

**IMPACT OF CORPORATE SUSTAINABILITY REPORTING ON
STOCK RETURNS OF FIRMS LISTED AT THE NAIROBI
SECURITIES EXCHANGE**

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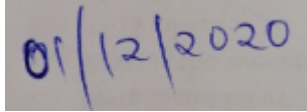
DECLARATION

I, the undersigned, declare that this is my original work and has not been presented to any institution or university other than the University of Nairobi for examination.

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D63/81759/2015

This research project has been submitted for examination with my approval as the University Supervisor.

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To the Almighty God, who made all this possible. I am grateful for your sufficient grace and for good health.

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DEDICATION

This research project is dedicated to my family, my father and mother, for their unwavering encouragement and support during the entire period of my study. I am very grateful and proud to call you family.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
CMA	Capital Markets Authority
CSR	Corporate Social Responsibility
GRI	Global Reporting Initiative
GRI	Global Reporting Initiative
ICPAK	Institute of Certified Public Accountants
IFR	Integrated Financial Reporting
IFRS	International Financial Reporting Standards
NASI	Nairobi All Share Index
NSE	Nairobi Securities Exchange
ROA	Return on Assets
ROE	Return on Equity
SPSS	Statistical Package for Social Sciences
SRI	Sustainability Reporting Index
TBL	Triple Bottom Line
TSE	Thailand Stock Exchange

ABSTRACT

Corporate sustainability reporting has gained prominence in the last decade as firms struggle to thrive in the current interdependent world. This is informed by the argument that for companies to succeed, they need to identify various stakeholders to whom they will account to, establish relationships with, and identify ways in which they will work together for mutual gains. In the long term, the company will be more profitable and be more socially, economically and environmentally prosperous for the society. The study's aim was establishing how corporate sustainability reporting impacts stock returns of NSE listed firms. The study's population was the 63 NSE listed companies. The independent variables for the study were corporate sustainability reporting measured using a sustainability reporting index developed from Global Reporting Initiative (GRI), leverage represented by debt ratio, management efficiency given by total revenue to total assets and firm size as represented by the natural log of total assets. Stock return was the dependent variable given by annual change in stock price plus dividend issued if any. Secondary data was acquired for five years (January 2015 to December 2019) annually. The design for this study was descriptive cross-sectional design while multiple linear regression was applied in determining the variables' relation. SPSS software was employed in the analysis of data. From the analysis an R-square value of 0.393 was produced which in other words mean that 39.3% of the changes in the stock returns of NSE listed firms can be described by the independent variables studied while the other 60.7% in the changes in stock returns is affiliated to other variables that outside the scope of this study. It was further found out that independent variables of this study strongly correlated with the stock returns ($R=0.627$). ANOVA outcomes revealed a substantial F statistic at 5% level with a $p<0.005$. Henceforth, the model was appropriate in explanation of how the variables relate. The findings also showed that corporate sustainability reporting and firm size generated positive and statistically significant values while leverage generated negative substantial values for this study. Management efficiency generated positive but weak values for this study. It hence recommends that listed firms should enhance their corporate sustainability reporting and their asset levels as this has a significant positive impact on stock returns of the firms. The study also recommends the need for future studies to focus on factors that influence adoption of sustainability reporting as a practice.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The role of businesses in the society has been changing over time (Sachs & Ki-Moon, 2015). Milton Friedman's prominent statement that the sole concern of a business is to make economic gains has overtime been interchanged with Edward Freeman's argument that firms have environmental and social responsibilities as well (Lozano, Carpenter & Huisinigh, 2015). Firms are thus seen as social enterprises whose existence is justified in as far as they serve the interests of all stakeholders in their public and social domains (Lozano et al., 2015). According to Gladwin et al. (2013), the necessary requirement for success in the current interdependent world is embracing sustainability. The process involves identifying a variety of stakeholders to whom it may be accountable to, establish open relationships with, and identify methods of working with them for common benefit. In the long term the company will be more profitable and be more socially, economically and environmentally prosperous.

This study was based on three theories namely; Triple Bottom Line (TBL) theory, stakeholder theory and institutional theory. The triple bottom line theory as developed by Elkington (1997) will be the anchor theory. The theory was selected because it consists a wide range of values, issues and methods used by companies in creating economic, social and environmental values while lowering any harmful effects caused by their activities. This approach takes into consideration the requirements of all stakeholders who include the shareholders, consumers, staff, business partners, the government, local communities and the general public (Elkington, 1997). Stakeholder theory as developed by Freeman (1984) aims at ensuring that the diverse needs of all

the stakeholders are well represented. This is achieved through establishing a network of relationships with the stakeholders of the firm. The core idea is that organizational structures and practices are a direct reflection or response to directives, ideologies and traditions found in the external and internal environment (Palthe, 2014).

In Kenya, potential investors obtain important details on how companies listed at the NSE operate by examining their annual reports and other Capital Markets Authority (CMA) bulletins. Similar to other exchanges, NSE encourages firms to disclose as much information as possible so that stock prices in the exchange reflect the most current information (Mwangi & Mwiti, 2015). Corporate sustainability reporting has been declared optional in Kenya but companies are increasingly embracing the concept to improve their reputation, improve the visibility of their brands, declare their commitment to care for the community, protect the environment and welfare of employees. Sustainability disclosure is becoming a trend compared to the past whereby companies gave a general statement on their involvement in community affairs in their financials. It is therefore imperative to investigate whether this development is influential to the stock returns of listed firms as this is the main goal of a firm.

1.1.1 Corporate Sustainability Reporting

Corporate sustainability reporting refers to a method of internalizing and improving an organizations strategy on sustainable development which can shown to internal and external stakeholders (Mc Fie, 2014). Eccles and Krzus (2011) defines corporate sustainability reporting as the latest tool in combined corporate reporting which is meant to solve the issues surrounding conventional financial and non- financial reporting and improving prior advancements that increase the amount of information

that is extended to the stakeholders of corporations. The corporate sustainability reporting concept was influenced by the global financial crisis and the desire for quality reporting, that combines both financial and non-financial information, a requirement for proper management of risks in the in the environmental and financial business (Abeysekera, 2013).

Currently, businesses are being held accountable for their actions, and those of their suppliers, communities in which they are established, users of their products and others. Business are accountable to investors, shareholders and also to political figures, whistle blowers, media, staff, communities, environmentalists, human rights activists, public health institutions and consumers (Ernst & Young, 2012). Corporate sustainability reporting meaningfully weighs short-term profit-related economic characteristics with concepts like human rights and sustainability of the environment. Sustainability reporting is efficient and sufficient in reporting of an organization's performance responsibly. By formulating and sharing statements on sustainability, an organization is able to demonstrate how sensitive the institution is to economic, environmental and social dimensions of social responsibility (Brown & Deegan, 2006).

There is no standardized way of measuring corporate sustainability reporting. The Global Reporting Initiative (GRI) propositions have established a reporting framework which has developed guidelines for every sector both public and private. Many of the sustainability reports are developed using these standards. GRI establishes a standard framework that reports environmental, social, and governance disclosure (Willis, 2003). The current study will operationalize corporate sustainability reporting using Sustainability Reporting Index (SRI) developed from

Global Reporting Initiative (GRI-G4) reporting guidelines. This has been used before by Sidorova and Gurvitsh (2019).

1.1.2 Stock Returns

This refers to the loss or gain of the cost of a share during a precise time frequently cited as a percentage. It contains of capital advances and any revenue acknowledged by the financier from the stock (Mugambi & Okech, 2016). The returns from stock can be utilized in predicting output and investment because they are a future-oriented variable that outlines future rates of discount and cash flow predictions. Stock returns aid as a directory to financiers in making their stock choices. Financiers of different monetary ability are able to put stocks as long as they are capable to obtain profit that is advanced than their rate of investment (Wang, 2012).

According to Taofik and Omosola (2013) stock return determine the availability of sufficient market information and the effectiveness and efficiency of stock in share and equity allocation. Changes in stock prices create some form of uncertainty for the investors which influence the stocks' supply and demand. Shares and stock markets react to any prize-shaping evidence, applicable for upcoming marketplace expansion (Širucek, 2013). Firms with higher stock returns exhibit more profitability thereby improving the growth of the economy (Aliyu, 2011). Hence, uncertainties related to stock markets returns is crucial to the aggregate economy since unstable economic growth trends render consumption and investment problematic (Erdugan, 2012).

Stock returns are mostly measured using the stock market indexing. A stock's performance is measured by the fluctuations in price. Just like an increase in its price is a reflection of positive performance while declining price indicates negative performance, a higher stock index shows that the sector is registering better

performance, when comparison is made to a lower stock index (Daferighe & Sunday, 2012). In Kenya, several indices are used in the calculation of stock returns and they include NSE All Share Index (NASI), FTSE NSE Kenya 25 Indices, FTSE NSE Kenya 15 and NSE 20 share index. The oldest (since 1964) is NSE 20 share index which is occasionally reviewed to reflect the accurate picture of stock market performance.

1.1.3 Corporate Sustainability Reporting and Stock Returns

Sustainability reporting refers to the method of internalizing and improving an organizations objective of sustainable development that can be shown to internal and external stakeholders. The triple bottom line framework of accounting recognized profitability measurements to include the conventional measurements like return on investment, and shareholder value and also recognized both environmental and social dimension measurements (Epstein et al., 2009). The TBL is hence a framework that recognizes three performance angles: social, environmental and financial. By adopting such a framework in business operations, practices, a company aims to protect stakeholders. In this framework, no harm should be made to any group, there should be no exploitation, or an unequal burdening caused by business activities. Secondly, the natural resources of the earth (such as ecology, plants, or wildlife species) should not be harmed by the activities of a business. Third, profitability or fiscal and economic successes should not be limited by attaining the other two values. It reports to stakeholders the strategies, performance and organizational activities in a way which allows the stakeholders to measure the organization's abilities I the creation and sustenance of value in the short, medium and long term (Mc Fie, 2014).

Phillips, Watson and Willis (2011) noted that corporate sustainability reporting is very comprehensive when making assessments concerning how the organization has performed, disclosures on finance matters, social values, and strategies that allows the stakeholders to have a complete understanding of the overall performance of the firm. James (2014) posits that the corporate sustainability system of reporting is useful in improving the overall efficiency in operations for an organization which consequently leads to its achievement of its mission and goals. Furthermore, such a system will be helpful to stakeholders in understanding how company performance impacts people and the environment. In addition to this, it will assist internal decision makers in obtaining a clear understanding of how various functions relate their nature and their effects.

Magarey (2012) posits that financial information given in annual reports alone is not sufficient to give a comprehensive understanding of a company's business activity. These shortcomings of the traditional financial reporting are being overcome by having a system of corporate sustainability reporting that combines information of both the financial and non-financial position thereby promoting integrated thinking. Corporate sustainability reporting would be useful to find a solution to these problems in addition to increasing the realization of long-term sustainable development perspective, and enabling comparisons of countries around the globe to be made whilst minimizing the possibility of negative effects on the reputation of companies (Ghani & Said, 2010). Theoretically, it is hypothesized that corporate sustainability reporting will enhance acceptance of a firm's goods and services by clients, increase supplier confidence, attract investors which will in return contributing to increased profitability and in essence stock returns of the firms.

1.1.4 Nairobi Securities Exchange

The research focuses on corporations listed at the NSE. The NSE has the fourth largest trading volume across the African continent and plays a key role in the economic growth in Kenya. NSE was recognised as an association of stock brokers, it was later recorded underneath the societies Act in 1954. The NSE was registered under the companies Act of Kenya in 1991 as a corporation limited by guarantee, there was no share capital (Kibuthu, 2005). Subsequently, the market has evolved with an increase in the numeral of brokers, formation of guardian institutions, credit evaluation agencies and the numeral of listed corporations over time. Securities merchandized in the market comprise equities, bonds and preference shares. Currently, there are 63 corporations registered at NSE, 61 of which have been actively trading at NSE for the last five years (NSE, 2019).

The companies that are listed at the NSE must produce quarterly, semi-annual and annual financial statements. CMA regulations dictate that the financial statements should be prepared in adherence to the IFRS and ISA regulations. In order to encourage adherence to the IFRS, the Institute of Certified Public Accountants (ICPAK) in conjunction with the CMA and NSE have established the Financial Reporting award (FiRe) that makes a review of participant companies and awards the one that complies closely with the regulations provided by the IFRS. Further, the CMA Guidelines implore companies to make additional disclosures on non-financial information that might be of benefit to investors and other key stakeholders (CMA, 2018).

Some of the listed firms that have received the FiRe award in the recent past include Trans Century Ltd, Equity Group Holdings, Limuru Tea company Ltd, Barclays Bank

of Kenya Ltd, and several others. A review of these firms' annual reports reveals that they have incorporated sustainability in their reporting. In regards to the stock returns, listed firms have performed differently and therefore the need to establish whether corporate sustainability is one of the factors influencing returns of listed firms (CMA, 2018). This study seeks to establish whether practicing sustainability reporting has a significant positive influence on stock returns of firms.

1.2 Research Problem

According to Gladwin et al. (2013), success in the current interdependent world is ensured through sustainability. This requires efforts by companies in identifying various stakeholders that they will be accountable to, establish relationships with them, and work for their benefit. In the long term, this will improve their profitability and enable them to be socially, economically and environmentally prosperous for society's benefit. Many traditional business thinkers recognize the shareholders who contribute capital in return for equity ownership as the legitimate company investors. Financial capital contributors are not the only company investors. There are other groups of people who contribute non-financial capital while facing risks. Communities make investments in natural and social capital. Employees are known for their human capital. Suppliers contribute organizational and technical capital. Such a view is hence limited and cannot be attained by companies established within a society (Gladwin et al., 2013).

In Kenya, potential investors obtain important details on how companies listed at the NSE operate by examining their annual reports and other CMA bulletins. Similar to other exchanges, NSE encourages firms to disclose as much information as possible so that stock prices in the exchange reflect the most current information (Mwangi &

Mwiti, 2015). Currently in Kenya similar to many nations, reports on sustainability are voluntary and there is no existing law that makes it mandatory. Because of this a standard way of reporting on this aspect is unavailable. However, the Global Reporting Initiative (GRI) guidelines provide a framework in which each sector is able to report on such matters both in private and public institutions. The lack of legislation on this type of reporting discourages its implementation. However, some firms have been practicing sustainability reporting and therefore need to investigate whether this development is influential to the stock returns of listed firms.

Empirically, the impact of corporate sustainability reporting on stock returns has been analyzed in prior studies. However, because of methodological differences, the findings have not been conclusive and greatly contradict, with different investigations producing either positive or negative relationships (Margolis & Walsh, 2013; Orlitzky, Smith, & Rynes, 2013). Other studies have also suggested a complex relation between corporate sustainability reporting and stock returns. In a study by Barnett & Salomon (2012), the success of sustainability on stock returns is dependent on how well firms can capitalize on social responsibility. In an investigation of the relation between corporate charitable contributions and corporate financial performance, Brammer & Millington (2018) similarly found variations in companies with significantly low and significantly high sustainability reporting. Firms with low reporting had better financial results in the short run, whereas firms with increased reporting were more successful in the long run.

Locally, although studies have been carried out, they focused on other variables and not corporate sustainability reporting and stock returns. Gatimbu and Wambire (2016) studied how corporate environmental disclosure impacts performance of NSE listed

firms and revealed that environmental disclosure positively impacted performance. Mutiva (2015) studied how voluntary disclosures impacted performance of entities quoted at NSE and found a direct and significant relationship between the study variables. Ngatia (2014) examined how sustainability reporting impacted performance of a selection of NSE listed companies in Kenya and concluded that social disclosure had the most profound impact on financial performance which was closely followed by resource uniqueness and proficiency in disclosure while conservation of the environment had the most minimal impact.

In the last decade, corporate sustainability reporting has gained acceptability and most firms listed at the NSE have adopted it though it remains to be established whether this contributes to the main goal of a firm which is shareholder wealth maximization. Although there are empirical studies on the variables of the current study, there exist conceptual, contextual and methodological gaps. Conceptually, studies done on how sustainability reporting impacts performance yielded either had varied results which were negative, neutral or positive thereby proving to be inconsistent. Further, many had a focus on performance which does not always translate to shareholders wealth. Contextually, many investigations have been carried out in developed markets compared to emerging markets. Corporate sustainability reporting new in Kenya but listed firms are increasingly adopting it. In spite of this there has been no known value of this form of reporting. Prior local studies have mostly focused on how firms' characteristics impact sustainability reporting but the current study will focus on a different angle which will, consider the elements of sustainability reporting and how they impact stock returns. The degree by which corporate sustainability reporting improves stock returns among listed companies is still unknown. It hence sought to

answer: What is the effect of corporate sustainability reporting on stock returns of NSE listed companies?

1.3 Research Objective

To determine how corporate sustainability reporting impacts stock returns of NSE listed firms.

1.4 Value of the Study

The study will be of benefit to policy-makers in assessing whether sustainability reporting adoption has effectively achieved its objective of value creation. In addition, policy-makers may find it necessary in improving financial reporting quality among listed firms in the event that the financial reporting quality outcome is below expectation. Sustainability reporting might also be incorporated as a mandatory requirement if the findings reveal it has a positive influence on stock returns.

The findings will be useful to scholars, students and researchers in future as a platform for executing additional studies. The findings will also be used by researchers and scholars in to identify further research areas on the related topics addressing the same matter through conducting a review of the existing literature so as to identify the research gaps.

For management practice, this study is expected to enhance the understanding on how to improve financial reporting that can lead to superior performance. The findings of this study will help managers to focus on critical success factors for value within their organizations hence improving the performance of their institutions. By establishing that sustainability reporting contributes to stock returns, managers will need to focus more on sustainability reporting components if they are to improve the shareholders wealth which is the main goal of a firm.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section presents theories that inform the study. Additionally it contains a section on determinants of stock returns. Further it contains an empirical review, the framework and a literature summary.

2.2 Theoretical Framework

This section reviews the theories explaining the associations between corporate sustainability reporting and stock returns. The study will use triple bottom line theory, stakeholder theory and institutional theory.

2.2.1 Triple Bottom Line Theory

This is the anchor theory for the current study. The theory was developed by Elkington in 1997. This theory postulates that a corporation is a moral community associate. As such, a corporation has social responsibilities. The focus of the theory is on a corporation's long term sustainability. The theory holds that a firm ought to consider its actions at three independent measures. These are the social, economic and environmental sustainability (Elkington, 2004).

Brown & Deegan (2006) concur that corporate financial indicators alone are not sufficient and the adoption of TBL reporting considers the social and environmental impacts that business activities have. Reports made following TBL guidelines measure short-term profit-related economic factors to abstract concepts like human rights and environmental sustainability. It is sufficient in measuring organizational performance more responsibly. In the development and sharing of TBL statements, the organization proves that it is sensitive to economic, environmental and social

dimensions of the responsibility of the society (Brown & Deegan, 2006). TBL forms a framework in which institutional concerns on sustainability are considered (Vanclay, 2004).

With the adoption of TBL theory many advantages accrue to an organization. These include a sound corporate governance, ethics and a culture which focuses on values at every level, improvement in risk management via improved performance monitoring and management systems, which encourage better allocation of resources and business planning, it formalizes and enhances communication with major stakeholders like the finance sector, suppliers, community and customers, which allows for a more proactive approach to meet future requirements and concerns, attracts and retains staff by focusing on values and organizational longevity, ability to standardize performance within and across sectors, which creates competitive advantage with customers and suppliers, and increases capital access from the finance sector which is increasingly focusing on non-financial performance. As a result many organizations are gradually being committed to TBL reporting. Vanclay (2004) argued that TBL reporting avoids tokenism if legislations were instituted to make them mandatory for companies specific and established and provided specific guidelines on the type of information to be disclosed. The study reviews economic, social and environmental disclosures of the TBL framework. The theory is relevant as it explains the need for corporations to conduct corporate sustainability reporting and it will be used to evaluate this reporting enhances firm stock returns.

2.2.2 Stakeholder Theory

Stakeholders' theory has its origin from Freeman (1984) as cited by (Fontaine, 2006). Freeman defined a stakeholder as a person or group that affects or is affected if the

organization achieves its objectives. Freeman conceptualized his idea of stakeholders theory in his book titled “Strategic Management: A stakeholder Approach” in 1984. Since then, a lot of contribution on the theory of stakeholders has been made by many economists and sociologists but not necessarily sharing similar sentiments (Fontaine, 2006). Lack of congruence on the definition of stakeholders can be viewed as a serious drawback of stakeholders’ theory. Fontaine (2006) notes that there are more than 75 definitions of stakeholders. Nevertheless, there is agreement about certain propositions which every author agrees (Fontaine, 2006). Each firm has stakeholders who have different demands, every stakeholder has a different influence. The aim of managing stakeholders is to consider all their demands and arbitrate them in case they contradict from one another.

Scholars observe that the theory is important; they hold that there should be accountability of the organization externally and internally as business entity activities impacts the external environment. This theory is condemned on the basis of assuming a single-valued objective this is where gains that accrues to a firm’s stakeholders (Jensen, 2001). Jensen’s (2001) states that there are other measures to measure how a firm has performed besides by benefits got by stakeholders. These measures include information flow from senior management to subordinate staff, working organization environment and interpersonal relations within the organization.

Stakeholder theory is relevant to this study because it is aimed at ensuring that the diverse needs of all the stakeholders are well represented. This is achieved through establishing a network of relationships with the stakeholders of the firm who include the investors, suppliers, employees, regulators and the customers. This is part of the corporate goal of the firm. In this study, the managers of listed firms should aspire to

maximize wealth of a firm. To achieve this goal; they should ensure they communicate all the relevant information to stakeholders whether financial or non-financial.

2.2.3 Institutional Theory

This argument was formulated by John Meyer, Brian Rowan in 1977, Richard Scott in 1983 and by Lynne Zucker in 1977 (Meyer & Rowan, 1977). The theory suggests that the structure of an organization is a direct reflection of the technical demands, resource availability together with the institutional force within the organization (Palthe, 2014). The core idea is that organizational structures and practices are a direct reflection or response to directives, ideologies and traditions found in the external and internal environment. Standardized items, administrations, procedures, approaches and programs work as capable myths and numerous associations embrace them ritualistically but conformity to institutionalized rules often conflicts sharply with efficiency (Meyer & Rowan, 1977).

According to Fogarty (1996), all organizational functions are designed to function according to the social expectations so as to improve the welfare of the society. This means that the complex and not easily notable internal operations of the organization come second with regard to external legitimacy. An organization' external image could arguably be loosely coupled with the type of reporting adopted and its operating processes.

A clear example of how institutional theory is applied by organizations was documented by Abang'a (2017). In his study on "High Quality Corporate Environmental Reporting: The Conceptual Anatomy, Multi-theoretical Basis, Presence and Drivers Among Large Companies in Kenya", it was established that

motivation behind the quality of corporate environmental reporting at Kenya Commercial Bank and Magadi Soda Company were partly as a result of pressure to legitimize their operations. Similarly, the listed firms may have introduced corporate sustainability reporting owing to the demands of the external environment to give a sense of rationality and efficiency and to be considered legitimate, but fail to use this as a means of improving internal performance consequently improving the value of the firm. Institutional theory has been used in this study to establish if the adoption of sustainability reporting among listed firms has made significant improvement to their values.

2.3 Determinants of Stock Returns

There a number of determinants of stock returns in organizations which vary across many sectors in the economy. They are corporate sustainability reporting, management efficiency, financial leverage and firm size.

2.3.1 Corporate Sustainability Reporting

James (2014) posits that corporate sustainability system of reporting is useful in improving the overall efficiency in operations for an organization which consequently leads to its achievement of its mission and goals. Furthermore, such a system will be helpful to stakeholders in understanding how company performance impacts people and the environment. In addition to this, it will assist internal decision makers in obtaining a clear understanding of how various functions relate, their nature and their effects.

According to Gladwin et al. (2013), success in the current interdependent world is ensured through sustainability. This requires efforts by companies in identifying various stakeholders that they will be accountable to, establish relationships with

them, and work for their benefit. In the long term, this will improve their profitability and enable them to be socially, economically and environmentally prosperous for society's benefit. Theoretically, it is hypothesized that corporate sustainability reporting will enhance acceptance of a firm's goods and services by clients, increase supplier confidence, attract investors which will in return contribute to increased profitability and in essence stock returns of the firms (Ghani & Said, 2010).

2.3.2 Firm Size

The amount of economies of scale earned by a firm is dependent on its size. The bigger the firm, the lower the average production scale and the more the efficiency in operating activities resulting from large economies of scale that the firm generates is high. Despite their size, large firms may lose control of their strategic and operational activities by their management which may ultimately cause a decline in their efficiency (Burca & Batrinca, 2015).

Larger firms command a big market power and can engage in more diversification. They are also more likely to suffer from organizational slack in case the business experiences boom. Size of the firm is a large determinant of the amount of investments of cash flow that can be made. In determining this size of the firm, the number of its workers, property held and sales volume are the critical elements taken into account (Almajali, 2012).

2.3.3 Financial Leverage

Financial leverage is an important determinant of returns of a firm. Financial leverage is the debt, equity financing ratio. For a firm to thrive, substantial amount of resources are required in form of labour, land, capital employment of all required finances which could either be internally or externally generated. The firm's capital structure together

with the costs of acquiring resources is the main determinants of the source of finance to be selected. These costs can be non-monetary or monetary. According to Su and Vo (2010), debt financing exposes the firm to bankruptcy although its attributed with certain tax and monetary benefits. Debt financing also reduces agency conflict by reducing the firm's free cash flow.

A significantly positive association was found established amid profitability and total debt presented as a percentage of the entire buyout-financing package (Roden & Lewellen 1995). On the contrary, Fama and French (1998) found negative associations between debt financing and returns. They stated that excessive use of debt translates to agency problems among creditors and shareholders' which could in negative associations between profitability and leverage.

2.3.4 Management Efficiency

This is a crucial internal element that is qualitative in nature and determines a firm's operational efficiency. Management's ability to effectively use firm resources, maximize financing and engage in efficient allocation of such financing are examples of ways in which efficiency in management is ensured (Kusa & Ongore, 2013).

This is a qualitative measurement, it determines operational efficiency and can be measured by staff quality, effectiveness and efficiency of internal controls, the organizational discipline and management systems' effectiveness (Athanasoglou et al., 2009). The management's quality influences the level of operational expenses which impacts the firm's bottom line hence it substantially affects performance (Kusa & Ongore, 2013).

2.4 Empirical Review

Local and international studies have supported the relationship between corporate sustainability reporting and stock returns, but these studies have mostly operationalized the study variables differently leading to varied results.

2.4.1 Global Studies

Gunarsih and Ismawati (2018) did an empirical investigation on how three disclosure dimensions of Sustainability Reporting (SR) impact performance using ROA and Tobin's Q. the dimensions included the economical, environmental, and social dimensions. The argument made in the study on the relation between SR and company performance was based on good management theories which argues that there exists a high correlation between good management and corporate social performance, which will positively impact company performance. The study sampled 60 IDX listed companies from 2014 to 2017, under the mining, metal and food processing sectors. A purposive sampling methodology was adopted to this end. Findings showed that two dimensions of SR (economic and social dimensions) heavily impacted market value (Tobin's Q) but had no impact on book value (ROA)

Zhang, Djajadikerta and Zhang (2018) examined how firms' sustainability engagements impacted their stock returns and volatility using the EGARCH and FIGARCH models and data drawn from major Chinese listed financial companies. In this study, evidence pointed to a positive linkage between sustainability engagement and returns on stocks, which suggested that news concerning a firm's sustainability are favorable in the market. Even though persistent volatility is attributed to the flow of news, the findings show that news on sustainability has the most substantial and significant reduction in volatility persistence, and closely following is popularity in

Google search engine and in general news. News on sustainability the volatility in stock returns. Evidence was also found showing that market expectations can be influenced by the dominant social paradigm upon the inclusion of sustainability. The findings have a crucial impact on market efficiency and the efficient management of portfolios.

Laskar (2018) investigated the impact that corporate sustainability reporting has on performance among four countries in Asia and to establish the existence of a substantial difference between developed and emerging nations in Asia and on how such reporting impacts firm performance. The investigation was based on 36 listed non-financial organizations in Japan, 28 in India, 26 in South Korea and 21 in Indonesia from 2009 to 2014. Content analysis (binary- 0 and 1) was used in establishing the disclosure score of sustainability performance, using the GRI format. The findings were further used in examining how corporate SR impacts firm performance by use of a logistic regression model. Findings from the regression showed that sustainability reporting had a substantial positive impact on firm performance. Additionally, it showed that the impact of SR performance was more significant among developed nations compared to emerging nations in Asia.

Kaya and Akbulut (2019) investigated the relation between SR and firm performance. Their investigation was to assess whether such practices have a positive impact on firm value while improving the impact of profitability and financial leverage on sustainability reporting in the automotive industry. The design of the study was based on panel data logistic regression analysis of 155 firms in the automotive industries from 20 different countries, between 2010-2018. Financial data like the Tobin's Q ratio and firm size as well as financial leverage ratio and ROA were used to indicate

firm performance while working with GRI's reports on GRI sustainability disclosure database. Similar findings were found in a study of existing literature which showed that sustainability reporting had a substantial positive association with firm size and but a negative one with financial leverage.

Oncioiu et al. (2020) was seeking to identify the accessibility of corporate sustainability reporting tools for managers in Romania and how they contribute to the increase in financial performance of companies. The conclusion drawn from the study was that SR indicators can be included in reporting the financial performance of an organization and has the ability to transform sustainability into tangible value for all stakeholders. Additionally, empirical findings create more understanding of CSR practices; and even though they are non-financial, they seem to have a substantial meaning upto a specific level after controlling other financial factors.

2.4.2 Local Studies

Ngatia (2014) investigated the impact of sustainability reporting on financial performance of a selection of NSE listed companies in Kenya. A descriptive design was adopted for this purpose. The study targeted 1144 management staff working in the NSE listed companies in Nairobi, Kenya. Descriptive statistics were used in analyzing the quantitative data collected in the study. Additionally, a multivariate regression model utilized in determining the relative significance of the variables in relation to performance. The overall findings showed that social disclosure had the most substantial impact on company performance closely followed by resource uniqueness and proficient disclosure while disclosures on environment protection had minimal effect.

Kitonyi (2015) investigated the relation between social accounting reporting and stock returns of NSE listed companies. The study obtained secondary data for the period 2009-2013 from annual financials of the NSE listed companies. It drew consideration from the NSE 20 share index companies. The data for the computation of stock returns was obtained from the NSE website. A content analysis was conducted on the annual reports based on the number of sentences written about each variable of social accounting. The data was analysed using the regression model. The findings revealed the existence of an insignificant relationship between social accounting and stock returns

Gatimbu and Wabwire (2016) investigated how corporate environmental disclosure impacts the performance of NSE listed firms. Longitudinal secondary data from the annual financials was employed for this purpose. Content analysis of sampled listed companies' annual financials was performed in examining environmental disclosure practices using a casual research design. The investigation targeted 61 listed companies for this purpose. Purposive sampling was then used in selecting firms listed for the entire period of the investigation and whose annual financials were availed at the NSE. The result was a sample of 32 companies. Linear regression model was used to determine the casual relationship between the variables. Findings reveal that environmental disclosure had a substantial positive impact on performance.

Mbuthia (2016) sought to assess the impact of corporate environmental reporting on performance of NSE listed companies. Secondary data for 4 years (2011 to 2014) was collected. Level of corporate environmental reporting was extracted from the annual reports through content analysis. Correlation and regression were then used to

determine the existence of a relation between variables. Findings showed that corporate environmental reporting has a significant positive impact on performance.

Katuva (2019) sought to ascertain the effect of integrated reporting on performance of NSE listed firms. The population consisted the 63 NSE listed firms. Secondary data was acquired over five years (January 2014 to December 2018) annually. Research design for this study was descriptive cross-sectional design while multiple linear regression was applied in determining how the variables relate. The findings showed that business model disclosure and firm size generated positive and statistically significant values while leverage generated negative substantial values for this study. Governance disclosure, risks and opportunities disclosure and resource allocation disclosure generated positive but weak values in the investigation.

2.5 Conceptual Framework

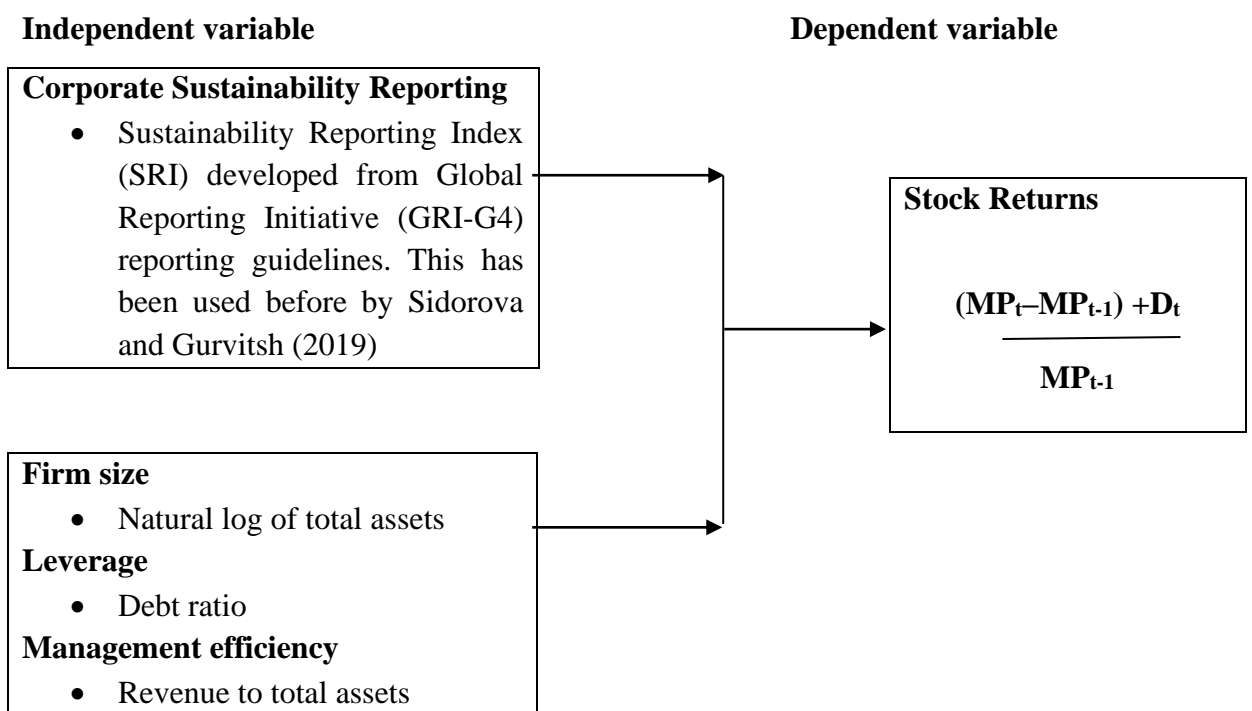
The independent variable was corporate sustainability reporting operationalized using a Sustainability Reporting Index (SRI) developed from Global Reporting Initiative (GRI-G4) reporting guidelines while stock returns was the dependent variable. The control variables were firm size, financial leverage and profitability.

Theoretically, the expected relationship between corporate sustainability reporting and stock returns is that increasing or reducing the level of corporate sustainability reporting will increase or reduce the stock returns of the business, resulting in an increase or reduction in wealth to the business owners. However, this relationship is also pegged on the control variables with varying relationships between firm size, financial leverage, profitability and stock returns.

Large firms are expected to enjoy economies of scale and therefore theoretically, large firms are expected to report high stock returns than small firms. Financial

leverage results to tax shield benefits which increases stock returns which leads to a positive relationship. However, financial leverage is also associated with bankruptcy costs which would imply a negative relationship between financial leverage and stock returns. Finally, management efficiency is expected to lead to increased dividend payouts and in essence stock returns and therefore positive relationship is expected between management efficiency and stock returns.

Figure 2.1: The Conceptual Model



Control Variables

Source: Researcher (2020)

2.6 Summary of the Literature Review and Research Gaps

From the review of available literature, there exist conceptual, contextual and methodological gaps. Conceptually, studies conducted on effect of sustainability reporting have mainly focused on its influence which is different from stock returns. The findings have also been inconsistent, Kitonyi (2015) found an insignificant impact while Gatimbu and Wabwire (2016) found a significant impact.

Contextually, the focus of most studies have been on developed markets as opposed to compared to emerging markets. Corporate sustainability reporting is relatively new in Kenya but is increasingly being adopted by listed firms. In spite of this, its value is still unknown. Prior local studies have been mainly on how firms' characteristics impact sustainability reporting level but the current study will use a different approach which considers its effect on stock returns. The degree by which corporate sustainability reporting improves stock returns among listed firms is still unknown

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

To ascertain how the returns of listed firms are affected by corporate sustainability reporting, a methodology was required in outlining how the research was done. Sections included in this chapter are; design, data collection, diagnostic tests and analysis.

3.2 Research Design

The research utilized a descriptive cross-sectional design. This design was appropriate because the researcher sought to describe the nature of affairs as they are (Khan, 2008). It was also appropriate because the nature of the phenomenon being studied and how they relate is of major interest to the researcher. Additionally, a descriptive research accurately represents the variables that aids in providing a response to the research query (Cooper & Schindler, 2013).

3.3 Target Population

The study targeted all the NSE listed companies. As at December 2019, the Nairobi Securities Exchange had listed 63 firms. Since the target population is small, the study was a census targeting all the listed firms.

3.4 Data Collection

This study relied exclusively on secondary data. The source of this data was the published annual financials published by the listed firms from January 2015 and December 2019 and noted down in a collection schedule. The reports were obtained from CMA and data was compiled on an annual basis.

The financial statements for each company were subjected to the Sustainability Reporting Index (SRI) shown in Appendix II. Corporate sustainability reporting disclosure was measured by dummy values assigned to each item of the disclosure index such that 0 represent absence of the disclosure item in financial reports and 1 represent the presence of the item in the reports. The total score was then shown as a percentage of the total possible points. The use of this binary coding system is justified by its use by other researchers such as Sidorova and Gurvitsh (2019) who scored items of their corporate sustainability reporting index with a value of one (1) if present and zero (0) if absent.

3.5 Diagnostic Tests

In determining the viability of the study model, the paper carried out several diagnostic tests, which included normality test, stationarity test, test for multicollinearity, test for homogeneity of variances and the autocorrelation test. Normality tests the presumption that the residual of the response variable have a normal distribution around the mean. The test for normality was done by the Shapiro-Wilk test. In the case where one of the variables was not normally distributed it was transformed and standardized using the logarithmic transformation method. Stationarity test was used to assess whether properties like mean, variance and autocorrelation structure vary with time. Stationarity was assessed using augmented Dickey Fuller test. In case, the data fails the assumption of stationarity, the study used robust standard errors in the model (Khan, 2008).

Autocorrelation measures how similar a certain time series is in comparison to a lagged value of the same time series in between successive intervals of time. This was measured by the Durbin-Watson statistic and incase the assumption was violated the

study employed robust standard errors in the model. Multicollinearity occurs when an exact or near exact relation that is linear is observed between two or several predictor variables. Variance Inflation Factors (VIF) and the levels of tolerance were used. Any multi-collinear variable should be dropped from the study and a new measure selected and substituted with the variable which exhibits co-linearity.

3.6 Data Analysis

SPSS version 23 analyzed the data with findings being quantitatively presented in the form of graphs and tables. Descriptive statistics summarized and explained the variables observed. The results were presented using percentages, frequencies, measures of dispersion and central tendencies and recorded in tables. Multiple regressions, Pearson correlation coefficient of determination and ANOVA were applied for inferential statistics.

3.6.1 Analytical Model

The regression model adopted was as follows

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$$

Where;

Y = Stock returns measured as % change in stock price and dividend earned on an annual basis

β_0 – Constant

β_1 - β_4 – Regression Coefficients

X_1 – Corporate sustainability reporting as measured using SR index

X_2 – Size of the firm given by natural log of total assets

X_3 – Leverage measured using debt to total assets ratio

X_4 – Management efficiency as measured by the ratio of total revenue
to total assets

ε – Error term

3.6.2 Tests of Significance

Parametric tests were carried out by the researcher to establish how significant the general model and individual parameters are. The F-test was used in the determination of the model's significance and was tested using ANOVA while a t-test determined significance of variables.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The focus of this chapter was to analyze the collected data in order to ascertain the impact of corporate sustainability reporting on stock returns of NSE listed firms. The findings are presented in line with study objectives and presented in Tables.

4.2 Descriptive Analysis

The descriptive statistics gives a representation of the mean, minimum and maximum values of variables presented along with standard deviations. Table 4.1 below illustrates the statistics of the variables used. An output of all the variables was extracted using SPSS for five years (2015 to 2019) on an annual basis.

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Stock returns	275	-.5700	.3900	.038376	.1067155
SRI	275	.1250	.8875	.562318	.3257903
Firm size	275	6.8455	11.5766	9.280967	1.1529618
Leverage	275	.0246	1.4193	.502143	.2486335
Management efficiency	275	.3431	11.6481	2.233636	1.8088672
Valid N (listwise)	275				

Source: Research Findings (2020)

4.3 Diagnostic Tests

Diagnostic tests were completed before running the regression model. In relation to this study the diagnostic tests that were done include multi-collinearity test, normality test, autocorrelation and heteroscedasticity tests.

4.3.1 Multicollinearity Test

Multicollinearity in statistics can be defined as an instance where more than one predictor variables are highly correlated. Strong correlations among independent variables are an undesirable situation. In situations where there is more than one linear relationship between some of the variables perfect multi-colinear is said to exist.

Table 4.2: Multicollinearity Test for Tolerance and VIF

Variable	Collinearity Statistics	
	Tolerance	VIF
Corporate sustainability reporting	0.503	1.988
Financial leverage	0.310	3.226
Firm size	0.380	2.632
Management efficiency	0.706	1.416

Source: Research Findings (2020)

Multicollinearity test was carried out on the data collected. VIF value together with the Tolerance of the variable were applied. Results where tolerance value exceeds 0.2 and the value of VIF is below 10 means that multi-collinearity is nonexistent. The analysis found a tolerance value exceeding 0.2 and a VIF value of below 10 meaning that there was no multi-collinearity existing.

4.3.2 Normality Test

In testing normality, the researcher used the Shapiro-Wilk test and Kolmogorov-Smirnov tests. Below are the null hypotheses as well as the alternative hypotheses.

H₀: the secondary data was not normal.

H₁ the secondary data is normal

A p-value more than 0.05, would lead to rejecting the null hypothesis and vice versa.

The table 4.3 below summarizes the outcomes.

Table 4.3: Normality Test

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Stock returns	.161	275	.300	.869	275	.853
SRI	.173	275	.300	.918	275	.822
Firm size	.178	275	.300	.881	275	.723
Leverage	.175	275	.300	.874	275	.812
Management efficiency	.176	275	.300	.892	275	.784

a. Lilliefors Significance Correction

Source: Research Findings (2020)

The data revealed a p- value of higher than 0.05 hence rejecting the null hypothesis and accepting the alternative hypothesis which means the normality test revealed the data was normally distributed. This data was henceforth suitable for usage in guiding parametric tests like ANOVA, regression analysis along with Pearson’s correlation.

4.3.3 Heteroskedasticity Test

The error process may be Homoskedastic among cross-sectional units, but have different variances across units: this is called group wise Heteroscedasticity. The hettest command is used in calculating Breuch Pagan for group wise Heteroscedasticity among residuals.

Table 4.4: Heteroskedasticity Test

**Modified Wald test for group wise heteroskedasticity
in fixed effect regression model**

H0: $\sigma(i)^2 = \sigma^2$ for all i

chi2 (275) = 320.28

Prob>chi2 = 0.0629

Source: Research Findings (2020)

The results in Table 4.4 indicate that the null hypothesis of Homoskedastic error terms is not rejected as supported by a p-value of 0.0629.

4.3.4 Autocorrelation Test

Correlation of error terms were checked across time period by conducting a serial correlation test. In testing the autocorrelation in the Durbin Watson test was applied for serial correlation which is a major challenge in panel analysis of data and it has to be factored in so as to attain the right model requirement. A DW statistic of 1.563 implied there is no serial correlation as it was within the accepted limit of 1.5 to 2.5

Table 4.5: Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.627 ^a	.393	.384	.0837653	1.56

a. Predictors: (Constant), Management efficiency, Leverage, Firm size, SRI
b. Dependent Variable: Stock returns

Source: Research Findings (2020)

4.4 Correlation Analysis

To test the relationship existing among variables a correlation analyses was done. A negative and positive correlation coefficient indicates a negative and positive correlation respectively. Pearson correlation test was applied in evaluating the correlation between stock returns and the independent variables under study.

From the results of correlation analysis, it was acknowledged corporate sustainability disclosure and firm size have a positive substantial correlation with stock returns as evidenced by ($r = .473, p = .000$); and ($r = .124, p = .040$) respectively. The study further revealed existence of a negative and statistically significant correlation ($r = -.423, p = .000$) of leverage against stock returns. The management efficiency showed a weak negative association with stock returns as evidenced by ($r = -.025, p = .676$).

Table 4.6: Correlation Analysis

		Stock returns	CSR	Firm size	Leverage	Management efficiency
Stock returns	Pearson Correlation	1				
	Sig. (2-tailed)					
SRI	Pearson Correlation	.473**	1			
	Sig. (2-tailed)	.000				
Firm size	Pearson Correlation	.124*	-.302**	1		
	Sig. (2-tailed)	.040	.000			
Leverage	Pearson Correlation	-.423**	-.214**	-.039	1	
	Sig. (2-tailed)	.000	.000	.521		
Management efficiency	Pearson Correlation	-.025	-.102	-.056	-.013	1
	Sig. (2-tailed)	.676	.092	.357	.825	

** . Correlation is significant at the 0.01 level (2-tailed).
* . Correlation is significant at the 0.05 level (2-tailed).
c. Listwise N=275

Source: Research Findings (2020)

4.5 Regression Analysis

NSE listed firms' stock returns was regressed against four variables; corporate sustainability reporting, firm size, leverage and management efficiency. The results are as shown in table 4.7. In determining the influence of selected predictor variables on stock returns, the research employed the coefficient of determination- R- squared. The study findings indicate that the value of the R-square was 0.393 implying that the selected predictor variables explain 39.3% of changes in stock returns. The R-square column highlights the quality of prediction by the independent variables. The study revealed that the independent variables and the dependent variable have a strong relationship as shown by an R value of 0.627%.

Table 4.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.627 ^a	.393	.384	.0837653	1.563

a. Predictors: (Constant), Management efficiency, Leverage, Firm size, SRI
b. Dependent Variable: Stock returns

Source: Research Findings (2020)

Table 4.8 provides the outcomes of the ANOVA. With P value being 0.000 and below the critical p value of 0.05, the model was considered statistically significant wholly and this is also explained by an F statistic of 43.678 which implies that the selected predictor variables are good predictors of stock returns.

Table 4.8: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.226	4	.306	43.678	.000 ^b
	Residual	1.894	270	.007		
	Total	3.120	274			

a. Dependent Variable: Stock returns
b. Predictors: (Constant), Management efficiency, Leverage, Firm size, SRI

Source: Research Findings (2020)

T-test was applied in determining the significance of each variable individually as a predictor of stock returns. P value indicated in the Sig. column shown the significance of the relationship of the variables. When P Value is below 0.05 and confidence level of at 95% it is considered to be a statistical significant measure. On the contrast when the p value falls above 0.05 it is concluded that there exist a weak association between the dependent variable and the independent variable. Table 4.9 below summarizes the outcomes.

Table 4.9: Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
	(Constant)	-.215	.051		
	SRI	.160	.017	.490	9.477
1	Firm size	.024	.005	.262	5.210
	Leverage	-.132	.021	-.307	-6.281
	Management efficiency	.002	.003	.035	.733

a. Dependent Variable: Stock returns

Source: Research Findings (2020)

Following the outcomes above, corporate sustainability reporting generated as t value of 9.477 while the firm size value of t was 5.210 both with P values less than 0.05 and this is interpreted to mean they are positive and statistically significant in the study. Leverage generated negative and statistically significant values as shown by a p value greater than 5%. Management efficiency generated positive but insignificant values as evidenced by high p values.

The below regression equation was formed:

$$Y = -0.215 + 0.160X_1 + 0.024X_2 - 0.132X_3$$

Where,

Y = Stock returns

X₁ = Corporate sustainability reporting

X₂ = Firm size

X₃ = leverage

From the above model, the constant = -0.215 indicates that if dependent variables (corporate sustainability reporting, firm size, leverage and management efficiency) were rated zero, firms' quoted at the NSE stock returns would be -0.215. A rise in corporate sustainability reporting with a unit would lead to a rise in stock returns of firms quoted at the NSE by 0.160. A unit increment in size of a firm would lead to an increment in stock returns of companies listed at the NSE by 0.024 while rise in leverage by a unit would cause the stock returns to reduce by 0.132.

4.6 Discussion of Research Findings

The researcher sought to ascertain the influence of corporate sustainability reporting on stock returns of firms. The independent variable was corporate sustainability reporting which was measured using SRI. The control variables characterized here were firm size, leverage and management efficiency. The listed firms' stock returns were measured by changes in stock price plus dividend issued if any. All the predictor variables were analyzed independently in terms of their strength and direction in influencing the dependent variable.

The corporate sustainability reporting as measured by SRI exhibited a positive and moderate relationship with stock returns as shown by a positive coefficient of 0.473. The association is also significant as shown by p values less than 0.05. Leverage has a negative correlation with stock returns. This means that higher levels of debt as compared to assets of a firm lead to a reduction in stock returns. The study further established that firm size exhibit positive substantial correlation with stock returns of quoted firms.

Regression analysis undertaken discovered that the model would predict 39.3% of variations in stock returns of the firms. The other 60.7% however would be as a result

of factors not in this model. The analysis showed that the alpha value was more than the critical value and therefore the relationship was significant. The calculated value of F was higher than F statistic making the null hypothesis to be rejected. In conclusion the study outcomes were existence of a significant effect of the selected independent variables on stock returns.

The study findings concur with Zhang, Djajadikerta and Zhang (2018) who examined how firms' sustainability engagements impacted their stock returns and volatility using the EGARCH and FIGARCH models and data drawn from major Chinese listed financial companies. In this study, evidence pointed to a positive linkage between sustainability engagement and returns on stocks, which suggested that news concerning a firm's sustainability are favorable in the market. Even though persistent volatility is attributed to the flow of news, the findings show that news on sustainability has the most substantial and significant reduction in volatility persistence, and closely following is popularity in Google search engine and in general news. News on sustainability the volatility in stock returns. Evidence was also found showing that market expectations can be influenced by the dominant social paradigm upon the inclusion of sustainability. The findings have a crucial impact on market efficiency and the efficient management of portfolios.

This study in addition agrees with Laskar (2018) investigated the impact that SR has on performance among four countries in Asia to establish the existence of a substantial difference between developed and emerging countries in Asia on the impact of this reporting on performance. The investigation was based on 36 listed non-financial organizations in Japan, 28 in India, 26 in South Korea and 21 in Indonesia from 2009 to 2014. Content analysis (binary- 0 and 1) was used in

establishing the disclosure score of sustainability performance, on the basis of GRI format. The findings from the content analysis were further used in examining how corporate sustainability reporting impacts firm performance by use of a logistic regression model. Findings from the regression showed that SR had a substantial positive impact on firm performance. Additionally, it showed that the impact of SR on performance was more significant among developed nations compared to emerging nations in Asia.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter reviews the results from the previous chapter, it further derives conclusions as well as the limitations encountered during the study. In addition, recommends policies that can enforce to boost the expected stock returns of companies. Finally, the chapter gives suggestions of areas where further studies can be done.

5.2 Summary of Findings

Aim of researcher was seeking to investigate the effect of corporate sustainability reporting on stock returns of companies enlisted at the NSE. The independent variables were corporate sustainability reporting, firm size, leverage and management efficiency. The research design was descriptive cross-sectional design. Data for all the CMA reports were used to retrieve secondary data and SPSS software 22 was used to analyze it. The period for this study was the five years from the year 2015 to 2019 for the 63 listed firms.

The Pearson correlation showed that corporate sustainability reporting exhibited a positive and moderate relationship with stock returns as shown by a positive coefficient. The association is also significant as shown by a p value less than 0.05. Leverage has a negative correlation with stock returns. This means that higher levels of debt as compared to assets of a firm lead to a reduction in stock returns. The study further established that firm size exhibit positive and significant correlation with stock returns of quoted firms.

From the regression analysis results, the findings revealed that 39.3% of changes in stock returns of entities are described by the four selected predictor variables. It is implied that 60.7% of fluctuations in returns of entities trading in the NSE are represented by other factors outside the scope of this study. The model wholly was said to be significant as the P value below 0.05. This means that the selected independent variables significantly influence returns of enlisted entities at the NSE.

The regression model further established that corporate sustainability reporting has a significant influence on stock returns of quoted entities which implies that an increase in corporate sustainability reporting will have a positive and significant influence on stock returns. It was also revealed that firm size has a significant positive influence on stock returns of listed firms and this implies that an increase in assets held by a firm and current ratio will result to stock returns increasing. Leverage was established to negatively and significantly influence stock returns implying that firms with more debt in their books will on average have lower returns than firms with less debt.

5.3 Conclusion

A conclusion can be drawn that stock returns is significantly affected by corporate sustainability reporting, firm size and leverage. Corporate sustainability reporting was established to have a significant positive impact on stock returns of listed firms and hence concludes that corporate sustainability reporting does substantially impact listed firms' stock returns. Management efficiency had a positive effect on stock returns but the effect is not statistically significant and therefore this study concludes that management efficiency has no substantial impact on stock returns.

Leverage was noted to have a substantial negative impact on stock returns of firms enlisted at NSE meaning a rise in debt financing leads to a reduction in stock returns.

This study therefore concludes that firms with more debt in their books will on average perform lower than firms with less debt in their books. Firm size had a positive substantial impact on stock returns and hence this study resolves that firm size does significantly influence stock returns of firm listed in NSE.

Conclusion on this study is that the predictor variables of this study; corporate sustainability reporting, firm size, leverage and management efficiency largely affect stock returns of listed firms in NSE. The p value of the ANOVA summary also assists in concluding that these variables significantly affect the stock returns. Since the independent variables of this have been found to explain 39.3% the stock returns of listed firms in the NSE, it is implied that 60.7% of variation in stock returns can therefore be related to factors that were not covered in the current study.

This finding concurs with Gatimbu & Wabwire (2016) made an assessment of how corporate environmental disclosure impacts performance of NSE listed firms. The study relied on longitudinal secondary data from annual financials. Content analysis of a sample of listed firms' reports was used in examining environmental disclosure practices. A Casual design was used on a targeted 61 listed companies. Purposive sampling was used in the selection of listed firms for firms with annual reports at the NSE. The process produced a sample of 32 listed companies. Linear regression model was used to determine the casual relationship between environmental disclosure and financial performance. Findings reveal that environmental disclosure has a positive significant effect on financial performance.

5.4 Recommendations

Corporate sustainability reporting was revealed to having a significant positive influence on stock returns of listed firms. This study recommends that firms whether

listed or not should strive to disclose their sustainability activities in their annual reports as this will directly and significantly contribute to the stock returns which will translate to achievement of the main goal of a firm which is shareholder wealth maximization.

Leverage was revealed to have a substantial negative effect on stock returns of listed firm's quoted at the NSE. The research therefore recommends firms to evaluate the tax benefits and the bankruptcy costs that come along with debt financing. Debt levels should be kept at optimal points since it has been found out that high level of debts reduces stock returns. This will make sure maximization of the wealth of shareholders is reached.

Firm size had a positive impact on the stock returns of listed firms quoted at the NSE though not significant. This study recommends suitable measures should be adopted by managers of these firms so as to boost the growth of their stock returns by increasing their asset base. Generally, firm's despite being listed or not should work on growing their assets and consequently this will improve stock returns and eventually lead to shareholder wealth maximization which is the primary objective of the firm.

5.5 Limitations of the Study

The research scope was five years, 2015-2019. This is not proof that similar results will be found with a longer study period. Additionally it is not certain that the same findings will hold beyond 2019. A longer period would be more reliable since it will consider major events not catered for in this study.

One of these study limitations is data quality. It cannot be ascertained from the investigation whether findings show accurate facts from the situation. An assumption

is made that the data is accurate. The measurements may change from a year to the next based on current conditions. The research used secondary data, which was in the public domain had already been obtained, unlike the first-hand information associated with primary data. The study considered selected determinants and not every factor that determines stock returns of listed firms.

For analyzing the data, the regression model was used. Because of the limitations of the model like erroneous and misleading results when a variable changes, it is impossible for the researcher to generalize the findings with certainty. With the addition of more data in the model, the expected relation between the variables may fail to hold.

5.6 Suggestions for Further Research

This study concentrated on corporate sustainability reporting and stock returns of firms quoted at the NSE and secondary data was relied on. Further research study that uses primary data such as questionnaires and interviews as well as covering all the listed firms is recommended.

The study did not exhaust all the independent variables influencing stock returns of firms listed at the NSE and a recommendation is given that more variables like firm age, growth opportunities, corporate governance, industry practices, and other macro-economic variables. Establishing how every variable impacts returns of listed firms will enable policy formulators know the tools that maximize shareholder wealth.

The study only focused on the latest five years because it consisted of only recent data. Additional studies may utilize a wider range which will be useful in confirming or disapproving the results. Finally, because of the limitations of the regression models, alternative models can be used in explaining the relation between variables.

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APPENDICES

Appendix I: Firms Listed at the Nairobi Securities Exchange

	COMPANY	SECTOR	YEAR OF LISTING
1	<u>Deacons (East Africa)</u>	Consumer Services	2016
2	<u>Nairobi Business Ventures</u>	Consumer Services	2016
3	<u>Stanlib Fahari I-REIT</u>	Financials	2015
4	<u>Atlas African Industries</u>	Industrials	2014
5	<u>Flame Tree Group Holdings</u>	Basic Materials	2014
6	<u>Kurwitu Ventures</u>	Financials	2014
7	<u>Nairobi Securities Exchange</u>	Financials	2014
8	<u>Home Afrika</u>	Financials	2013
9	<u>I&M Holdings</u>	Financials	2013
10	<u>CIC Insurance Group</u>	Financials	2012
11	<u>Umeme</u>	Utilities	2012
12	<u>Britam (Kenya)</u>	Financials	2011
13	<u>TransCentury</u>	Industrials	2011
14	<u>Co-operative Bank of Kenya</u>	Financials	2008
15	<u>Safaricom</u>	Telecommunications	2008
16	<u>Kenya Re-Insurance Corporation</u>	Financials	2007
17	<u>Liberty Kenya Holdings</u>	Financials	2007
18	<u>Equity Group Holdings</u>	Financials	2006
19	<u>Eveready East Africa</u>	Consumer Goods	2006
20	<u>KenGen Company</u>	Utilities	2006
21	<u>WPP Scangroup</u>	Consumer Services	2006
22	<u>Mumias Sugar Co</u>	Consumer Goods	2001
23	<u>ARM Cement</u>	Industrials	1997
24	<u>TPS Eastern Africa</u>	Consumer Services	1997
25	<u>Kenya Airways</u>	Consumer Services	1996
26	<u>National Bank of Kenya</u>	Financials	1994
27	<u>Sameer Africa</u>	Consumer Goods	1994
28	<u>Longhorn Publishers</u>	Consumer Services	1993
29	<u>Crown Paints Kenya</u>	Basic Materials	1992
30	<u>HF Group</u>	Financials	1992
31	<u>Uchumi Supermarkets</u>	Consumer Services	1992
32	<u>KCB Group</u>	Financials	1989
33	<u>Standard Chartered Bank Kenya</u>	Financials	1988

34	<u>Total Kenya</u>	Oil & Gas	1988
35	<u>Barclays Bank of Kenya</u>	Financials	1986
36	<u>Jubilee Holdings</u>	Financials	1984
37	<u>Express Kenya</u>	Consumer Services	1978
38	<u>Olympia Capital Holdings</u>	Industrials	1974
39	<u>East African Cables</u>	Industrials	1973
40	<u>Nation Media Group</u>	Consumer Services	1973
41	<u>Carbacid Investments</u>	Basic Materials	1972
42	<u>Diamond Trust Bank Kenya</u>	Financials	1972
43	<u>Eaagads</u>	Consumer Goods	1972
44	<u>East African Breweries</u>	Consumer Goods	1972
45	<u>East African Portland Cement</u>	Industrials	1972
46	<u>Kapchorua Tea Kenya</u>	Consumer Goods	1972
47	<u>Kenya Power & Lighting</u>	Utilities	1972
48	<u>Williamson Tea Kenya</u>	Consumer Goods	1972
49	<u>NIC Group</u>	Financials	1971
50	<u>Unga Group</u>	Consumer Goods	1971
51	<u>Bamburi Cement</u>	Industrials	1970
52	<u>Stanbic Holdings</u>	Financials	1970
53	<u>B O C Kenya</u>	Basic Materials	1969
54	<u>BAT Kenya</u>	Consumer Goods	1969
55	<u>Centum Investment</u>	Financials	1967
56	<u>Limuru Tea</u>	Consumer Goods	1967
57	<u>Sasini</u>	Consumer Goods	1965
58	<u>Sanlam Kenya</u>	Financials	1963
59	<u>KenolKobil</u>	Oil & Gas	1959
60	<u>Kenya Orchards</u>	Consumer Goods	1959
61	<u>Standard Group</u>	Consumer Services	1954
62	<u>Kakuzi</u>	Consumer Goods	1951
63	<u>Car & General (K)</u>	Consumer Services	1940

Source: Nairobi Securities Exchange (2020)

Appendix II: Corporate Sustainability Reporting Index

The following are binary questions that attempt to measure the extent of a firm's corporate sustainability reporting. A mark of one will be given for each variable that a firm has complied while 0 will be given for non-compliance.

1. Chairman statement/message from the chairman
2. Separate section of Management report dedicated to charity and social responsibility
3. Separate section of Management Report dedicated to personnel
4. Separate section of Management Report dedicated to customers
5. Brief introduction of the company
6. Separate section of Management Report dedicated to Supervisory Board
7. Separate section of Management Report dedicated to production
8. Separate section of Management Report dedicated to corporate targets
9. Existence of environmental policy that lists environmental objectives, issues of environmental concern and prioritization of environmental concerns in terms of their impact;
10. Presence of an environmental audit program;
11. Rehabilitation costs and provision for contingent liabilities;
12. Environmental cost accounting;
13. Availability of sustainable development report including a statement which states the company subscribes to sustainable development;
14. Waste recycling, reduction and reuse
15. Research and development on energy management and non-renewable resources use.
16. Company's contribution to the national economy

Source: Sidorova and Gurvitsh (2019)

Appendix III: Research Data

Company	Year	Stock returns	SRI	Management efficiency	Firm size	Leverage
Athi river mining	2019	-0.1600	0.1250	1.7659	10.6304	0.5125
	2018	-0.0600	0.1250	2.9085	10.7081	0.4556
	2017	0.1500	0.7500	5.9581	10.7155	0.6756
	2016	0.0400	0.1250	11.6481	10.5672	0.7448
	2015	0.0500	0.3750	7.5035	10.4728	0.7232
Bamburi	2019	0.1400	0.8750	2.1231	10.6604	0.2742
	2018	0.1500	0.8750	3.2366	10.5285	0.3254
	2017	0.1200	0.8750	1.0823	10.6222	0.2887
	2016	0.0900	0.7500	2.2792	10.6033	0.2953
	2015	0.1100	0.7500	1.3029	10.6336	0.2754
Car & General	2019	0.0100	0.5000	1.5945	9.9731	0.6428
	2018	0.0200	0.5000	1.4376	9.9870	0.6662
	2017	0.0200	0.5000	1.0129	9.9537	0.6639
	2016	0.0400	0.6250	0.9113	9.9113	0.6526
	2015	0.0600	0.6250	2.3548	9.8389	0.6372
Carbacid	2019	0.1300	0.8750	3.0471	9.5194	0.1158
	2018	0.1200	0.8750	3.0008	9.4888	0.1323
	2017	0.1300	0.8750	2.8067	9.4726	0.1656
	2016	0.1700	0.8750	2.9726	9.4037	0.1472
	2015	0.2200	0.8750	2.8340	9.3433	0.1270
Crown Berger	2019	0.0400	0.3750	3.2485	9.7688	0.7007
	2018	0.0500	0.3750	6.2517	9.7041	0.6912
	2017	0.0100	0.1250	2.0761	9.6570	0.7020
	2016	0.0100	0.1250	2.0507	9.5858	0.6503
	2015	0.0700	0.5000	2.6737	9.4691	0.5377
East Africa Cables	2019	-0.1000	0.1250	1.9401	9.8475	0.7331
	2018	-0.0800	0.1250	1.0225	9.8779	0.6613
	2017	0.0200	0.1250	0.7213	9.9235	0.5954
	2016	0.3900	0.6250	0.6988	9.8970	0.6081
	2015	0.0600	0.1250	0.8031	9.8331	0.5497
E.A Portland	2019	-0.0400	0.1250	1.0523	10.4371	0.3826
	2018	0.1500	0.8750	2.3571	10.4447	0.3554
	2017	0.3100	0.8750	2.2968	10.3638	0.4025
	2016	-0.0200	0.1250	2.6813	10.1964	0.5734
	2015	0.1100	0.7500	2.3480	10.2077	0.5605
Eveready	2019	0.3500	0.1250	2.6204	8.8880	0.2890
	2018	-0.1800	0.1250	1.3164	9.0346	0.5506
	2017	0.3900	0.1250	1.1960	9.1795	0.4309

Company	Year	Stock returns	SRI	Management efficiency	Firm size	Leverage
	2016	-0.1900	0.2500	1.1739	8.9685	0.7651
	2015	0.0500	0.3750	1.2056	8.9734	0.5803
Kakuzi	2019	0.1000	0.8750	1.2276	9.7594	0.2478
	2018	0.1100	0.8750	1.0562	9.7045	0.2405
	2017	0.1200	0.7500	1.0962	9.4807	0.3577
	2016	0.0400	0.5000	1.1120	9.5863	0.2284
	2015	0.0500	0.5000	1.1601	9.5703	0.2211
Kengen	2019	0.0200	0.3750	1.1233	11.5766	0.5144
	2018	0.0200	0.3750	4.5106	11.5650	0.5296
	2017	0.1900	0.7500	6.2963	11.5347	0.5866
	2016	0.0200	0.3750	10.0893	11.3983	0.6934
	2015	0.0300	0.3750	4.2579	11.2757	0.6071
Kenolkobil	2019	0.0900	0.8875	8.8431	10.3820	0.5346
	2018	0.0900	0.8750	1.1065	10.3838	0.5924
	2017	0.1000	0.8750	1.1464	10.2400	0.5076
	2016	0.0400	0.7500	1.3815	10.3787	0.6935
	2015	0.0200	0.7500	1.5359	10.4490	0.7629
KPLC	2019	0.0200	0.5000	1.4639	11.5336	0.7952
	2018	0.0200	0.5000	1.2832	11.4735	0.7848
	2017	0.0300	0.5000	1.1679	11.4401	0.6970
	2016	0.0400	0.5000	1.3048	11.3442	0.6677
	2015	0.0300	0.5000	1.1971	11.2484	0.6829
KQ	2019	-0.0600	0.1250	1.1606	11.1648	1.3073
	2018	-0.1900	0.1250	1.5853	11.1922	1.2291
	2017	-0.1900	0.1250	0.9464	11.2602	1.0328
	2016	-0.0200	0.1250	1.0851	11.1722	0.8101
	2015	-0.0400	0.1250	1.0237	11.0888	0.7456
Safaricom	2019	0.3000	0.8750	1.4691	11.2087	0.1556
	2018	0.2400	0.8750	0.9836	11.2019	0.1738
	2017	0.2000	0.8750	1.3339	11.1958	0.3356
	2016	0.1700	0.8750	1.5404	11.1290	0.3222
	2015	0.1400	0.8750	1.2591	11.1101	0.3771
Sameer	2019	0.0000	0.3750	1.1154	9.4727	0.3930
	2018	-0.2000	0.3750	4.1442	9.5173	0.4443
	2017	-0.0100	0.3750	6.6570	9.5742	0.3845
	2016	-0.0200	0.3750	7.9538	9.5863	0.3275
	2015	0.1200	0.3750	8.4745	9.5645	0.2696
Sasini	2019	0.0200	0.5000	3.3451	10.1204	0.1425
	2018	0.0300	0.5000	0.9506	10.2258	0.1037
	2017	0.1300	0.6250	1.0966	10.2053	0.0904

Company	Year	Stock returns	SRI	Management efficiency	Firm size	Leverage
	2016	0.3800	0.6250	1.4218	10.1740	0.1881
	2015	0.0100	0.3750	1.4858	9.9569	0.2950
Standard Group	2019	-0.0500	0.1250	1.7358	9.6493	0.5820
	2018	0.0500	0.2500	1.2374	9.6439	0.5287
	2017	-0.0700	0.1250	0.9502	9.6390	0.5689
	2016	0.0500	0.2500	0.9346	9.6129	0.4618
	2015	0.0500	0.2500	0.9684	9.6194	0.5065
Total Kenya	2019	0.0700	0.7500	1.2242	10.5799	0.4366
	2018	0.0600	0.7500	1.6434	10.5585	0.4653
	2017	0.0500	0.7500	1.0320	10.5343	0.4858
	2016	0.0400	0.6250	0.9226	10.5124	0.4953
	2015	0.0300	0.5000	0.8973	10.6019	0.6154
TransCentury	2019	-0.2100	0.1250	1.1574	10.2728	1.0060
	2018	-0.0500	0.1250	0.5021	10.2767	0.7975
	2017	-0.0500	0.1250	0.4648	10.2767	0.9662
	2016	-0.0800	0.1250	0.5627	10.3388	0.3658
	2015	0.0300	0.1250	1.4005	10.3773	0.4455
Uchumi	2018	-0.5700	0.1250	0.6245	9.6992	1.4193
	2017	-0.5300	0.1250	0.7402	9.8071	0.8674
	2016	0.0800	0.1250	0.6930	9.8379	0.5202
	2015	0.0600	0.1250	0.5634	9.7461	0.4751
Unga Group	2019	0.0000	0.1250	0.6361	10.0115	0.4664
	2018	0.0600	0.1250	2.2050	9.9638	0.3808
	2017	0.0700	0.1250	2.5238	9.9381	0.3826
	2016	0.0600	0.1250	3.3740	9.9045	0.3937
	2015	0.0400	0.1250	2.8332	9.9089	0.4708
Nation Media	2019	0.1200	0.8750	3.0200	10.0539	0.2786
	2018	0.1300	0.8750	4.4016	10.0854	0.2851
	2017	0.1600	0.8750	2.3280	10.1037	0.2948
	2016	0.2000	0.8750	1.7710	10.0772	0.2659
	2015	0.2300	0.8750	1.8952	10.0586	0.2797
BOC Kenya	2019	0.0200	0.7500	2.1309	9.3480	0.2771
	2018	0.0600	0.7500	0.9554	9.3471	0.2403
	2017	0.0600	0.7500	1.2192	9.3657	0.2615
	2016	0.1000	0.6250	1.1561	9.3618	0.2405
	2015	0.0800	0.6250	1.1158	9.4205	0.2165
EABL	2019	0.1200	0.8750	1.0780	10.8239	0.8202
	2018	0.1600	0.8750	1.5236	10.7906	0.8878
	2017	0.1400	0.8750	1.4882	10.8257	0.8005
	2016	0.1100	0.8750	1.2774	10.7984	0.8552

Company	Year	Stock returns	SRI	Management efficiency	Firm size	Leverage
	2015	0.1100	0.8750	1.2997	10.7613	0.8684
Eaagads Ltd	2018	0.1700	0.8750	1.1003	8.9651	0.0783
	2017	0.0500	0.8750	0.6298	8.8815	0.0910
	2016	0.0100	0.8750	1.5950	8.6334	0.1478
	2015	-0.0900	0.7500	1.4871	8.6491	0.1914
Williamson Tea	2019	0.1000	0.7500	1.2846	9.9780	0.2388
	2018	-0.0300	0.1250	1.4099	9.9224	0.2651
	2017	0.0500	0.1250	0.3431	9.9509	0.2212
	2016	0.0100	0.1250	0.6717	9.9324	0.2289
	2015	0.0900	0.1250	2.9726	9.9314	0.2535
Kapchorua Tea	2019	-0.0300	0.1250	2.8340	9.3076	0.3028
	2018	0.0500	0.1250	3.2485	9.3313	0.2939
	2017	-0.0100	0.1250	6.2517	9.2974	0.2801
	2016	0.0700	0.1250	2.0761	9.2854	0.2843
	2015	0.0900	0.1250	2.0507	9.3177	0.3822
Limuru Tea	2019	-0.0700	0.1250	2.6737	8.4183	0.2833
	2018	-0.0800	0.2500	2.8280	8.4505	0.2710
	2017	0.0100	0.2500	2.9102	8.4966	0.2674
	2016	0.0000	0.2500	3.4630	8.5297	0.2358
	2015	0.0800	0.2500	3.6012	8.5353	0.2410
Express	2019	-0.0700	0.1250	4.3590	8.5741	1.1388
	2018	-0.2500	0.1250	1.7659	8.5793	0.9389
	2017	-0.1400	0.1250	2.9085	8.6453	0.7282
	2016	-0.1600	0.1250	5.9581	8.6794	0.6733
	2015	0.0000	0.1250	11.6481	8.6817	0.5869
TPS	2019	0.0100	0.1250	7.5035	10.2427	0.4759
	2018	0.0000	0.1250	2.1231	10.2300	0.4368
	2017	-0.0300	0.1250	3.2366	10.1991	0.3876
	2016	0.0100	0.1250	1.0823	10.2025	0.3467
	2015	0.0300	0.1250	2.2792	10.2078	0.3458
Scan Group	2019	0.0400	0.3750	1.3029	10.1386	0.3484
	2018	0.0300	0.3750	1.5945	10.1299	0.3469
	2017	0.0200	0.3750	1.4376	10.0958	0.3099
	2016	0.0400	0.3750	1.0129	10.1233	0.3569
	2015	0.0600	0.3750	0.9113	10.1053	0.3686
Business Venture	2019	-0.2300	0.1250	2.3548	8.1575	0.6834
	2018	0.0300	0.1250	3.0471	8.1915	0.6793
	2017	0.0300	0.1250	3.0008	8.0483	0.5936
	2016	0.1000	0.3750	2.8067	7.9003	0.7626
	2015	0.0300	0.1250	2.9726	7.6541	0.7537

Company	Year	Stock returns	SRI	Management efficiency	Firm size	Leverage
Home Africa	2019	-0.0400	0.1250	2.8340	9.6511	1.0875
	2018	-0.0400	0.1250	3.2485	9.5944	1.0535
	2017	-0.1000	0.1250	6.2517	9.5868	1.0108
	2016	0.0000	0.1250	2.0761	9.5704	0.9063
	2015	0.0300	0.3750	2.0507	9.4864	0.8892
Kurwitu	2019	-0.0800	0.3750	2.6737	8.1475	0.5301
	2018	-0.0300	0.1250	2.2713	8.7080	0.5264
	2017	0.0000	0.1250	1.8378	8.7810	0.5370
	2016	0.0000	0.1250	2.3583	8.7119	0.4524
	2015	-0.1100	0.1250	2.5221	8.1094	0.4029
NSE	2019	0.1000	0.8750	1.3097	9.3239	0.0457
	2018	0.0900	0.8750	1.1747	9.3040	0.0748
	2017	0.1600	0.8750	1.1699	9.2829	0.0748
	2016	0.1900	0.8750	1.1666	9.2266	0.0843
	2015	0.2300	0.8750	1.1380	9.0604	0.3640
BAT	2019	0.1900	0.8750	0.4479	10.2506	0.5597
	2018	0.2600	0.8750	1.0423	10.2672	0.5245
	2017	0.2700	0.8750	1.0590	10.2714	0.5261
	2016	0.2300	0.8750	1.1121	10.2613	0.5548
	2015	0.2200	0.8750	1.1251	10.2301	0.0246
Mumias	2018	0.0600	0.1250	1.1587	10.4282	0.7179
	2017	-0.2300	0.1250	1.1441	10.3103	0.7097
	2016	-0.1200	0.1250	1.1447	10.3722	0.6361
	2015	-0.0500	0.1250	1.0939	10.4359	0.5670
Longhorn Publishers Limited	2019	0.0600	0.8750	1.0332	9.2692	0.4912
	2018	0.0500	0.8750	1.2705	9.2711	0.4925
	2017	0.0900	0.8750	1.2776	8.8384	0.4482
	2016	0.1300	0.8750	1.1715	8.8765	0.4229
	2015	0.1700	0.8750	1.1658	8.8357	0.4367
Deacons (East Africa) PLC	2018	-0.1200	0.1250	1.5582	9.3583	0.4861
	2017	0.0400	0.1250	1.6234	9.3955	0.3917
	2016	0.0300	0.1250	1.6385	9.2927	0.2804
	2015	-0.0400	0.1250	1.6048	8.7413	0.5297
ABSA	2019	0.0498	0.8750	1.5050	8.2674	0.4680
	2018	0.0389	0.8750	1.2653	8.3160	0.4500
	2017	0.0387	0.8750	1.2875	8.3543	0.4420
	2016	0.0360	0.8750	1.2781	8.3823	0.3410
	2015	0.0284	0.8750	1.2225	8.4142	0.2830

Company	Year	Stock returns	SRI	Management efficiency	Firm size	Leverage
Diamond Trust Bank	2019	0.0498	0.8750	1.0468	8.2674	0.4000
	2018	0.0389	0.8750	1.1691	8.3160	0.3180
	2017	0.0387	0.8750	1.1254	8.3543	0.3990
	2016	0.0360	0.8750	1.0996	8.3823	0.4000
	2015	0.0284	0.8750	1.0417	8.4142	0.3350
Standard Chartered Bank Kenya Ltd	2019	0.0449	0.8750	1.2396	8.2908	0.3260
	2018	0.0446	0.8750	1.1984	8.3432	0.3380
	2017	0.0471	0.8750	1.1591	8.3473	0.3760
	2016	0.0278	0.8750	1.1483	8.3692	0.3370
	2015	0.0374	0.8750	1.0814	8.3988	0.4600
NIC Bank	2019	0.0417	0.8750	2.0954	8.0348	0.6790
	2018	0.0414	0.8750	2.3650	8.0830	0.4140
	2017	0.0427	0.8750	2.5203	8.1637	0.7370
	2016	0.0386	0.8750	2.2533	8.2195	0.5460
	2015	0.0364	0.8750	2.3134	8.2291	0.3900
National Bank	2018	0.0140	0.1250	2.9412	7.9661	0.4400
	2017	0.0074	0.1250	2.3810	8.0894	0.4200
	2016	-0.0096	0.1250	2.6316	8.0964	0.3800
	2015	0.0012	0.1250	4.3478	8.0611	0.2300
KCB Bank	2019	0.0378	0.8750	4.9505	8.4839	0.2020
	2018	0.0396	0.8750	2.7174	8.5088	0.3680
	2017	0.0454	0.8750	3.0211	8.5763	0.3310
	2016	0.0391	0.8750	3.2468	8.6700	0.3080
	2015	0.0407	0.8750	3.5714	8.7031	0.2800
I&M Bank	2019	0.0400	0.8750	4.7393	7.2905	0.2110
	2018	0.0420	0.8750	2.1739	8.0426	0.4600
	2017	0.0230	0.8750	2.9412	8.1377	0.3400
	2016	0.0410	0.8750	3.2895	8.1698	0.3040
	2015	0.0410	0.8750	3.4364	8.2152	0.2910
HFCK	2019	0.0189	0.8750	2.9674	7.6094	0.3370
	2018	0.0185	0.8750	2.6596	7.6698	0.3760
	2017	0.0162	0.8750	1.4728	7.7817	0.6790
	2016	0.0212	0.8750	2.4155	7.0011	0.4140
	2015	0.0113	0.8750	1.3569	7.0000	0.7370
Equity Bank	2019	0.0560	0.8750	1.8315	8.3341	0.5460
	2018	0.0560	0.8750	2.5641	8.3769	0.3900
	2017	0.0670	0.8750	2.9412	8.4411	0.3400
	2016	0.0520	0.8750	2.2727	8.5332	0.4400

Company	Year	Stock returns	SRI	Management efficiency	Firm size	Leverage
	2015	0.0420	0.8750	1.6556	8.5795	0.6040
Co-operative Bank	2019	0.0400	0.8750	2.0833	8.3003	0.4800
	2018	0.0420	0.8750	2.5000	8.3596	0.4000
	2017	0.0330	0.8750	2.9412	8.4513	0.3400
	2016	0.0340	0.8750	4.1667	8.5309	0.2400
	2015	0.0380	0.8750	4.3478	8.5441	0.2300
Stanbic	2019	0.0233	0.8750	4.9505	7.6698	0.2020
	2018	0.0290	0.8750	2.7174	7.7817	0.3680
	2017	0.0320	0.8750	3.0211	8.2339	0.3310
	2016	0.0254	0.8750	3.2468	8.2979	0.3080
	2015	0.0219	0.8750	3.5714	8.3115	0.2800
Jubilee	2019	0.0212	0.8750	1.1971	6.8455	0.7143
	2018	0.0097	0.8750	1.1606	6.8953	0.8333
	2017	0.0330	0.8750	1.5853	7.7397	0.8750
	2016	0.0340	0.7500	0.9464	7.8129	0.8750
	2015	0.0290	0.7500	1.0851	7.8152	0.8750
Pan Africa	2019	0.0265	0.8750	1.0237	6.9446	0.8750
	2018	0.0171	0.8750	1.4691	6.9849	0.7143
	2017	0.0126	0.8750	0.9836	7.0103	0.7143
	2016	0.0162	0.7500	1.3339	7.0192	0.7143
	2015	0.0105	0.7500	1.5404	7.0159	0.7500
Kenya Re	2019	0.0546	0.8750	1.2591	7.0138	0.8750
	2018	0.0489	0.8750	1.1154	7.1349	0.7778
	2017	0.0411	0.8750	4.1442	7.2366	0.7778
	2016	0.0493	0.7500	6.6570	7.3015	0.7778
	2015	0.0375	0.7500	7.9538	7.3503	0.7500
Liberty	2019	0.0269	0.8750	8.4745	7.2804	0.7500
	2018	0.0219	0.8750	3.3451	7.2931	0.7500
	2017	0.0126	0.8750	0.9506	7.3312	0.8889
	2016	0.0123	0.7500	1.0966	7.3436	0.7778
	2015	0.0071	0.7500	1.4218	7.3507	0.7500
Britam	2019	0.0330	0.8750	1.4858	7.6641	0.9091
	2018	0.0410	0.8750	1.7358	7.7162	0.9091
	2017	0.0390	0.8750	1.2374	7.7920	0.8889
	2016	0.0310	0.7500	0.9502	7.8336	0.8750
	2015	0.0390	0.7500	0.9346	7.9186	0.8750
CIC	2019	0.0498	0.8750	0.9684	8.2674	0.8750
	2018	0.0389	0.8750	1.2242	8.3160	0.8750
	2017	0.0387	0.8750	1.6434	8.3543	0.4000
	2016	0.0360	0.7500	1.0320	8.3823	0.5000

Company	Year	Stock returns	SRI	Management efficiency	Firm size	Leverage
	2015	0.0284	0.7500	0.9226	8.4142	0.5714