THE RELATIONSHIP BETWEEN MANAGERIAL OVERCONFIDENCE AND FINANCIAL LEVERAGE AMONG STATE CORPORATIONS LISTED AT THE NAIROBI SECURITIES EXCHANGE, KENYA

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D61/38106/2020

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A RESEARCH PROJECT SUBMITTED TO THE FACULTY OF

BUSINESS & MANAGEMENT SCIENCES IN PARTIAL

FULFILLMENT OF THE REQUIREMENT FOR

THE AWARD OF A MASTER OF BUSINESS

ADMINISTRATION (FINANCE) OF

THE UNIVERSITY OF NAIROBI

NOVEMBER, 2022

DECLARATION

I hereby declare that this research project is my original work and has not been presented for award of a degree in this university or elsewhere.
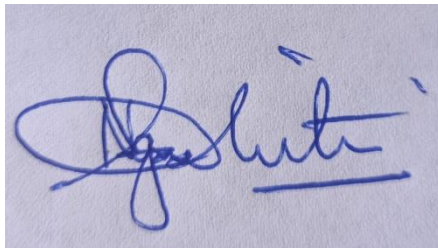
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DEDICATION

To my father Thomas, mother Agnes, my two brothers Junich and Maurice, spouse Dennis, and my daughter Marcia for their roles in the success of this study. May they be proud of and benefit from the results of this academic adventure.

ACKNOWLEDGEMENT

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ACRONYMS AND ABBREVIATIONS

CEO   -Chief Executive Officer

ROE – Return on Equity

SCs – State Corporations

NSE – Nairobi Securities Exchange

CMA – Capital Markets Authority

KQ – Kenya Airways

NPV -   Net Present Value

PV – Present Value

M&As – Mergers & Acquisitions

ABSTRACT

The nexus between managerial overconfidence and financial leverage among state corporations listed at the NSE, Kenya was explored in this inquiry. Descriptive survey and correlational design were adopted targeting seven listed State Corporations and census was adopted. Information was obtained from auxiliary sources of 5 years (2017-2021). SPSS tool was critical in processing the evidence supported by means and standard deviations, correlation and regression model. Tables were handy in presentation of results. It was noted that managerial overconfidence, asset tangibility, firm profitability and firm size all had p-values ($p<0.05$), implying that they were significant predictors of financial leverage. It was concluded that highly overconfident managers may not necessarily require debts in order to finance the risky investment projects they undertake. It was recommended that te investment and finance managers working in state corporations in Kenya need to undertake more risky projects that would generate more returns for the shareholders. The policy makers working among the listed state corporations in Kenya should formulate and implement relevant debt management policies.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

Financial leverage (FL) is the proportion of debts used to finance investments and it can have negative as well as positive outcome to the firm (Salehi, DashtBayaz, Hassanpour & Tarighi, 2020). FL facilitates the interest tax shield that in turn maximizes the wealth of the owners of the firm. FL stems from the use of debts in the capital structure (CS) of the entity (Seo & Amit, 2011). While debts can provide an interest tax shield that maximizes the wealth of the owners of the firm, too much of it can increase the risk of financial distress. It is believed over-confident managers will always have a high appetite of debts to finance investment projects and this may have an effect on financial soundness of the firm although there exists little empirical evidence to support this assertion (Hackbarth, 2004).

Building on the pecking order theory and the trade-off theory, this study sought to explore the nexus between managerial overconfidence and financial leverage. In the trade off theory, a firm is believed to have set in place a target debt to value ratio and that efforts are in place to gradually move towards the same (Kraus & Lintzenberg, 1973). The tradeoff between the advantages (interest tax shield) and the costs (repayment of interest and principal) inform this target debt ratio as established by the firm. Thus, the essence of the firm is to strike a balance between value of the interest tax shied and the bankruptcy costs or financial distress cost related with the use of debts (Myers, 1984). The pecking order theory (POT) leverages information asymmetry to argue that firm need first of all to issue safety security then followed hybrid securities (e.g. convertible bonds) and lastly equity as the last resort (Myers, 1984). The suggestion of this theory is that the concerns of information asymmetry art firm level provide

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guidelines for the firm to establish a given form of order in consideration of funding (Myers & Majluf, 1984).

The listed State Corporations in Kenya have consistently faced challenges as far as their financial leverage is concerned. A good example of these firms includes Kenya Airways and Mumias Sugar Company Ltd that are currently facing concerns as far as the degree of their financial leverage is concerned. Most of the listed state corporations in Kenya have been relying on debts besides government financing to fund investment projects. Most of these firms have a high proportion of debts in their capital structures

1.1.1 Managerial Overconfidence

Managerial overconfidence (MO) is the over estimation of the ability and outcome of someone in relation to a given situation at a personal level. Managerial overconfidence arises from the behavioral school of finance (Barbosa, 2019). Managers with a high level and degree of confidence will always undertake investments that are of high risks which in turn require huge investments that cannot be sustained by retained earnings and other internal sources of funds. There is high level of uncertainty when it comes towards quantification of the degree and level of managerial overconfidence. This is because there exists no clear measure of managerial overconfidence in literature as the measures are mixed and inconsistent (Pham & Nguyen, 2019). Managerial overconfidence stems from the fact that managers tend to be optimistic when faced with high degree of uncertainty (Margolin, 2012). From the behavioral point of view, managerial overconfidence relate to the fact that managers have under estimated the variance or risk related with the events in future (Fairchild, 2009). Overconfident managers over estimate

their abilities and they have strong believe that they have more knowledge than they actually do and they suffer from a control illusion.

As observed by Goel and Thakor (2008), shareholders have strong preference of overconfident chief executives because a firm incurs less cost to motivate managers in undertaking projects that are of lesser risk. On the contrary, CEOs who are overconfident always seek to overestimate their abilities and thus will underinvest in production of information. Malmendier and Tate (2008) noted that managerial overconfidence can best be measured by how media perceive CEOs with those CEOs who are overconfident being viewed as high risk takers besides being non conservative. A CEO who is over confident will always tend to overestimate their forecasts. Literature also provides involvement of CEOs in mergers and acquisition as a proxy for measuring the overconfident CEOs. A manager who is overconfident will always undertake more M&As. Silveira (2008) proposed the varied proxies for MO mostly based on the status of the manager as an entrepreneur or a non-entrepreneur. The most widely embraced measure of managerial overconfidence is the use of the dummy variable where managers who are also entrepreneurs will always display biasness of overconfidence more frequently as opposed to those other managers. The dummy variable where the firms used are not state corporations can take the range of 1 where the manager is classified as entrepreneur or the CEO/chairman in a given year holds above 50% of the common shares and 0 if the manager is regarded as non-entrepreneur and thus less overconfidence.

Capital expenditure can also be used to measure managerial overconfidence (Dashtbayaz & Mohammadi, 2016) and this takes a dummy variable of 1 if the total capital expenditure divided by assets of the firm of the previous year exceed the median industry in the period of

consideration and the value 0 when otherwise (Duellman et al., 2015). This is borrowed from Lichtenstein and Fischoff (1977) and Arwa (2018) and Shah et al., (2018) who proposed two widely documented measures of managerial overinvestment and capital expenditure. Overinvestment is a situation where the investment expenditure of the firm is above the available finances and capacity. In this study, volatility of earnings forecast (Std. deviation of the differences between actual and forecasted earnings by management) was used to measure managerial overconfidence as successfully used by Lee, Hwang and Chen (2017).

1.1.2 Financial Leverage

FL arises from the use of debts in the CS of the firm. Levered firms have some proportion of debts besides equities in their capital structures (Park & Kim, 2009). Firms which are highly levered have high vulnerability to downturns their cycles of business operation as compared to the less levered or the unlevered counterparts. This stems from their lengthy binding payments. Debt is the total amount of funds that one party has borrowed from a lender. High level of debts in the capital structure is equivalent to increased leverage which may lower or increase the return earned by shared on their capital (ROE). Thus, the use of debts is likely to bring about an enhancement in ROE of the firm.

There are several measures of FL including total debts of the firm against the tangible net worth of the firm and debts against the sum of debts and equities among others. Hashemi (2013) shared that debt equity ratio determined as total debts against total equity are a widely adopted measure of financial leverage of the firm. When the debt/equity ratio is high, the implication drawn is that the firm has high aggressiveness in its investment and growth potentials using debts

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as opposed to equities and retained earnings. In the present study, financial leverage was measured using the book values of total debts against total equity of the firm.

1.1.3 Managerial Overconfidence and Financial Leverage

From the theoretical point of view, the POT implicitly discourages the use of debts as opposed to retained earnings in financing investments of the firm. Given the fact that debts are external sources of funds, they are prone to information asymmetry and thus would be utilized to finance investments of the firm before retained earnings which are regarded as internal sources of funds (Myers & Majluf, 1984). On the other hand, the tradeoff theory highly encourages the use of debts since it allows the firm to enjoying the interest tax shield that enhances the value of the shareholders (Kraus & Lintzenberg, 1973).

Empirically, Azhari, Hasnan and Sanusi (2020) observed that the duality role of the CEO as an aspect of managerial overconfidence is significantly connected with occurrence of misstatements in financial reports and accounts of the firm. Ahmed and Jarboui (2022) shared that the level of overconfidence of the CEO is negatively linked with forecast accuracy of the firm. Park and Kim (2009) noted that overconfident managers have strong tendency of issuing more debts which is consistent with Oliver (2009). Nyakundi, Njuguna and Omboi (2017) observed that managerial overconfidence significantly predicts the financing decisions made by managers of the firm. Seo and Amit (2011) noted that overconfident managers over estimate their capital structure decisions in their firms. Barbosa (2019) observed that managerial overconfidence is negatively linked with financial leverage determined through debt levels.

1.1.4 Listed State Corporations Listed in Kenya

State Corporations (SCs) are institutions that are formed by a specific Act of Parliament and they are charged with a specific role and responsibility. These institutions are agents of the government and some of them engage in commercial activities aimed at generation of surplus that is directly reknitted to the National Exchequer. Among other things, these institutions are bailed out by the government through the taxpayers' revenue when they are facing financial hurdles. The government control and manages the operation of these State Corporations.

In Kenya, there are 7 SCs that are listed at the NSE (appendix II). Financial leverage as determined through the high debt level has remained a challenge among these SCs. For instance, Kenya Airways has consistently reported negative equity position where the liabilities including debt level were above the assets to a tune of Kshs. 5.9 billion and Kshs. 35.7 billion in 2015 and 2016 respectively (KQ, 2017).

1.2 Research Problem

Financial leverage is the proportion of debts against equities that used to finance investments in the firm. Overconfident managers will always undertake very risky investments that require huge capital outlays which cannot be fully generated from internal and retained earnings and thus motivated to borrow (Kloosterman, 2019). Theoretical, mixed results positive and negative nexus between managerial overconfidence and financial leverage is predicted (Myers, 1984, Kraus & Lintzenberg, 1973). This is also consistent with empirical evidence that predict inconsistent and mixed results on managerial overconfidence and financial leverage of the firm.

Listed SCs are institutions formed under a specific Act of Parliament with responsibility of attaining a given goal. The government expects these SCs to generate surplus that is used to finance budget deficit. However, this not been achieved because of the huge burden of debts in the capital structures of these firms like for the case of Kenya Airways and Mumia Sugar Company Ltd. The increase level of financial leverage in these SCs has led to some of them positing negative noteworthy positions like for the case of KQ.

The available studies include Azhari, Hasnan and Sanusi (2020) who did an appraisal of managerial overconfidence, the audit committee, duality role of CE and misstatement of financial reports. It emerged that occurrence of accounts misstatement is linked with financial distress and the duality role of the CEO. Ahmed and Jarboui (2022) did an analysis of overconfidence on the side of the CEO and the nexus with attributes that are accounting based where among listed firms in Europe and established an inverse nexus.

Locally in Kenya, Nyakundi, Njuguna and Omboi (2017) did a study whose focus was on managerial overconfidence and the ability to rank investment decisions where a significant nexus was reported. Diba (2012) did an appraisal of managerial overconfidence and the nexus with capital structure of the listed entities in Kenya. The study observed existence of a significant nexus between managerial overconfidence and CS which was consistent with the pecking order theory.

However, much of the existing studies on managerial overconfidence financial leverage nexus focus in different contexts like Turkey (Tomak, 2013) and Vietnam (Pham & Nguyen, 2019) that are contextually different from Kenya. Against this background, the present study sought for

answers to: what is the relationship between managerial overconfidence on financial leverage among state corporations listed at the NSE, Kenya?

1.3 Research Objective

To determine the relationship between managerial overconfidence and financial leverage among state corporations listed at the Nairobi Securities Exchange, Kenya

1.4 Value of the Study

The study would contribute towards an understanding of the nexus between managerial overconfidence and financial leverage. This is important as it would allow managers of the listed state corporations in Kenya to improve on their financial leverage position. These managers would get to understand how the degree of their overconfidence leads to financial leverage of their firms.

The policy makers working among the listed state corporations would develop relevant policies in regard to financial leverage. The policy makers at the NSE would be in position to come up with adequate policies as far as managerial overconfidence and financial leverage are concerned. The policy makers at the CMA would be in position to develop relevant policies to guide participation of state corporations in trading activities.

The study would contribute to the available literature and studies with respect to managerial overconfidence. The study would advance, agree or disagree with the available theories with respect to managerial overconfidence and financial leverage. Scholars conducting related inquiries would analyze evidence from this inquiry.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The chapter is designed to review literature in respect to managerial overconfidence and financial leverage. The review of literature begins with the theories and the determinants of financial leverage of the firm.

2.2 Theoretical Review

2.2.1 Pecking Order Theory

Myers (1984) developed it and it shares that in the event that the firm requires external funds, safest securities should be issues first then accompanied by debts that are convertible and lastly equity as the last resort. Pandey (2005) agrees with this order auguring internal capital should be utilized first and once it has been exhausted, the firm can progress to external funds. The main reason for this is that as compared to internal sources of funds, the external ones are highly affected with information asymmetry.

Myers (1984) asserted that in order to fund the investments, firms have a high preference of internal as opposed to external funds. This is brought about by the differences in profitability at firm level. The key assumptions of this theory include existence of asymmetrical information between the investors and those in management of the firm in respect to the net present value (NPV) on an investment opportunity. Myers and Majluf (1984) observed that equity is the least preferred means of financing investments since the same will have a signaling effect on the investor and ultimately affecting the market value of the share prices. Thus, in light of this theory, highly profitable firms will be associated with less debts as compared to the less

profitable ones (Myers, 2001). The theory shares that a firm cannot have an optimal CS but instead, it depends on an array of factors including profitability and asset tangibility.

2.2.2 Trade-off Theory

Kraus and Lintzenberg (1973) developed this theory and it is used to relate the advantages as well as the disadvantages that are connected with use of debts so as to establish a perfect blend between use of debts and equities to finance investments. Myers (2001) shared that this theory is about the need to balance the costs of financial distress and bankruptcy and the tax benefits that are linked with the use of debts. The theory points out existence of a capital structure that is regarded as optimal. Myers (1984) argued that managers have a strong incentive to set debt to equity ratio and their financial decisions and undertakings are informed by the notion that they need to need to move in a direction which contributes towards maximization of the wealth.

The theory is premised on the fact that the tradeoff faced by the firm stems from the marginal PV of tax shield and the costs associated with financial distress. The key concern and criticism remains that it fails to consider the adjustment costs. It also operates on the assumption that there is a lot of efficiencies in the capital markets besides availability of systematical information (Baker & Wurgler, 2002). These premised cannot hold under normal circumstance.

2.3 Determinants of Financial Leverage of the Listed State Corporations

The subsequent sections review literature on the determinants of financial leverage of the listed state corporations.

2.3.1 Firm Size

Firm size has uncertain effect on financial leverage (Zingales & Rajan, 1995; Goyal & Frank, 2003). Rajan and Zingales (1995) while considering the POT argue that size and financial leverage are negatively linked with each other. This is because in larger firms, there will be reduction in information asymmetry between the insiders and the investors and such firms will have strong preference for issuance of equities compared to the smaller firms. On the contrary, with consideration of the tradeoff theory, size and leverage can be positively linked with each other on account those large diversified firms have low probability of running into bankruptcy and that their going concern assumption is always evident (Goyal & Frank, 2003). Titman and Wessels (1988) obtained evidence that confirmed existence of the positive nexus between AN entity's size and being levered. Relatively well established entities are in position to finance their investments with debts at a cost that is relatively low due to the low probability of accruing bankruptcy costs.

2.3.2 Assets Tangibility

Goyal & Frank (2009) argue that in reference to POT, there exists an inverse nexus between asset tangibility and financial leverage. This arises from the low information asymmetry faced with firms having more tangible assets. This provides them with an opportunity where they can face a cheap cost during issuance of equities and this would in turn lower the leverage ratios. Rajan and Zingales (1995), Harris and Raviv (1991) and Titman and Wessels (1988) provide the description of the positive nexus between asset tangibility and leverage with consideration of the tradeoff theoretical views. Rajan and Zingales (1995) observed that when there are a

considerable proportion of tangible assets in the financial statements, they may be placed as collaterals for accessing funds.

2.3.3 Firm Profitability

De-Angelo and Masuli (1980) and Fama and French (2002) shared that firms which are less profitable have low financial leverage. This high interest tax shield would provide an incentive where the firms would borrow more thus an increase in financial leverage. Jensen (1986) also asserts that there exists a positive nexus between profitability and leverage especially when there is high level of effectiveness in markets of the firms. The tradeoff theory also predicts that profitability and financial leverage are positively connected with each other.

2.4 Empirical Review

Azhari, Hasnan and Sanusi (2020) did a study to appraise the nexus between managerial overconfidence and misstatement of accounting information. The study was conducted among 237 firms listed in Malaysia. Information was obtained from the company published results. It was noted that financial distress is significantly connected with misstatement of financial records. Ahmed and Jarboui (2022) did an assessment of CEO overconfidence and the link with forecast accuracy. Information for this inquiry was sought from 347 listed firms in Europe covering the horizon from 2005-2018. The study pointed out existence of an inverse nexus between CEO overconfidence and forecast accuracy at firm level. Park and Kim (2009) did a study in Korea among the listed entities whose focus was on managerial overconfidence and leverage. The horizon covered by the inquiry was 1985 to 2007. To measure managerial overconfidence, the average of the past 12 months Business Survey Index from Korea Bank was

used. It emerged from the analysis that managers have strong tendency of issuing more debts when they have high level of overconfidence.

Nyakundi, Njuguna and Omboi (2017) conducted an assessment of managerial overconfidence and the need to rank decisions on investment among NSE listed entities. Positivist philosophy and descriptive correlational design were adopted in this study. At firm level, census was utilized for sampling and purposive sampling at financial manager point of view. Information was gathered through questionnaire where it emerged that overconfidence on the side the managers enhances the need to rank financing decisions by those in management of the firm. Diba (2012) did an appraisal of MO and the nexus with CS of the listed entities in Kenya. The horizon covered by the study was 2000-2011. To measure managerial overconfidence, the response of the managers to factual questions while highlighting the level of their confidence was utilized. In total, 48 managers of 24 listed entities were covered in the study. The study observed existence of a significant nexus between managerial overconfidence and capital structure which was consistent with the pecking order theory.

Mashayekh and Morshedi (2020) did an appraisal of managerial overconfidence and investment. The study utilized a sample of firms from Tunisia and panel data methodology was adopted. It emerged from the analysis that managerial overconfidence has a positive nexus with the level of debts in the capital structure. Pham and Nguyen (2019) did an assessment of managerial overconfidence and the link with capital structure using evidence from Vietnam. Covering the period of 2010-2016, a total 329 non-financial firms were targeted. It emerged that managerial overconfidence and capital structure of the firm have a link with each other. Kunjal, Nyasha, Ghisyan, Govender, Murugasen, Naidoo and Muzindutsi (2021) did an appraisal of managerial

overconfidence and the value of the firm using evidence from listed entities in South Africa. The
study noted existence of an insignificant effect of managerial overconfidence on firm value.

2.5 Summary of Literature and Gaps

Table 2.1: Summary of Literature and Gaps

Author	Study	Key finding	Knowledge gap	Focus of the present study
Ahmed and Jarboui (2022)	an assessment of CEO overconfidence and the link with forecast accuracy	pointed out existence of an inverse nexus between CEO overconfidence and forecast accuracy at firm level	forecast accuracy was the dependent variable	Financial leverage was the dependent variable
Azhari, Hasnan and Sanusi (2020)	to appraise the nexus between managerial overconfidence and misstatement of accounting information	Financial distress is significantly connected with misstatement of financial records.	The study done in Malaysia	The study was done among listed SCs in Kenya
Nyakundi, Njuguna and Omboi (2017)	an assessment of managerial overconfidence and the need to rank decisions on investment among NSE listed entities	overconfidence on the side the managers enhances the need to rank financing decisions by those in management of the firm	Information was gathered through questionnaire	Information was gathered from secondary sources through data collection sheet

2.6 Conceptual Framework

INDEPENDENT VARIABLE	DEPENDENT VARIABLE

Managerial Overconfidence

- Volatility of earnings forecast (Std. deviation of the differences between actual and forecasted earnings by management)

Financial leverage

Total debts/ Total equity

CONTROL VARABLES
- **Asset Tangibility** -Measured as follows: Non- current assets / Total assets
- **Firm profitability** – Measured as follows: Net Income / Equity

Figure 2.1: Conceptual Framework

Operationalization of the above variables is discussed in table 3.1.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter is set out to document the methodologies that will be used. It revolves around the design, target population, gathering and analysis of data for result generation. .

3.2 Research Design

The study adopted two types of research designs, descriptive survey and correlational design as elaborated in data analysis 3.6 below. Descriptive design is largely concerned with determination and description of phenomena. Correlational design supported the use of more robust inferential statistic like correlation to establish the cause effect nexus between managerial overconfidence and financial leverage.

3.3 Target Population

The study targeted seven State Corporations that are listed at the NSE (appendix II). Since these firms have a limited geographic scope, census data was used. Thus, the analysis took into account all seven of the listed State Corporations in Kenya.

3.4 Data Collection

Information was obtained from auxiliary sources for a five years period (2017-2021). The sources of the information included the publications by NSE (annual reports) and annual audited financial statements of the respective firms as indicated on the data collection sheet (Appendix 1).The information will specifically be obtained from forecasted earnings, actual earnings, non-current assets, total assets, net income, equity and total debts.

3.5 Operationalization of Variables

Table 3.1: Operationalization of Variables

Variable	Indicator	Scale
Managerial overconfidence	Volatility of earnings forecasts (Std. deviation of the differences between actual and forecasted earnings by management)	Continuous
Asset tangibility	Noncurrent assets/total assets	Ratio
Firm profitability	Net income/total equity	Ratio
Financial leverage	Total debts/total equity	Ratio

3.6 Data Analysis

The statistical software used was SPSS version 24, based on the following analytical tools; mean, standard deviation, regression and correlation. The reason for selecting upon means and standard deviation was because they helped in providing a summary and description of the study variables. Correlation helped to establish the nexus between managerial overconfidence and financial leverage while regression analysis generated p-values that were interpreted to draw relevant inferences.

3.6.1 Model Specification

The following model was adopted during the analysis of the results:

$$\textbf{FL}_{it} = \beta_0 + \beta_1 MO_{it} + \beta_2 FS_{it} + \beta_3 AT_{it} + \beta_4 FP_{it} + \varepsilon_{it}$$

Where;

FL_{it} refers to financial leverage of firm i at time t

MO_{it} is the managerial overconfidence of firm i at time t

FS_{it} is the firm size of firm i at time t

AT_{it} is asset tangibility of firm i at time t

FP_{it} is firm profitability of firm i at time t

ε_{it} is the error term

β_0 is the regression beta coefficient

3.6.2 Diagnostic Tests

The study tested for normality, autocorrelation and multicolinearity and the resultant values were interpreted appropriately. These were aimed at validating the assumptions of regression analysis.

CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION

4.1 Introduction

The processing of the gathered information is conducted in this chapter. This covers the presentation of evidence descriptively and inferentially and the discussion of the same.

4.2 Descriptive Statistics

Consider Table 4.1.

Table 4.1: Descriptive Statistics

	n	Min	Max	Mean	Std. Dev
Managerial overconfidence	35	-3.67	.12	-1.48	1.000
Asset tangibility	35	.03	.84	.406	.261
Firm profitability	35	.0003	.09	.037	.019
Financial leverage	35	.18	9.11	1.72	2.133
Firm size	35	3.05	3.90	3.59	.2330

Table 4.1 shows that on average, managerial overconfidence was -1.48. This implies that there existed fluctuation between actual and future earnings forecasts in the studied firms. Asset tangibility was represented by an average of 0.406; this implies that on overall, non-current assets among listed SCs in Kenya account for 40.6% of the total assets. Firm profitability proxied by ROE registered a mean of 0.037. This means that on average, the listed SCs in Kenya generated 3.7% of their net incomes by leveraging shareholders' equities. Financial leverage indicated the mean value of 1.72; this means that the listed SCs in Kenya are highly indebted.

Firm size registered an average of 3.59, implying that the corporations studied had accumulated their asset bases.

4.3 Diagnostic Tests

The study tested for normality, autocorrelation and multicolinearity and the resultant values were interpreted appropriately. These were aimed at validating the assumptions of regression analysis.

4.3.1 Normality Test

This was aimed at determining whether the data had a normal distribution, Skewness & Kurtosis values and presented as summarized below;

Table 4.2: Skewness and Kurtosis

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Managerial overconfidence	35	-.171	.398	-.679	.778
Asset tangibility	35	.108	.398	-1.382	.778
Firm profitability	35	.495	.398	.172	.778
Firm size	35	-1.157	.398	.661	.778
Financial leverage	35	2.056	.398	1.366	.778
Average	35	0.266	0.398	0.0276	0.778

As summarized in Table 4.2, the mean values of Skewness and Kurtosis are 0.266 and 0.0276 respectively. This is in line with Kothari (2004) who shared that such values within a range of + or -3 show evidence of presence of the normality assumption.

4.3.2 Autocorrelation Test

Table 4.3 is a breakdown of results.

Table 4.3: Autocorrelation Test

Model	Durbin-Watson
1	2.089

Shown in Table 4.3 is that Durbin Watson Statistic value was 2.089. This finding agree with Gujarati and Porter (2013) who shared that such values closer or equal to 2 provide strong indication of absence of serial correlation in a sample data.

4.3.3 Multicolinearity Test

Table 4.4 is an overview of findings.

Table 4.4: Multicolinearity Test

	Collinearity Statistics	
	Tolerance	VIF
Managerial overconfidence	.812	1.232
Asset tangibility	.823	1.216
Firm profitability	.982	1.018
Firm size	.337	2.964
Mean	0.739	1.608

Table 4.4 indicates the mean VIF value as 1.608 and this agrees with Gujarati and Porter (2013) who held that such values within a range of 1-10 imply absence of this assumption.

4.4 Correlation Matrix

The findings of correlation matrix were determined and summarized in Table 4.5.

Table 4.5: Correlation Matrix

		Financial leverage	Managerial overconfidence	Asset tangibility	Firm profitability	Firm size
Financial leverage	Pearson Correlation	1				
Managerial overconfidence	Pearson Correlation	-.347	1			
Asset tangibility	Pearson Correlation	.330	.421	1		
Firm profitability	Pearson Correlation	.430	.133	.069	1	
Firm size	Pearson Correlation	.407*	.440	.343	.459	1

Table 4.5 shows that managerial overconfidence is a moderate but negative correlate of financial leverage (r=-0.347). On the other hand, asset tangibility (r=0.330), firm profitability (r=0.430) and firm size (r=0.407) were all moderate and positive correlates of financial leverage.

4.5 Regression Results and Hypotheses Testing

The implication of managerial overconfidence on financial leverage was explored through regression analysis.

Table 4.6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.885[a]	.783	.762	1.04052

Shown in Table 4.6 is that managerial overconfidence has strong and positive link with financial leverage (R=0.885). On overall, the model embraced by this study was fit (R^2=0.783). It further emerged that 76.2% variation in financial leverage among the listed SCs in Kenya is due to managerial overconfidence (Adj. R^2=0.762). This means that aside from managerial overconfidence, there are still other variables with implication on financial leverage that the focus of future studies should be.

Table 4.7: ANOVA Findings

	Sum of Squares	df	Mean Square	F	Sig.
Regression	121.192	4	30.298	27.082	.000[b]
Residual	33.563	30	1.119		
Total	154.755	34			

From Table 4.7, it can be inferred that the overall model adopted in this study was significant (F=37.313, p<0.05). Table 4.8 is the beta coefficient and significance determined through p-values.

Table 4. 8: Coefficients and p-values

	Unstandardized Coefficients		Standardized Coefficients		
	β	Std. Error	Beta	t	p-values
(Constant)	3.102	1.539		2.016	.000
Managerial overconfidence	-.684	.088	-1.492	-7.773	.000
Asset tangibility	.146	.064	.583	2.281	.020
Firm profitability	.353	.097	.714	3.639	.000
Firm size	.117	.027	.249	4.333	.000

The fitted model becomes:

$$FL_{it} = 3.102 - 0.684 MO_{it} + 0.117 FS_{it} + 0.146 AT_{it} + 0.353_{it} + \varepsilon_{it}$$

Where;

FL_{it} refers to financial leverage of firm i at time t

MO_{it} is the managerial overconfidence of firm i at time t

FS_{it} is the firm size of firm i at time t

AT_{it} is asset tangibility of firm i at time t

FP_{it} is firm profitability of firm i at time t

ε_{it} is the error term

β_0 is the regression beta coefficient

In terms of the beta coefficient, the study observed that increasing managerial overconfidence by a unit would lead to a reduction in financial leverage among the listed CSs by 0.684 units. A unit increase in firm size would lead to 0.117 unit increase in financial leverage among the listed CSs. Increasing asset tangibility by a unit would lead to .146 unit increase in financial leverage among the listed CSs. An increase in firm profit by a unit would result into 0.353 unit increase in financial leverage among the listed CSs. Based on significance, managerial overconfidence, asset tangibility, firm profitability and firm size all had p-values ($p<0.05$), implying that they were significant predictors of financial leverage.

4.6 Discussion

Managerial overconfidence is a moderate but negative correlate of financial leverage ($r=-0.347$). This implies that highly overconfident managers may not necessarily have a strong incentive to borrow for funding investment projects. This agrees with Ahmed and Jarboui (2022) who shared that the level of overconfidence of the CEO is negatively linked with forecast accuracy of the firm. Barbosa (2019) observed that managerial overconfidence is negatively linked with financial leverage determined through debt levels. Mashayekh and Morshedi (2020) noted that managerial overconfidence has a positive nexus with the level of debts in the capital structure. Pham and Nguyen (2019) established that managerial overconfidence and capital structure of the firm have a link with each other. Kunjal et al (2021) noted existence of an insignificant effect of managerial overconfidence on firm value.

On the other hand, asset tangibility ($r=0.330$), firm profitability ($r=0.430$) and firm size ($r=0.407$) were all moderate and positive correlates of financial leverage. This means that firm size and financial leverage are positively linked with each other. This is consistent with the

tradeoff theory where size and leverage can be positively linked with each other on account that large and diversified firm has low probability of running into bankruptcy and that their going concern assumption is always evident (Frank and Goyal, 2003). Titman and Wessels (1988) obtained evidence that confirmed existence of the positive nexus between size and leverage. The finding further agree with Rajan and Zingales (1995), Harris and Raviv (1991) and Titman and Wessels (1988) who provide the description of the positive nexus between asset tangibility and leverage with consideration of the tradeoff theoretical views. The findings on profitability agree with Jensen (1986) also asserts that there exists a positive nexus between profitability and leverage especially when there is high level of effectiveness in markets of the firms.

Based on significance, managerial overconfidence, asset tangibility, firm profitability and firm size all had p-values ($p<0.05$), implying that they were significant predictors of financial leverage. Thus, managerial overconfidence has significant effect on financial leverage. This observation agrees with Park and Kim (2009) who noted that overconfident managers have strong tendency of issuing more debts which is consistent with Oliver (2009). Nyakundi et al (2017) observed that managerial overconfidence significantly predicts the financing decisions made by managers of the firm. Seo and Amit (2011) noted that overconfident managers over estimate their capital structure decisions in their firms.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Summarization of the processed information is detailed in this chapter with concluding and recommending remarks.

5.2 Summary of the Findings

Based on descriptive statistics, the study observed that managerial overconfidence was characterized by a negative value. On overall, non-current assets among listed SCs in Kenya account for less than half of the total assets. On average, the listed SCs in Kenya generated less of their net incomes by leveraging shareholders' equities. Listed SCs in Kenya are highly indebted. The corporations studied had accumulated their asset bases.

Correlation evidence were that while that managerial overconfidence is a moderate but negative correlate of financial leverage asset tangibility, firm profitability and firm size were all moderate and positive correlates. The results of regression provided an indication that over half of the financial leverage of the listed SCs in Kenya is as a result of managerial overconfidence. It also emerged that managerial overconfidence, asset tangibility, firm profitability and firm size all had p-values, implying that they were significant predictors of financial leverage.

5.3 Conclusion

Financial leverage demonstrated by high levels of debts has remained a challenge for most of the listed CSs in Kenya. One possible explanation of the high level of debts in capital structure of

these firms is their ease of accessing funds now that they are listed. Although debts are generally not bad for such firms, too much of it may create financial performance challenges increasing the increased risk of financial distress. This conclusion is supported by the tradeoff theory that is used to relate the advantages as well as the disadvantages that are connected with use of debts so as to establish a perfect blend between use of debts and equities to finance investments.

The study concludes that managerial overconfidence is negative and significant predictor of financial leverage. This implies highly overconfident managers may not necessarily require debts in order to finance the risky investment projects they undertake. It also implies that highly overconfident managers will have a strong incentive to access funds from others sources including equities or retained earnings for financing investments aside from debt financing. This observation however contradicts with an earlier finding where the listed SCs were found to have huge amount of debts. This creates a scholarly issue that deserves further analysis.

5.4 Recommendations for Management and Policy

The Kenyan listed state corporations should balance between debts and equities so as establish an optimal financial leverage position. The investment and finance managers working in state corporations in Kenya need to undertake more risky projects that would generate more returns for the shareholders. The board of directors in the in state corporations in Kenya needs to enhance their oversight roles to ensure the managers undertake viable investment projects.

The policy makers working among the listed state corporations in Kenya should formulate and implement relevant debt management policies. The policy makers at the NSE ought to develop adequate policies as far as managerial overconfidence and financial leverage are concerned. The

policy makers at the CMA should develop policies that allow the listed firms to enhance their financial leverage positions.

5.5 Limitations of the Study

The fact that data was entirely obtained from secondary sources, there was a lot of information posted by different authors some with biased and contradicting information. Hence, lack of accuracy and relevance really affected the quality of data obtained.

Also, limiting on seven SCs in Kenya presents a limitation when it comes to generation of the results. It becomes hard to generalize evidence to the rest of the state corporations in Kenya. Data was entirely obtained from secondary sources. The limitation with such information is that it is not first hand and chances of manipulation are high. This may have an effect on quality of the final outcome from the analysis.

5.6 Suggestions for Further Research

It was pointed out that 76.2% variation in financial leverage among the listed SCs in Kenya is due to managerial overconfidence. This means that aside from managerial overconfidence, there are other factors affecting financial leverage that one should focus on when conducting further research. Further studies can be conducted by taking a relatively large sample of state corporations in Kenya.

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APPENDICES

Appendix I: Data Collection Sheet

Year	Forecasted Earnings	Actual earnings	Noncurrent assets	Total assets	Net income	Equity	Total debts
2017							
2018							
2019							
2020							
2021							

Appendix II: Listed State Corporations in Kenya

1. KCB Group Plc.

2. Kenya Airways Ltd

3. E.A Portland Cement Ltd.

4. Kenya Power & Lighting Plc.

5. KenGen Plc

6. Kenya Re - Insurance Corporation Ltd

7. Mumias Sugar Co. Ltd

Source: NSE (2022)

Appendix III: Raw Data Gathered

Year	Firm	Managerial over-confidence	Asset tangibility	Firm profit ability	Financial leverage	Firm size
2017	KCB Group Plc.	-0.220	0.642	0.035	0.325	3.818
2017	Kenya Airways Ltd	-0.167	0.606	0.059	0.275	3.768
2017	E.A Portland Cement Ltd.	-0.841	0.659	0.038	0.438	3.896
2017	Kenya Power & Lighting Plc.	-0.764	0.612	0.027	0.307	3.803
2017	KenGen Plc	-1.037	0.564	0.029	0.384	3.807
2017	Kenya Re - Insurance Corporation Ltd	0.116	0.603	0.037	0.469	3.809
2017	Mumias Sugar Co. Ltd	-0.209	0.435	0.020	0.374	3.724
2018	KCB Group Plc.	0.033	0.427	0.060	0.389	3.696
2018	Kenya Airways Ltd	-0.203	0.481	0.022	0.179	3.759
2018	E.A Portland Cement Ltd.	-1.768	0.696	0.035	0.417	3.586
2018	Kenya Power & Lighting Plc.	-1.334	0.704	0.034	0.374	3.591

2018	KenGen Plc	-1.501	0.453	0.043	0.332	3.366
2018	Kenya Re - Insurance Corporation Ltd	-1.678	0.754	0.018	0.309	3.684
2018	Mumias Sugar Co. Ltd	-2.189	0.788	0.067	7.791	3.721
2019	KCB Group Plc.	-1.588	0.459	0.089	3.660	3.357
2019	Kenya Airways Ltd	0.051	0.843	0.059	3.824	3.902
2019	E.A Portland Cement Ltd.	-1.710	0.821	0.025	0.571	3.769
2019	Kenya Power & Lighting Plc.	-1.008	0.760	0.026	0.578	3.614
2019	KenGen Plc	-2.818	0.156	0.050	1.015	3.072
2019	Kenya Re - Insurance Corporation Ltd	-2.835	0.334	0.052	3.640	3.052
2019	Mumias Sugar Co. Ltd	-2.400	0.185	0.035	2.322	3.083
2020	KCB Group Plc.	-1.465	0.087	0.040	3.752	3.571
2020	Kenya Airways Ltd	-0.831	0.062	0.044	4.405	3.663
2020	E.A Portland Cement Ltd.	-1.076	0.050	0.028	0.750	3.748

2020	Kenya Power & Lighting Plc.	-1.108	0.085	0.054	1.707	3.649
2020	KenGen Plc	-3.192	0.106	0.063	15.112	3.569
2020	Kenya Re - Insurance Corporation Ltd	-1.921	0.029	0.062	1.426	3.581
2020	Mumias Sugar Co. Ltd	-1.625	0.254	0.029	0.380	3.634
2021	KCB Group Plc.	-2.641	0.273	0.010	2.984	3.633
2021	Kenya Airways Ltd	-2.827	0.311	0.024	0.740	3.563
2021	E.A Portland Cement Ltd.	-2.255	0.234	0.025	1.573	3.634
2021	Kenya Power & Lighting Plc.	-2.501	0.155	0.004	0.572	3.853
2021	KenGen Plc	-1.107	0.067	0.016	3.584	3.522
2021	Kenya Re - Insurance Corporation Ltd	-3.668	0.144	0.005	0.644	3.335
2021	Mumias Sugar Co. Ltd	-1.846	0.376	0.046	0.830	3.120