RELATIONSHIP BETWEEN BOARD CHARACTERISTICS AND FINANCIAL RISK MANAGEMENT OF FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE

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A RESEARCH PROJECT PRESENTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINSTRATION, FACULTY OF BUSINESS AND MANAGEMENT SCIENCES, UNIVERSITY OF NAIROBI

2022

DECLARATION

This research project is my original work and has not been submitted for examination in any other university.

22nd November 2022

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This research report has been submitted for examination with my approval as the university supervisor.

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ACKNOWLEDGEMENT

I am grateful to God for the Resolve, Health and Strength that enabled me to complete my studies successfully. I wish to pay special tributes to my Supervisor, Prof. Mirie Mwangi who guided me through my research project where a greatly benefitted from his knowledge, skills and attention to details. I extend my gratitude to Prof. Cyrus Iraya who moderated my research project with immense support and guidance. I acknowledge the publishers of various annual financial reports for respective companies that were used to extract data for use in completing this research project. I wish to acknowledge my classmates for their influence, challenging my thoughts and encouragement to complete the research. Lastly, I wish to thank the University of Nairobi, School of Business, Department of Business Administration Staff for their cooperation and support that enabled me to study in a flexible environment to the achievement of my academic goals alongside other challenges and routine of life.

DEDICATION

To my Children Arielle Andrew and Angelina,

I wish you the best as you pursue your education

To my Wife Irine,

For your support and allowing me time to pursue and complete this journey

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATION AND ACRONYMS

AIMS	-	Alternative Investment Market Segment
BAT	-	British American Tobacco
CEO	-	Chief Executive Officer
CG	-	Corporate Governance
CMA	-	Capital Market Authorities
CRO	-	Chief Risk Officer
EABL	-	East Africa Breweries
ERM	-	Enterprise Risk Management
GEMS	-	Growth Enterprise Market Segment
ICT	-	Information and Communication Technology
MIMS	-	Main Investment Market Segment
NMG	-	Nation Media Group
NPL	-	Non-Performance Loans
NSE	-	Nairobi Securities Exchange
RC	-	Risk Committee
RDT	-	Resource dependence theory

ABSTRACT

The complexity of the present-day corporate operations and the global economy's rapid change has brought into fore the difficulties managers have in understanding their own risk exposures in the course of their daily operations. The main objective of the study was to determine the relationship between board characteristics and financial risk management of firms listed at the Nairobi Securities Exchange. Based on the research topic and related variables, Agency Theory, Stewardship Theory and the resource dependency theory formed the theoretical review literature that connect the theory and practice in regard to board characteristics and organizational risk management. The study adopted a correlation research design. A correlation research design aims at explaining phenomena by using quantitative data analysed using mathematical based methods. The 49 operational firms that are members of the NSE made up the Study's population. In addition, the main source of data for this study was secondary sources. The study conducted both descriptive and inferential statics. The descriptive statistics showed that directors with financial expertise in majority of the firms ranges between 1 to 7 of the board of the firms listed at the NSE. Based on initial multicollinearity tests Number of directors appointed after CEO appointment was excluded implying that the variable was closely represented by another one among the rest hence the variable was dropped from further analysis. The study established that increasing the number of directors on the board by a single unit decreases Financial Risk Index (FRM) by 0.23 (β = - 0.238) implying the firm's ultimate financial risk management is in turn only improved by a factor of 0.23 but this impact may be due chance as the variable is also not significant at (α=0.586). According to the study, independence of the of the board has a positive relationship with organizational financial risk management 1.47 (β = - 1.475) but not significant (α=0.065). Similarly, the study established that financial expertise has a positive (β=0.78) but not significant (α=0.384) relationship with financial risk management. The study established that gender diversity positively (β = - 1.558) affect financial risk management and was significant (α=0.04). The view that having more women on the board leads to better financial risk management did hold in this study. Considering control variables, only age of the firm has a significant impact on financial risk management (α=0.012) and (β = 0.064) implies the study found out that the older the firm the lower the financial risk hence implied a better financial risk management approach is in place. Impact of number of regulators was found to be not significant (α= 0.075) on financial risk management however the presence of more than 1 core regulators for a firm in a segment led to better financial risk management practices that more than proportionately reduced financial risk in the firm (β = - 4.244). Finally, in regard to Size of the firm, the study found out that if the size of the firm is increased by Kes 1,000 this negligibly decreases Financial Risk Index (FRM) by 0.0000000009178 (β = 0.0000000009178) hence in turn ultimate financial risk management is improved by a marginal factor of 0.0000000009178 but this impact may be attributed to chance as it is not significant at (α=0.863). The study recommends that the firms should harmonize the number of directors on the board to an average of 10 to ensure enhancement of other board characteristics contribution towards financial risk management. The study also recommends that the firms under study should consider financial expertise of a director during recruitment. Furthermore, the study recommends that the firms should incorporate more independent directors. Lastly, the study results imply that in the context of an average board size of 10 directors for firms listed on the NSE, use of a higher number of regulators in providing external oversight to financial industry segment may be an effective approach in forcing the boards to agree and adopt a risk governance rule set towards reduction of financial risk management in the firm.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The complexity of the present-day corporate operations and the global economy's rapid change has highlighted the difficulties managers have in understanding their own risk exposures in the course of their daily operations. According to (El-Masry et al., 2016), risk management has emerged into a crucial aspect that defines a company's ability to continue operating. As a result, corporate organizations must develop an effective risk governance framework to supervise management activities.

From a corporate governance perspective, the ability of an organization to identify and expose possibility of risk occurring is a paramount capability and that the board of directors have been mandated in majority of organization to play a key risk management role which comprise of the capabilities aforementioned. As a result, Abdul et al. (2018) opined that the board of directors in a company plays a significant role in policy formulation and risk management strategy implementation. The purpose of strong governance is to enhance organizational value by lowering financial risks, operational risks, and business risks.

A dedicated board-level risk committee (RC) would be established as part of the risk management aim, and a chief risk officer (CRO) would be appointed to supervise all pertinent risks that a business face (Lundqvist, 2015). All the board's actions are intended to force managers to provide investors with a return on their investment by limiting their ability to direct management's resources away from value-destroying activities and toward activities that create value, which ultimately protects shareholders' rights. To get a long-term return on investment, managers should constantly encourage a company's sustainable development with an acceptable level of risk.

As a result, given the significance of the boards of directors' role in corporate governance, it is essential that they have characteristics that make it easier for them to carry out their fundamental duties, which include monitoring and supervising employees, improving financial performance, avoiding and preventing executive managers from acting opportunistically, and making recommendations for the effective management of risks (Fitriya & Stuart, 2012).

The moral hazard theory and the agency theory will serve as the study's guiding theories. According to the agency hypothesis, the ownership structure serves as a safeguard by coordinating the actions and conduct of executives (Jensen & Meckling, 1976). As per the agency theory, managers avoid taking on too much risk in order to keep their jobs, but by being indulgent, the board and audit committee may help company managers avoid taking on too much risk and safeguard investors' interests. The agency theory thus contends that the board, via its oversight function, must monitor and supervise the managerial activities, including limiting the firm's exposure to risk.

According to the moral hazard hypothesis (Galai & Masulis 1976), investors in high-risk ventures that might benefit shareholders at the cost of the projects' financiers, creditors, and taxpayer backers are encouraged to do so by shareholders. There is a danger that the borrowing firm will go back on the commitments they made when they signed the loan contract since the creditors can't constantly monitor the borrower and get useful information about the borrower's readiness to pay the external cash (Huang, Liu & Ren, 2018).

1.1.1 Board Characteristics

Separation of the firm control and management, Fama and Jensen (1983) note that the involvement of shareholders in a firm is limited because the management is empowered to act on behalf of the shareholders under utmost good faith. Through this arrangement, managers

tend to have an upper hand in the running of the firm and making of managerial decision. However, the expectation of the managers and that of the shareholders is not perfectly aligned – with the shareholders having less advantage; the board of directors are brought in to oversight the managers (Fitriya & Stuart, 2012).

As a result, the board should have certain characteristics that will result in effective monitoring of the managers activities. These features is categorized into two broad categories, namely; board demography that encompasses such attributes as gender, ethnicity and age of the directors, and structure of the board which contains such features as the size, meetings, tenure, size of the committee and its perceived independence (Hu, Hao, Liu & Yao, 2015).

The diverse nature of the board characteristics is expected to influence the extent to which firm managers are controlled and not only concentrate in stopping the negative action by managers that might lead to corporate scandals or failures but at the same time help the firm seize opportunities that improve the value and wealth of all stakeholders (Dabari & Saidin, 2016). This is because boards consist of a team of individuals that are expected to bring together their diverse competencies that should form a synergy of social capital and thus effective performance of governance function. The collapse of many firms in both developed and developing countries has brought into fore the limited role played by respective boards in not implementing appropriate risk mitigating policies.

An important argument is that external board members should not have any commercial or other relationships with the corporation that would jeopardize their independence from the top management. External directors serving as professional referees, according to Fama (1980), improves the board's viability and lessens the likelihood of senior executives conspiring to embezzle shareholder money. The incorporation into the board of directors' members that have financial experience is expected to constrain opportunistic behaviours of managers because

they will be able to detect such activities much easily than board members with no or limited accounting background (Carcello & Neal, 2002).

Similarly, when board of directors are populated with members that have a longer tenure of financial experience, firm managers will less likely be induced to engaging in risky managerial actions that impact the long-term sustainability of the organization. Further, a large board size increases the firm's ability to understand the needs of the diverse range of stakeholders and in the process be able to address their diverse needs in a better way. This results in greater transparency and therefore improved risk-management behaviour.

1.1.2 Financial Risk Management

According to Schmidt and Roth (1990), financial risk management is the ability to optimally reduce potential losses arising from uncertainties that might lead to negative implication on organization operations and financial performance. This definition reflects the historical focus of risk management on the protection of a firm's economic value. The process of recognizing, analyzing, and responding to a specific risk is known as risk management, which implies that it is a continuous activity and a crucial management aspect in the decision-making process (Kanchu & Kumar, 2013).

In the same line of thinking, Raheja (2005) affirmed that risk management is concerned with strategic ways of identifying possible sources of loses attributed to risks and implementing appropriate measures to counter the occurrence of risks that might jeopardize operations and consequently performance. According to the definition, financial risk management aims to safeguard earnings variations, limit cash flow volatility, minimize foreign currency losses, and minimum profits fluctuation to ensure the firm's existence.

Raee (2008) asserts that there are different forms of risks that a firm might face in the cause of its operations. These risks are classified into non-financial and financial risks. The main non-financial risks according to the author include managerial, political, industry, operating, legislation and human resource. On the other hand, the common financial risks include exchange rate, interest rates, credit, liquidity, inflation, stock price and re-investment risk.

Business organizations need to set up mechanisms for reducing potential hazards resulting from their operations. An independent, highly competent, seasoned, and committed governance board can help manage risks effectively, which will boost asset portfolios as a source of return and lower operating expenses. According to Dinu and Bunea (2018), there is a strong and important link between management structure and risk management. Elder managers tend to be more conservatories on the board of management and are less willing to take chances than younger managers, who have been shown to be risk-takers (Tarus and Ayabei) (2016).

The board must prevent the executive directors from acting in an unsuitable or opportunistic manner, as well as come up with the best solutions and provide advice regarding the elements that will determine the characteristics and board size based on different factors as well as establish how these factors and board characteristics influence the overall organizational performance (Farag & Mallin, 2017).Similarly, Dinu and Bunea (2018)argued that the board of directors should be in a strategic position to determine the appropriateness of organizational risk management and control systems in regard to integrity and transparency.

1.1.3 Board Characteristics and Financial Risk Management

The ability of good corporate governance procedures to prevent managers from taking excessive activities that might expose organizations can be used to analyse how board characteristics affect the ability of a corporation to manage risk (Bunea and Dinu 2020). The

board has a noteworthy influence on a firm's daily operations and, therefore, the decision-making process aimed at achieving the firm's goals, which has a cascading effect on the success of the company as a whole. The board should oversee the managers' activities and make sure that all choices are based on the company's strategy and ultimately lead to greater shareholder value creation. At the same time, the board should prohibit any management initiatives that could fail or generate disputes with both internal and external stakeholders (Kakanda & Salim, 2017).

Appropriate board characteristics that include diversity, financial expertise that is dispersed, skills and structure, size, independence, and diverse background is expected to bring into the supervisory role a wide range of knowledge that can facilitate effective supervision and monitoring of the management action. According to Pucheta-Martnez and Gallego-lvarez (2020), board size is defined by the number of directors who have the power to oversee a company's corporate governance procedures and, therefore, its financial performance as a whole. In order to maximize possibilities and minimize risks-related vulnerabilities, board members and senior management must consciously raise their competence levels. By doing so, they will be better equipped to take advantage of market opportunities and gain a competitive edge.

The board size then represents the level of efficiency that can be expected from this team since a large board that will not slow decision-making process is better than a small board that curtails available level of competency (Alzoubi & Selamat, 2012). On the same line, an audit committee with financial expertise increases level of monitoring and by extension quality of reporting that emanate from the firm. A board of directors with financial literacy would reduce regular earnings management behavior by managers, according to Dhaliwal, Naiker, and Navissi (2010).

The board characteristic in relation to gender has been a widely discussed area, more so, on matters environmental and social issues due to their perceived difference in perception and perspectives. Women in the board have been found to be more dedicated, involved, diligent and motivated, with less self-centred attitudes when it comes to decision making process - an attribute that brings more efficiency to the board (Haque, 2017). The capacity to properly challenge management decisions and assess their effectiveness is also correlated with the board's independence, which lowers agency costs and boosts business productivity. Further, since independent directors have no direct financial benefit, they tend to be less compromised and dependent on the executive management Carter et al. (2003).

1.1.4 Firms Listed at the Nairobi Securities Exchange

According to Kenyan law's Companies Act Cap 486, a business must have a minimum of seven members to be registered on the Nairobi Securities Exchange (NSE). The revised Capital Market Authority (CMA) 2014 stipulates corporate governance code that should be upheld by the board of directors. These codes of conduct cover board control and governance, shareholder rights, social responsibility and moral conduct, responsibility, internal audit and risk management. The board is entrusted with the responsibility monitoring the risk exposure of the firm as a result of the management decisions (Kobuthi, K'Obonyo & Ogutu, 2018).

In the firm's annual reports, evidence abounds of disclosure of the chief risk officer in the respective firms and also the structure of reporting the nature of risk exposure of the firms. According to Sanda,Teresa Odero&Omoro Nixon (2021), the risk management practices that are prevalent and disclosed by firms listed at the NSE include existence the credit risk officer, risk reporting structure, the involvement of the BOD in the risk management process, adherence to the regulatory framework and existence of a common language on communicating risk. However, it was reported that investors in the bourse are not concerned with individual

firm risk but rather the overall risk of their portfolio, a position that is in line with the modern portfolio theory.

A total of 64 firms are listed at NSE as at end of September 2022 with the non-financial firms comprising 52 organizations. Equities, Preference shares, Treasury Bonds, and Corporate Bonds are among the frequently traded financial products in the markets. Because of the distinctive reporting practices of commercial banks, which are closely regulated by the Central Bank of Kenya, the non-financial markets will be of particular importance for this research.

1.2 Research Problem

In the last three decades, the world has faced prominent cases of corporate disappointment that has not only resulted in economic turmoil across the globe but also in the diminishing shareholder wealth value. As a result of these challenges, businesses are more susceptible to a wide range of corporate risks. These challenges have been caused, among other things, by weak governance systems in the organizations, uncertainty of currency exchange rates, interest rates, market prices, commodity prices and prices for securities. Indeed, the greatest contributor to the recent financial crisis was identified as weakness in the risk governance practice and excessive risk taking by financial institutions; as a result, financial institutions, for instance, have been fined over $400 billion by regulators since the 2007–2008 global financial crisis (S&P Global, 2020).

One of the principles of corporate governance choices and actions is internal firm risk governance, which guarantees effective risk management by the board on the portfolio of risks faced by a company. Due to the necessity for proper corporate governance systems to control the excessive exposure of business entities where ownership and management are separated, the relationship between risk management and board characteristics is established (Bunea and

Dinu 2020). Listed as well as unlisted ones have faced their fair share of challenges that have originated from a lack of an effective governance structure.

Collapse of both the Chase and Imperial banks, Uchumi supermarket and publicly owned entities have all pointed to the lack of the board to play their rightful role of supervising and ratification of the management actions regarding investment decisions. Different firms have faced varied risk exposure to their operations at different times in Kenya. The common types of risks include interest risk, exchange risk, political risk, and different diversifiable risks. Majority of these risks are dependent upon management decisions and that improper decisions has resulted in loss of capital, poor performance and in some cases the collapse or delisting of the firms. Such firms that have been affected include, Sameer Africa Plc, Express Kenya, Athi River Mining, East Africa Portland Cement, EA Cables Ltd, Home Afrika Ltd, Eveready East Africaand Olympia Capital Holdings Ltd.

Inefficient management of these risks is partly because of ineffective board supervision of the management action. However, it is important that members to the board have unique characteristics that would enable them to perform their supervisory role well. Therefore, the understanding of how different board characteristics, both individually and collectively, influence the risk management of firms listed at the NSE is important.

Alabdullah, Ahmed and Putri (2021) conducted a study on how board characteristics influence risk management in the emergent economy countries. According to the research, board independence has no bearing on either profitability or risk management, whereas board size has a negative impact on both. Further study found that small boards and risk management committees both help to raise the degree of risk management with increased board independence.

While focusing on European economic environment, Noja, Thalassinos, Cristea, and Grecu (2021) aimed to establish the relationship between valued board members characteristicscapacity in risk disclosure and the overall financial performance. The findings show a strong correlation between board size, management turnover, board independence, and board member qualifications. Zemzem and Kacem (2014) used data collected from the institutions for the years 2002 to 2011 to conduct a study with the aim of establishing the relationship between established characteristics of the board members, risk management ability and strategies and the overall firm performance with main focus on lending institutions operating in Tunisia. According to the study, banks with a Chief Risk Officer (CRO) who is prominently placed on the executive board had better corporate governance frameworks than banks without a CRO on the executive board.

Tarus and Tendai (2019) conducted research on the effect of board features on the financial risk of listed non-financial enterprises in Kenya. The study was conducted from 2010 to 2017 and was based on information from 41 non-financial companies listed on the NSE. The results showed that the association between the board's financial expertise and financial risk management was moderated favourably but insignificantly by the ownership structure, but that association between independent board members and financial risk management was moderated favourably and significantly by ownership structure.

Ndwiga (2020) looked into how FinTechs may affect Kenyan banks' market dominance and risk-taking behaviours. According to the research, there is a clear link between bank risk-taking and the growth of market domination following the introduction of FinTechs. The implications of board composition, company size, and financial leverage on manufacturing businesses listed on the Nairobi Securities Exchange in Kenya were studied by Njenga and Jagongo in 2019.

The study's findings indicated that the size of the firm and the makeup of the board of directors affected judgments about financial leverage.

The above-mentioned study and the current literature review have focused a lot of attention on the influence of board characteristics on businesses' risk management, but the results have been conflicting. To my knowledge, no study has made an effort to thoroughly investigate this topic based on the totality of firms in the Kenyan economic structure. As a result, the purpose of the study is to provide an empirical finding to fill the gap established in regard to board of directors' characteristics and risk management with target population being companies listed on the Nairobi Securities Exchange.

1.3 Research Objective

To determine the relationship between board characteristics and financial risk management of firms listed at the Nairobi Securities Exchange.

1.4 Value of the Study

The research will add to the body of knowledge on board characteristics efficacy and provide valuable information to scholars, policymakers, and many stakeholders in organizations. It is anticipated that the findings would help policymakers specify the qualities that a board member should possess before being nominated to lead a company and help them make wise decisions about firm management. Specifically, the study will seek to show how independent corporate governance board, board size, financial expertise, and gender impact on financial risk management to the firms.

Additionally, before making an investment choice, lenders will be advised by the authorities on a company's ideal financial standings. In order to understand how board qualities affect an

organization's capability for managing risk, the study will shed more insight for policy makers and regulators like CMAs on the said aspect.

Given that there is a gap in the research on the impact of board characteristics on firms performance, the study fills that gap from the perspective of Kenyan economic and business environment, a developing nation. The study will identify several gaps that may be investigated by other researchers utilizing various predictor factors.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The focus in this chapter will be the review of the relevant literature that delves within the subject of the study. More specifically, the chapter will entail literature review on board characteristics, its significance in the current contemporary operating environment and how specific board characteristics influences managements' risk management capabilities. In addition, the chapter will delve more on the theories that will provide a foundation and underpin the study.

2.2 Theoretical Review

Based on the research topic and related variables, Agency Theory, Stewardship Theory and the resource dependency theory will form the theoretical review literature that connect the theory and practice in regard to board characteristics and organizational risk management.

2.2.1 Agency Theory

The agency theory investigates and focuses on the problems that occur in firms as a direct consequence of the separation of ownership and management responsibilities. This theory contributes to the process of putting into reality the many governance strategies that may be used to manage the conduct of the stakeholders in a company that is jointly owned. The primary concern is determining whether the management of a joint stock company work for the owners of the company or for the managers' personal benefit. The ownership of a joint stock company may be held by either people or groups in the form of stocks. The owners of the company, known as shareholders, delegate their power to the company's managers, who are known as agents, to run the firm for them. According to Jensen and Meckling (1976), a firm is portrayed as a "black box" that seeks to maximize both its value and its profitability.

A solid coordination and sense of collaboration among the stakeholders engaged in the company may lead to the maximization of wealth. The agency theory holds that to protect the shareholders interest, then one needs to reduce the agency cost by aligning the agent-principal interests through various governance mechanism. The most popular mechanism is through the adoption management compensation scheme and adoption of appropriate governance structure (Ujunwa, 2012). If managers are compensated based on their ability to safeguard the interest of the shareholders, then they will work towards successful compensation of the shareholder. These are long-term rewards that are tied to the firm performance, which is expected to make them act in the interest of the shareholder's interest. This approach is more appropriate in situations where the agent has limited monitoring capacity but a significant information benefit (Panda & Leepsa, 2017).

The agency theory is relevant to this research because the board of directors is responsible for implementing the governance process, and as a result, they have the ability to conduct performance audits and performance evaluations of the management decisions that might increase the firms risk exposure. The basis of the agency theory is that there exists opportunistic behaviour by managers that can be curbed through controls instituted by the board (Huang, Boateng & Newman, 2016). Therefore, appropriate board characteristics such as financial competence of the board members, independence, separation of the management and oversight role; and optimal board membership is able to effectively monitor the actions of the management in relation to risk management. Therefore, for the board to perform its role effectively, it is expected that its function is delinked from that of the CEO and the board being populated with persons with the requisite financial expertise (Panda & Leepsa, 2017). This is because the actions of the management – headed by the CEO, should be separated from the oversight duties.

The agency theory has been criticized, however, for concentrating on the agent and yet the cost of the relationship might also arise from the principal side (Habbash, 2016). The principals might also deceive, exploit, and shirk the agents. In some other cases, the agents have been dragged into working in perilous working environment without any chance of approaching the principal and thus under such a situation, the shareholders will be opportunistic as well. At the same time, under certain circumstances, humans have been found to be noble and work diligently towards the realization of the organization objectives (Shukeri, Shin & Shaari, 2018).

The other criticism of the agency theory is that it assumes a contractual relationship for a limited or unlimited future time, and yet this future horizon remains uncertain. Similarly, the theory assumes that by contracting the managers, then the agency costs is eliminated. Practically, this is not true since the relationship faces several hindrances like rationality, transaction costs, information asymmetry and fraud. The sole duty that directors have is to oversee the managers; their other responsibilities are not clearly defined.

2.2.2 Stewardship Theory

Donaldson and Davis (1989) established the stewardship theory. The stewardship theory takes into account the dynamic of life by assuming that managers may align their activities inside the company to be in line with shareholders' interests, in contrast to the agency theory, which presupposes a divergence of interests between the agent and principal. The theory represents situations where managers become stewards of the shareholders and relegate their interest to that of the firm in general. The behavioural characteristic of a manager is determined by the situational and psychological factors of the individual, such that some managers might find it to always work in the best interest of the shareholders (Davis, Schoorman & Donaldson, 2018).

The theory posits that the behaviour of a steward is whole encompassing such that seek to collectively achieve the organizations objectives such as increased sales and profits. The shareholder wealth therefore is increased through firm performance which in turn increases steward utility function. Because there are many interest groups in an organization, it would be collectively advantageous if the stewards pursue objectives that will be beneficial as opposed to meeting specific party interests (Martin & Butler, 2017). Therefore, a steward who increases the organization performance will be able to meet the interest of many of the stakeholder groups, many of whom interest is served by increasing the shareholder wealth.

The stewardship theory recognizes that a steward manager can be able to trade-off personal and the organizational goals and is convinced that by seeking to realise the organizational objectives, so will they be able to achieve individual interest (Chrisman, 2019). Empowering organizational governance structures, through the establishment of boards with unique characteristics, will therefore not be a problem. Strict constraints may be detrimental since they limit the steward's pro-organizational behaviour because an individualistic agent will be able to pursue pro-organizational behaviour. Since the steward can be trusted and generally acts in accordance with the principal, the steward autonomy should be increased to maximize the advantages of the steward (Davis, Schoorman & Donaldson, 2018).

The stewardship theory is chosen to anchor the study because it recognizes that managers might work to the best interest of the shareholders and that it’s not under all the cases that agency cost is high. Similarly, the stewardship theory recognize that agency cost incurred out of the monitoring function as well as the opportunity cost of the management might be low because the management actions are in line with the board characteristic advice and decision. Under this circumstance, board characteristics would have high effect on financial risk management implemented by the firms.

2.2.3 Resource Dependence Theory

The work of Pfeffer and Salancik (1978) may be linked to the Resource Dependence Theory (RDT), which maintains that organizations depend on their environment for their survival via the flow of resources. Despite being primarily designed to explain the interconnectedness of various players inside an organization and their working environment, the theory has been used to describe the interactions between firms and many sorts of institutions and actors (Cuervo-Cazurra, Mudambi, & Pedersen, 2019). RDT posits that a firm pays close attention to those who exercise significant control over key resources, which may be why organizations that rely heavily on female employees pay close attention to work-life balance issues as well as why companies that rely on natural resources shared with local communities invest heavily in local development programs for health and education (Hess & Warren 2008).

The RDT approach acknowledges the importance of the board of directors in guaranteeing the flow of vital resources, as shown by their expertise, relationships with the company, and legitimacy (Chou, 2015). The board's role as improving the firm's credibility and public image, giving knowledge, guidance, and counsel, connecting the company to significant stakeholders or other significant entities, and making resources more accessible. Additionally, the board members must be capable of fostering relationships with the external environment, contributing to the development of strategy, and making other crucial business choices (Porter & Kramer 2006).

The resource dependence theory is relevant in this study because it recognizes that the corporate boards serve as a crucial conduit between the business and its surroundings, serving as a means for communication, a means of obtaining support from key stakeholders, and a means of legitimizing the organization via board relationships. For example, firms that are customer oriented have been found to appoint women as directors and such decision helps in

giving the business some degree of legitimacy and is found to provide customer stakeholder legitimacy (Brammer, Millington & Rayton, 2007).

2.3 Determinants of Financial Risk Management

Risk is an inherent uncertainty in firm operations that have serious negative financial implication. According to Manab, Othman, and Kassim (2012), managing risk within a company has always been difficult because of the conflict between incurred agency expenses and the corporate governance practices put in place to reduce possible losses. The chief risk officer (CRO) position has been used as a barometer for how seriously a company handles risk. The capacity of a company's risk management to accomplish goals in relation to strategy, operations, reporting, and compliance is one way to gauge its performance. The research will be guided by factors such as the company's characteristics, information technology, and the current regulatory environment.

2.3.1 Firm Characteristics

Firm characteristics are internal organizational factors that are presented in relation to organizational structure, size, ownership, and risk management. In addition, firm characteristics are explained by firm size, key stakeholders influence and the role of directors in risk management (Muazu, Tasmin & Javaid, 2021). With these factors explaining firm characteristics, it follows that a company with sufficient resources may set up a reliable risk management system and anticipate possible hazards that the enterprise would encounter in the context of its operational environment.

A firm ownership structure influences decision making since in a democratic decision-making process, most of the board members will carry the day. Consequently, the decision to institute risk management procedure in a firm is going to be influenced by the board (Wakaisuka-

Isingoma, Aduda, Wainaina & Mwangi, 2016). When it comes to the ownership of a firm, the ownership structure of a company is determined by the proportion of individual ownership versus that of institutional ownership irrespective of the type of ownership. The board of directors provides an explanation of how ERM may be implemented in a company and the effect that this has on choices about the proportion of equity financing to debt financing. This is a decision that influences the amount of risk exposure that the company is subject to.

Appropriate board characteristics that include diversity, financial expertise that is dispersed, skills and structure, size, independence, and diverse background is expected to bring into the supervisory role a wide range of knowledge that can facilitate effective supervision and monitoring of the management action (Muazu, Tasmin & Javaid, 2021). The independence of the board is also associated with increased ability to question management action and evaluate their performance successfully, a move that lowers agency costs and raise the efficiency of the company. Further, since independent directors have no direct financial benefit, they tend to be less compromised and dependent on the executive management (Haque, 2017). Manad, Othman, and Kassim (2012) used both financial and non-financial firms in their research to determine the factors that affect the establishment of risk management practices.

They discovered that the quality of people in the organization, tools, and technologies all affect the implementation of the decision. If a business has sufficient resources, it will be able to hire competent employees who are capable of comprehending the company's strategic direction, as well as the requirements of its customers, and who are also able to utilize contemporary technology to effectively manage risk exposure. Effective endowment management may be linked to investments that have sufficient resources. According to Nordin and Hamid (2013), the size of a company, as determined by the total asset base, is a representation of the economic resources available to the company. The decrease of expenditures related with the avoidance

and mitigation of risks might be one of the total advantages realized by the concerned businesses as well as the shareholders if effective asset management is practiced.

A corporation has to have up-to-date software that is helpful for the goal of monitoring and properly managing risks for the organization as a whole in order for their enterprise risk management program to be effective. In a similar vein, Waweru and Kisaka (2012) explain that the efficacy of risk management systems may be influenced by the size of a company, which is represented in the form of assets possessed by the company. It is more probable that larger organizations will be impacted by various types of risks, and it is also more likely that they will be unable to devise innovative strategies to mitigate those risks. According to Tahir and Razali's (2011) research, institutional shareholders have the ability to influence any decision made by the management of companies because of the structure of the organization. The accumulation of cash is beneficial in the establishment of efficient risk management frameworks.

2.3.2 Regulatory Framework

The efficiency of regulatory bodies is a critical factor in the successful ERM rules and regulations. According to the findings of a study conducted by Deloitte and Touché (2012) in East Africa (EA), which includes the countries of Kenya, Uganda, and Tanzania, capital market regulators and industry are working together to drive regulatory changes throughout the EA area. According to the findings of the research, government regulators are paying a growing amount of attention to the part that boards of directors play in the process of establishing policies for risk management, determining the degree to which an organization is willing to take risks, assessing the effectiveness of policies relating organizational risk and risk management techniques, and determining the compliance capacity within an organization. It is feasible to deduce the impact of ERM on the financial performance of a firm from the growing

need for modifications and the active participation of regulators in the monitoring of ERM. This is something that can be done using inductive reasoning.

Nguyen, Newby, and Macaulay (2015) in the study avert that in some countries, strict measures are put by the regulating agencies to ensure that firms are subjected to a standardized procedures for risk management and reporting strategies. They create a distinction between those in charge of making laws and registering businesses and those in charge of professional organizations that register their members. Regulators register businesses; professional organizations register their members. It is possible to increase enterprise risk management's efficiency of ERM strategic initiatives that may offer unique advantages that go beyond the scope of basic regulatory compliance. According to the findings of a study that was carried out by the Economic Intelligence Unit in the year 2016, it was anticipated that regulators, manufacturers, and rating agencies would increase the amount of pressure they put on companies (Ullah & Sepasgozar, 2019).

According to the argument made by Manab, Othman, and Kassim (2012), one of the most important criteria is ensuring that one is in conformity with all applicable rules and regulations. It is possible that compliance and corporate governance may get the majority of the attention during the initial stage of enterprise-wide risk management (EWRM). By carrying out compliance checks, the compliance functions make certain that all relevant laws are followed in the correct way. This ensures that all applicable laws are respected. Compliance is made easier because to the role that corporate governance contributes to efficient EWRM.

This normalizes the interaction that exists between shareholders, the board of directors and senior management of a given company. This shows that the accomplishment of sound corporate governance as well as compliance with various business and operational standards is a step toward the establishment of successful enterprise risk management (ERM).

2.3.3 Firm Size

A firm size provides a measure of how profitable a firm is based on its asset size. The common measurement of firm size in literature is either amount of capital or number of employees, and it follows that firms that are considered to be large engage in much more economic activities than smaller size firms (Liang & Liu, 2017). Large firms are associated with additional expertise, skills, technology and networks than smaller firms, all of which are associated with better capacity to manage risk. Similarly, large firms are associated with advantages such as economies of scale, capacity to recruit qualified staff for managing risk and thus being able to anticipate risk and keep the firm risk level low. However, other scholars find that firm size might have negative influence firm performance, more so in situations that increased size results in diseconomies of scale ((Lee, 2019).

Wu (2017) contend that if a firm profit increases over time, it establishes a good relationship within and outside the business environment that it operates in. Further, the larger the size of a firm, the greater the level of influence it has in the sector that it operates in. Indeed, multinational corporations and business conglomerates are a measure of their size in the corporate world. The other advantages of having a bigger company are that it will attract funding from both external and internal parties – a move that will bring onboard external knowledge on risk management (Suffah & Riduwan, 2016).

2.3.4 Age of the Firm

The age of firm explains how small or large an institution is. By extension, the agency theory suggests that larger size of a firm implies that that it practices a higher transparency level based on their higher problem-solving capacity and risk mitigation capability (Mottoh & Sutrisno, 2020). This is because a large firm is likely to face more risk exposure based on the investment

portfolio; however, it has better capacity to manage the same risk. This explains why larger firms makes disclosure on their risk management accountability to explain to the general investing public whether that they are able to manage the risks that come about from the utilization of the capital (Martin& Butler, 2017).

2.4 Empirical Review

Various studies have drawn their attention into the topic of enterprise risk management and strategies that could be adopted to reduce risk exposure among organizations. In this regard, Tran, Do, and Nguyen (2020) in their study, investigated the influence that board features have on bank risk in Vietnam.

This study investigated the relationships between several factors by using a 10-year panel data set that began in 2008 and an ordinary least squares technique (OLS) analysis. The deposits, ownership structure, and bank size served as the independent factors in this study. The dependent variable was the size of the banks. The research used a one-of-a-kind dataset consisting of 216 date sets from 37 banks operating in Vietnam between the years 2009 and 2018. The findings suggests that there exists a significant effect on the CEO gender and risk taking among the Vietnamese banks with banks that are led by female gender facing more risk than the male led banks. This was attributed to the fact that female CEOs in Vietnam find it a challenge in balancing their family, work demands and when it is combined with a lack of support from their families, it ends up affecting the concentration in the workplace.

This conclusion gives credibility to the arguments made by Nguyen (2018), who contends that there is a kind of societal bias that holds that women are not tough enough to successfully operate their own companies. When it comes to negotiating and entering into huge contracts, this approach does not provide results that are helpful. Barucci and Milani (2018) obtained a

different finding among banks in South Africa. They discovered that banks that were headed by women over the age of fifty were found to be more risk conservative than their male-led counterparts. This result was observed among banks. According to the findings of the research, the demographic variables of bank management are an important consideration for financially distressed institutions. Doan and Ekşi have focused on the risk-taking habits of the board of directors and how they impact a company's success (2020). The research used 19 Turkey banks and a final sample of 133 observations, establishing the link using the ordinary least square approach.

The results suggests that there is neither a statistically significant correlation nor a positive one between the number of directors on a bank's board of directors and the ROA ratios of its various branches. Therefore, it was concluded that a bank's performance is not affected by having a larger board of directors. There is a strong consensus from the that having greater percentage of foreign ownership negatively impact the volume of NPL and as a result, commercial banks will have reduced level of performance given the fact that the major source of revenue is interest from loans. The study attributed the findings to the nature of economic swindling in Turkey that foreign investors lack knowledge on when and whom to lend loans. Therefore, financial institutions with a smaller customer base may have a higher ROA and provide advantages in terms of bank NPL (Ararat, Black & Yurtoglu, 2017).

Aebi et al., (2012) carried out a study on the relationship between corporate governance and the impact risk management has on bank performance. To determine if the board characteristic might prevent the financial crisis of the North American banks, the research used data for 2006, only one year before to the commencement of the financial crisis. The criteria for the use of CG included the existence of a specific committee charged with overseeing and managing risk in banks, the size, independence, board expertise, and if the CRO is a board member. The

research demonstrates that neither the risk committee's structure nor the CRO's board membership had a substantial impact on performance. This outcome backs up Adams' (2009) assertion that the firm's risk management posture was unaffected by the CRO's board membership.

According to research by Al Azeez, Sukoharsono, and Andayani (2019), board features such as gender, have an influence on how managers manage their earnings. The study involved 71 oil and gas businesses operating in diverse parts of the world. The outcome presented that board independence had a substantial impact on how profits were managed; however, board size had no significant impact on how earnings were managed since it was discovered that a big board size made it difficult to supervise management. Similar findings indicated that board gender and CEO duality greatly increased profits management. This result confirms a previous study by Abdul Rauf et al. (2012) that management ownership and CEO duality positively impacted earnings management as determined by discretionary accruals. Similarly, CEO duality has an impact on profits management, according to Yugroho and Eko (2011).

Osemene, Adeyele, and Adinnu (2018) determined whether ownership structure and board characteristics of the deposit-taking banks in Nigeria using panel data spanning the five-year period from 2011 to 2016. The results demonstrate that the enterprises' foreign, private, and government holdings had a negative effect on managers' earnings management. The study's findings, in contrast, support Kazemian and Sanusi's (2015) assertion that CEO tenure and board size had no bearing on the banks' earning management practices. In contrast, Alzoubi (2012), who looked into the impact of ownership structure among Jordanian commercial banks, found that foreign and private ownership influenced management of earnings.

In their study on the effects of board characteristics on the social performance of Microfinance Institutions in Kenya, Waithaka, Gakure, and Wanjau (2013) used board size, director

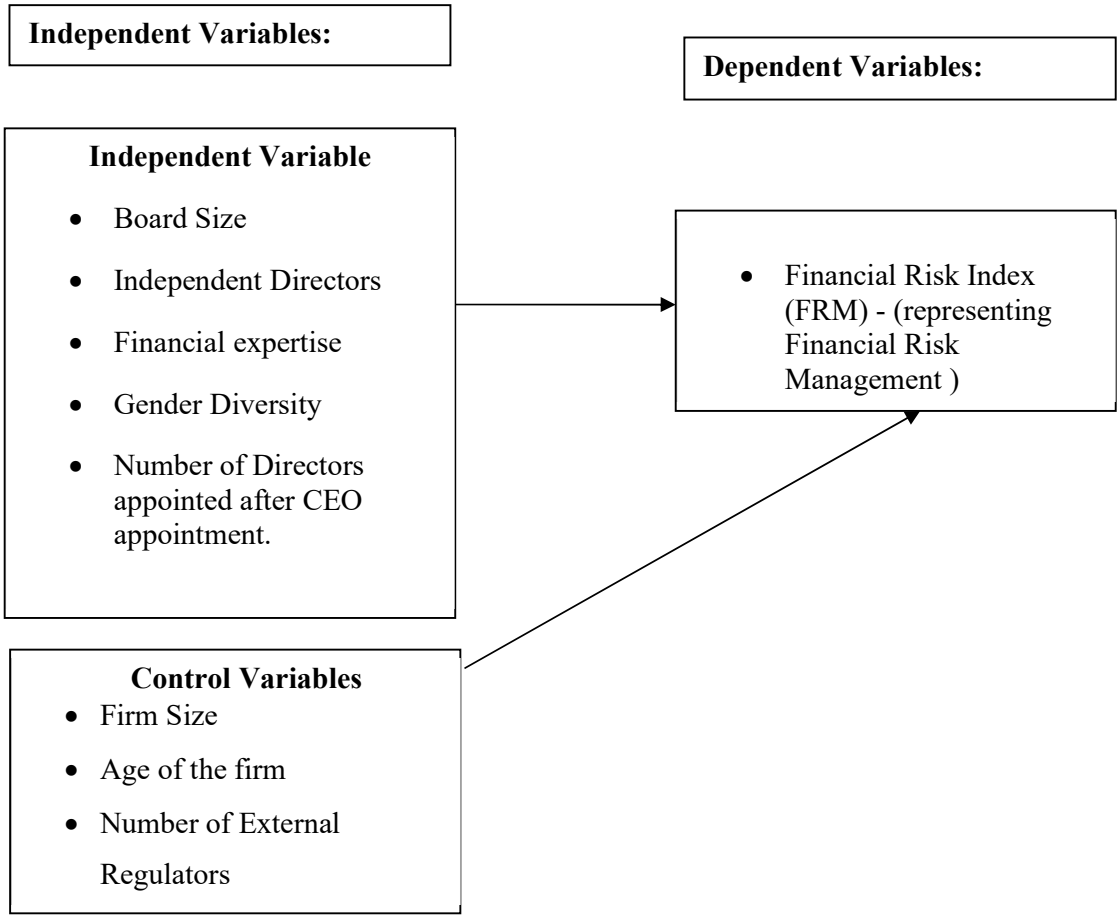
remuneration, board committees, board skills, and multiple directorships as proxy measures for board characteristics. This was done in Kenya. Waithaka, Gakure, and Wanjau (2013) also used multiple directorships. The findings indicate that the number of directorships didn't have much of an effect on social performance. Previous research conducted by Abdullah (2004) and Sahin, Basfirinci, and Ozsalih found that board committees, independent directors, and the social performance of MFIs had a favorable and substantial influence on the financial stability of the institutions (2011).

Wanyama and Olweny (2013) conducted an investigation into a Kenyan listed insurance firms with the goal of determining the nature of the connection that exists between successful business practices and financial outcomes. The research was conducted using a descriptive research approach, and the researchers found that the board size, board composition, CEO duality, and leverage each had an individual and combined influence on the performance of the companies that were the subject of the study. The study period that lasted for five years, from 2007 to 2011, resulted in 316 data observations being collected.

2.5 Conceptual Framework

A conceptual framework represents a practicable course of action or a desired plan of thoughts for certain desired outcomes. The predicting factors in the present study are bored characteristics that are represented by, board size, independent directors, foreign directors, and proportion of women in the board. The control variable will be the firm size and firm performance. The financial risk management of the firm will be measured by whether the firm hedges or not its risk. This relationship is presented in Figure 2.1.

Figure 2. 1Conceptual Framework



CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section details the approach pursued in carrying out the research in order to achieve the research objective. It describes the structure of the research, the empirical model, the population under investigation, the sampling method, the process for collecting data, and the analysis of the results.

3.2 Research Design

Research design relates to guidelines relating to the achievement of objectives with minimal distraction (Sekaran & Bougie, 2013). The study will adopt a correlation research design. A correlation research design aims at explaining phenomena by using quantitative data analysed using mathematical based methods (Asamoah, 2014). Quantitative data is based on precise measurements using structured collection instruments and involves determination of statistical significance of findings using means of variables. Since the relationship between the two variables, board characteristics and financial risk management will be sought, then correlation research is deemed appropriate.

3.3 Population of the Study

The total number of people or organizations that a researcher is interested in learning more about makes up a researcher's study population (Sekaran & Bougie, 2013). It is characterized in terms of the components that are available, the time range that is awarded, the geographical borders that are available, and the subject of interest. The 61 operational firms that are members of the NSE will make up the Study's population (Appendix I). Because of the low number of firms listed in the NSE, the research will be a census to ensure complete enumeration of the unit of analysis.

3.4 Data Collection

The main source of data for this study will be secondary sources. This therefore means that in order to measure the study variables, that is, board size, financial expertise, independent directors, board gender diversity, directors appointed after the CEO, age of the firm, firm size, data from audited financial statements will be collected. The financial statements are majorly uploaded by listed firms on their websites or available physically at the central market authorities (CMA). The study will draw its focus for the last five years, 2017-2021.

3.5 Data Analysis

Data analysis covers the processing of raw research data into information, as well as making deductions and inferences, for the sake of interpretation. Both descriptive and panel regression will be used as the analyses' foundation. The analysis measures that will be computed include number of observations, mean and variance. Further, the maximum number of observations, and lowest number of observations will all be included in the descriptive analysis. On the other hand, the panel data regression analysis must serve as the foundation for the inferential analysis. The 5% level of significance will be applied in the analysis. The Statistical Package of Social Science – Version 22 will be employed in the analysis.

3.5.1 Diagnostic Test

Different diagnostic tests were performed. These include the normality, multicollinearity, and homoscedasticity tests. The study carried out normality test to establish distribution of the data based on normality criterion. Normality of data enhances precision of the findings which also enhances internal consistency of the data values.

Any correlation of independent variables in a sample is known as multicollinearity (Wooldridge, 2013). High degrees of multicollinearity raise the p-values in a regression model,

which leads to inaccurate predictions. The assumption corresponds with Greene (2012), who found a significant degree of multicollinearity in r or r^2 values greater than 0.8 or 64%. In such a case, each of the variables involved would be omitted. Homoscedasticity in a model means that the error is constant along the values of the dependent variable. The study will check for homoscedasticity by making a scatterplot with the residuals against the dependent variable. Homoscedasticity means a constant error; the study will check for a constant deviation of the points from the zero-line. If homoscedasticity is violated, this will mean heteroscedasticity is present and inputs will have to be rechecked for additions of removal.

3.5.2Analytical Model

The financial risk management will be determined as a function of board size, independent directors, financial expertise, and women in the board, while firm size, regulatory framework, information technology and firm age will be the control variables. The aim of a control variable is to reduce potential omitted variable bias that might arise due not by the independent variables explaining the dependent variable (Taylor & Peens, 2017). The analytical model will be as follows.

$$Y = \beta o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \varepsilon$$

Where: Y = FRM. Further, FRM is as outlined and derived further below based on Alexander Bathory model.

X_1 = Number of directors on the board (Board Size)

X_2 = Number of independent directors

X_3 = Number of directors with financial expertise

X_4 = Number of female directors

X_5 = Number of directors appointed after CEO appointment

X_6 = Age of the firm in number of calendar years

X_7 = Size of the firm based on total assets measured in Kenya Shillings

X_8 = Number of external regulators overseeing the firm's sector.

FRM above, is the level of financial risk in the firm measured as an index and the same shall be derived using the Alexander Bathory model as follows:

FRM = SZ + SY + GF+ YF + YZ

Where:

FRM = A calculated index measuring level of financial risk in every year of operation of the firm. It is the dependent variable in this paper It has been used by the study to represent financial risk management in the firm by board of directors.

SZ = [depreciation + profit before tax + deferred tax] / current liabilities

SY = Pre-tax profit/operating capital.

GF = Net tangible assets / current liabilities

YF = Net tangible assets / total liabilities

YZ = Working capital / total assets.

In the opinion of Alexander Bathory, the company's strength is proportional to the value of FRM (Financial Risk Index) , and the financial risk of the enterprise increases as FRM decreases thereby reflecting on the board's decisions and impact on level of financial risk in the overall firm for the period under study.

The research variables are described in Table 3.1

Table 3. 1: Research Variables

Type	Variable	Definition
Independent Variables	Board Size	Total number of directors on the board.
	Independent directors	Number of independent directors
	Financial Expertise	Number of directors with financial expertise.
	Number of female directors	Number of female directors on the board.
	Directors appointed after CEO	Number of directors appointed after CEO appointment
Control Variable	Firm Size	Size of the firm based on total assets measured in Kenya shillings.
	Firm Age	Age of the firm in number of calendar years since incorporation.
	Regulatory Framework	Number of external regulators overseeing the firm's sector.
Dependent Variable	Financial Risk Index	This is the financial risk index in every year of operation of the firm. It the measure used by the study to represent financial risk management effort in the firm by board of directors.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1. Introduction

The chapter present the data analysis outcomes as well as the interpretation of the findings. The findings are guided by the study objectives which is underpinned by the variables under considerations. Tables and figures are the main features of interpretation following the format presented in the previous chapter.

4.2 Descriptive Statistics

Descriptive statistics is done to establish the summary of the findings and present. The statistics used in this research included measures of central tendency, mean, minimum, and maximum, as well as measures of dispersion. The measures of central tendency provide a broad overview of the research data, whilst the measures of dispersion provide a summary and the type of spread in relation to the data under consideration. The data collected spanned the years 2017-2021.

Table 4. 1 Descriptive Statistics

Descriptive Statistics						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Financial Risk Index (FRM)	245	129.85	-39.62	90.23	7.04	14.03
No. of Directors on the Board	245	14	3	17	9.17	2.862
No. of Independent Directors	245	6	1	7	3.37	1.237
No. of Directors with Financial Expertise	245	6	1	7	3.77	1.166
No. of Female Directors	245	7	0	7	2.23	1.459
No. of Directors Appointed after CEO appointment	245	14	1	15	7.17	2.862
Age of the firm (No. of Calendar years)	245	143	9	152	69.68	33.517
Size of the Firm in (Kes '000')	245	1,304,796,729	117,271	1,304,914,000	126,973,824	211,550,909
No. of External Regulators	245	1	1	2	1.29	.453
Valid N (listwise)	245					

From the descriptive statistics, the study established that financial risk management among the firms under study have been fluctuating from as low as -39.62 and highs of 90.23 The mean value of 7.04 on average, firms listed at the NSE had a financial risk management score that revolves within 7.04 implying that on the average over the 5-year period, risk level in the firms has been on the higher side. In addition, the standard deviation of 14.03 implies that financial risk management discrepancy between the firms is not wide.

Based on the size of board of management, expressed as the total number of board of directors, the study established that there is a small difference between the largest board of directors and the firm comprising the least directors. The findings shows that the largest board of directors registered a score of 17 while the smallest board had a score of 3. Having a mean of 9.17 and a standard deviation of 2.86, the findings implies that majority of the firms listed at the NSE comprises of board of directors within a score of 10 and that the deviation between and among the firms is about 3, respectively.

Additionally, the study findings shows that the independence of board of directors of the firms listed at NSE varied from 1 to 7. The mean values shows that majority of the firms listed at the NSE comprises of 4 independent directors. A standard deviation of 1.2 implies that the deviation between the firms in regard to board independence was small.

In regard to financial expertise of the firms under review, the study findings shows that the firm with the most experienced directors in respect to financial management has 7 directors with financial expertise while the minimum financial expertise score is 1 director. In relation to number of women on the board, the findings shows that some board of directors in the firms listed at the NSE have no women on the board. However, the most gender diversified board of directors comprises of 7 female directors. However, on average, there are 3 female directors on the board.

Furthermore, the study aimed to establish the number of directors appointed after CEO. From the findings, the least number of directors appointed after the CEO is 1 of the directors while the leading firm with directors appointed after the CEO comprises of 15 of the directors. However, on average, the firms listed at the NSE comprises of 8 of the directors appointed after the CEO.

Using total assets measured in kenya shillings as the metric of firm size, the study established that the leading firm has a size of Kenya Shillings 1.3 trillion while the smallest firm has a size of Kenya Shillings 117million but on average, the firms listed at the NSE have assets worth Kes 126 billion. Further, regarding the age of the firm, the study established that majority of the firms listed at the NSE are old enough as shown by the average age 69 years expressed as the number of years since incorporation. However, the youngest firm was 9 years old while the oldest firm was 152 years old. The findings thus implies that there is a large deviation (std dev.= 33.51) as far as age of the firm is concerned.

4.4 Diagnostic Test

To establish whether the secondary data collected was suitable for analysis, a diagnostic test was carried out. The diagnostic tests that were used include the normality test, homoscedasticity, multicollinearity and serial correlation.

4.4.1 Tests of Normality

Normality tests are done to establish the distribution of data based on its skewness and kurtosis. An appropriate data for appropriate findings has a normal distribution. However, in majority of studies with sample size lesser than 50, Shapiro Wilk test is used. To ascertain whether the data collected in regard to independent variables are normally distributed, normality test was conducted using the Shapiro Wilk test given that a sample size of 49 operational firms - both

financial and non-financial was used in the current study. The null hypothesis of the test is judged based on the significance values. If the significance value of a given variable is less than 0.05, then it is said that the data in relation to the variable is normally distributed.

Table 4. 2Tests of Normality

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Financial Risk Index (FRM)	.255	245	.000	.679	245	.000
No. of Directors on the Board	.102	245	.000	.981	245	.002
No. of Independent Directors	.206	245	.000	.927	245	.000
No. of Directors with Financial Expertise	.173	245	.000	.931	245	.000
No. of Female Directors	.152	245	.000	.936	245	.000
No. of Directors Appointed after CEO appointment	.102	245	.000	.981	245	.002
Age of the firm (No. of Calendar years)	.124	245	.000	.963	245	.000
Size of the Firm in (Kes '000')	.275	245	.000	.647	245	.000
No. of External Regulators	.450	245	.000	.566	245	.000

a. Lilliefors Significance Correction

From the data analysis in regard to normality test, it was established that the significance values in relation to all the variables were less than 0.05 implying that the data values explaining the variables in questions were normally distributed and therefore regression analysis outcome were not affected from the challenge of data abnormality.

4.4.2 Test for Multicollinearity

Multicollinearity occurs when one or more variable among the independent variables are related with one another such that when one variable changes, it affects the results of the other independent variable and therefore resulting in level of correlation. Availability of multicollinearity among the variable residuals poses a problem in the model since each independent variable cannot be correlated with each other. The presence of multicollinearity

decreases the model's reliability when it is produced from data. The degree of multicollinearity among the variables under investigation was investigated using the variance inflation factor (VIF) technique. The null hypothesis of VIF is based on the assumption that the values range between 1-10 and as the values approaches 10, the more the presence of multicollinearity problem in the data values.

Table 4. 3: Test for Multicollinearity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	21.538	4.836		4.45	.000		
	No. of Directors on the Board	-.238	.437	-.049	-.545	.586	.440	2.27
	No. of Independent Directors	-1.475	.797	-.130	-1.85	.065	.711	1.40
	No. of Directors with Financial Expertise	-.786	.902	-.065	-.871	.384	.624	1.60
	No. of Female Directors	-1.558	.754	-.162	-2.06	.040	.569	1.75
	Age of the firm (No. of Calendar years)	.064	.025	.152	2.52	.012	.961	1.04
	Size of the Firm in (Kes '000')	9.178E-10	.000	.014	.173	.863	.548	1.82
	No. of External Regulators	-4.244	2.374	-.137	-1.788	.075	.597	1.674

a. Dependent Variable: Financial Risk Index (FRM)

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
						Tolerance	VIF	Minimum Tolerance
1	No. of Directors Appointed after CEO appointment	.[b]	.	.	.	.000	.	.000

a. Dependent Variable: Financial Risk Index (FRM)

b. Predictors in the Model: (Constant), No. of External Regulators, Age of the firm, No. of Directors with Financial Expertise, No. of Independent Directors, No. of Female Directors , Size of the Firm (Kes 000), No. Directors on the Board

From the findings, it is evident that VIF values obtained fell in the recommended bracket 1-10. Furthermore, the values are small implying that there is little or no multicollinearity in the data values and thus no effect on the regression model for prediction of the outcome variable as a result of multicollinearity.

Number of directors appointed after CEO appointment was excluded implying that the variable is closely represented by another one among the rest.

4.4.3 Serial Correlation

The aim of autocorrelation, also known as serial correlation analysis, is to see if the sample variables are autocorrelated with their residuals over time. The Durbin Watson serial correlation is a standard indicator of serial correlation, with a decision criterion that the DW statistic ranges between 1-4 where a statistic of 2 implies no autocorrelation, less than 2 implying a positive autocorrelation and greater than 2 implying a negative autocorrelation.

Table 4. 4Serial Correlation

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.413[a]	.170	.146	12.97	.826

a. Predictors: (Constant), No. of External Regulators, Age of the firm, No. of Directors with Financial Expertise, No. of Independent Directors, No. of Female Directors, Size of the Firm (Kes 000), No. Directors on the Board

b. Dependent Variable: Financial Risk Index (FRM)

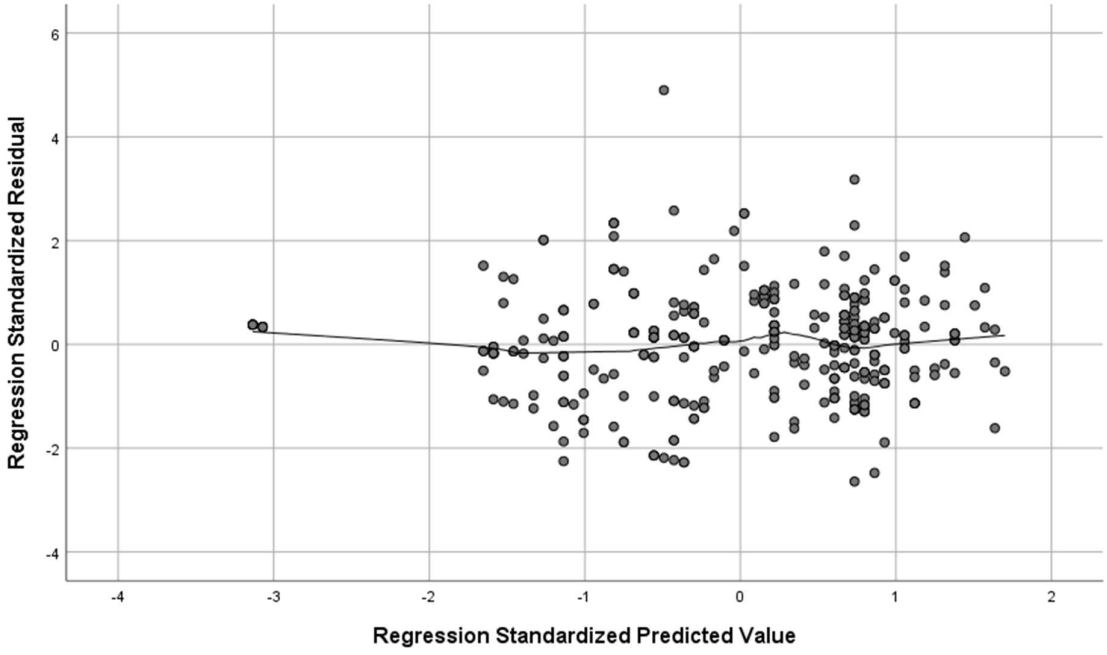
The findings as per the Durbin Watson serial correlation test above indicate that the DW value is 0.826 which is less than 2 implying that there is a positive serial correlation that exists among the data values of the variables. A positive autocorrelation implies that the residuals of data

values of the variables are autocorrelated, but the effect may not be significant to influence the outcome of the regression analysis since standard errors tend to be small.

4.4.4 Homoscedasticity

In regression analysis, it is important to test whether the variance of error terms is homogeneous across the values of the predictor variables. This is the assumption of homoscedasticity. A plot of standardized residuals versus predicted values can show whether points are equally distributed across all values of the predictor variables. A test of this assumption in this study yielded the results in Figure 4.2

Figure 4.2 Scatter Plot



There is evidence that the assumption of homoscedasticity has been met since the scatterplot show that the data points are equally distributed above and below zero on the X axis, and to the left and right of zero on the Y axis.

4.5 Regression Analysis

Regression analysis is an inferential statistic that aims to establish the relation between board characteristics and financial risk management among the firms listed at the NSE. In order to bring out this relationship, the study carried out a regression analysis incorporating all variables. The outcome of regression analysis is interpreted based the model summary, analysis of variance and the regression coefficient table.

4.5.1 Model Summary

The model summary establishes the correlation coefficient (R) and coefficient of determination (R square. The coefficient of correlation determines the strength of correlation between the dependent and independent variables while the coefficient of determination explains the magnitude of contribution on the dependent variable courtesy of independent variables.

Table 4. 5 Model Summary

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.413[a]	.170	.146	12.97

a. Predictors: (Constant), No. of External Regulators, Age of the firm, No. of Directors with Financial Expertise, No. of Independent Directors, No. of Female Directors, Size of the Firm (Kes 000), No. Directors on the Board

b. Dependent Variable: Financial Risk Index (FRM)

From the findings, the study established that board characteristics and financial risk management have a weak correlation (r=0.413). Additionally, the study established that the board characteristics considered; No. of External Regulators, Age of the firm, No. of Directors with Financial Expertise, No. of Independent Directors, No. of Female Directors, Size of the

Firm (Kes 000), No. Directors on the Board, explains 17% of the overall risk management in the organization. This implies that approximately 83% of risk management capability of the firms under study is attributed to other factors not considered in the study which may include but not limited to capital structure, debt structure, solvency, profitability, and operation ability.

4.5.2 ANOVA

Analysis of variance is a technique used to determine the goodness of fit of a model regarding regression data. The decision criterion is based on the significance level where, less than 5% imply the model is fit for the data and vice versa.

Table 4.6 ANOVA

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8,192.82	7	1170.40	6.95	.000[b]
	Residual	39,879.54	237	168.26		
	Total	48,072.37	244			

a. Dependent Variable: Financial Risk Index (FRM)

b. Predictors: (Constant), No. of External Regulators, Age of the firm, No. of Directors with Financial Expertise, No. of Independent Directors, No. of Female Directors, Size of the Firm (Kes 000), No. Directors on the Board

As shown from the ANOVA model, the significance value of the model is 0.000 which is less than 0.05. The findings imply that the model was statistically good of fit for the regression data. As a result, it can be argued that the findings from regression analysis is credible, and the independent factors predicted the outcome variables significantly.

4.5.3 Regression Coefficients

Regression coefficients explains the degree of individual variable effect on the outcome variable. The coefficients also explain the nature of association between the dependent and the predict variables as well as the significance of the effect.

Table 4. 7: Regression Coefficients

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	21.538	4.836		4.454	.000
	No. Directors on the Board	-.238	.437	-.049	-.545	.586
	No. of Independent Directors	-1.475	.797	-.130	-1.852	.065
	No. of Directors with Financial Expertise	-.786	.902	-.065	-.871	.384
	No. of Female Directors	-1.558	.754	-.162	-2.065	.040
	Age of the firm (No. of Calendar years)	.064	.025	.152	2.527	.012
	Size of the Firm in (Kes '000')	9.17E-10	.000	.014	.173	.863
	No. of External Regulators	-4.244	2.374	-.137	-1.788	.075

a. Dependent Variable: Financial Risk Index (FRM)

The study noted the negative beta (β) output for five of the variables depicting an inverse correlation with the dependent variable Financial Risk Index (FRM). In the opinion of Alexander Bathory, the financial risk management of the enterprise in enhanced as the derived Financial Risk Index (FRM) decreases. The relationship between the two is inverse. This implies that the output negative beta (β) for the already inverse relationship leads to a final net positive impact that the independent variable with a negative (β) has on financial risk management. A beta of less than one (<1) leads to the independent variable having a reducing effect on the dependent variable and a beta of greater than one (>1) leads to a proportionate increase in the dependent variable.

From the table of regression beta coefficients, the study findings show that without the board characteristic dimensions considered in the study, financial risk management in the firms under study has a score of 21.53. As a dimension of board characteristics, the study established that increasing the number of directors on the board by a single unit decreases Financial Risk Index (FRM) by 0.23 (β = - 0.238) implying the firm's ultimate financial risk management is in turn only improved by a factor of 0.23 but this impact may be due chance as the variable is also not significant at (α=0.586). Considering number of independent directors, increasing their number on the board by a single unit more than proportionately decreases Financial Risk Index (FRM) by 1.47 implying the firm's ultimate financial risk management is improved by 1.47 (β = - 1.475) but this impact may again be due chance as the variable is not significant at (α=0.065). Similarly, the study found that improving number of directors with financial expertise by 1 unit marginally decreases Financial Risk Index (FRM) by 0.78 implying resultant financial risk management is in turn increased by 0.78 but similarly its impact may be due chance as the variable is also not significant at (α=0.384).

The study found that increasing the number of female directors on the board by a single unit more than proportionately decreases Financial Risk Index (FRM) by 1.558 implying that the firm's ultimate financial risk management is in turn improved by 1.558 (β = - 1.558) and this impact is not due to chance as it is significant at (α=0.04). Further the study found that increasing the number of regulators that oversee a firm by a single unit exponentially decreases Financial Risk Index (FRM) by 4.244 (β = - 4.244) which in turn increases the firm's ultimate financial risk management by 4.22 but this impact may be to chance as it is not significant at (α=0.075).

Further, the study found out that as the age of the firm increases by 1-year, Financial Risk Index (FRM) reduces by a factor of 0.064 (β = 0.064) hence in turn marginally improving ultimate

financial risk management by a factor 0.064 and this impact is not due to chance as it is significant at (α=0.012).

Finally, in regard to Size of the firm, the study found out that if the size of the firm is increased by Kes 1,000.00 this negligibly decreases Financial Risk Index (FRM) by 0.0000000009178 (β = 0.0000000009178) hence in turn ultimate financial risk management is improved by a marginal factor of 0.0000000009178 but this impact may be attributed to chance as it is not significant at (α=0.863).

In summary, the study found that variables with negative beta will lower Financial Risk Index (FRM) which in turn increases financial risk management. Further, if they have p-values that are insignificant (p>0.05) then they are excluded from the regression equation hence the resultant regression model is therefore presented as:

Financial risk management =21.538 + 0.064 (Age of the Firm) -1.55 (Number of Female Directors)

The study aimed to establish the role control variables play in the association between board characteristics and financial risk management of the firms under study. The study considered the Age of the Firm, Size of the Firm and Number of Regulators as control variables in the study. The study found that only incorporation of age of the firm has a significant impact on financial risk management while Size of the Firm only had a marginal positive impact that was not significant (α=0.863). As for number of regulators the study found out that as the number of regulators overseeing the firm is increased by 1-unit, Financial Risk Index (FRM) exponentially reduces by a factor of 4.244 (β = - 4.244) hence in turn exponentially improving ultimate financial risk management by the same factor 4.244 but this impact could be due to chance as it is not significant at (α=0.075).

4.7 Discussion of Regression and study results

This research project investigated the relationship between characteristics of the board of directors on financial risk management in the firms listed on the Nairobi Securities Exchange (NSE). The study conducted analysis on 49 firms where data was readily available. Reference was to three key theories in literature i.e resource dependence theory, agency theory and stewardship theory to anchor and guide the research. The results from data analysis have established the findings in relation to the study objective.

In relation to the effect of size of the board on financial risk management of the firms listed at the NSE, the study established that as the board size increases, financial risk management of the firms in quest reduces. This implies that there is an inverse relationship between size of the board and financial risk management. The findings are in tandem with Nguyen, Newby, and Macaulay (2015) who established that as the size of the board of directors increases, there is disagreement due to diverse opinion leading to non-disclosure of financial performance as they appear in organizational aspect leading to low financial risk management. The study established that Number of Directors Appointed after CEO appointment as a variable was already closely represented by another variable among the rest hence it was excluded from further statistical analysis.

In relation to independence of the board, the study found a positive relationship between board independence and organizational financial risk management though not significant. In this respect, the more the number of independent non-executive directors, the more an organization become firm on financial risk management. As argued by Cresswell and Sheikh (2013), independent directors act to the best of their understanding without manipulation from organizational management and therefore, they advise on the best investment opportunities with limited or no risks associated. As a result, a firm with more independent directors will

have appropriate strategies to mitigate financial risks hence resulting to reduced loses and increased profitability.

The study established that number of female directors on the board positively affected financial risk management. The view that having more women on the board leads to superior financial risk management and adds to the quality of accountability and transparency in financial management was upheld by the study. The finding agrees with Wanyama and Olweny (2013) that women are believed to be transparent and accountable on matters financial management. As a result, on financial risk management, they will be cautious by advising the organization on investment of projects that are less risky to avoid total loss in case of calamities.

Furthermore, the study established a positive relationship between board of directors' financial expertise and financial risk management. The findings imply that having more directors on board who well understand financial management in the organization will advise the organization appropriately in relation to financial risk management. As a result, increased number of directors with financial management knowledge adds to the wealth of experience on financial risk management.

As a result of control variables considered in the study, only Age of the Firm has a significant impact on financial risk management (α= 0.012). The (β = 0.064) implies the study found out that the older the firm the better the financial risk management approach that is in place. In regard to the number of external regulators overseeing the firm, the study found that the impact of regulators to be not significant (α= 0.075) on financial risk management in the NSE listed firms however the presence of more than 1 core regulators for a firm in a segment led to exponential better financial risk management practices that reduced financial risk in the firm (β = -4.24).

In summary, the research findings indicate the variables representing board characteristics have a bearing on financial risk management in the NSE listed firms and agree with similar studies performed in other markets.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the key findings, highlighted conclusions drawn from the findings and recommendations, both for policy and for future research work. The conclusions and recommendations drawn were in quest of addressing research objective.

5.2 Summary

The aim of the study was to determine the relationship between board characteristics and financial risk management of firms listed at the Nairobi Securities Exchange. The study incorporated five dimensions of board characteristics; board size, board independence, directors appointed after CEO appointment, financial expertise and gender diversity. Additionally, the study aimed to establish the role of control variables on the relationship between board characteristics and financial risk management.

Analysis of descriptive statistics showed that the firms listed at the NSE have varied board sizes and that majority of the board of directors have more male directors than female directors with some firm's board of directors, having no representation of female directors. Additionally, the study established that as far as independence of the board of directors is concerned, the average number of independent directors is 4. Furthermore, descriptive statistics showed that directors with financial expertise in majority of the firms ranges between 1 to 7 directors on the board of the firms listed at the NSE.

Based on inferential statistics, No. of Directors Appointed after CEO appointment was excluded from further study implying that the variable was closely represented by another one among the rest.

According to the study findings, independence of the of the board has a positive relationship with organizational financial risk management. From a broader perspective, independent directors have the freedom to make appropriate decisions that is aimed at enhancing shareholder value creation. As a result, a unit advancement of board independence, according to the findings, improves financial risk management though it is not significant. Similarly, the study established that financial expertise has a positive but not significant relationship with financial risk management across the firms listed at the NSE. The findings also imply that board of directors with financial management knowledge makes appropriate decisions as far as financial risk management is concerned. The study established that gender diversity positively impacts financial risk management but is not significant.

Considering control variables in the study, Age of the Firm has a positive significant impact on financial risk management implying older firms had better financial risk management approach in place. Presence of a higher number of regulators had a positive but not significant impact on financial risk management implying that the higher the number of external regulators put in place to oversee the firm, the better the resulting financial risk management practice. Firm size also had positive but not significant relationship with financial risk management at the firm. As the firm increases in size so does its financial risk management practice improve.

5.3 Conclusion

The study has established mixed findings as far as the relationship between board characteristics and financial risk management among the firms listed at the NSE covering all segments. As a result, the study contributes to findings of similar studies that the number of directors on the board (board size) may have a negative impact on financial risk management in the firm. A unit increase in the number of directors on the board was found to result in a

lower financial risk index reflecting increased risk in the firm related with poor risk management practice by the larger board. Due to the large number of some of the board of directors, decision making becomes a problem hence leading to delayed policy formulation and implementation regarding financial risk management. Additionally, the study concludes that financial expertise is a useful characteristic of the board that enhances the capacity to manage financial risks appropriately.

Regarding independence of the board of directors, the study concludes that there is proper decision-making when a director is not influenced by the management. Independent decisions are made which are appropriate for policy formulation and implementation. Similarly, the study found that having a gender diversified board of directors is significant on matters financial risk management. A female director is understood to be firm in financial management and takes more precaution on investment in risky projects which may jeopardize financial performance of the firm. The average number of women directors on boards as a proportion of board sizes of firms listed on the NSE is at a threshold whereby they positively contribute to actual risk management performance of the firms.

Furthermore, the study found that the control variables in the study had an effect on the relationship between the dependent and independent variables. As a result, it is concluded that firm size, age of the firm and number of external regulators overseeing the firm adds to the relationship between board characteristics and financial risk management for NSE listed firms. However only age of the firm was significant among the control variables.

Finally, the findings of the study will be useful to firm owners and other market practitioners focused on outcomes of financial risk management in firms. The results reinforce the need to maintain an optimal balance of these board characteristics as a primary starting point when constituting boards of directors to achieve the desired impact on level of financial risk

management to achieved. Results of the study imply that spending a lot of resources on appointing many directors after appointment of the CEO may not necessarily add towards financial risk management in the firm. Conventional wisdom suggests such directors would easily align with the CEO while the study imply that their would-be contribution towards financial risk management is already catered for by other board characteristics. The study results imply that in the context of an average board size of 10 directors for firms listed on the NSE, use of a higher number of regulators in providing external oversight to financial industry segment may be an effective approach in forcing the boards to agree and adopt a risk governance rule set towards reduction of financial risk management in the firm.

5.4 Recommendations for Policy

Based on the conclusions made from the study findings, the recommendations drawn are as follows:

Firstly, the firms listed at the NSE have large sized boards of directors that negatively affects other important and beneficial characteristics of the board that would be important in decision making on financial risk management. As a result, the study recommends that the firms should harmonize the number of directors in the board to ensure effective decision making, policy formation and implementation as far as financial risk management is concerned.

Secondly, the study recommends that the firms under study should consider financial expertise of a director during recruitment. This recommendation was arrived at due to the positive relationship that the characteristic has on financial risk management.

Thirdly, the study recommends that the firms listed at the NSE should incorporate more independent non-executive directors. Having more independent directors increases the

independence of decision making and therefore effectiveness of appropriate policy formulation in relation to financial risk management.

Similarly, the study makes recommendations that firms listed at the NSE should consider having more women on the board of directors. The higher proportion might increase their ability to table their input on the boards. This will enhance financial risk management at the firms.

5.5 Limitations of the Study

The study encountered a degree of limitations. First, the main limitation of the study is that the data was collected from publicly available information portals for annual financial reports and treated as credible reports thus assumed to be the correct and final financial position of the firms and board composition. The data may have reporting errors in the filed reports or figures may have been subsequently restated and updated reports not filed on the public portals and that would genitively affect the validity of the findings.

Second, the entire population census of actively operating firms at the NSE is only 49 which is relatively small however still passed normality and correlational tests. Data challenges meant that a few of the entries for some of the firms could not be found but this is noted to be insignificant and far less than estimated 0.01% of the entire target year observations for the 49 firms that were missing hence did not negatively affect the study outcome.

Third, the research was limited to a 5-year duration from 2017 to 2021. The five-year period was deemed appropriate to study the firms and provide generalizable findings, conclusions and recommendations for policy and future studies. Inclusion of older financial data say covering 15–20-year financial periods may yield some reasonable variation where performance may

have been influenced differently by the included control variables like impact of regulators and prevailing rules during the era.

Fourth, we can rule out the impact of regulators in driving formation of the boards and pre-approving directors who ultimately sit on the boards. This is so especially for the case of commercial banks listed in the financial segment of the NSE and covered as part of this. The regulators also draft external rules that cover risk management practice to be followed by the banks hence it is possible for the observed firm performance to be indirectly affected by directions of regulators like the Central Bank of Kenya and Insurance Regulatory Authority rather than a result of independently formulated board characteristics or its effectiveness hence there is a caveat on outcome on this basis.

5.6 Recommendations for Further Research

Firstly, based on the limitations of the study, it is suggested that more studies be conducted within the topic covered using data captured from a longer period say 15-20 years. This may register a different outcome and capture the impact of including regulators operating under changing regulation over the different eras as a control variable and see if the study will yield a different result.

Secondly, different board characteristics could be explored in a study covering variables like multiple directorships, different age bands and number of political or government led director postings to firms. Thirdly it would be of benefit to establish the optimal board size for NSE listed firms through a study such that impact on financial risk management is maximized and resources channelled towards excess board preserved for other uses. Related studies covering impact on financial risk management in NSE firms could cover variables of strategic nature and current themes like sustainability drawn from things like environment, social and governance [ESG] to describe board business strategy making strengths. Finally, the issue of

women on boards was strongly inversely related on the NSE firms that have large board sizes. This area could be further studies incorporating social leaning social descriptors to bring out personality traits for both men and women on the board and study impact on financial risk management.

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APPENDICES

Appendix I : List of Firms Listed at the Nairobi Securities Exchange

1. Eaagads Plc
2. Kapchorua Tea Co. Plc
3. Kakuzi Plc
4. Limuru Tea Co. Plc
5. Sasini Plc.
6. Williamson Tea Kenya Plc
7. Car & General (K) Plc
8. ABSA Bank Kenya Plc.
9. Stanbic Holdings Plc
10. I & M Holdings Plc.
11. Diamond Trust Bank Kenya Plc
12. HF Group Plc.
13. KCB Group Plc.
14. NCBA Group Plc
15. Standard Chartered Bank Kenya Plc
16. Equity Group Holdings Plc
17. The Co-operative Bank of Kenya Plc
18. Express Kenya Plc.
19. Sameer Africa Plc
20. Kenya Airways Plc
21. Nation Media Group Plc.
22. Standard Group Plc.
23. TPS Eastern Africa (Serena) Ltd.
24. WPP Scangroup Plc.
25. Longhorn Publishers Plc.
26. Bamburi Cement Plc

27. Crown Paints Kenya Plc.
28. E.A Cables Plc
29. E.A Portland Cement Plc
30. Total Kenya Plc
31. KenGen Plc.
32. Kenya Power & Lighting Plc.
33. Umeme Plc
34. Jubilee Holdings Plc
35. Kenya Re - Insurance Corporation Plc
36. Liberty Kenya Holdings Plc
37. CIC Insurance Group Plc
38. Olympia Capital Holdings Plc
39. Centum Investment Plc.
40. Home Afrika Plc
41. B.O.C Kenya Plc.
42. British American Tobacco Kenya Plc.
43. Carbacid Investments Plc.
44. East African Breweries Plc
45. Unga Group Plc
46. Kenya Orchards Plc
47. Flame Tree Group Holdings Plc
48. Safaricom Plc.
49. Stanlib Fahari I-REIT

Source: Nairobi Securities Exchange

Appendix II : Data Collection Form

Firm Name:					Industry Segment: [Financial / Non-financial]						
Dependent Variable	Year	Total Assets	Total Liabilities	Net Tangible Assets	Current Asset	Current Liabilities	Operating Capital	Working Capital	Depreciation	Deferred Tax	Profit Before Tax
	2021										
	2020										
	2019										
	2018										
	2017										
Independent Variables								Control Variables			
	Year	Number of Directors on the Board	Number of Independent Directors on the Board	Number of directors with Financial Expertise	Number of female directors on the board	No of Directors appointed after CEO appointment		Age of the firm in years.	Size of the Firms total assets in Kes Shilling	Number of Regulators overseeing firm's sector	
	2021										
	2020										
	2019										
	2018										
	2017										

Appendix III: Raw Input Data

				KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'
	Listed firm	**Industry Segment: Financial = 2 Non Financial = 1**	**Year**	**Total Assets**	**Total Liabilities**	**Net Tangible Assets**	**Current Asset**	**Current Liabilities**	**Operating Capital**	**Working Capital**	**Depreciation**	**Deffered Tax**	**Pofit Before Tax**
1	Eaagads Ltd	1	2017	922,802	72,216	850,586	147,539	11,500	136,039	136,039	15,000	-	32,212
		1	2018	905,895	89,730	816,165	905,895	13,554	892,341	892,341	15500	900	- 51,858
		1	2019	942,324	95,406	846,918	942,324	20,464	921,860	921,860	15,548	- 930	1,728
		1	2020	948,581	116,723	831,858	110,328	49,830	94,498	60,498	15,544	- 10,389	- 77,088
		1	2021	1,116,493	106,805	1,009,688	113,198	20,286	92,912	92,912	15,152	2,904	4,660
2	Kapchorua Tea Kenya Plc	1	2017	2,330,311	800,000	1,530,311	1,769,191	411,664	1,357,527	1,357,527	-	-	- 351,944
		1	2018	2,567,000	895,000	1,672,000	1,096,632	375,399	721,233	721,233	0	-	257,238
		1	2019	2,109,000	642,000	1,467,000	872,389	193,329	679,060	679,060	-	-	- 151,676
		1	2020	1,981,000	555,000	1,426,000	875,728	180,948	694,780	694,780	163	-	17,980
		1	2021	2,138,000	651,000	1,487,000	871,626	135,939	735,687	735,687	115	-	34,114
3	Kakuzi Plc	1	2017	5,746,126	1,264,083	4,482,043	2,028,447	427,350	1,601,097	1,601,097			58,477
		1	2018	5,941,042	1,424,090	4,516,952	2,407,204	616,900	1,790,304	1,790,304	183000	68,000	754,683
		1	2019	6,461,035	1,271,566	5,189,469	2,316,917	389,964	1,926,953	1,926,953	197,000	114,000	560,753
		1	2020	6,906,816	1,340,367	5,566,449	2,916,774	259,897	2,656,877	2,656,877	234,000	71,000	847,532
		1	2021	5,639,459	1,348,048	4,291,411	2,958,275	277,091	2,681,184	2,681,184	248,000	- 13,000	471,556
4	Limuru Tea Co. Ltd.	1	2017	262,009	74,231	187,778	140,277	39,439	100,838	100,838	24,526	- 12,178	- 31,565
		1	2018	268,255	75,129	193,126	159,521	45,550	113,971	113,971	15683	- 1,887	3,696
		1	2019	235,670	41,644	194,026	139,615	16,671	122,944	122,944	14,954	- 1,790	3,016
		1	2020	229,696	229,696	-	135,900	19,649	116,251	116,251	-	-	- 7,898
		1	2021	208,501	208,501	-	113,858	9,731	104,127	104,127	-	-	- 14,198
5	Sasini Plc.	1	2017	13,196,025	1,880,148	11,315,877	2,985,170	703,941	2,281,229	2,281,229	-	-	1,178,280
		1	2018	12,961,680	1,637,597	11,324,083	2,645,241	459,079	2,186,162	2,186,162	0	-	354,615
		1	2019	14,674,359	1,789,304	12,885,055	1,186,882	443,597	743,285	743,285	-	-	- 392,109
		1	2020	14,577,755	1,524,690	13,053,065	1,983,194	345,714	1,637,480	1,637,480	-	-	34,324
		1	2021	15,142,739	1,698,748	13,443,991	2,537,391	397,685	2,139,706	2,139,706	-	-	721,069

				KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'
	Listed firm	**Industry Segment: Financial = 2 Non Financial = 1**	**Year**	**Total Assets**	**Total Liabilities**	**Net Tangible Assets**	**Current Asset**	**Current Liabilities**	**Operating Capital**	**Working Capital**	**Depreciation**	**Deffered Tax**	**Pofit Before Tax**
6	Williamson Tea Kenya Plc.	1	2017	8,364,127	614,807	7,749,320	788,704	227,766	560,938	560,938	300,000	-	-
		1	2018	9,505,074	817,424	8,687,650	1,096,632	375,599	781,033	721,033	316000	-	744,000
		1	2019	8,271,981	565,459	7,706,522	872,389	193,329	716,060	679,060	481,000	- 130,000	- 163,000
		1	2020	7,900,570	1,764,395	6,136,175	2,212,782	565,233	1,653,549	1,647,549	378,000	- 49,000	102,000
		1	2021	8,048,478	2,088,582	5,959,896	20,984,741	517,381	20,505,360	20,467,360	372,000	8,000	- 70,000
7	Car & General (K) Ltd	1	2017	9,400,007	1,211,724	8,188,283	1,007,689	605,862	3,520,827	401,827	70,000	- 4,000	105,000
		1	2018	10,173,507	6,569,541	3,603,966	5,029,246	5,078,562	2,954,684	- 49,316	62000	105,000	322,000
		1	2019	11,483,744	8,162,000	3,321,744	5,549,830	6,356,590	3,378,240	- 806,760	77,000	- 102,000	- 42,000
		1	2020	11,903,486	7,964,166	3,939,320	4,952,022	5,721,837	2,189,185	- 769,815	190,000	- 200,000	- 107,000
		1	2021	14,447,609	9,593,656	4,853,953	6,882,829	7,365,255	- 482,426	- 482,426	-	-	708,000
8	ABSA Bank Kenya Plc.	2	2017	271,572,000	228,515,000	43,057,000	268,831,000	228,515,000	40,316,000	40,316,000	767,000	- 209,000	10,005,000
		2	2018	325,313,000	282,443,000	42,870,000	323,041,000	282,443,000	40,598,000	40,598,000	792000	- 714,000	10,250,000
		2	2019	374,904,000	330,951,000	43,953,000	372,061,000	329,617,000	42,444,000	42,444,000	1,070,000	- 725,000	10,328,000
		2	2020	379,441,000	334,245,000	45,196,000	376,632,000	332,836,000	43,796,000	43,796,000	1,022,000	- 426,000	5,100,000
		2	2021	428,722,000	374,413,000	54,309,000	426,353,000	373,472,000	52,881,000	52,881,000	769,000	-1,124,000	14,726,000
9	Stanbic Holdings Ltd.	2	2017	248,738,719	205,783,032	32,249,878	246,482,444	205,420,402	41,062,042	41,062,042	380,270	-1,004,000	5,401,248
		2	2018	290,570,254	245,946,834	33,962,930	288,383,884	241,954,487	46,429,397	46,429,397	414148	- 664,000	8,947,757
		2	2019	303,624,592	254,589,827	38,660,696	299,962,502	249,220,423	50,742,079	50,742,079	802,460	-1,212,000	7,709,764
		2	2020	328,593,000	276,863,000	41,516,000	324,830,000	275,477,000	49,353,000	49,353,000	931,000	- 338,000	6,227,000
		2	2021	328,872,000	272,420,000	46,081,000	325,881,000	271,288,000	54,593,000	54,593,000	850,000	- 808,000	9,756,000
10	I & M Holdings Plc.	2	2017	240,110,741	193,095,258	43,514,963	227,227,112	187,321,266	39,905,846	39,905,846	426,453	- 806,000	9,894,574
		2	2018	288,522,049	237,647,601	46,002,254	281,797,488	229,400,826	52,396,662	52,396,662	407239	- 509,000	11,497,780
		2	2019	315,290,674	254,428,501	55,705,495	305,138,245	246,598,298	58,539,947	58,539,947	821,799	-1,158,000	14,603,108
		2	2020	358,099,793	290,036,654	62,471,197	345,978,207	277,919,955	68,058,252	68,058,252	993,125	-1,246,000	10,952,004
		2	2021	415,180,677	341,132,600	67,469,018	402,297,048	329,919,688	72,377,360	72,377,360	1,320,783	- 95,000	12,412,906
11	Diamond Trust Bank Kenya Ltd	2	2017	363,303,400	309,683,645	52,119,326	356,587,151	305,499,397	51,087,754	51,087,754	982,200	1,025,030	10,098,235
		2	2018	377,719,314	318,780,065	57,535,806	371,308,640	312,384,211	58,924,429	58,924,429	1002064	473,945	11,000,272
		2	2019	386,230,186	321,714,841	62,920,407	376,769,565	311,967,061	64,802,504	64,802,504	1,515,092	1,146,058	11,262,914
		2	2020	425,054,034	356,739,902	67,419,510	414,976,117	337,195,070	77,781,047	77,781,047	1,500,389	2,587,511	4,668,271
		2	2021	456,842,717	382,289,733	73,703,809	446,569,775	361,792,837	84,776,938	84,776,938	2,201,151	1,998,011	6,625,657
12	HF Group Plc.	2	2017	67,541,116	56,091,581	10,377,148	66,023,736	46,713,528	19,310,208	19,310,208	168,435	- 104,572	126,216
		2	2018	60,588,226	50,216,995	9,363,678	59,242,913	39,800,057	19,442,856	19,442,856	181033	- 65,191	- 598,218
		2	2019	56,454,917	46,212,698	9,378,714	54,601,386	39,694,224	14,907,162	14,907,162	246,004	- 214,019	- 110,108
		2	2020	55,445,249	46,883,461	7,858,534	53,664,395	42,604,483	11,059,912	11,059,912	273,461	- 80,307	- 1,706,863
		2	2021	52,903,518	44,935,230	7,448,415	51,313,064	40,057,478	11,255,586	11,255,586	224,829	- 306,423	- 593,291

				KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'
	Listed firm	**Industry Segment: Financial = 2 Non Financial = 1**	**Year**	**Total Assets**	**Total Liabilities**	**Net Tangible Assets**	**Current Asset**	**Current Liabilities**	**Operating Capital**	**Working Capital**	**Depreciation**	**Deffered Tax**	**Pofit Before Tax**
13	KCB Group Plc.	2	2017	646,668,000	540,703,000	102,594,000	636,214,000	528,063,000	108,151,000	108,151,000	1,731,000	- 733,000	29,114,000
		2	2018	714,313,000	600,652,000	110,658,000	703,306,000	580,685,000	122,621,000	122,621,000	1858000	-1,412,000	33,859,000
		2	2019	898,572,000	768,831,000	123,404,000	878,281,000	741,238,000	137,043,000	137,043,000	2,104,000	24,000	36,897,000
		2	2020	987,810,000	845,387,000	136,924,000	967,722,000	801,497,000	166,225,000	166,225,000	2,408,000	-5,672,000	25,719,000
		2	2021	1,139,672,000	966,165,000	166,497,000	1,117,817,000	921,923,000	195,894,000	195,894,000	3,857,000	-4,351,000	47,815,000
14	NCBA Group Plc.	2	2017	206,172,460	171,456,223	33,135,926	205,023,748	154,430,365	50,593,383	50,593,383	274,700	- 665,304	5,600,950
		2	2018	245,106,892	214,499,081	26,912,398	242,803,409	206,536,123	36,267,286	36,267,286	0	- 554,640	6,734,188
		2	2019	494,717,416	427,457,591	60,250,923	487,021,612	400,710,917	86,310,695	86,310,695	-	416,421	11,313,559
		2	2020	527,868,381	455,320,084	66,068,178	521,608,419	438,221,823	83,386,596	83,386,596	-	-2,758,514	4,981,921
		2	2021	591,088,038	513,101,009	71,870,390	585,626,570	503,404,573	82,221,997	82,221,997	763,683	-1,695,843	15,034,989
15	Standard Chartered Bank Kenya Ltd.	2	2017	285,724,000	240,059,904	43,443,435	282,372,760	240,059,904	42,312,856	42,312,856	423,394	-1,108,701	10,071,293
		2	2018	285,404,000	238,764,000	44,810,000	282,333,000	238,764,000	43,569,000	43,569,000	442000	160,000	11,847,000
		2	2019	302,138,000	254,377,000	45,029,000	298,244,000	253,661,000	44,583,000	44,583,000	639,000	- 317,000	12,174,000
		2	2020	325,605,000	274,714,000	47,868,000	321,971,000	274,185,000	47,786,000	47,786,000	715,000	-1,072,000	7,396,000
		2	2021	334,871,938	281,657,832	49,315,265	331,675,904	281,293,764	50,382,140	50,382,140	553,947	329,939	12,598,053
16	Equity Group Holdings Plc.	2	2017	524,465,000	431,323,000	83,043,000	513,600,000	383,450,000	130,150,000	130,150,000	3,541,000	251,000	26,882,000
		2	2018	573,384,000	478,427,000	84,491,000	563,108,000	433,326,000	129,782,000	129,782,000	3139000	743,000	28,463,000
		2	2019	673,682,000	561,905,000	101,430,000	655,309,000	497,695,000	157,614,000	157,614,000	4,755,000	-1,088,000	31,478,000
		2	2020	1,015,093,000	876,452,000	127,050,000	993,099,000	772,616,000	220,483,000	220,483,000	5,260,000	-7,755,000	22,170,000
		2	2021	1,304,914,000	1,128,723,000	163,388,000	1,281,624,000	991,483,000	290,141,000	290,141,000	5,241,000	322,000	51,881,000
17	The Co-operative Bank of Kenya Ltd	2	2017	386,857,657	317,045,072	67,793,710	379,364,083	295,881,258	83,482,825	83,482,825	1,951,637	- 68,726	16,398,638
		2	2018	413,670,710	342,915,495	68,257,972	407,056,662	318,965,884	88,090,778	88,090,778	1817946	- 518,672	18,157,131
		2	2019	457,092,986	376,679,509	77,705,459	445,671,750	345,246,203	100,425,547	100,425,547	2,735,754	- 152,988	20,705,754
		2	2020	537,076,319	445,452,983	85,504,235	524,774,710	394,980,886	129,793,824	129,793,824	3,004,831	- 642,026	14,281,860
		2	2021	579,823,654	479,484,185	94,511,134	569,477,462	432,283,195	137,194,267	137,194,267	2,754,399	-1,116,278	22,648,863
18	Express Kenya Plc.	1	2017	363,000	431,000	- 68,000	97,000	162,000	- 3,000	- 65,000	18,042	-	- 94,309
		1	2018	324,000	461,000	- 137,000	75,000	122,000	16,000	- 47,000	18019	- 6,102	- 75,793
		1	2019	477,000	447,000	30,000	76,000	51,000	42,000	25,000	22,647	- 1,742	- 23,163
		1	2020	1,346,000	715,000	631,000	68,000	45,000	35,000	23,000	25,755	- 4,917	- 35,570
		1	2021	1,258,416	709,000	549,416	-	48,000	- 36,000	- 48,000	-	-	- 67,601
19	Kenya Airways Ltd.	1	2017	146,144,000	191,059,000	- 44,915,000	26,747,000	71,301,000	- 17,572,000	- 44,554,000	-	-	- 10,202,000
		1	2018	136,634,000	148,753,000	- 12,119,000	27,976,000	129,512,000	- 23,473,000	-101,536,000	0	-	- 7,588,000
		1	2019	195,673,000	223,199,000	- 27,526,000	25,660,000	67,815,000	- 24,033,000	- 42,155,000	-	-	- 12,975,000
		1	2020	171,462,000	245,257,000	- 73,795,000	27,173,000	85,330,000	- 28,479,000	- 58,157,000	-	-	- 36,573,000
		1	2021	155,555,000	238,892,000	- 83,337,000	25,685,000	80,965,000	- 55,280,000	- 55,280,000	-	-	- 16,028,000
20	Nation Media Group Plc.	1	2017	11,320,000	3,154,000	8,166,000	6,311,100	3,128,100	3,183,000	3,183,000	541,000	- 191,000	1,861,000
		1	2018	11,198,000	3,320,400	7,877,600	6,428,000	3,290,400	3,137,600	3,137,600	525000	- 179,000	1,556,000
		1	2019	12,097,000	4,299,200	7,797,800	6,912,000	3,573,700	3,468,300	3,338,300	623,000	27,000	1,224,000
		1	2020	11,821,000	3,887,600	7,933,400	6,957,100	3,410,100	3,678,000	3,547,000	6,020,000	- 83,000	68,000
		1	2021	12,653,400	4,563,200	8,090,200	8,126,900	4,105,700	4,021,200	4,021,200	-	-	-

				KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'
	Listed firm	**Industry Segment: Financial = 2 Non Financial = 1**	**Year**	**Total Assets**	**Total Liabilities**	**Net Tangible Assets**	**Current Asset**	**Current Liabilities**	**Operating Capital**	**Working Capital**	**Depreciation**	**Deffered Tax**	**Pofit Before Tax**
21	Standard Group Plc.	1	2017	4,460,000	2,594,381	1,865,619	1,874,462	2,212,332	517,130	- 337,870	346	- 103	- 282,000
		1	2018	4,676,133	2,721,817	1,954,316	1,991,597	2,183,681	518,916	- 192,084	255	- 47	397,000
		1	2019	4,196,000	2,774,736	1,421,264	1,385,279	2,320,660	- 234,381	- 935,381	292	- 223	- 684,000
		1	2020	4,055,000	2,935,262	1,119,738	1,299,986	2,562,965	- 603,979	- 1,262,979	342	-	- 434,000
		1	2021	4,354,312	3,307,890	1,046,422	1,507,098	3,276,746	- 456,648	- 1,769,648	380	-	- 22,000
22	TPS Eastern Africa (Serena) Ltd.	1	2017	17,488,000	8,323,000	9,165,000	2,648,000	2,453,000	852,000	195,000	406	- 93	290,000
		1	2018	17,598,000	8,461,000	9,137,000	2,115,000	4,875,000	296,000	- 2,760,000	408	- 117	267,000
		1	2019	18,466,000	9,264,000	9,202,000	1,920,000	2,888,000	- 8,000	- 968,000	488	- 28	351,000
		1	2020	17,414,000	9,153,000	8,261,000	1,484,000	2,230,000	63,000	- 746,000	540	- 482	- 1,564,000
		1	2021	17,429,378	9,732,287	7,697,091	2,030,000	2,522,000	141,000	- 492,000	622	-	- 663,000
23	WPP Scangroup Plc.	1	2017	13,758,912	4,793,743	8,965,169	10,924,015	4,787,863	6,136,152	6,136,152	126	- 22	696,000
		1	2018	14,425,198	5,935,819	8,489,379	11,240,951	5,430,739	5,810,212	5,810,212	119	- 60	935,000
		1	2019	12,803,173	3,510,517	9,292,656	6,584,494	3,255,042	3,329,452	3,329,452	-	-	-
		1	2020	8,741,883	31,117,000	- 22,375,117	23,981,700	23,227,100	754,600	754,600	-	-	-
		1	2021	9,444,783	23,801,800	- 14,357,017	15,365,600	16,485,400	- 1,119,800	- 1,119,800	-	-	-
24	Longhorn Publishers Plc.	1	2017	1,858,734	913,028	945,706	1,251,000	913,028	680,972	337,972	28	6	179,000
		1	2018	2,407,529	1,367,891	1,039,638	1,654,000	1,367,891	871,109	286,109	22	- 2	273,000
		1	2019	2,344,234	1,239,930	1,104,304	1,474,000	1,239,930	621,070	234,070	16	7	264,000
		1	2020	2,450,164	1,715,399	734,765	1,304,000	1,360,660	764,340	- 56,660	14	- 69	- 295,000
		1	2021	2,877,729	2,136,808	740,921	1,558,000	2,136,808	- 578,808	- 578,808	-	-	18,000
25	Sameer Africa Plc.	1	2017	2,969,868	1,132,014	1,837,854	1,698,490	1,096,854	1,163,636	601,636	66	6	14,000
		1	2018	2,587,824	1,458,246	1,129,578	1,300,172	1,438,597	822,575	- 138,425	82	36	51,000
		1	2019	1,530,847	1,461,736	69,111	867,098	1,001,255	280,843	- 134,157	98	370	401,000
		1	2020	1,047,155	932,439	114,716	323,387	218,588	140,799	104,799	10	-	28,000
		1	2021	1,124,090	789,991	334,099	342,717	288,367	54,350	54,350	-	-	-
26	Bamburi Cement Ltd.	1	2017	47,203,000	14,003,000	33,200,000	13,978,000	8,133,000	7,295,000	5,845,000	1,621	- 148	4,116,000
		1	2018	49,085,000	16,894,000	32,191,000	12,233,000	9,423,000	4,213,000	2,810,000	1882	- 176	620,000
		1	2019	49,446,000	16,953,000	32,493,000	12,092,000	8,781,000	5,130,000	3,311,000	2,548	244	728,000
		1	2020	50,357,000	15,395,000	34,962,000	12,709,000	7,017,000	5,857,000	5,692,000	2,504	- 176	1,776,000
		1	2021	51,728,000	15,911,000	35,817,000	14,748,000	7,365,000	7,648,000	7,383,000	2,536	- 128	2,172,000
27	Crow n Paints Kenya Plc.	1	2017	5,872,000	4,114,000	1,758,000	3,124,565	2,894,567	1,750,998	229,998	134	26	398,000
		1	2018	5,476,000	4,449,000	1,027,000	3,457,698	2,987,548	2,214,150	470,150	158	52	396,000
		1	2019	5,522,000	4,214,000	1,308,000	3,651,254	3,059,874	591,380	591,380	-	-	528,000
		1	2020	5,631,000	3,721,352	1,909,648	3,821,241	3,217,132	604,109	604,109	-	-	863,000
		1	2021	7,807,000	4,377,159	3,429,841	5,671,576	4,038,331	2,655,245	1,633,245	376	36,000	1,124,000

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	Listed firm	Industry Segment: Financial = 2 Non Financial = 1	Year	Total Assets	Total Liabilities	Net Tangible Assets	Current Asset	Current Liabilities	Operating Capital	Working Capital	Depreciation	Deffered Tax	Pofit Before Tax
28	E.A Cables Ltd.	1	2017	7,038,421	5,160,000	1,878,421	1,737,000	1,325,452	3,466,548	411,548	256,000	- 247,000	- 927,000
		1	2018	6,603,660	5,102,000	1,501,660	1,134,000	1,401,246	3,287,754	- 267,246	253000	- 248,000	- 813,000
		1	2019	6,274,877	4,145,000	2,129,877	1,147,000	1,457,562	316,438	- 310,562	268,000	25,000	659,000
		1	2020	5,932,382	4,539,811	1,392,571	990,000	1,525,979	- 229,979	- 535,979	270,000	197,000	- 555,000
		1	2021	5,580,066	4,481,176	1,098,890	847,000	1,708,192	- 360,192	- 861,192	-	-	- 410,000
29	E.A Portland Cement Ltd.	1	2017	29,982,000	10,466,405	19,515,595	1,949,095	6,196,213	- 1,006,118	- 4,247,118	702,000	- 242,000	- 1,713,000
		1	2018	37,603,554	12,794,804	24,808,750	1,985,639	8,122,032	- 4,051,393	- 6,136,393	527000	- 812,000	7,042,000
		1	2019	36,541,105	15,021,127	21,519,978	3,618,444	13,789,101	- 3,448,657	- 10,170,657	537,000	400,000	- 2,962,000
		1	2020	35,176,893	16,423,753	18,753,140	2,414,244	16,243,768	- 6,282,524	- 13,829,524	546,000	- 29,000	- 2,799,000
		1	2021	34,641,110	13,628,986	21,012,124	2,443,441	13,181,200	- 7,019,759	- 10,737,759	561,000	- 159,000	1,736,000
30	Total Kenya Ltd.	1	2017	38,012,115	11,922,121	26,089,994	26,454,000	10,234,575	21,387,425	16,219,425	1,222,000	84,000	4,132,000
		1	2018	39,258,921	13,140,719	26,118,202	27,286,000	11,245,365	16,040,635	16,040,635	1349000	104,000	3,599,000
		1	2019	37,564,704	15,803,353	21,761,351	23,829,000	13,457,568	11,404,432	10,371,432	1,712,000	- 41,000	3,881,000
		1	2020	42,987,172	16,126,875	26,860,297	29,829,000	14,287,129	15,852,871	15,541,871	1,706,000	69,000	4,785,000
		1	2021	47,030,094	18,419,271	28,610,823	32,655,000	16,179,466	16,724,534	16,475,534	-	-	3,993,000
31	KenGen Plc.	1	2017	376,729,582	193,893,669	182,835,913	29,639,369	20,093,197	118,176,172	9,546,172	9,121	2,219	11,461,000
		1	2018	379,353,006	189,249,380	190,103,626	31,412,067	20,879,478	21,153,589	10,532,589	10014	3,709	11,745,000
		1	2019	401,422,249	206,457,713	194,964,536	33,629,173	25,597,466	20,494,707	8,031,707	10,272	3,538	11,654,000
		1	2020	412,926,930	201,608,542	211,318,388	34,038,073	17,056,053	25,670,020	16,982,020	11,938	- 4,770	13,790,000
		1	2021	425,658,163	215,334,794	210,323,369	43,819,196	20,395,646	34,416,550	23,423,550	11,421	13,297	14,762,000
32	Kenya Power & Lighting Plc.	1	2017	351,873,000	267,902,615	83,970,385	61,293,386	78,828,585	- 1,906,199	- 17,535,199	11,213	2,298	7,657,000
		1	2018	352,586,000	272,447,800	80,138,200	54,620,181	106,257,796	- 22,977,615	- 51,637,615	15221	1,568	4,968,000
		1	2019	349,241,000	272,263,753	76,977,247	44,710,629	115,680,490	- 42,045,861	- 70,969,861	17,223	- 23	334,000
		1	2020	343,257,000	270,370,560	72,886,440	42,626,939	117,475,761	- 50,757,822	- 74,848,822	16,336	- 6,164	- 7,042,000
		1	2021	350,216,000	275,056,184	75,159,816	49,634,944	116,114,111	- 46,657,167	- 66,479,167	17,042	6,586	8,198,000
33	Jubilee Holdings Ltd	2	2017	104,967,530	80,481,532	24,485,998	36,234,528	34,235,658	1,998,870	1,998,870	-	-	3,978,268
		2	2018	114,189,212	86,637,832	27,551,380	38,654,247	35,214,245	3,440,002	3,440,002	-	-	3,998,584
		2	2019	130,076,938	99,730,179	30,346,759	40,258,761	36,215,421	4,043,340	4,043,340	-	-	4,018,701
		2	2020	145,863,583	110,693,266	35,170,317	43,254,145	40,235,412	3,018,733	3,018,733	-	-	3,855,361
		2	2021	155,272,618	122,508,399	32,764,219	52,364,421	42,354,758	10,009,663	10,009,663	-	-	6,662,406
34	Kenya Re - Insurance Corporation Ltd.	2	2017	42,426,000	15,221,000	27,205,000	38,027,000	13,907,000	24,120,000	24,120,000	-	42	4,054,000
		2	2018	44,091,000	15,718,000	28,373,000	39,617,000	14,423,000	25,194,000	25,194,000	0	139	2,921,000
		2	2019	50,081,000	18,130,000	31,951,000	44,911,000	15,616,000	29,295,000	29,295,000	-	177	3,589,000
		2	2020	53,083,000	18,686,000	34,397,000	47,322,000	16,222,000	31,100,000	31,100,000	-	239	3,691,000
		2	2021	55,406,000	18,366,000	37,040,000	48,636,000	16,046,000	32,590,000	32,590,000	-	287	3,596,000

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	Listed firm	Industry Segment: Financial = 2 Non Financial = 1	Year	Total Assets	Total Liabilities	Net Tangible Assets	Current Asset	Current Liabilities	Operating Capital	Working Capital	Depreciation	Deffered Tax	Pofit Before Tax
35	Liberty Kenya Holdings	2	2017	34,960,000	27,466,000	7,494,000	32,719,000	24,654,000	8,065,000	8,065,000	-	-	1,104,000
		2	2018	33,877,000	26,258,000	7,619,000	31,885,000	23,809,000	8,076,000	8,076,000	0	-	925,000
		2	2019	35,482,000	27,500,000	7,982,000	32,710,000	25,126,000	7,584,000	7,584,000	-	-	1,127,000
		2	2020	36,136,000	27,431,000	8,705,000	33,375,000	25,065,000	8,310,000	8,310,000	-	-	1,044,000
		2	2021	37,083,000	28,268,000	8,815,000	33,445,000	18,256,000	15,189,000	15,189,000	-	-	312,000
36	CIC Insurance Group Ltd.	2	2017	28,253,000	20,616,000	7,637,000	27,193,000	1,842,087	25,350,913	25,350,913	-	-	519,000
		2	2018	31,168,000	23,430,000	7,738,000	30,059,000	3,297,267	26,761,733	26,761,733	0	-	637,000
		2	2019	33,552,000	25,699,000	7,853,000	32,088,000	5,007,239	27,080,761	27,080,761	-	-	405,000
		2	2020	37,059,000	29,430,000	7,629,000	35,648,000	7,422,913	28,225,087	28,225,087	-	-	- 72,000
		2	2021	39,527,000	31,542,000	7,985,000	38,021,000	8,138,765	29,882,235	29,882,235	-	-	960,000
37	Olympia Capital Holdings Ltd.	1	2017	1,613,368	334,000	1,279,368	347,000	213,000	184,000	134,000	18,678	130	51,668
		1	2018	1,658,883	358,000	1,300,883	404,000	232,000	207,000	172,000	18644	-	6,542
		1	2019	1,626,600	343,000	1,283,600	330,000	207,000	145,000	123,000	20,433	-	14,890
		1	2020	1,705,872	391,000	1,314,872	339,000	201,000	149,000	138,000	21,054	4,019	25,723
		1	2021	1,468,738	254,000	1,214,738	299,000	194,000	114,000	105,000	20,307	- 3,801	6,450
38	B.O.C Kenya Plc.	1	2017	2,229,000	618,000	1,611,000	1,206,000	617,000	613,000	589,000	78,000	3,000	84,000
		1	2018	1,808,000	622,000	1,186,000	838,000	622,000	256,000	216,000	84000	4,000	120,000
		1	2019	1,993,000	547,000	1,446,000	1,081,000	547,000	534,000	534,000	-	-	90,000
		1	2020	1,844,000	482,000	1,362,000	946,000	474,000	473,000	472,000	95,000	- 24,000	156,000
		1	2021	1,997,000	408,000	1,589,000	1,155,000	401,000	755,000	754,000	-	-	169,000
39	British American Tobacco Kenya Plc.	1	2017	17,806,000	9,965,000	7,841,000	8,665,000	6,575,000	3,771,000	2,090,000	781,000	-	4,867,000
		1	2018	18,338,000	9,029,000	9,309,000	9,216,000	5,792,000	3,424,000	3,424,000	517000	- 155,000	5,881,000
		1	2019	21,936,000	12,221,000	9,715,000	11,251,000	10,351,000	916,000	900,000	551,000	- 887,000	5,534,000
		1	2020	21,706,000	9,850,000	11,856,000	10,792,000	8,273,000	2,538,000	2,519,000	535,000	-	7,416,000
		1	2021	24,119,000	9,144,000	14,975,000	11,814,000	7,206,000	4,628,000	4,608,000	-	-	9,288,000
40	East African Breweries Ltd.	1	2017	66,666,312	38,228,551	28,437,761	13,295,831	15,894,835	- 2,599,005	- 2,599,005	-	-	5,455,493
		1	2018	71,246,826	59,595,000	11,651,826	21,526,000	19,868,544	2,177,456	1,657,456	3495	938	11,742,000
		1	2019	87,065,627	70,911,000	16,154,627	29,602,000	24,835,680	9,971,320	4,766,320	3,726	3,058	17,815,000
		1	2020	88,658,406	74,665,138	13,993,268	25,968,419	31,044,600	3,421,819	- 5,076,181	4,775	- 515	10,655,259
		1	2021	100,117,014	85,264,584	14,852,430	34,092,534	39,702,313	2,875,221	- 5,609,779	5,099	179	10,858,033
41	Unga Group Ltd.	1	2017	10,267,471	3,051,378	7,216,093	4,051,430	2,569,412	1,482,018	1,482,018	-	-	-
		1	2018	9,933,000	4,260,000	5,673,000	6,596,000	3,211,765	3,461,235	3,384,235	266000	- 6,000	1,294,000
		1	2019	10,646,000	4,531,000	6,115,000	6,677,000	4,014,706	2,957,294	2,662,294	335,000	- 77,000	615,000
		1	2020	12,051,000	5,895,000	6,156,000	7,913,000	5,018,383	3,159,617	2,894,617	303,000	-	118,000
		1	2021	10,049,000	3,659,000	6,390,000	6,047,000	2,676,291	3,629,709	3,370,709	325,000	-	485,000

				KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'	KES '000'
	Listed firm	Industry Segment: Financial = 2 Non Financial = 1	Year	Total Assets	Total Liabilities	Net Tangible Assets	Current Asset	Current Liabilities	Operating Capital	Working Capital	Depreciation	Deffered Tax	Pofit Before Tax
42	Centum Investment Plc.	1	2017	88,386,000	38,911,000	49,475,000	78,314,000	12,453,000	78,314,000	65,861,000	1,144,000	- 36,000	7,389,000
		1	2018	96,288,000	45,391,000	50,897,000	86,623,000	5,960,000	86,623,000	80,663,000	1445000	121,000	2,452,000
		1	2019	101,764,000	50,188,000	51,576,000	90,316,000	5,674,000	90,316,000	84,642,000	-	42,000	5,863,000
		1	2020	101,864,000	52,591,000	49,273,000	93,687,000	10,421,000	93,687,000	83,266,000	-	- 88,000	7,424,000
		1	2021	109,432,000	62,384,000	47,048,000	97,551,000	7,467,000	97,551,000	90,084,000	-	-1,267,000	- 1,258,000
43	Home Afrika Ltd.	1	2017	4,623,000	3,442,704	1,180,296	3,797,000	4,823,000	175,000	- 1,026,000	6,809	- 36,552	- 221,014
		1	2018	4,502,000	4,303,380	198,620	3,822,000	5,555,000	- 430,000	- 1,733,000	6874	- 46,877	- 391,904
		1	2019	4,348,000	5,379,225	- 1,031,225	3,955,000	6,289,000	- 1,491,000	- 2,334,000	6,506	-	- 886,601
		1	2020	4,443,000	6,724,031	- 2,281,031	3,998,000	6,724,000	- 1,311,000	- 2,726,000	7,504	-	- 338,244
		1	2021	4,538,000	7,100,458	- 2,562,458	4,042,000	71,000	5,494,000	3,971,000	-	-	- 280,210
44	Carbacid Investments Plc.	1	2017	3,306,974	192,376	3,114,598	541,146	93,847	447,300	447,300	76,647	- 18,363	218,603
		1	2018	3,371,233	240,470	3,130,763	676,433	117,308	559,124	559,124	53157	- 20,682	273,254
		1	2019	3,503,501	300,588	3,202,913	845,541	146,635	698,906	698,906	53,574	- 4,716	341,567
		1	2020	3,627,831	375,735	3,252,096	1,056,926	183,294	873,632	873,632	54,876	- 6,331	426,959
		1	2021	3,919,224	430,425	3,488,799	1,242,942	249,358	993,584	993,584	-	-	540,265
45	Kenya Orchards Ltd.	1	2017	117,271	54,385	62,886	49,326	25,574	23,752	23,752	-	-	- 560
		1	2018	118,652	67,981	50,671	61,658	31,967	29,690	29,690	0	-	- 700
		1	2019	121,564	84,977	36,587	77,072	39,959	37,113	37,113	-	-	- 875
		1	2020	126,245	106,221	20,024	96,340	49,949	46,391	46,391	-	-	- 1,094
		1	2021	126,948	103,234	23,714	97,723	46,962	50,761	50,761	-	-	3,132
46	Flame Tree Group Holdings Ltd.	1	2017	1,680,770	949,000	731,770	1,142,000	533,654	966,346	608,346	56,000	- 43,000	41,000
		1	2018	1,839,272	1,026,000	813,272	1,133,000	667,067	853,933	465,933	51000	- 33,000	42,000
		1	2019	2,281,168	1,224,000	1,057,168	1,079,000	833,834	582,166	245,166	30,000	15,000	91,000
		1	2020	2,489,049	1,404,125	1,084,924	1,157,000	1,042,292	661,708	114,708	87,000	27,000	148,000
		1	2021	2,874,810	1,684,757	1,190,053	1,413,147	1,348,470	64,677	64,677	-	-	-
47	Safaricom Plc.	1	2017	161,689,000	51,135,559	110,553,441	25,162,000	54,197,753	- 12,491,602	- 29,035,753	31,546,000	4,000	70,632,000
		1	2018	168,062,000	44,148,000	123,914,000	29,473,000	43,525,000	- 10,012,000	- 14,052,000	31,908,000	- 214,000	79,899,000
		1	2019	192,475,400	48,129,000	144,346,400	49,959,000	46,259,000	7,732,000	3,700,000	33,660,000	558,000	91,213,000
		1	2020	215,450,000	72,370,000	143,080,000	48,822,200	56,501,000	3,870,200	- 7,678,800	35,189,000	498,000	102,416,000
		1	2021	230,629,300	92,994,000	137,635,300	55,909,400	75,452,000	- 4,770,600	- 19,542,600	36,336,000	-4,363,000	94,143,000
48	Umeme Ltd	1	2017	72,068,497	53,121,595	18,946,902	13,217,178	21,931,288	- 1,280,828	- 8,714,110	-	504	1,368,098
		1	2018	71,906,687	48,169,387	23,737,301	10,010,337	22,618,589	- 5,722,853	- 12,608,252	0	1,413	5,984,202
		1	2019	77,968,528	52,400,429	25,568,098	16,873,497	23,187,301	- 951,319	- 6,313,804	-	1,070	6,268,620
		1	2020	81,749,693	57,111,472	24,638,221	16,295,583	29,929,939	- 5,730,828	- 13,634,356	-	649	1,931,319
		1	2021	76,910,920	49,513,558	27,397,362	13,973,896	27,259,264	- 5,129,294	- 13,285,368	-	-	5,950,215
49	Stanlib Fahari -REIT	1	2017	3,762,000	95,000	3,667,000	3,759,536	-	3,759,536	3,759,536	591	-	171,126
		1	2018	3,853,000	129,000	3,724,000	3,852,995	-	3,852,995	3,852,995	617	-	193,491
		1	2019	3,878,000	115,000	3,763,000	3,877,984	-	3,877,984	3,877,984	1,069	-	175,228
		1	2020	3,884,000	108,000	3,776,000	3,883,985	-	3,883,985	3,883,985	1,299	-	148,025
		1	2021	3,713,000	169,000	3,544,000	3,712,987	-	3,712,987	3,712,987	-	-	- 123,951

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1	Eaagads Ltd	2017	4.11	0.24	11.78	73.96	0.15	90.23	4	2	1	0	2	71	922,802	1
		2018	- 2.62	- 0.06	9.10	60.22	0.99	67.62	4	2	1	0	2	72	905,895	1
		2019	0.80	0.00	8.88	41.39	0.98	52.04	4	2	1	0	2	73	942,324	1
		2020	- 1.44	- 0.82	7.13	16.69	0.06	21.63	3	2	1	0	1	74	948,581	1
		2021	1.12	0.05	9.45	49.77	0.08	60.48	3	2	1	1	1	75	1,116,493	1
2	Kapchorua Tea Kenya Plc	2017	- 0.85	- 0.26	1.91	3.72	0.58	5.10	7	3	2	0	5	148	2,330,311	1
		2018	0.69	0.36	1.87	4.45	0.28	7.64	7	3	2	0	5	149	2,567,000	1
		2019	- 0.78	- 0.22	2.29	7.59	0.32	9.19	7	3	2	0	5	150	2,109,000	1
		2020	0.10	0.03	2.57	7.88	0.35	10.93	7	3	3	0	5	151	1,981,000	1
		2021	0.25	0.05	2.28	10.94	0.34	13.87	7	3	3	0	5	152	2,138,000	1
3	Kakuzi Plc	2017	0.14	0.04	3.55	10.49	0.28	14.49	8	3	2	0	6	113	5,746,126	1
		2018	1.63	0.42	3.17	7.32	0.30	12.85	8	3	2	0	6	112	5,941,042	1
		2019	2.24	0.29	4.08	13.31	0.30	20.21	9	3	4	0	7	113	6,461,035	1
		2020	4.43	0.32	4.15	21.42	0.38	30.71	8	3	4	0	6	114	6,906,816	1
		2021	2.55	0.18	3.18	15.49	0.48	21.87	8	3	3	0	6	115	5,639,459	1
4	Limuru Tea Co. Ltd.	2017	- 0.49	- 0.31	2.53	4.76	0.38	6.88	7	2	3	2	5	122	262,009	1
		2018	0.38	0.03	2.57	4.24	0.42	7.65	7	2	4	3	5	123	268,255	1
		2019	0.97	0.02	4.66	11.64	0.52	17.81	7	2	4	3	5	124	235,670	1
		2020	- 0.40	- 0.07	-	-	0.51	0.04	8	2	5	4	6	125	229,696	1
		2021	- 1.46	- 0.14	-	-	0.50	- 1.10	8	2	5	4	6	126	208,501	1
5	Sasini Plc.	2017	1.67	0.52	6.02	16.08	0.17	24.46	10	2	4	2	8	65	13,196,025	1
		2018	0.77	0.16	6.92	24.67	0.17	32.69	9	2	5	2	7	66	12,961,680	1
		2019	- 0.88	- 0.53	7.20	29.05	0.05	34.89	9	2	5	2	7	67	14,674,359	1
		2020	0.10	0.02	8.56	37.76	0.11	46.55	8	2	6	2	6	68	14,577,755	1
		2021	1.81	0.34	7.91	33.81	0.14	44.01	8	2	6	2	6	69	15,142,739	1

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6	Williamson Tea Kenya Plc.	2017	1.32	-	12.60	34.02	0.07	48.01	7	3	2	0	5	148	8,364,127	1
		2018	2.82	0.95	10.63	23.13	0.08	37.61	7	3	2	0	5	149	9,505,074	1
		2019	0.97	- 0.23	13.63	39.86	0.08	54.32	7	3	2	0	5	150	8,271,981	1
		2020	0.76	0.06	3.48	10.86	0.21	15.37	7	3	3	0	5	151	7,900,570	1
		2021	0.60	- 0.00	2.85	11.52	2.54	17.51	7	3	3	0	5	152	8,048,478	1
7	Car & General (K) Ltd	2017	0.28	0.03	6.76	13.52	0.04	20.63	7	3	4	1	5	81	9,400,007	1
		2018	0.10	0.11	0.55	0.71	- 0.00	1.46	7	3	4	1	5	82	10,173,507	1
		2019	- 0.01	- 0.01	0.41	0.52	- 0.07	0.84	7	3	4	1	5	83	11,483,744	1
		2020	- 0.02	- 0.05	0.49	0.69	- 0.06	1.05	7	3	4	1	5	84	11,903,486	1
		2021	0.10	- 1.47	0.51	0.66	- 0.03	- 0.24	7	3	4	1	5	85	14,447,609	1
8	ABSA Bank Kenya Plc.	2017	0.05	0.25	0.19	0.19	0.15	0.82	8	4	4	4	6	101	271,572,000	2
		2018	0.04	0.25	0.15	0.15	0.12	0.72	10	4	6	5	8	102	325,313,000	2
		2019	0.03	0.24	0.13	0.13	0.11	0.66	10	4	6	5	8	103	374,904,000	2
		2020	0.02	0.12	0.14	0.14	0.12	0.52	11	4	7	4	9	104	379,441,000	2
		2021	0.04	0.28	0.15	0.15	0.12	0.73	11	4	7	4	9	105	428,722,000	2
9	Stanbic Holdings Ltd.	2017	0.02	0.13	0.16	0.16	0.17	0.63	11	4	5	4	9	62	248,738,719	2
		2018	0.04	0.19	0.14	0.14	0.16	0.67	9	4	4	5	7	63	290,570,254	2
		2019	0.03	0.15	0.15	0.16	0.17	0.66	9	4	4	5	7	64	303,624,592	2
		2020	0.02	0.13	0.15	0.15	0.15	0.60	11	4	4	4	9	65	328,593,000	2
		2021	0.04	0.18	0.17	0.17	0.17	0.72	11	4	4	4	9	66	328,872,000	2
10	I & M Holdings Plc.	2017	0.05	0.25	0.23	0.23	0.17	0.92	9	5	3	1	7	43	240,110,741	2
		2018	0.05	0.22	0.19	0.20	0.18	0.84	11	5	4	2	9	44	288,522,049	2
		2019	0.06	0.25	0.22	0.23	0.19	0.94	11	5	4	2	9	45	315,290,674	2
		2020	0.04	0.16	0.22	0.22	0.19	0.83	11	5	3	1	9	46	358,099,793	2
		2021	0.04	0.17	0.20	0.20	0.17	0.79	11	5	3	1	9	47	415,180,677	2
11	Diamond Trust Bank Kenya Ltd	2017	0.04	0.20	0.17	0.17	0.14	0.72	12	6	3	1	10	72	363,303,400	2
		2018	0.04	0.19	0.18	0.18	0.16	0.75	12	6	4	4	10	73	377,719,314	2
		2019	0.04	0.17	0.20	0.20	0.17	0.78	12	6	4	4	10	74	386,230,186	2
		2020	0.03	0.06	0.19	0.20	0.18	0.66	15	6	4	5	13	75	425,054,034	2
		2021	0.03	0.08	0.19	0.20	0.19	0.69	15	6	4	5	13	76	456,842,717	2
12	HF Group Plc.	2017	0.00	0.01	0.19	0.22	0.29	0.70	10	6	2	2	8	52	67,541,116	2
		2018	- 0.01	- 0.03	0.19	0.24	0.32	0.70	10	3	2	2	8	53	60,588,226	2
		2019	- 0.00	- 0.01	0.20	0.24	0.26	0.69	9	3	2	3	7	54	56,454,917	2
		2020	- 0.04	- 0.15	0.17	0.18	0.20	0.36	9	3	2	3	7	55	55,445,249	2
		2021	- 0.02	- 0.05	0.17	0.19	0.21	0.49	11	3	2	7	9	56	52,903,518	2

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13	KCB Group Plc.	2017	0.06	0.27	0.19	0.19	0.17	0.88	11	4	4	4	9	121	646,668,000	2
		2018	0.06	0.28	0.18	0.19	0.17	0.88	11	4	4	4	9	122	714,313,000	2
		2019	0.05	0.27	0.16	0.17	0.15	0.80	11	4	4	4	9	123	898,572,000	2
		2020	0.03	0.15	0.16	0.17	0.17	0.68	11	4	4	3	9	124	987,810,000	2
		2021	0.05	0.24	0.17	0.18	0.17	0.82	11	4	4	3	9	125	1,139,672,000	2
14	NCBA Group Plc.	2017	0.03	0.11	0.19	0.21	0.25	0.80	14	4	3	3	12	58	206,172,460	2
		2018	0.03	0.19	0.13	0.13	0.15	0.62	14	4	3	3	12	59	245,106,892	2
		2019	0.03	0.13	0.14	0.15	0.17	0.63	11	4	3	1	9	60	494,717,416	2
		2020	0.01	0.06	0.15	0.15	0.16	0.52	11	4	3	1	9	61	527,868,381	2
		2021	0.03	0.18	0.14	0.14	0.14	0.63	11	4	3	1	9	62	591,088,038	2
15	Standard Chartered Bank Kenya Ltd.	2017	0.04	0.24	0.18	0.18	0.15	0.79	12	3	4	5	10	106	285,724,000	2
		2018	0.05	0.27	0.19	0.19	0.15	0.85	12	3	4	5	10	107	285,404,000	2
		2019	0.05	0.27	0.18	0.18	0.15	0.82	13	3	5	4	11	108	302,138,000	2
		2020	0.03	0.15	0.17	0.17	0.15	0.68	12	3	7	4	10	109	325,605,000	2
		2021	0.05	0.25	0.18	0.18	0.15	0.80	12	3	7	4	10	110	334,871,938	2
16	Equity Group Holdings Plc.	2017	0.08	0.21	0.19	0.22	0.25	0.94	11	4	4	3	9	33	524,465,000	2
		2018	0.07	0.22	0.18	0.19	0.23	0.89	11	4	4	3	9	34	573,384,000	2
		2019	0.07	0.20	0.18	0.20	0.23	0.89	8	4	4	3	6	35	673,682,000	2
		2020	0.03	0.10	0.14	0.16	0.22	0.65	8	4	4	3	6	36	1,015,093,000	2
		2021	0.06	0.18	0.14	0.16	0.22	0.77	8	4	4	3	6	37	1,304,914,000	2
17	The Co-operative Bank of Kenya Ltd	2017	0.06	0.20	0.21	0.23	0.22	0.92	13	4	5	3	11	49	386,857,657	2
		2018	0.06	0.21	0.20	0.21	0.21	0.89	13	4	5	3	11	50	413,670,710	2
		2019	0.07	0.21	0.21	0.23	0.22	0.92	13	4	5	3	11	51	457,092,986	2
		2020	0.04	0.11	0.19	0.22	0.24	0.80	13	4	5	3	11	52	537,076,319	2
		2021	0.06	0.17	0.20	0.22	0.24	0.87	13	4	5	3	11	53	579,823,654	2
18	Express Kenya Plc.	2017	- 0.47	31.44	- 0.16	- 0.42	- 0.18	30.21	4	2	3	1	2	99	363,000	1
		2018	- 0.52	- 4.74	- 0.30	- 1.12	- 0.15	- 6.83	4	2	3	1	2	100	324,000	1
		2019	- 0.04	- 0.55	0.07	0.59	0.05	0.11	4	2	3	1	2	101	477,000	1
		2020	- 0.33	- 1.02	0.88	14.02	0.02	13.58	4	2	3	1	2	102	1,346,000	1
		2021	- 1.41	1.88	0.77	11.45	- 0.04	12.65	4	2	3	1	2	103	1,258,416	1
19	Kenya Airways Ltd.	2017	- 0.14	0.58	- 0.24	- 0.63	- 0.30	- 0.73	13	4	5	3	11	40	146,144,000	1
		2018	- 0.06	0.32	- 0.08	- 0.09	- 0.74	- 0.65	13	4	5	3	11	41	136,634,000	1
		2019	- 0.19	0.54	- 0.12	- 0.41	- 0.22	- 0.40	12	4	6	3	10	42	195,673,000	1
		2020	- 0.43	1.28	- 0.30	- 0.86	- 0.34	- 0.65	12	4	6	3	10	43	171,462,000	1
		2021	- 0.20	0.29	- 0.35	- 1.03	- 0.36	- 1.64	15	4	6	3	13	44	155,555,000	1
20	Nation Media Group Plc.	2017	0.71	0.58	2.59	2.61	0.28	6.77	17	3	4	1	15	58	11,320,000	1
		2018	0.58	0.50	2.37	2.39	0.28	6.12	17	3	4	1	15	59	11,198,000	1
		2019	0.52	0.35	1.81	2.18	0.28	5.15	14	3	3	2	12	60	12,097,000	1
		2020	1.76	0.02	2.04	2.33	0.30	6.45	14	3	3	2	12	61	11,821,000	1
		2021	-	-	1.77	1.97	0.32	4.06	15	3	3	2	13	62	12,653,400	1

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21	Standard Group Plc.	2017	- 0.13	- 0.55	0.72	0.84	- 0.08	0.81	9	4	4	2	7	115	4,460,000	1
		2018	0.18	0.77	0.72	0.89	- 0.04	2.52	8	4	5	2	6	116	4,676,133	1
		2019	- 0.29	2.92	0.51	0.61	- 0.22	3.53	8	4	5	2	6	117	4,196,000	1
		2020	- 0.17	0.72	0.38	0.44	- 0.31	1.06	9	4	5	2	7	118	4,055,000	1
		2021	- 0.01	0.05	0.32	0.32	- 0.41	0.27	9	4	5	2	7	119	4,354,312	1
22	TPS Eastern Africa (Serena) Ltd.	2017	0.12	0.34	1.10	3.74	0.01	5.31	11	4	4	1	9	48	17,488,000	1
		2018	0.05	0.90	1.08	1.87	- 0.16	3.75	11	4	4	1	9	49	17,598,000	1
		2019	0.12	- 43.88	0.99	3.19	- 0.05	- 39.63	8	4	3	0	6	50	18,466,000	1
		2020	- 0.70	- 24.83	0.90	3.70	- 0.04	- 20.96	8	4	3	0	6	51	17,414,000	1
		2021	- 0.26	- 4.70	0.79	3.05	- 0.03	- 1.15	8	4	4	0	6	52	17,429,378	1
23	WPP Scangroup Plc.	2017	0.15	0.11	1.87	1.87	0.45	4.45	9	5	4	2	7	21	13,758,912	1
		2018	0.17	0.16	1.43	1.56	0.40	3.73	9	5	4	2	7	22	14,425,198	1
		2019	-	-	2.65	2.85	0.26	5.76	10	5	4	3	8	23	12,803,173	1
		2020	-	-	- 0.72	- 0.96	0.09	- 1.60	11	5	4	3	9	24	8,741,883	1
		2021	-	-	- 0.60	- 0.87	- 0.12	- 1.59	11	5	4	3	9	25	9,444,783	1
24	Longhorn Publishers Plc.	2017	0.20	0.26	1.04	1.04	0.18	2.71	9	3	4	3	7	52	1,858,734	1
		2018	0.20	0.31	0.76	0.76	0.12	2.15	9	3	5	2	7	53	2,407,529	1
		2019	0.21	0.43	0.89	0.89	0.10	2.52	9	3	5	2	7	54	2,344,234	1
		2020	- 0.22	- 0.39	0.43	0.54	- 0.02	0.34	9	3	5	2	7	55	2,450,164	1
		2021	0.01	- 0.03	0.35	0.35	- 0.20	0.47	9	3	5	2	7	56	2,877,729	1
25	Sameer Africa Plc.	2017	0.01	0.01	1.62	1.68	0.20	3.53	8	2	5	3	6	48	2,969,868	1
		2018	0.04	0.06	0.77	0.79	- 0.05	1.60	9	2	5	3	7	49	2,587,824	1
		2019	0.40	1.43	0.05	0.07	- 0.09	1.86	9	2	5	3	7	50	1,530,847	1
		2020	0.13	0.20	0.12	0.52	0.10	1.07	6	2	3	2	4	51	1,047,155	1
		2021	-	-	0.42	1.16	0.05	1.63	6	2	3	2	4	52	1,124,090	1
26	Bamburi Cement Ltd.	2017	0.51	0.56	2.37	4.08	0.12	7.65	11	5	5	4	9	66	47,203,000	1
		2018	0.07	0.15	1.91	3.42	0.06	5.59	11	5	5	4	9	67	49,085,000	1
		2019	0.08	0.14	1.92	3.70	0.07	5.91	11	5	5	3	9	68	49,446,000	1
		2020	0.25	0.30	2.27	4.98	0.11	7.92	11	5	5	3	9	69	50,357,000	1
		2021	0.30	0.28	2.25	4.86	0.14	7.84	11	5	5	3	9	70	51,728,000	1
27	Crown Paints Kenya Plc.	2017	0.14	0.23	0.43	0.61	0.04	1.44	6	3	2	0	4	59	5,872,000	1
		2018	0.13	0.18	0.23	0.34	0.09	0.97	6	3	3	0	4	60	5,476,000	1
		2019	0.17	0.89	0.31	0.43	0.11	1.91	6	3	3	0	4	61	5,522,000	1
		2020	0.27	1.43	0.51	0.59	0.11	2.91	7	3	3	1	5	62	5,631,000	1
		2021	0.29	0.42	0.78	0.85	0.21	2.55	7	3	3	1	5	63	7,807,000	1

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28	E.A Cables Ltd.	2017	- 0.69	- 0.27	0.36	1.42	0.06	0.88	8	3	3	0	6	51	7,038,421	1
		2018	- 0.58	- 0.25	0.29	1.07	- 0.04	0.50	8	3	4	1	6	52	6,603,660	1
		2019	0.65	2.08	0.51	1.46	- 0.05	4.66	8	3	4	1	6	53	6,274,877	1
		2020	- 0.06	2.41	0.31	0.91	- 0.09	3.48	8	3	4	1	6	54	5,932,382	1
		2021	- 0.24	1.14	0.25	0.64	- 0.15	1.63	8	3	4	1	6	55	5,580,066	1
29	E.A Portland Cement Ltd.	2017	- 0.20	1.70	1.86	3.15	- 0.14	6.37	7	3	4	1	5	84	29,982,000	1
		2018	0.83	- 1.74	1.94	3.05	- 0.16	3.92	7	3	4	1	5	85	37,603,554	1
		2019	- 0.15	0.86	1.43	1.56	- 0.28	3.43	7	3	4	1	5	86	36,541,105	1
		2020	- 0.14	0.45	1.14	1.15	- 0.39	2.21	8	3	5	1	6	87	35,176,893	1
		2021	0.16	- 0.25	1.54	1.59	- 0.31	2.74	8	3	5	1	6	88	34,641,110	1
30	Total Kenya Ltd.	2017	0.53	0.19	2.19	2.55	0.43	5.89	9	3	3	2	7	62	38,012,115	1
		2018	0.45	0.22	1.99	2.32	0.41	5.39	9	3	3	3	7	63	39,258,921	1
		2019	0.41	0.34	1.38	1.62	0.28	4.02	9	3	3	3	7	64	37,564,704	1
		2020	0.46	0.30	1.67	1.88	0.36	4.67	9	3	5	2	7	65	42,987,172	1
		2021	0.25	0.24	1.55	1.77	0.35	4.16	9	3	5	2	7	66	47,030,094	1
31	KenGen Plc.	2017	0.57	0.10	0.94	9.10	0.03	10.74	14	1	5	4	12	63	376,729,582	1
		2018	0.56	0.56	1.00	9.10	0.03	11.26	14	1	5	4	12	64	379,353,006	1
		2019	0.46	0.57	0.94	7.62	0.02	9.61	14	1	5	4	12	65	401,422,249	1
		2020	0.81	0.54	1.05	12.39	0.04	14.83	14	1	5	4	12	66	412,926,930	1
		2021	0.72	0.43	0.98	10.31	0.06	12.50	14	1	5	4	12	67	425,658,163	1
32	Kenya Power & Lighting Plc.	2017	0.10	- 4.02	0.31	1.07	- 0.05	- 2.59	11	6	3	5	9	95	351,873,000	1
		2018	0.05	- 0.22	0.29	0.75	- 0.15	0.73	12	6	3	5	10	95	352,586,000	1
		2019	0.00	- 0.01	0.28	0.67	- 0.20	0.74	12	6	3	5	10	95	349,241,000	1
		2020	- 0.06	0.14	0.27	0.62	- 0.22	0.75	11	7	3	5	9	95	343,257,000	1
		2021	0.07	- 0.18	0.27	0.65	- 0.19	0.63	11	7	3	5	9	95	350,216,000	1
33	Jubilee Holdings Ltd	2017	0.12	1.99	0.30	0.72	0.02	3.14	11	2	4	2	9	80	104,967,530	2
		2018	0.11	1.16	0.32	0.78	0.03	2.41	10	3	4	2	8	81	114,189,212	2
		2019	0.11	0.99	0.30	0.84	0.03	2.28	10	3	4	2	8	82	130,076,938	2
		2020	0.10	1.28	0.32	0.87	0.02	2.59	9	2	3	2	7	83	145,863,583	2
		2021	0.16	0.67	0.27	0.77	0.06	1.93	9	2	3	2	7	84	155,272,618	2
34	Kenya Re - Insurance Corporation Ltd.	2017	0.29	0.17	1.79	1.96	0.57	4.77	11	6	5	2	9	46	42,426,000	2
		2018	0.20	0.12	1.81	1.97	0.57	4.66	11	6	5	2	9	47	44,091,000	2
		2019	0.23	0.12	1.76	2.05	0.58	4.75	11	6	5	2	9	48	50,081,000	2
		2020	0.23	0.12	1.84	2.12	0.59	4.89	11	6	5	2	9	49	53,083,000	2
		2021	0.22	0.11	2.02	2.31	0.59	5.25	11	6	5	2	9	50	55,406,000	2

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35	Liberty Kenya Holdings	2017	0.04	0.14	0.27	0.30	0.23	0.99	6	3	2	1	4	53	34,960,000	2
		2018	0.04	0.11	0.29	0.32	0.24	1.00	6	3	2	1	4	54	33,877,000	2
		2019	0.04	0.15	0.29	0.32	0.21	1.02	7	3	3	2	5	55	35,482,000	2
		2020	0.04	0.13	0.32	0.35	0.23	1.06	7	3	3	2	5	56	36,136,000	2
		2021	0.02	0.02	0.31	0.48	0.41	1.24	7	3	3	2	5	57	37,083,000	2
36	CIC Insurance Group Ltd.	2017	0.28	0.02	0.37	4.15	0.90	5.72	12	3	5	2	10	9	28,253,000	2
		2018	0.19	0.02	0.33	2.35	0.86	3.75	8	3	3	4	6	10	31,168,000	2
		2019	0.08	0.01	0.31	1.57	0.81	2.78	8	3	3	4	6	11	33,552,000	2
		2020	- 0.01	- 0.00	0.26	1.03	0.76	2.04	7	3	3	2	5	12	37,059,000	2
		2021	0.12	0.03	0.25	0.98	0.76	2.14	7	3	3	2	5	13	39,527,000	2
37	Olympia Capital Holdings Ltd.	2017	0.33	0.28	3.83	6.01	0.08	10.53	5	2	2	1	3	49	1,613,368	1
		2018	0.11	0.03	3.63	5.61	0.10	9.48	5	2	2	1	3	50	1,658,883	1
		2019	0.17	0.10	3.74	6.20	0.08	10.29	5	2	2	1	3	51	1,626,600	1
		2020	0.25	0.17	3.36	6.54	0.08	10.41	5	2	2	1	3	52	1,705,872	1
		2021	0.12	0.06	4.78	6.26	0.07	11.29	5	2	2	1	3	53	1,468,738	1
38	B.O.C Kenya Plc.	2017	0.27	0.14	2.61	2.61	0.26	5.89	8	2	3	3	6	77	2,229,000	1
		2018	0.33	0.47	1.91	1.91	0.12	4.74	9	2	3	3	7	78	1,808,000	1
		2019	0.16	0.17	2.64	2.64	0.27	5.89	9	2	3	3	7	79	1,993,000	1
		2020	0.48	0.33	2.83	2.87	0.26	6.76	7	2	3	3	5	80	1,844,000	1
		2021	0.42	0.22	3.89	3.96	0.38	8.88	7	2	3	3	5	81	1,997,000	1
39	British American Tobacco Kenya Plc.	2017	0.86	1.29	0.79	1.19	0.12	4.25	10	4	4	4	8	110	17,806,000	1
		2018	1.08	1.72	1.03	1.61	0.19	5.62	9	4	4	3	7	111	18,338,000	1
		2019	0.50	6.04	0.79	0.94	0.04	8.32	9	4	4	4	7	112	21,936,000	1
		2020	0.96	2.92	1.20	1.43	0.12	6.64	10	4	4	4	8	113	21,706,000	1
		2021	1.29	2.01	1.64	2.08	0.19	7.20	10	4	4	4	8	114	24,119,000	1
40	East African Breweries Ltd.	2017	0.34	- 2.10	0.74	1.79	- 0.04	0.74	12	5	5	2	10	95	66,666,312	1
		2018	0.59	5.39	0.20	0.59	0.02	6.79	12	5	5	2	10	96	71,246,826	1
		2019	0.72	1.79	0.23	0.65	0.05	3.44	13	5	5	4	11	97	87,065,627	1
		2020	0.34	3.11	0.19	0.45	- 0.06	4.04	13	5	5	4	11	98	88,658,406	1
		2021	0.27	3.78	0.17	0.37	- 0.06	4.54	12	5	5	5	10	99	100,117,014	1
41	Unga Group Ltd.	2017	-	-	2.36	2.81	0.14	5.32	9	4	3	3	7	109	10,267,471	1
		2018	0.48	0.37	1.33	1.77	0.34	4.30	9	4	3	3	7	110	9,933,000	1
		2019	0.22	0.21	1.35	1.52	0.25	3.55	9	4	3	3	7	111	10,646,000	1
		2020	0.08	0.04	1.04	1.23	0.24	2.63	11	4	4	3	9	112	12,051,000	1
		2021	0.30	0.13	1.75	2.39	0.34	4.91	11	4	4	3	9	113	10,049,000	1

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42	Centum Investment Plc.	2017	0.68	0.09	1.27	3.97	0.75	6.77	11	5	4	4	9	63	88,386,000	1
		2018	0.67	0.03	1.12	8.54	0.84	11.20	10	5	5	4	8	64	96,288,000	1
		2019	1.04	0.06	1.03	9.09	0.83	12.05	10	5	5	4	8	65	101,764,000	1
		2020	0.70	0.08	0.94	4.73	0.82	7.27	12	5	5	4	10	66	101,864,000	1
		2021	- 0.34	- 0.01	0.75	6.30	0.82	7.53	12	5	5	4	10	67	109,432,000	1
43	Home Afrika Ltd.	2017	- 0.05	- 1.26	0.34	0.24	- 0.22	- 0.95	8	2	3	3	6	9	4,623,000	1
		2018	- 0.08	0.91	0.05	0.04	- 0.38	0.53	8	2	3	3	6	10	4,502,000	1
		2019	- 0.14	0.59	- 0.19	- 0.16	- 0.54	- 0.44	8	2	3	3	6	11	4,348,000	1
		2020	- 0.05	0.26	- 0.34	- 0.34	- 0.61	- 1.08	8	2	3	3	6	12	4,443,000	1
		2021	- 3.95	- 0.05	- 0.36	- 36.09	0.88	- 39.57	8	2	3	3	6	13	4,538,000	1
44	Carbacid Investments Plc.	2017	2.95	0.49	16.19	33.19	0.14	52.95	7	2	4	1	5	56	3,306,974	1
		2018	2.61	0.49	13.02	26.69	0.17	42.97	6	3	3	1	4	57	3,371,233	1
		2019	2.66	0.49	10.66	21.84	0.20	35.85	6	3	3	1	4	58	3,503,501	1
		2020	2.59	0.49	8.66	17.74	0.24	29.72	7	3	4	1	5	59	3,627,831	1
		2021	2.17	0.54	8.11	13.99	0.25	25.06	7	3	4	1	5	60	3,919,224	1
45	Kenya Orchards Ltd.	2017	- 0.02	- 0.02	1.16	2.46	0.20	3.77	3	2	2	0	1	58	117,271	1
		2018	- 0.02	- 0.02	0.75	1.59	0.25	2.54	3	2	2	0	1	59	118,652	1
		2019	- 0.02	- 0.02	0.43	0.92	0.31	1.61	3	2	2	0	1	60	121,564	1
		2020	- 0.02	- 0.02	0.19	0.40	0.37	0.91	3	2	2	0	1	61	126,245	1
		2021	0.07	0.06	0.23	0.50	0.40	1.26	3	2	2	0	1	62	126,948	1
46	Flame Tree Group Holdings Ltd.	2017	0.10	0.04	0.77	1.37	0.36	2.65	5	1	3	1	3	28	1,680,770	1
		2018	0.09	0.05	0.79	1.22	0.25	2.40	5	1	3	1	3	29	1,839,272	1
		2019	0.16	0.16	0.86	1.27	0.11	2.56	5	1	3	1	3	30	2,281,168	1
		2020	0.25	0.22	0.77	1.04	0.05	2.33	5	1	3	1	3	31	2,489,049	1
		2021	-	-	0.71	0.88	0.02	1.61	5	1	3	1	3	32	2,874,810	1
47	Safaricom Plc.	2017	1.89	- 5.65	2.16	2.04	- 0.18	0.25	15	3	5	3	13	24	161,689,000	1
		2018	2.56	- 7.98	2.81	2.85	- 0.08	0.15	15	3	5	3	13	25	168,062,000	1
		2019	2.71	11.80	3.00	3.12	0.02	20.65	14	3	5	3	12	26	192,475,400	1
		2020	2.44	26.46	1.98	2.53	- 0.04	33.38	13	3	5	3	11	27	215,450,000	1
		2021	1.67	- 19.73	1.48	1.82	- 0.08	- 14.84	11	3	5	3	9	28	230,629,300	1
48	Umeme Ltd	2017	0.06	- 1.07	0.36	0.86	- 0.12	0.09	12	4	4	2	10	13	72,068,497	1
		2018	0.26	- 1.05	0.49	1.05	- 0.18	0.59	10	4	4	2	8	14	71,906,687	1
		2019	0.27	- 6.59	0.49	1.10	- 0.08	- 4.81	10	4	4	2	8	15	77,968,528	1
		2020	0.06	- 0.34	0.43	0.82	- 0.17	0.82	10	4	4	2	8	16	81,749,693	1
		2021	0.22	- 1.16	0.55	1.01	- 0.17	0.44	10	4	4	2	8	17	76,910,920	1
49	Stanlib Fahari -REIT	2017	-	0.05	38.60	-	1.00	39.64	6	3	3	1	4	35	3,762,000	1
		2018	-	0.05	28.87	-	1.00	29.92	6	3	3	1	4	36	3,853,000	1
		2019	-	0.05	32.72	-	1.00	33.77	7	3	3	1	5	37	3,878,000	1
		2020	-	0.04	34.96	-	1.00	36.00	7	3	3	1	5	38	3,884,000	1
		2021	-	- 0.03	20.97	-	1.00	21.94	7	3	3	0	5	39	3,713,000	1

End