be attributed to the possibility of some institutional investors being linked to government and acting in the best interest that will benefit other institutions.

Lastly, a positive relationship was found between firm size and financial performance. The results are similar to Frank and Goyal (2003: 217) and Abor (2005: 365). Their study argued

that large firms should be highly leveraged compared to smaller firms and that larger firms are expected to have more assets. Therefore, there is a significant relationship between firm size and assets.

This study found positive correlations between corporate governance measures and ROA and ROE. Firm size had the highest correlation to ROE. Thus, the size of the firm positively affects financial performance. A positive correlation was found between ROE and institutional ownership. As a result, there is a positive relationship between institutional ownership and financial performance. Board independence had small positive correlation coefficients between variables ROA and ROE; therefore, board independence had a slight effect on financial performance. Board size had little significance on ROE and ROA, as the variables had a small positive correlation.

Furthermore, the results of this study documented that the relationship between corporate governance and financial performance was not very strong among retail firms in South Africa. This could be due to firms not following the guidelines and regulations very strictly during the sample period. Arora and Sharma (2016: 431) Mashayekhi and Bazaz (2008: 167) and Abor (2005: 365) also found a weak relationship between corporate governance and financial performance.

5.3 CONCLUSION

Overall, distinct relationships between capital structure, corporate governance and financial performance could be found. The study found a negative relationship between debt and financial performance. Additionally, the study found negative relationships between independent variables, board size and institutional ownership, and the dependent variable financial performance. Further, the study found positive relationships between independent variables, board independence and firm size, the dependent variable, financial performance. From the regression results, capital structure had a bigger impact on financial performance than corporate governance practices. ROA had a higher correlation which indicates that ROA is the better variable to consider as a performance variable. The debt to equity ratio and debt to capital ratio provided similar results so either variable could be used as the leverage variable to measure capital structure.

5.4 RECOMMENDATIONS FOR FUTURE RESEARCH

This study has opened areas for future research in a number of ways. Firstly, this study was limited to a sample of retail firms listed on the JSE. It excluded the other sectors such as the service sector, the financial sector and the industrial sector. Accordingly, the results cannot be generalised or applied to all South African firms. In future studies, it would be interesting to incorporate the other sectors which are also likely to rely on both debt and equity for their financing.

Secondly, this study was limited to 18 retail firms and covered a period of 10 years from 2010 to 2019. The analysis could be extended to consider a longer period and a larger sample size. Thirdly, future studies could also compare similar retail firms, and compare these firms to those of other countries. This could provide more information on how retail firms operate and which type of capital structures such firms use.

Fourthly, to have a deeper understanding of how firms use their debt, variables such as short-term debt and long-term debt can be included. The results of this study show a negative relationship between overall debt and financial performance, which is contrary to the predictions of the trade-off theory which stipulates that an increase in debt should increase profitability until the level where debt matches profit. Thus, further studies on this subject are required to resolve this conundrum. Such studies could include more detailed debt variables. Fifthly, further studies could include more corporate governance variables as this study only focused on four variables which may not provide the full effect of corporate governance on financial performance of firms.

Sixthly, future studies could employ other measurements of financial performance, such as; earnings per share and Tobin's Q which relate to the market value of firms. This study used ROA and ROE which did not take in account the market value of firms.

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APPNDICES

APPENDIX A: Turnitin Document



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APPENDIX B: Ethical Clearance Certificate



UNISA DEPARTMENT OF FINANCE, RISK MANAGEMENT AND BANKING ETHICS REVIEW COMMITTEE

Date: 30 JULY 2019

Dear Ms S Mukaddam

ERC Ref #2019/CEM5/FRMB/009
Name : Ms S Mukaddam
Student #: 58517332
Staff #:

Decision: Ethics Approval from 01 August 2019 to 31 July 2024

Researcher(s): Name Ms S Mukaddam

E-mail address 58517332@mylife.unisa.ac.za, telephone +971564466737

Supervisor (s): Name Dr AB Sibindi

E-mail address sbinab@unisa.ac.za, telephone 012 429 3757

Working title of research:

Capital structure, corporate governance and financial performance: An empirical study of the South African retail trade sector

Qualification: MCOM

Thank you for the application for research ethics clearance by the Unisa DFRB Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period 01 August 2019 to 31 July 2024

*The Negligible **risk application** was **reviewed** by the DFRB Ethics Review Committee on 30 July 2019 in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment*



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The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the DFRB Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.
5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data require additional ethics clearance.
7. No fieldwork activities may continue after the expiry date (2024). Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

The reference number 2019/CEMS/FRMB/009 should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.

Yours sincerely,


Signature

Chair of DFRB ERC : Prof K Tsaurai

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Executive Dean: Prof T Mogale

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URERC 25.04.17 - Decision template (V2) - Approve

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APPENDIX C: Language Certificate

CERTIFICATE

of Professional English Editing

This certifies that the dissertation entitled

"CAPITAL STRUCTURE, CORPORATE GOVERNANCE AND FINANCIAL PERFORMANCE:
AN EMPIRICAL STUDY OF THE SOUTH AFRICAN RETAIL TRADE SECTOR"

submitted by

Shaa'ista Mukaddam

in accordance with the requirements for the degree of

Master of Commerce

in the subject of Management Studies

at the University of South Africa

has been edited by a professional language editor:

The following issues were corrected: grammar; spelling; punctuation usage, and
language usage (sentence structure and phrasing).

May 4, 2020

Date issued

Edited and Certified by Sathya Bhat, founder of SBLE Services
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