RELATIONSHIP BETWEEN EARNINGS MANAGEMENT AND STOCK MARKET RETURNS AMONG COMPANIES LISTED IN NAIROBI SECURITIES EXCHANGE

ODUMA ONYANGO CHRISPINE

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DECLARATION

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

Signature: ..... Date: .....

ODUMA ONYANGO CHRISPINE **D63/76264/2012**

This research project has been submitted for examination with my approval as a University supervisor.

Supervisor:

Signed…… Date ……

DR. KISAKA SIFUNJO

DEDICATION

This project is dedicated to my loving wife Celine Grace Aluoch Nyar Abwogo Yonder for her love, encouragement, support and prayers. To our lovely daughters Taifa and Deutsche for their patience. To our parents Mrs. Margret Oduma and Mr. Marcus Oduma together with Mrs. Risper Ochieng Aoko and Mr. Henry Ochieng Aoko for all the support they have given me.

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ABSTRACT

The main objective of this research study was to establish the relationship between earnings management and stock market returns among companies listed in Nairobi Securities Exchange. The study adopted a descriptive research design aimed at investigating the relationship between earnings management and stock market returns among companies listed in Nairobi Securities Exchange. The population of the study consisted of 66 companies quoted in the Nairobi Securities Exchange as at 31st December 2014. The study used a census approach. The study found that earnings management, firm size, and market to book value ratio, influenced stock return. All of the variables influenced it positively. The results show that the intercept was 1.103 for all years. The study found that the coefficient for earnings management was 0.852, meaning that earnings management positively and significantly influenced the Stock return among companies listed at the Nairobi Securities Exchange in Kenya. The study also found that the coefficient for firm size was 0.654, meaning that Firm size positively and significantly influenced the stock return among companies listed at Nairobi Securities Exchange. The study concluded that the coefficient for market to book value ratio was 0.231, meaning that market to book value ratio positively and significantly influenced the stock return among companies listed at Nairobi Securities Exchange.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Earnings management is the alteration of firms' reported economic performance by insiders to either mislead some stakeholders or to influence contractual outcomes (Healy & Wahlen, 2010). Ronen and Yaari (2008) classified the earnings management into two categories value-enhancing earnings management and opportunistic earnings management and further defined each as "Value-enhancing earnings management is a way for managers to establish rapport with owners by signalling value relevant information without getting into too many cumbersome details. Securing the goodwill of the owners is valuable" while they defined the other type "Opportunistic earnings management is likely because of the conflict of interest between shareholders and management and because, in general, those possessing private information makes it easier to use it to the advantage of its holder at the expense of others".

Consequently, Easterling (2011) defined stock market returns as returns that investors generate from buying and selling of stocks in an efficient market. Depending on the market, they can either be profit or dividends in nature. Returns are usually floating and subject to market risks. To make the maximum returns, investors should buy low and sell high. Rational investors act on informed decisions and conduct either technical or fundamental analysis to determine the future trend of stocks.

Prior research provides mixed evidence of how managers' focus on earnings management affects the stock market returns. While greater stock returns can

discourage managers from excessively focusing on earnings management by increasing shareholder monitoring and threat of exit, it can also motivate myopic behavior due to greater hostile takeover pressure and equity compensation (Edmans, 2009). This study aims to establish these contrasting perspectives with respect to earnings management since earnings manipulation is often motivated by managers' incentives to inflate short-term earnings and can result in misallocated firm resources and reduced firm value (McNichols & Stubben, 2008; Palmrose, Richardson & Scholz, 2004).

According to market efficiency theory, correlation between earnings management and stock markets is noticeable. Indeed, it is declared information which is supposed to be reflected in stocks and not accounting value in itself (Fama, 2011). Fisher in his theory also hypothesized that the ex-ante nominal interest rate should fully anticipate movements in expected inflation, in order to yield the equilibrium real interest rate (Fisher, 2003). Value Investing Theory postulated that one of the investments strategies is derived from undervalued basic fundaments which are expected to determine the stock price.

This section defined earnings management and stock market returns, the relationship between earnings management and stock market returns, the study also highlighted the relevant theories that the study will be hinged. The background also highlighted previous studies that investigated the relationship between earnings management and stock market returns. In light of these, the study seeks to establish the effect of earnings management on stock market returns among companies listed in Nairobi securities exchange.

1.1.1 Earnings Management

The role of financial statements in a market economy cannot be over emphasized. Management conveys information about the firm to its owners and other interested constituents using financial statements. This function takes on an added significance in a publicly owned corporation where the separation of ownership and control makes it the only avenue through which owners and investors can get a glimpse of the operations of the firm. "Agency theory suggests that earnings management may occur when managers have the incentive to promote their own self-interest by compromising shareholders interest" as the result of information asymmetry (Chen et al., 2010).

There has been numerous research on earnings management that examines how managers manipulate certain financial statement accounts such as accruals and, or real economic activities for their own self-interest (Roychwdhury, 2006; Cohen & Zarowin, 2010; Ibrahim et al., 2011). Earning is an item of the income statement that can be manipulated. Earnings is a product of cash flows and accruals so it can be managed through means such as accruals, changes in capital structure, and changing accounting methods as stated by Jones (2011). Jones uses total accruals in the study of earnings management by firms in the import business. These firms can benefit from import relief and thus will attempt to decrease earnings during import relief investigations by the United States International Trade Commission (ITC).

Ronen and Yaari (2008) classified the earnings management into two categories value-enhancing earnings management and opportunistic earnings management and further defined each as Value-enhancing earnings management is a way for managers to establish rapport with owners by signalling value relevant information without

getting into too many cumbersome details. Securing the goodwill of the owners is valuable while they defined the other type opportunistic earnings management is likely because of the conflict of interest between shareholders and management and because, in general, those possessing private information makes it easier to use it to the advantage of its holder at the expense of others.

This section presented the concept of earnings management and the two classifications of earnings management; value-enhancing earnings management and opportunistic earnings management. Value-enhancing earnings management is a way for managers to establish rapport with owners by signalling value relevant information without getting into too many cumbersome details. Securing the goodwill of the owners is valuable while Opportunistic earnings management is likely because of the conflict of interest between shareholders and management.

1.1.2 Stock Market Returns

According to Moridi and Mousavi (2009), stock market return is one of the most important factors in choosing the best investment. In any investment, investors are seeking to obtain returns and trying to get information from the future amount of stock returns of companies. One of the most common methods to analyse financial information is to prepare financial ratios. In fact, financial ratios are the summary of financial reports of companies which provide much information content from the internal situation of company. According to Namazi and Rostami (2006), among the financial ratios, a set of market ratios exist for corporate performance evaluation that investors during making their investment decisions have particular attention to it and the most important is earnings per share ratio (EPS) which shows earnings that the company has achieved in a fiscal period for an ordinary share and often is used to

evaluate the profitability and risk associated with earning and also judgments about stock prices.

The use of stock market indicator for the prediction of future economic growth or vice versa has been a debatable issue in finance and economics. It is commonly believed that large decreases in stock prices are reflective of future recession, and increasing stock prices are leading indicators of future economic growth (Mun, Siong & Thing, 2008). For instance, the uncertainty embedded in the recession of 2009 triggered a large-scale drop in stock prices that was reflected in the Dow Jones and the S&P 500 (Fuentes, 2010).

Stock market also provides companies with facility to raise capital for expansion and growth through the selling off of shares to the public or offering additional shares to shareholders through a rights issue. This is very crucial for the business as it offers them a cheaper and a competitive way of raising additional capital. The market also assist in the mobilization of resources especially savings and redirecting the same to productive activities in the economy thereby facilitating growth and development (Amadi & Amadi, 2006).

Stock market returns can therefore be considered a crucial indicator of stock market for the prediction of future economic growth or vice versa. Stock market also provides companies with facility to raise capital for expansion and growth through the selling off of shares to the public or offering additional shares to shareholders through a rights issue. The study of stock market returns is therefore very important as it helps managers to manage the company's earnings before earnings announcements.

1.1.3 Earnings Management and Stock Market Returns

The role of financial statements in a market economy cannot be over emphasized. Management conveys information about the firm to its owners and other interested constituents using financial statements. This function takes on an added significance in a publicly owned corporation where the separation of ownership and control makes it the only avenue through which owners and investors can get a glimpse of the operations of the firm. "Agency theory suggests that earnings management may occur when managers have the incentive to promote their own self-interest by compromising shareholders interest" as the result of information asymmetry (Chen et al., 2010).

Nicholson (2009) noted that the effect of earnings management operate in such a way that firms with low ratios between stock price and stock earning consistently provide higher returns than those with high earnings ratios. On contrary, stock market returns declines when the willingness of investors to pay price per unit falls as well as when the price paid per stock by investor's increases in slower pace than the earnings per share. A high price earning ratio usually indicates that the market will pay more to obtain the company's earnings because it believes in the firm's ability to increase its earnings. Companies in those industries enjoying a surge of popularity tend to have high price earnings ratio, reflecting a growth in orientation. A low price earnings ratio indicates that the market has less confidence that the company's earnings will increase.

According to Rafournier (2010), firms adopting earnings management measured by discretionary accruals have positive or negative discretionary accruals or positive (negative) abnormal returns during results publication. These results indicates that

earnings management is a practice adopted by most firms to influence investors' perception of the firm's future returns and to provide them unexpected market results superior to their expectations. Indeed, firm managers may adopt an accounting policy which allows for hiding their management practices. This is related to their influence on investors' behaviour and on the market, by increasing the gap between real stock returns and that which could have been achieved in case no manipulated information was declared

This sub-section presented the relationship between earnings management and stock market returns. The rationale is the belief that firms that consistently beat or meet analysts' forecasts are rewarded with high stock prices. Consequently, the studies argue that managers whose performances are tied to shareholder wealth creation are rewarded with performance incentive based measures like stock options.

1.1.4 Nairobi Securities Exchange

The NSE was constituted in 1954 as a voluntary association of stockbrokers registered under the Societies Act (NSE, 1997). The newly established stock exchange was charged with the responsibility of developing the stock market and regulating trading activities. The NSE is regulated by Capital Markets Authority (CMA, 2011) which provides surveillance for regulatory compliance. According to Ngugi (2005), the exchange has continuously lobbied the government to create conducive policy framework to facilitate growth of the economy and the private sector to enhance growth of the stock market.

The NSE is also supported by the Central Depository and Settlement Corporation (CDSC) which provides clearing, delivery and settlement services for securities traded at the Exchange. It oversees the conduct of Central Depository Agents

comprised of stockbrokers and investments banks which are members of NSE and Custodians (CDSC, 2004). These regulatory frameworks are aimed to sustain a robust stock market exchange that supports a cogent and efficient allocation of capital allowing price discovery to take place freely based on the market forces. The Nairobi Securities Exchange's All Share Index soared 43.7% in US dollar terms, ranking it among worlds very best. While big names like Safaricom and ARM Cement recorded terrific performances in 2013, the year's most explosive price gains came from insurance firms and investment holdings companies.

Several empirical studies conducted in Kenya concluded that there are various relationships between earnings management and stock market returns. Ogello (2014) who did an empirical evidence study on relationship between price earnings ratio and stock returns for companies listed at the NSE concluded that majority of the firms had low Price earnings ratios resulting in higher stock returns, that firms with lower reinvestment needs have higher price earnings ratios than firms with higher reinvestment rates, that stocks with high market to book value ratios have significantly higher returns than stocks with low market to book values ratios and that there is a significant relationship between total assets and stock returns of firms. It is important to note that many other factors for example interest rates and industry performance affect stock returns and investors should consider them when making investment decisions. This subsection looked at the background of NSE. The subsection presented the year NSE was constituted and the body that regulates firms listed in NSE. It also postulates the possible relationship between the study variables.

1.2 Research Problem

According to Monther and Kaothar (2010), the stock exchange provides investors with an efficient mechanism to liquidate or make investments in securities. However emerging Equity Markets have witnessed significant changes in terms of technology development, investor profile and investment climate as a result of economic reform policies. These changes are expected to have profound effects on the earnings management and stock market returns. During these last decades, research conducted on earnings management and stock market returns reached mixed results. Some studies report positive results in earnings management and stock market returns (Brochet et al., 2012; Amadi & Amadi, 2014) and the reverse is true (Courteau et al., 2011). These mixed results in the literature are justified by the difficulty in giving a universal definition to earnings management concept and the limitations of the adopted methodologies.

The NSE has seen drastic volatility in its stock prices as a reaction to market environment which have ranged from financial crisis of 2008, political election, other government activities and the general performance of the Kenyan economy. This has affected market returns of most securities. However, NSE has continued to see increased number of listed companies such as Safaricom and ARM Cement and robust performance of some listed companies particularly from insurance firms and investment holdings companies in 2013. The increased market volatility in the securities market had a direct impact on the price of securities. This negatively affected some small or individual investors who experienced shrinkage or altogether lost their investment in the market. This was because some of them are not keen on the changes in stock market returns and the trend of changes hence does not review their earnings management as a response to market fundamentals. Despite earnings

management-stock market returns being of considerable interest very little is documented about the relationship between earnings management and stock market returns of companies listed on Nairobi Stock Exchange.

Amaadi and Amadi (2014) conducted a research on earnings management and stock market returns in USA, Fazeli and Rasouli (2011) investigated real earnings management as relates to the emerging market using Tehran Stock Exchange. Locally, Muriuki (2014) conducted a research on the effect of inflation and interest rates on stock market returns of firms listed at the Nairobi securities exchange, Iraya, Mwangi and Muchoki (2015) examined the effect of corporate governance practices on earnings management of companies listed at the Nairobi Securities Exchange while Bulee (2013) also conducted a research on the effect of corporate governance on earnings management of companies listed at the Nairobi securities exchange. To the best of the researchers understanding no study has been conducted either internationally or locally on earnings management and stock market returns. It therefore evident that there exists a literature gap on earnings management and stock market returns in Kenya. This study hopes to fill this gap by answering the question: what is the relationship between earnings management and stock market returns among companies listed in Nairobi Securities Exchange?

1.3 Research Objectives

The main objective of this research study was to establish the relationship between earnings management and stock market returns among companies listed in Nairobi Securities Exchange.

1.4 Value of the Study

Results of this study would be of significance to Nairobi Securities Exchange management, analysts and investors in determining investment decisions and strategies so as to ensure investors earn systematically above average return by investing in appropriate stocks. External investors and shareholders can be able to know the main variables that affect the stock earnings and to observe firm's performance before making the decision on whether to buy or sell stock. Professional managers who can consider these determinants of earnings to establish the optimal financing vehicle that helps achieve the company's objectives.

To the Government, this study provided an avenue through which it can raise the much needed resources especially for the long term projects such as infrastructure development through the sale of bonds, and also act as an economic barometer, in that, by looking at the movement in share prices and the stock market index, the Government can be able to gauge the performance of the economy at large and thereby initiate either monetary or fiscal measures that can assist in facilitating growth and development.

Lenders may use the results in evaluating the firm's market returns before giving corporate financing loans with particular emphasis on the level of risk involved. Theoretically, the study would enrich existing knowledge on earnings management and stock returns of listed companies in Kenya. The study shall also be of value to academicians who may wish to carry out further research on the relationship between the earnings management and stock market returns among companies listed in Kenya.

This section presented the relevance of the study. The section discussed how this study would be significant to Nairobi Securities Exchange management, analysts,

both internal and external investors who may have interest in firms listed in Nairobi Securities Exchange, shareholders, the government and Lenders.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter summarizes the information from other researchers who have carried out their research in the same field of study. Section 2.2 presents theoretical literature, section 2.3 discuses empirical studies, while section 2.4 presents the determinants of stock market returns and finally section 2.5 presents a summary of literature review and research gaps.

2.2 Theoretical Review

The study will be based on Fisher theory, value investing theory and market efficiency theory.

2.2.1 Fisher Theory

Fisher (2003) hypothesized that the ex-ante nominal interest rate should fully anticipate movements in expected inflation, in order to yield the equilibrium real interest rate. The expected real interest rate is determined by real factors such as the productivity of capital and time preference of consumers, and is independent of the expected Firm size. In principle, the Fisher hypothesis could be extended to any asset, such as real estate, common stock, and other risky securities.

The empirical relationship between earnings management and common stocks was first investigated by Jaffe and Mandelker (1976), Bodie (2008) and Nelson (1976). Although employing different empirical approaches, these authors all concluded for a significant positive relationship between the proxies of earnings management and stock returns. Following these pioneering studies, Fama and Schwert (2007)

investigate the earnings management effect on asset returns in a number of assets. They concluded that, similar to previous studies, common stocks seem to perform poorly as hedge against various determinants of stock returns. Since these earlier studies, the empirical literature on the Fisher hypothesis has been prolific, and the findings have been largely similar (Park, 1997).

The early studies on the Fisher hypothesis mentioned above were mainly concerned with documenting and describing the nature of the relationship between stock returns and earnings management, and not with any explanation of the results. Several alternative explanations have emerged. The Tax-Effect Hypothesis proposed by Feldstein (2004) argues that earnings per share generate artificial capital gains due to the valuation of depreciation and inventories (usually nominally fixed) subject to taxation. This increase price earnings ratio and thus reduces real after-tax earnings. Rational investors would take into account this effect of inflation by reducing common stock valuation. In this sense, inflation "causes" movement in stock prices.

Fisher's theory offers critical and fundamental insights into how earnings management affects performance of stock returns. In regards to the studies that Fisher hypothesized, most studies found a positive relationship between the proxies of earnings management and stock returns.

2.2.2 Value Investing Theory

Value investing theory is derived from the ideas of Graham and Dodd (1934). The main idea involves buying securities whose shares appear underpriced by some of its fundaments. Such securities might be traded at discounts of book value, sales or earnings multiples. The essence of value investing is buying stocks at less than their intrinsic value, where intrinsic value is the discounted value of all future distributions.

This approach has evolved significantly since 1970s. The most successful Graham's student is Warrant Buffet, who runs Berkshire Hathaway.

One of the investments strategies is derived from undervalued basic fundamentals which are expected to determine the stock price. This is typical for stocks traded with discount and at low multiples of sales (Price to Sales), book value (Price to Book Value), earnings (Price Earnings) and cash flow (Price Cash Flow). From long term prospective, the investment strategies based on the investments into stocks with low multiples result in comparably higher annual return. These studies consistently demonstrate that value investing works well and generally outperforms the market averages over the long-term. Stocks with low P/B ratios have higher average annual returns than growth stocks which are identified as those with high P/E ratios. To implement this theory an investor could buy a group of stocks with the lowest P/E ratios. According to Fama and French (2012), market-beating results are achievable over longer time horizons because eventually, the market will realize that these stocks are underpriced, and as more investors recognize this fact the stock price will increase.

While these concepts lay the core foundations of investing by buying securities whose shares appear underpriced by some of its fundaments, value investing works well and generally outperforms the market averages over the long-term. The most important question then would be how then can managers invest to increase the company's market returns?

2.2.3 Market Efficiency Theory

Fama (2011) defined efficient market as one which fully reflects all the available information, past, present and future in the asset prices. According to Basu (2007), in

an efficient capital market, security prices fully reflect available information in a rapid and unbiased fashion and thus provide unbiased estimates of underlying values.

There are three forms of market efficiency, namely weak form market efficiency, semi- strong form market efficiency and strong form market efficiency. Weak form market efficiency assumes that current stock prices reflect all the past information available including historical sequence of price, rates of return, trading volume and market generated information. This implies that future share prices cannot be forecasted using past rates of return. The semi-strong form market efficiency argues that the current prices of stock reflect all the available information content of historical prices and the publicly available information about corporations. This implies that information is quickly impounded in the share prices as they become available. The investors who base their decisions on new information cannot make above average profit after the information is made. The strong form suggests that security prices reflect the available information and even private information. No group of participants has monopolistic access to the relevant information hence, no one makes above average profits. Seyton (2013) provides sufficient evidence that insiders profit from trading on information not already incorporated into prices hence, the strong form does not hold in a world of an even playing field. While there is substantial empirical evidence supporting the efficient market hypothesis, many still question its validity. One such group believes that price-earnings P/E ratios are indicators of the future investment performance of a security.

Proponents of price-ratio hypothesis claim that low P/E ratio securities tend to outperform high P/E ratio stocks. In short prices of securities are biased and the P/E ratio is an indicator of this bias (Ali shah et al., 2009). A finding of returns on stocks with low P/E ratios tend to be larger than warranted by underlying risks even after

adjusting for any additional search and transaction costs and differential taxes would be inconsistent with financial market hypothesis.

Market efficiency theory seeks to understand the behaviour of a firm by analysing historical sequence of price, rates of return, trading volume and market generated information. This theory offers an insight to the management and shareholders about the performance of the company and to better manage their earnings.

2.3 Determinants of Stock Market Returns

The stock price is determined in the financial markets by investors and other market participants who rely on the information contained in the financial statements to assess the value and risk of the expected cash flows to stockholders. Management provides the financial statements; investors use the information to determine the value of the firm, and shareholders use the value of the firm to determine the compensation for management. There lies the incentive for earnings management. The rationale is the belief that firms that consistently beat or meet analysts' forecasts are rewarded with high stock prices. Since stock price is supposed to be an unbiased measure of the value of the firm, increase in its value thus implies increase in the wealth of the shareholders. Consequently, managers whose performances are tied to shareholder wealth creation are rewarded with such performance incentive based measures like stock options.

These section aims to review relevant literature on how earnings management, size of the company and market to book ratio affect stock market returns.

2.3.1 Earnings Management

Earnings management is a crucial issue for stockholders and investors. Investor's evaluation of a firm (firm performance and stocks returns on the financial market)

depends on selecting a measurement model of earnings management. As posited by Jones (2011), firms in the export/import business can benefit from import relief and thus will attempt to decrease earnings during import relief investigations by the United States International Trade Commission (ITC). One unique aspect of the study is that it used the discretionary component of total accrual instead of the discretionary aspect of single accrual. Jones focused more specifically on discretionary accruals, and noted "discretionary accruals are used as a measure of managers' earnings manipulations" (Jones, 2011). This study gave birth to the standard Jones Model by decomposing accruals into discretionary and non-discretionary components. The decomposition was based on what Jones described as normal total accruals based on the expectations of the levels of accruals that should be consistent with changes in economic conditions. Based on this model, one concludes that firms in the import business have more income-decreasing accruals on the year ITC completed its investigation than would otherwise be expected (Jones, 2011).

A cursory look at the literature revealed that a significant amount of research has been devoted to studying this specific situation under the heading of earnings management (Aflatooni & Nikbakht, 2010; Chi et al., 2011). However, the literature also revealed that the studies relied on a statistical estimation of the independent variable used in testing for evidence of earnings management. This raised the issue of both construct validity and reliability. Are the estimated residual accruals (considered to be the portion of the firm's accrual that are subject to manipulation by management) the variables used by management to manipulate earnings? Are the expected accruals the true non-discretionary accruals as the models assume? These questions led researchers to consider an alternative measure of independent explanatory variables that are not subject to estimation errors or problems, the variance. This is the essence of the

research, to investigate the role of variance in the detection of incidence of possible earnings management and its effect on stock returns.

Kiremu et al. (2013) investigated the effect of stock price and volumes reaction to annual earnings announcement in Nairobi Securities Exchange. The study sought to find out how the NSE reacts to annual earnings announcement. This was achieved by determining the share price behaviour and volumes traded during the event date to determine if there was any significant change due to the announcement. The results of the study indicate that the AAR, CAAR and the TAR around the event date were not significant. This implies that the information contained in the annual earnings announcement is absorbed efficiently in the share prices eliminating any chances of traders earning abnormal returns around the event date. This is consistent with the EMH which states that upon the event the price reaction to new information must be instantaneous and unbiased leaving no room for investors to earn abnormal returns.

Fazeli and Rasouli (2011) also investigated real earnings management as relates to the emerging market using (Tehran Stock Exchange). Their study examined cash flow from operations, production costs, and discretionary expenses firms listed in Tehran Stock Exchange from 2002 – 2007, as the avenue to prevent negative earnings for the year. This was based on Roychwdhury (2006) who made strong case for real activities manipulation by management. Roychowdhury (2006) further developed an empirical method to detect real activities earnings management by examining cash flow from operations, production costs and discretionary expenses; noting that these variables will capture the actions of managers as regarding the effect of real operations better than accruals.

Mohamed (2010) in his study to establish the effect of the earnings announcements on the stock prices of companies listed at the Nairobi Stock Exchange found that most of the shares posted statistically negative abnormal returns in the post and pre earnings announcements of firms listed at the Nairobi Stock Exchange. These studies show that firms try to avoid losses by engaging in overproduction as to lower the cost goods sold, to improve profit margins firms will reduce their discretionary expenditures, and another means used by firms is offering price discounts to temporarily increase sales (Cohen & Zarowin, 2010; Fazeli & Rasouli, 2011). The results of Fazelli and Rasouli are plagued by the use of the error term from a regression model as a measure of earnings management. Moreover, classification into whether a firm managed earnings or not was based on whether or not the firm reported small positive earnings.

From the reviewed literature, most studies find a positive relationship between earnings management and stock market returns (Kiremu et al., 2013; Fazeli & Rasouli, 2011; Roychwdhury, 2006; Mohamed, 2010).

2.3.2 Size of the Company

The size of a company also known as market capitalization represents the magnitude of that company. One of the most discussed relationships is the one between a company's size and the return on its stock. This anomaly, now known as the size effect, has been the focus of recent studies conducted by Fama and French (2012) as well as Daniel and Titman (1997); however the seminal work was performed by Banz (1981). Banz introduced the concept of a "size effect" on the New York Stock Exchange (NYSE) and established that the size of a firm and the return on its common stock are inversely related. In addition, he also found that smaller firms always obtain higher returns than larger firms on the NYSE.

In order to study the long-term potential of the size effect, Reinganum (2002) measured the autocorrelations of portfolio yields over periods of 1 to 7 years. He concluded that small firm's performances were volatile and distinguished cycles during which large firms were much more profitable than small ones. However, for Eleswarapu and Reinganum (2013) and Dichev (2013), the size effect remained practically non-existent between 1985 and 1995. In addition, according to Horowitz, Loughran and Savin (2000), between 1963 and 1981, small firms registered a monthly yield of 1.71%, compared to only 0.62% for large firms, i.e. a difference of 13% per year. Yet between 1981 and 1997, the size effect disappeared. Small firms generated a monthly return of 1.3%, compared to 1.46% for large firms.

Firms experiencing rapid growth by making capital investments and acquisitions subsequently have poor stock returns, whereas firms experiencing contraction through share repurchase, and debt retirement, subsequently report good operating results and high stock returns (Ogello, 2014). Oliech (2002) established that the size of the companies quoted on the NSE have no relationship with the returns of those companies. Drew and Barry (2001) also found that the factors of firm size and book-to-market value affect the expected stock returns based on the research from 35 emerging equity markets during the period from 1985 to 2000. They conclude that there is a negative relationship between firm size and stock returns, and there is a positive relationship between book-to-market value and stock returns. L'Her et al. (2004) found that the factor of firm size is significantly stronger variable related to stock return on January rather than in any other months in the Canadian stock market using the approach of Fama's and French's three factor pricing model during July 1960 to April 2001. Furthermore, they also find that the factor of book-to-market value has a positive and higher significant effect in down markets.

Most of the studies have been done in other countries. The findings of the researches done in other capital markets show a systematic relationship between the size of the firm and the stock returns. The study therefore seeks to establish how firm size affects stock market returns among the companies listed in NSE.

2.3.3 Market to Book Value Ratio

The market to book value ratio (MV/BV) compares the book value and market value of the stock. Economists and financial practitioners have sought to identify variables that predict stock returns. The use of the book-to-market ratio is motivated by the findings of Fama and French (2012), which showed that the book-to-market ratio of individual stocks has the ability to explain cross-sectional variation in stock returns. It indicates whether a stock is undervalued or overvalued.

MV/BV is traditionally interpreted as an indicator of expected return on a share. In Fama and French (2012) multi-factor asset pricing model, the M/B is a determinant of stock returns. They show that the stocks of low M/B firms tend to earn higher returns. They argue that low MV/BV firms might be in financial distress and investors would demand a larger risk premium from the stocks of these firms. This issue is controversial in the literature. Oliech (2002) found that the ratio of book to market value has no relationship to returns of the companies while Petkova and Zhang (2005) found empirical support for the Fama-French hypothesis by documenting that investors consider low MV/BV firm stocks to be riskier in "bad" times.

Raj and Ramesh (2012) examined the price to book ratio effect in Japanese market. In this study they have observed that stocks with high MV/BV have earned low returns whereas stocks with low MV/BV have high low stock returns. This study has observed inverse relationship between stock return and price to book ratio in Japanese

market. Simlai (2009) examined and re-investigated the performance of common stock return with two popular variables size and book to market ratio. According to their findings incorporation of time varying conditional variance can significantly support the impact of the three risk factors, he also concluded that, because of these findings Fama and French model is successful and unaffected by the incorporation of time varying investment opportunity set. His study also finds positive and significant relationship between size and stock return.

2.4 Empirical Studies

Various studies have been conducted on earnings management and stock market returns. Islam et al (2011) used the extended Jones model to study the incidence of earnings management among 142 listed firms drawn from the Dhaka Stock Exchange. The extended Jones model uses "current period expenses, trade accounts payable at year-end, depreciation expense, and retirement benefits expense" in addition to total assets, current period revenues, balance of trade accounts receivable at year-end, and gross property, plant and equipment at year-end employed by the modified Jones model, to determine existence of earnings management. They conclude that their model has a higher R-squared than the original modified Jones model (8.9 percent compared to 83.8 percent for their extended model).

Stubben (2010) examined revenue and accrual models in their ability to detect both simulated and actual earnings management. He used secondary data from the stock exchange which he computed a regression analysis. The study found that revenue models are less biased than accrual models, and that revenue models are better specified and more powerful in comparison to the accrual model. He also found that the revenue model is more likely to detect a combination of revenue and expense manipulation.

Cohen et al. (2010) examine whether managers engage in real earnings management to meet quarterly financial reporting benchmarks. Their study uses advertising expenditures as the instrument of real earnings management. They find that managers of the sample firms reduce advertising spending to avoid losses and earnings decrease. On the contrary, they also find that mature firms tend to increase advertising to meet earnings benchmarks.

Ali shah et al. (2009) studied the impact of corporate governance on earnings management, and whether the assertion that the credibility of financial statement information is related to features of corporate governance. Their results indicated a strong positive relationship between quality of corporate governance and earnings management proxy variables.

Hashemi and Rabiee (2011b) examined the role of corporate governance in real earnings management. Their study used Board size and the number or percentage of independent directors as a measure of the role of corporate governance. There results indicate the following: Board size and board independences are both negatively correlated with abnormal cash flow from operation. Both Board size and board independence are negatively correlated with abnormal discretionary expenses. Board size is negatively correlated with production operating expenses, whereas Board independence is not significantly related to production operating expense.

Laux and Laux (2009) in their analysis of board of directors setting of CEOs' incentive pay and overseeing financial reporting and their effects on the level of earnings management noted that "increase in CEO equity incentives does not necessarily increase earnings management" due to the fact that directors redouble their oversight effort relating to the change in CEO incentives. The Directors'

oversight increase with an increase in stock based CEO compensation to curb the level of earnings management. Cornett et al. (2008) examine the effect of "governance structure and incentive based compensation influence on firm performance when measured performance is adjusted for the impact of earnings management. Using discretionary accruals Cornett et al. find that "institutional ownership of shares, investor representation on the board of directors, and the presence of independent outside directors on the board, all combine to reduce the use of discretionary accruals" (p. 357).

Eckles et al. (2011) in their study of the role of board structure and executive compensation on firms' earnings management in the property-liability insurance industry found that managers who get a large percentage of their compensation from bonus payments and restricted stocks are more likely to engage in earnings management

Athanasakou et al. (2009) examined whether UK managers are more likely to engage in earnings forecast guidance to meet earnings benchmarks. The same study also reported on the decreased use of accruals to meet earnings forecast. On the other hand, Callen et al. (2008) investigated companies with string of losses and/or negative cash flows in order to obtain evidence of sales management, which is used as a valuation metric for firms with a string of losses. They find that managers of these firms engage in accounts receivable management as a means to increase their market capitalization.

Matsumoto (2002) examined the relationship between firm characteristics and the probability of having positive abnormal accruals and forecasts that are lower than expected. Matsumoto identified the following firm characteristics: higher transient

institutional ownership, greater reliance on implicit claims with their stakeholders; and greater value relevance of earnings. Matsumoto's study shows that: Firms with higher transient institutional ownership are more likely, and firms with consistent pattern of prior losses are less likely, to both manage earnings upward, and guide forecasts downward. Firms that rely more on implicit claims with stakeholders, and firms in industries in which earnings are more value-relevant, appear to guide forecasts downward but not manage earnings upward.

Oliech (2002) sought to investigate the relationship between size, book to market Value and returns of Nairobi stock exchange Common stocks. The objective of the study was to establish the relationship between the size of a company, the ratio of book to market equity value and the returns of common stock of all companies quoted on the Nairobi Stock Exchange from 1996 to 2000. The hypothesis that the study had come up with, based on similar study carried by Fama and French (2012) on shares listed on the NYSE, AMEX and NASDAQ, was that there exist a negative relationship between size and return and positive relationship between the ratio of book to market equity and returns. The results could not conclusively confirm the results as achieved by Fama and French in 2013. The findings of this research were that the size of the companies quoted on the NSE have no relationship with the returns of those companies and the ratio of book to market value has no relationship to returns of the companies. The low levels of significance achieved in the study could be attributed to the small number of shares quoted on the NSE as compared to previous studies.

Mohammed (2010) investigated the effect of the earnings announcements on the stock prices of companies listed at the Nairobi Stock Exchange. The objective of this is study was to determine whether earnings announcements generate abnormal returns

and duration of abnormal returns of firms listed at the Nairobi stock exchange. Data extracted from NSE Daily stock and NSE handbook for the 2004 -2008 and was analyzed using SPSS with focus on comparing critical t-value with table t-value and was presented using tables and graphs. The study found statistically negative abnormal returns were observed in the post and pre earnings announcements of firms listed at the Nairobi Stock Exchange. Given that a number of issues to be deliberated at earnings announcements are public information prior to earnings announcements and one would not expect revision in share prices that result into abnormal gains or losses. In which case abnormal gains or losses is only realizable if good or bad news emerges from the earnings announcements.

Mwai (2014) also did a research on the relationship between price earnings ratio and stock returns of companies listed at the Nairobi securities exchange. A census targeting the sixty companies listed between 2009 and 2013 was conducted. The study used secondary data obtained from the Nairobi Securities Exchange handbook. Data was collected for forty firms that were continually listed over the period cover by the study. The relationship between stock returns and price earnings ratio was evaluated by conducting regression analysis. Two regression models were constructed one in which stock returns were regressed against the price earnings ratio and the other in which returns were regressed against the price earnings ratio and book to market ratio with the latter being used as a control variable for size. In both regressions the coefficient of price earnings ratio was found to be positive. This means that there existed a positive relationship between stock returns and price earnings ratio. However the relationship was found to be not significant. The results of the study revealed that in both regressions the coefficient of determination was very low. This means that a very low percentage change in stock returns was explained by variation

in price earnings ratio both individually or together with book to market ratio. The study concluded that there existed a positive relationship between stock returns and price earnings ratio at the Nairobi Securities Exchange but the relationship is not statistically significant. Investors may not find it useful in selecting investment stocks on the basis of their price earnings ratio since stock returns bears insignificant relationship with price earnings ratio at the Nairobi Securities Exchange.

Ogello (2014) also conducted a research on the relationship between price earnings ratio and stock returns of companies listed at the Nairobi Securities Exchange. The main objective of this study was to examine the relationship between price earnings ratio and stock returns for companies listed at the Nairobi Securities Exchange. For this purpose secondary data obtained from the annual reports and financial statements of 61 companies listed at the NSE for the period January 2009 to December 2013 was analyzed. The study concluded there is a significant relationship between price earnings ratio and stock returns for companies listed at the NSE, majority of the firms had low P/E ratios resulting in higher stock returns, that firms with lower reinvestment needs have higher price earnings ratios than firms with higher reinvestment rates, that stocks with high market to book value ratios have significantly higher returns than stocks with low market to book values ratios and that there is a significant relationship between total assets and stock returns of firms.

Mboka (2014) examined the relationship between corporate governance practices and earnings management among companies listed in the Nairobi Securities Exchange. The study adopted descriptive research design. The population under investigation was all the 63 companies listed in the N.S.E. The sample population consisted of 58 companies that had been actively trading at the NSE between January 2010 and

December 2013. The study used secondary quantitative data. Descriptive statistics was used (mean scores, standard deviations and percentages) to profile the extent and distribution of various corporate governance practices. The data collected also employed linear regression and correlation analysis to test the relationship between the dependent variable. Based on the findings, the study concludes that board size positively and significantly influenced the earnings management among companies listed in the Nairobi Securities Exchange. In addition the study also concluded that board independence negatively but significantly influenced the earnings management among companies listed in the Nairobi Securities Exchange. The study further revealed that CEO Duality positively and significantly influenced the earnings management among companies listed in the Nairobi Securities Exchange although the effect is moderate. The study also concludes that ownership structure negatively but significantly influenced the earnings management among companies listed in the Nairobi Securities Exchange. The monitoring power derived from the ownership structure results in a kind of control exercised over the company and, particularly, over the top management team. Market regulators (or standard setters) and investors need to be aware of the different types of earnings management. While opportunistic earnings management tends to mislead and hurt investors, informative earnings management will, in fact, provide useful information through signalling out managers' private information about the firm's future cash flows and earnings potential. Rational investors should refer to different types of earnings management behaviours and adjust their decisions accordingly.

This section discussed the empirical studies on the relationship between earnings management and stock market returns. Most studies agree that managers of these firms engage in accounts receivable management as a means to increase their market

capitalization. Most of the studies also found that the size of the companies quoted on the NSE have significant relationship with the returns of those companies and the ratio of book to market value has a significant relationship to returns of the companies

2.5 Summary of Literature Review

The study was underpinned into Fisher's theory, value investing theory and market efficiency theory. Fisher (2003) hypothesized that the ex-ante nominal interest rate should fully anticipate movements in expected inflation, in order to yield the equilibrium real interest rate. Fisher hypothesis were mainly concerned with documenting and describing the nature of the relationship between stock returns and earnings management, and not with any explanation of the results. Value investing theory as derived from the ideas of Graham and Dodd (1934) involves buying securities whose shares appear underpriced by some of its fundamentals. One of the investments strategies is derived from undervalued basic fundamentals which are expected to determine the stock price. Finally, Market Efficiency Theory by Fama (2011) posited that weak form market efficiency assumes that current stock prices reflect all the past information available including historical sequence of price, rates of return, trading volume and market generated information while the strong form suggests that security prices reflect the available information and even private information.

The study also reviewed various empirical studies conducted both internationally and locally. Stubben (2010) examined revenue and accrual models in their ability to detect both simulated and actual earnings management. They found that these firms increase their accruals before issuing bonds, and then decrease the accruals after the issuance year. Matsumoto (2002) examined the relationship between firm characteristics and the probability of having positive abnormal accruals and forecasts that are lower than

expected, Oliech (2002) sought to investigate the relationship between size, book to market Value and returns of Nairobi Stock Exchange Common stocks, Mohammed (2010) investigated the effect of the earnings announcements on the stock prices of companies listed at the Nairobi Stock Exchange, Mwai (2014) also did a research on the relationship between price earnings ratio and stock returns of companies listed at the Nairobi Securities Exchange and Ogello (2014) also conducted a research on the relationship between price earnings ratio and stock returns of companies listed at the Nairobi Securities Exchange. These studies presented mixed results that the size of the companies quoted on the NSE have no relationship with the returns of those companies and the ratio of book to market value has no relationship to returns of the companies while Ogello (2014) concluded that there is a significant relationship between price earnings ratio and stock returns for companies listed at the NSE.

The literature reviewed also indicate that the size of a firm and the return on its common stock are inversely related; that smaller firms always obtain higher returns than larger firms. It was also indicated that book-to-market ratio of individual stocks has the ability to explain cross-sectional variation in stock returns. It further indicates whether a stock is undervalued or overvalued. It was also reviewed that firms experiencing rapid growth by making capital investments and acquisitions subsequently have poor stock returns, whereas firms experiencing contraction through share repurchase, and debt retirement, subsequently report good operating results and high stock returns

Although literature has been reviewed on earnings management and stock market returns (Islam et al., 2011; Stubben, 2010; Ali shah et al., 2009; Hashemi and Rabiee, 2011b; Laux and Laux, 2009; Athanasakou et al., 2009), most of these studies have been done in other countries whose strategic approach and financial footing is

different from that of Kenya. Among the studies conducted locally include; Oliech (2002), Mohammed (2010), Mwai (2014) and Ogello (2014) which investigated the relationship between size, book to market Value and returns of Nairobi stock exchange Common stocks, the effect of the earnings announcements on the stock prices of companies listed at the Nairobi Securities Exchange, the relationship between price earnings ratio and stock returns of companies listed at the Nairobi Securities Exchange, and the relationship between price earnings ratio and stock returns of companies listed at the Nairobi Securities Exchange respectively. None of these studies focused on how earnings management and stock market returns apply in the Kenyan case. It is evident therefore that a literature gap exists on the relationship between earnings management and stock market returns. This study therefore seeks to fill this gap by focusing on the relationship between earnings management and stock market returns of firms listed in Nairobi Securities Exchange.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methods that were used in the collection of data pertinent in answering the research questions. Section 3.2 presents research design, 3.3 presents the population of the study, 3.4 present's data collection and finally section 3.5 presents data analysis.

3.2 Research Design

The study adopted a descriptive research design aimed at investigating the relationship between earnings management and stock market returns among companies listed in Nairobi securities exchange. A descriptive design is concerned with determining the frequency with which something occurs or the relationship between variables (Bryman & Bell, 2007). Thus, this approach is suitable for this study, since the study intends to collect comprehensive information through descriptions which will be helpful for identifying variables. Bryman and Bell (2011) assert that a descriptive design seeks to get information that describes existing phenomena by asking questions relating to individual perceptions and attitudes. According to Polit and Beck (2013), in a descriptive study, researchers observe, count, delineate, and classify.

According to Aggarwal (2008) descriptive research is devoted to the gathering of information about prevailing conditions or situations for the purpose of description and interpretation. This type of research method is not simply amassing and tabulating facts but includes proper analyses, interpretation, comparisons, identification of trends and relationships. The elements and variables that were studied were observed

without making any attempt to control or manipulate them. The variables in this study were earnings management, firm size and market to book value ratio.

3.3 Population

According to Pole and Lampard (2002), population is classified as all the members of a given group to which the investigation is related, whereas the accessible population is looked at in terms of those elements in the target population within the reach of the study. Nassiuma (2000) also defined population as a well-defined or set of people, services, elements, and events, group of things or households that are being investigated.

Based on the recommendations of Churchill and Iacobucci (2002) and Frankfort-Nachmias and Nachmias (2006) in defining the unit of analysis for the study, the population of the study consisted of 66 companies quoted in the Nairobi Securities Exchange as at 31st December 2014. There was no sampling since the population is not too large hence the study used a census approach.

3.4 Data Collection

The two mostly used sources of data involve collecting primary data and secondary data. Primary data is mostly collected using questionnaires. On the other hand secondary data is collected from newspapers, published books, internet, journals and magazines as well as other sources such as the annual reports and financial statements (Mugenda & Mugenda, 2003).

The study used secondary data obtained from annual reports and financial statements of the firms listed in NSE found at the Capital Markets Authority (CMA) library for the period January 2010 to December 2014. A data collection form was designed to record stock prices, earnings attributable to ordinary shareholders, number of issued common

shares and dividends, size, market to book value ratio, debt amounts, current assets, current liabilities, depreciation and cash equivalents

3.5 Data Analysis

To determine the relationship between earnings management and stock returns for companies listed in the NSE, regression and correlation analysis was carried out. Regression analysis measures the pattern of the relationship and its closeness in absolute terms. Correlation analysis was also be used to measure how well the regression line explains the variation of the dependent variable. This was achieved with the help of statistical package for social sciences (SPSS version 21).

Stock return or rate of return also known as return on investment is a ratio which calculates the gain or loss of money on any investment relative to the initial money invested. In this study, stock returns were calculated by using dividend adjusted approach;

Total stock return= $\frac{(P1-Po)+D1}{po}$

Po= Initial stock price at the first day of the year

P1= Ending stock price on the last day of the financial year

D1= Dividends paid in period 1

3.5.1 Conceptual Model

$Y = f(X_1 + X_2 + X_3)$

Where;

Y is stock returns. This was measured by summing dividend yield and capital gain yield. (Stock Returns = Dividend yield + Capital gain)

X_1 = discretionary Accruals as an earnings management tool. This was computed based on Dechow et.al (1995), who computed accrual component of earnings as follows; ACCRUAL= (ΔCA-ΔCash) – (ΔCL-ΔSTD-ΔTP) –DEP.

Where; ΔCA=change in Current Assets. ΔCash=Change in cash /Cash equivalents. ΔCL=Change in Current Liabilities. ΔSTD =Change in Short-term Debts included in the Current Liabilities. ΔTP= Change in Income Taxes Payables DEP= Depreciation and Amortization expense. From the reviewed literature, most studies find a positive relationship between earnings management and stock market returns (Kiremu et al., 2013; Fazeli & Rasouli, 2011; Roychwdhury, 2006; Mohamed, 2010).

X_2= Firm size this was measured by natural log of Total asset. From the previous studies there are mixed results on the relationship between firm size and stock market returns. Reinganum (2002) and Drew and Barry (2001) in their study found a positive relationship between firm size and stock market returns. However, Eleswarapu and Reinganum (2013) and Dichev (2013) found no relationship between firm size and stock market returns.

X_3= Market to book value ratio- This was measured by calculating the ratio of market value to book value (MV/BV). The use of the book-to-market ratio is motivated by the findings of Fama and French (2012), which showed that the book-to-market ratio of individual stocks has the ability to explain cross-sectional variation in stock returns. Oliech (2002) found that the ratio of book to market value has no relationship to returns of the companies while Raj and Ramesh (2012) observed that stocks with

high MV/BV have earned low returns whereas stocks with low MV/BV have high low stock returns.

3.5.2 Analytical Model

To examine the relationship between stock return and predictive variables ordinary least squares regression was used. The regression equation was expressed as follows:

$$\boldsymbol{SR = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon}$$

Where, SR is stock return.

β_0: Indicates the value of SR when all the values of explanatory variables are zero.

X_1 = Discretionary Accruals as an earnings management tool.

X_2= Firm size

X_3= Market to book value ratio

β_1, β_2 and β_3 are coefficients of the independent variables.

ϵ is the error term.

3.5.3 Test of Significance

The model's test of significance was measured on how well the regression model fits the data by comparing explanatory variables that proposed actually explain variations in the dependent variable. Quantities known as goodness of fit statistics are available to test how well the sample regression function (SRF) fits the data how or how close' the fitted regression line is to all of the data points taken together. The most common goodness of fit statistic is known as R^2 (Brooks, 2008). A correlation coefficient must lie between −1 and +1 by definition. Since R^2 defined in this way is the square of a

correlation coefficient, it must lie between 0 and 1. If this correlation is high, the model fits the data well, while if the correlation is low (close to zero), the model is not providing a good fit to the data. R^2 is the square of the correlation coefficient between the values of the dependent variable and the corresponding fitted values from the model. In testing the significance of the model, significance tests were employed to determine whether or not the finding is as a result of a genuine difference between two or more variables, or whether it is just due to chance. Coefficient of determination (R^2) and Analysis of variance (ANOVA) test was computed. F-statistic was also computed at 95% confidence level to test whether there is any significant relationship between earnings management and stock return variables across year 2010 to 2014.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This chapter presents analysis and findings of the study as set out in the research objective and research methodology. The general objective of the study was to establish the relationship between earnings management and stock market returns among companies listed in Nairobi securities exchange. The data was gathered exclusively from the secondary source which included records at companies audited financial report. Data was collected from a total of 66 companies listed at Nairobi securities exchange. Section 4.2 presents descriptive statistics, section 4.3 discusses the relationship between earnings management and stock market returns, section 4.4 presents discussion of findings, while section 4.5 presents the summary and interpretation of findings.

4.2 Summary Statistics

Descriptive statistics are the measures that define the general nature of the data under study. They define the nature of response from primary data and/or secondary data. Descriptive statistics for this study were: mean, standard deviation, minimum and maximum and. Descriptive data analysis was performed on the stock return, discretionary accruals, firm size, and market to book value ratio. The descriptive statistics results are tabulated below.

Table 4.1: Stock return

	Minimum	Maximum	Mean	Std. Deviation
2010	-.61	2.62	.4038	.57344
2011	-160.93	117.74	.8638	41.76982
2012	-91.68	167.16	17.0878	35.39826
2013	-978.43	977.16	-27.5879	262.82639
2014	-233.01	147.53	9.9406	51.01760

Source: Author (2015)

Table 4.1 presents the findings on the descriptive statistics for stock return for the years 2010-2014. Stock Returns are the returns that the investors generate out of the stock market. This return could be in the form of profit through trading or in the form of dividends given by the company to its shareholders from time-to-time. The means portray year 2012 with the highest meanwhile 2013 reported the lowest stock return of -27.5879. Additionally the scores of standard deviation indicate variation in stock return for the various listed firms statistically.

Table 4.2: Earnings management

	Minimum	Maximum	Mean	Std. Deviation
2010	.01	5.77	.4758	.85648
2011	.01	6.40	.5279	.95033
2012	.02	1.46	.3644	.25348
2013	.00	3.29	.1322	.39964
2014	.01	6.15	.4987	.90567

Source: Author (2015)

Table 4.2 presents the findings on the descriptive statistics for earnings management for the years 2010-2014. Earnings management is the generic term given to accounting decisions that influence financial reporting outcomes. The means portray a steady decrease in the earnings management for all the 66 firms listed at the Nairobi Securities exchange for years 2011 to 2013. The highest mean was reported in 2011 with a mean of 0.5279 while the lowest was reported in 2011 with a mean of 0.1322. Additionally the scores of standard deviation indicate variation in forward contracts for the various listed firms statistically

Table 4.3: Firm size

	Minimum	**Maximum**	**Mean**	**Std. Deviation**
2010	7.90	11.04	10.1227	.69240
2011	7.87	11.18	10.1771	.69704
2012	7.85	11.21	10.2538	.72652
2013	7.82	11.21	10.2689	.73481
2014	6.85	11.27	10.2950	.80786

Source: Author (2015)

Table 4.6 presents the findings on the descriptive statistics for size of firm for the years 2010-2014. The means portray a steady increase in the size of firm for all the 66 firms listed at the Nairobi Securities exchange with the lowest being 10.1227 in the year 2010 and the highest being 10.2950 in 2014. Additionally the standard deviation figures are high for size, indicating that the data points are spread out over a large range of values, meaning that there is high level of variability in the data. There is a narrow gap between the maximum and minimum size, which means that there is low variability of size change in NSE.

Table 4.4: Market to book value ratio

	Minimum	Maximum	Mean	Std. Deviation
2010	56.10	75193.20	16610.3773	18964.07806
2011	12.90	165055.20	12647.8015	30171.31017
2012	77.10	452303.10	38489.6652	82249.75669
2013	-783319.00	1583291.00	75274.0000	261649.53447
2014	-723286.00	1281576.00	55301.2242	204152.10844

Source: Author (2015)

Table 4.5 present the findings on the descriptive statistics for market to book value ratio for the years 2010-2014. The means portray an irregular pattern in the market to book value ratio for all the 66 firms listed at the Nairobi Securities exchange with the lowest being 12647.8015 in the year 2011 and the highest being 75274 in 2013. Additionally the standard deviation figures are high for market to book value ratio, indicating that the data points are spread out over a large range of values, meaning that there is high level of variability in the data. There is a wide gap between the maximum and minimum market to book value ratio, which means that there is high variability of leading and lagging change in NSE.

4.3 Relationship between Earnings Management and Stock Market Returns

The study further applied general Linear Model to determine the predictive power to the establish the relationship between earnings management and stock market returns among companies listed in Nairobi Securities Exchange. This included regression analysis, the Model, Analysis of Variance and coefficient of determination.

4.3.1 Regression Analysis

In addition, the researcher conducted a multiple regression analysis so as to test relationship among variables (independent) on the relationship between earnings management and stock market returns among companies listed in Nairobi Securities Exchange. The researcher applied the statistical package for social sciences (SPSS V 21.0) to code, enter and compute the measurements of the multiple regressions for the study.

4.3.2 Model Summary

Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (stock market return) that is explained by all the three independent variables (earnings management, firm size, market to book value ratio).

Table 4.5: Results of multiple regression between stock market returns among companies listed in Nairobi Securities Exchange and predictor variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.866	0.749	0.731	0.116

Source: Author (2015)

The four independent variables that were studied, explain only 74.9% on the relationship between earnings management and stock market returns represented by the R^2. This therefore means that other factors not studied in this research contribute 19.3% of the relationship between earnings management and stock market returns.

Therefore, further research should be conducted to investigate the other factors (25.1%) that affect stock market returns.

4.3.3 ANOVA Results

The study conducted the ANOVA to establish the fitness of the model in predicting the relationship between the variables (earnings management, firm size and market to book value ratio) and stock market returns)

Table 4.6 ANOVA of the Regression

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.534	4	1.267	8.635	.002[a]
	Residual	9.307	61	2.327		
	Total	11.841	65			

Source: Author (2015)

The significance value is 0.002 which is less than 0.05 thus the model is statistically significant in predicting how (earning management , Firm size , Market to book value ratio, discount rates, and treasury bill rates) affect Stock returns. The F critical at 5% level of significance was 2.25. Since F calculated is greater than the F critical (value = 8.635), this shows that the overall model was significant.

4.3.4 Regression Coefficient

Multiple regression analysis was conducted so as to determine the strength of the relationship between the stock market returns and the three variables (earnings management, firm size and market to book value ratio).

Table 4.7: Regression coefficients of the relationship between stock returns and predictor variables

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	1.103	0.2235		5.132	0.000
	Earning management	0.852	0.1032	0.1032	6.569	.001
	Firm size	0.654	0.3425	0.1425	4.117	.004
	Market to book value ratio	0.231	0.2178	0.1178	3.968	.002

Source: Author (2015)

According to the regression equation established, taking all factors into account (earning management, firm size, and market to book value ratio) constant at zero, stock return will be 1.103. The data findings analyzed also shows that taking all other independent variables at zero, a unit increase in earning management will lead to a 0.852 increase in stock return; a unit increase in firm size will lead to a 0.654 increase

in stock return, while a unit increase in market to book value ratio will lead to a 0.231 increase in stock return.

This infers that earning management contribute most to the stock return followed by firm size. At 5% level of significance and 95% level of confidence, earning management, firm size, and market to book value ratio was all significant in stock return.

4.4 Discussion

From the above regression model, the study found out that earning management, firm size, and market to book value ratio, influenced stock return. All of the variables influenced it positively. The study found out that the intercept was 1.103 for all years.

The three independent variables that were studied (earning management, firm size, and market to book value ratio) explain a substantial 80.7% of Stock return among companies listed at Nairobi securities exchange represented by adjusted R^2 (0.807). This therefore means that the five independent variables contributes 80.7% of the Stock return among companies listed at Nairobi securities exchange while other factors and random variations not studied in this research contributes a measly 19.3% of the Stock return among commercial banks in Kenya.

The study established that the coefficient for earning management was 0.852, meaning that earning management positively and significantly influenced the Stock return among companies listed at Nairobi securities exchange in Kenya. These findings are in line with Mohamed (2010) in his study to establish the effect of the earnings announcements on the stock prices of companies listed at the Nairobi Stock Exchange who found that most of the shares posted statistically negative abnormal returns in the post and pre earnings announcements of firms listed at the Nairobi

Stock Exchange. These studies show that firms try to avoid losses by engaging in overproduction as to lower the cost goods sold, to improve profit margins firms will reduce their discretionary expenditures, and another means used by firms is offering price discounts to temporarily increase sales (Cohen & Zarowin, 2010; Fazeli & Rasouli, 2011). The results of Fazelli and Rasouli are plagued by the use of the error term from a regression model as a measure of earnings management. Moreover, classification into whether a firm managed earnings or not was based on whether or not the firm reported small positive earnings. Most studies find a positive relationship between earnings management and stock market returns (Kiremu et al., 2013; Fazeli & Rasouli, 2011; Roychwdhury, 2006; Mohamed, 2010).

The study also deduced that the coefficient for firm size was 0.654, meaning that firm size positively and significantly influenced the stock return among companies listed at Nairobi securities exchange. Contrary to the findings, Oliech (2002) established that the size of the companies quoted on the NSE have no relationship with the returns of those companies. Drew and Barry (2001) also found that the factors of firm size and book-to-market value affect the expected stock returns based on the research from 35 emerging equity markets during the period from 1985 to 2000. They conclude that there is a negative relationship between firm size and stock returns, and there is a positive relationship between book-to-market value and stock returns. L'Her et al. (2004) found that the factor of firm size is significantly stronger variable related to stock return on January rather than in any other months in the Canadian stock market using the approach of Fama's and French's three factor pricing model during July 1960 to April 2001. Furthermore, they also find that the factor of book-to-market value has a positive and higher significant effect in down markets.

The study established that the coefficient market to book value ratio size was 0.231, meaning that Market to book value ratio positively and significantly influenced the stock return among companies listed at Nairobi securities exchange. Raj and Ramesh (2012) examined the price to book ratio effect in Japanese market. In this study they have observed that stocks with high MV/BV have earned low returns whereas stocks with low MV/BV have high low stock returns. This study has observed inverse relationship between stock return and price to book ratio in Japanese market. Simlai (2009) examined and re-investigated the performance of common stock return with two popular variables size and book to market ratio. According to their findings incorporation of time varying conditional variance can significantly support the impact of the three risk factors, he also concluded that, because of these findings Fama and French model is successful and unaffected by the incorporation of time varying investment opportunity set. His study also finds positive and significant relationship between size and stock return.

4.5 Summary

Descriptive data analysis was performed on the stock return, discretionary accruals, firm size, and market to book value ratio. The mean for stock returns portray year 2012 with the highest meanwhile year 2013 reported the lowest stock return of -27.5879. The study also established a steady decrease in the earnings management for all the 66 firms listed at the Nairobi Securities Exchange for years 2011 to 2013. The highest mean was reported in 2011 with a mean of 0.5279 while the lowest was reported in 2013 with a mean of 0.1322. additionally, the study established a steady increase in the size of firm for all the 66 firms listed at the Nairobi Securities exchange with the lowest being 10.1227 in the year 2010 and the highest being 10.2950 in 2014. However, the mean portrayed an irregular pattern in the market to

book value ratio for all the 66 firms listed at the Nairobi Securities exchange with the lowest being 12647.8015 in the year 2011 and the highest being 75274 in 2013.

From the above regression model, the study found out that earnings management, firm size, and market to book value ratio, influenced stock return positively. The study found out that the intercept was 1.103 for all years. The study further established that the coefficient for earnings management was 0.852, meaning that earnings management positively and significantly influenced the Stock return among companies listed at Nairobi Securities Exchange in Kenya. The study also deduced that the coefficient for firm size was 0.654, meaning that firm size positively and significantly influenced the stock return among companies listed at Nairobi Securities Exchange. The study established that the coefficient market to book value ratio size was 0.231, meaning that Market to book value ratio positively and significantly influenced the stock return among companies listed at Nairobi Securities Exchange.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary, conclusion and recommendations of the main findings on the relationship between earnings management and stock market returns among companies listed in Nairobi Securities Exchange. Section 5.2 presents summary of the study, section 5.3 discuses conclusions, while section 5.4 presents the recommendations.

5.2 Summary of the Study

From the above regression model, the study found out that earnings management, firm size, and market to book value ratio, influenced stock return. All of the variables influenced it positively. The study found out that the intercept was 1.103 for all years.

The three independent variables that were studied, that is, earnings management, firm size, and market to book value ratio explain a substantial 80.7% of Stock return among companies listed at the Nairobi Securities Exchange represented by adjusted R^2 (0.807). This therefore means that the five independent variables contribute 80.7% of the Stock return among companies listed at Nairobi Securities Exchange while other factors and random variations not studied in this research contribute a mere 19.3% of the Stock return among companies listed at the Nairobi Securities Exchange.

The study established that the coefficient for earnings management was 0.852, meaning that earnings management positively and significantly influenced the Stock return among companies listed at Nairobi Securities Exchange in Kenya.

The study also deduced that the coefficient for firm size was 0.654, meaning that the firm size positively and significantly influenced the stock returns among companies listed at the Nairobi Securities Exchange.

The study established that the coefficient market to book value ratio size was 0.231, to mean that market to book value ratio positively and significantly influenced the stock return among companies listed at the Nairobi Securities Exchange.

5.3 Conclusions

The study found concludes that earning management, firm size, and market to book value ratio, influenced stock return. All of the variables influenced it positively. The study found out that the intercept was 1.103 for all years.

The study concludes that the coefficient for earning management was 0.852, meaning that earning management positively and significantly influenced the Stock return among companies listed at Nairobi securities exchange in Kenya. Adopting earnings management measured by discretionary accruals have positive or negative discretionary accruals or positive (negative) abnormal returns during results publication. Meeting analyst expectations is a fundamental earnings target; and that stock market reacts to negative earnings surprises, and that the market rewards those managers with positive earnings surprise. How can the analysts, who are external to the firm, be in a position to determine what a firm's future period earnings should be? The ability of analysts to accurately predict (based on the market's strong reaction to deviation from their forecast) the firm's earnings seem to be preposterous.

The study also concluded that the coefficient for firm size was 0.654, meaning that firm size positively and significantly influenced the stock return among companies listed at Nairobi securities exchange.

The study concluded that the coefficient market to book value ratio size was 0.231, meaning that market to book value ratio positively and significantly influenced the stock return among companies listed at Nairobi Securities Exchange.

5.4 Limitations of the Study

This study has several limitations. First, it is possible that the nature of data from the financial statements is impacting the results in an unanticipated manner or limits the power of the tests to detect associations. This may be created by variation of statistical figures illustrating the key variable measurements.

As with all empirical studies, the validity of this study rests on the sample of firms and the time period. The availability of significant variability difference in the chosen/selected financial statement accounts will greatly affect the results of this study. Earnings management is considered both unethical and a violation of securities law. As a result, firms who engage in earnings management will go to considerable length to cover their tracks. Thus, this study is an attempt to uncover earnings management tools if and where they exist. Most previous studies relied on correlation between the variables. This is true also of this study.

Finally, the use of secondary data provided an opportunity to search for a more genuine and intrinsic relationship between the variables. This afforded the researcher the benefits of a greater focus on analyzing the available data more closely in a way that would enhance the achievement of the study objectives. However, selecting the

right combination of variables to proxy for unobservable phenomena is always a problem in empirical quantitative research.

5.5 Recommendations for Policy and Practice

It is true that companies with above average growth potential will generally command higher earning management those with lower growth prospects but many other factors such as stability of the industry among others also influence stock returns hence must be taken into consideration in determining future returns of stocks. Due to the importance of earning management in the investment decisions, care should be exercised in determining the correct and comparable earning management of each company.

There is need for investors to carefully use market to book ratio to determine the differentials between net assets of the firm and the valuation that the market assigns to them as it reflects the premium (or discount) that the market gives to the firm on its net assets and, as such, reflects the efficiency with which the market views the firm as being managed which in turn affect stock returns.

There is need for investors to better understand the drivers of the asset growth effect, by decomposing total asset into major components from both the investment and financing of firm operations so that there is better understanding whether the asset growth effect will result in asset expansion or contraction which in turn affect operating assets and reduction in risk and eventually increased stock returns

From the findings and conclusions, the study recommends the need for effective earning management practice at the companies quoted at NSE. Re-examining the criteria used in selection of earning management practices in the companies and

ensures that earning management practices are more independent. This will reduce the stock returns associated risk

5.6 Recommendations for Further Research

Not so many studies have been done on this area of research here in Kenya, therefore it's still a raw field and there are so many gaps which further studies can bridge it. A study could be carried out to establish Earnings managements for non-listed companies in Kenya. Further research may be directed in comparing the findings of this study with findings that relate to firms operating in other developing countries of Africa

Also, this study only covers a period of five years from 2010 to 2013 because of dearth of data. Future studies could increase the scope and consider the Relationship between earnings management and stock market returns among companies listed in Nairobi securities exchange.

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APPENDICES

Appendix I: Firms Listed At NSE (NSE, 2014)

1. Eaagads Limited
2. Kakuzi Limited
3. Kapchorua Tea Limited
4. Limuru Tea Limited Company
5. Rea vipingo plantations Limited
6. Sasini Limited
7. Williamson Tea Kenya
8. Car and General Kenya Limited
9. CMC Holding Limited
10. Masharls E.A Limited
11. Sameer Africa Limited
12. Barclays Bank of Kenya Limited
13. CFC Stanbic Bank
14. Diamond Trust Bank
15. Equity Bank Limited
16. Housing Finance Company Limited
17. I&M Holdings
18. Kenya Commercial Bank Limited
19. National Bank of Kenya
20. NIC Bank Limited
21. Standard Chartered Bank Limited
22. Co-operative Bank of Kenya Limited
23. Express Kenya

24. Hutchings Biemer Limited
25. Kenya Airways limited
26. Longhorn Kenya Ltd
27. Nation Media Group Limited
28. ScanGroup Limited
29. Standard Group Limited
30. TPS EA (Serena)Limited
31. Uchumi Supermarkets Limited
32. Athi River Mining Limited
33. Bamburi Cement Limited
34. Crown Paints Kenya Limited
35. East Africa Cables Limited
36. East Africa Portland Cement
37. KenGen Limited
38. KenolKobil Limited
39. Kenya Power and Lighting Company
40. Total Kenya Limited
41. CIC Insurance Group Ltd
42. Jubilee Holdings Limited
43. Kenya Re Corporation Limited
44. Pan Africa Insurance
45. Centum Investment Company
46. City Trust Limited
47. Olympia Capital Holdings Limited
48. Trans-Century Ltd

49. B.O.C Kenya

50. BAT Kenya Limited

51. Carbacid Investments Limited

52. East African Breweries Limited

53. Eveready East Africa Limited

54. Kenya Orchards Limited

55. Mumias Sugar Limited

56. Unga Group Limited

57. Access Kenya Group Limited

58. Safaricom Limited

59. A.Baumann & Co Limited (BAUM)

60. Kurwitu Ventures Limited (KURV)

61. Atlas Development & Support Services (ADSS)

62. Flame Tree Group Holdings Limited (FTGH)

63. Umeme Limited (UMME)

64. Liberty Kenya Holdings Limited (CFCI)

65. Home Afrika Limited (HAFR)

66. British-American Investments Company Kenya Limited (BRIT)

Appendix II: EARNINGS MANAGEMENT LISTED COMPANIES

	2010	2011	2012	2013	2014
Eaagads Limited	0.306	0.340	0.656	0.081	0.326
Kakuzi Limited	0.123	0.136	0.166	0.174	0.131
Kapchorua Tea Limited	5.769	6.401	1.463	3.291	6.145
Limuru Tea Limited Company	2.192	2.432	0.547	0.026	2.335
Rea vipingo plantations Limited	0.316	0.351	0.401	0.001	0.337
Sasini Limited	0.161	0.179	0.270	0.136	0.172
Williamson Tea Kenya	1.435	1.592	0.136	0.136	1.528
Car and General Kenya Limited	0.113	0.125	0.413	0.008	0.120
CMC Holding Limited	0.388	0.430	0.091	0.001	0.413
Masharls E.A Limited	0.300	0.333	0.199	0.002	0.319
Sameer Africa Limited	0.110	0.122	0.225	0.009	0.117
Barclays Bank of Kenya Limited	1.570	1.742	0.245	0.049	1.672
CFC Stanbic Bank	2.237	2.482	0.861	0.121	2.309
Diamond Trust Bank	0.336	0.373	0.078	0.007	0.347
Equity Bank Limited	1.042	1.157	0.407	0.024	1.076
Housing Finance Company Limited	0.041	0.045	0.378	0.001	0.042
I&M Holdings	0.649	0.720	0.023	0.053	0.670
Kenya Commercial Bank Limited	0.215	0.238	0.517	0.007	0.222
National Bank of Kenya	0.893	0.991	1.021	0.024	0.922
NIC Bank Limited	0.123	0.136	0.136	0.136	0.126
Standard Chartered Bank Limited	0.416	0.461	0.569	0.017	0.429
Co-operative Bank of Kenya Limited	0.985	1.093	0.275	0.102	1.017
Express Kenya	0.623	0.691	0.639	0.100	0.643
Hutchings Biemer Limited	0.513	0.569	0.482	0.043	0.529
Kenya Airways limited	0.743	0.824	0.230	0.049	0.767

Longhorn Kenya Ltd	0.550	0.611	0.333	0.007	0.568
Nation Media Group Limited	0.007	0.008	0.394	0.000	0.007
ScanGroup Limited	0.761	0.844	0.039	0.069	0.785
Standard Group Limited	0.659	0.731	0.024	0.053	0.680
TPS EA (Serena)Limited	0.346	0.384	0.024	0.005	0.357
Uchumi Supermarkets Limited	0.431	0.478	0.026	0.023	0.444
Athi River Mining Limited	0.026	0.029	0.131	436000	0.027
Bamburi Cement Limited	2.608	2.894	1.104	0.345	2.691
Crown Paints Kenya Limited	0.809	0.898	0.953	0.068	0.835
East Africa Cables Limited	0.115	0.127	0.468	0.027	0.119
East Africa Portland Cement	0.141	0.157	0.152	0.001	0.146
KenGen Limited	0.093	0.104	0.317	0.011	0.096
KenolKobil Limited	0.299	0.332	0.325	37315.220	0.319
Kenya Power and Lighting Company	0.275	0.305	0.321	38658.970	0.293
Total Kenya Limited	0.250	0.278	0.318	40002.720	0.267
CIC Insurance Group Ltd	0.226	0.251	0.314	41346.470	0.241
Jubilee Holdings Limited	0.202	0.224	0.311	42690.230	0.215
Kenya Re Corporation Limited	0.178	0.197	0.308	44033.980	0.189
Pan Africa Insurance	0.153	0.170	0.304	45377.730	0.163
Centum Investment Company	0.129	0.143	0.301	46721.480	0.137
City Trust Limited	0.105	0.116	0.297	48065.240	0.111
Olympia Capital Holdings Limited	0.080	0.089	0.294	49408.990	0.086
Trans-Century Ltd	0.184	0.205	0.339	55263.030	0.196
B.O.C Kenya	0.168	0.187	0.339	56911.280	0.179
BAT Kenya Limited	0.152	0.169	0.339	58559.530	0.162
Carbacid Investments Limited	0.137	0.151	0.339	60207.780	0.145

East African Breweries Limited	0.121	0.134	0.338	61856.040	0.124
Eveready East Africa Limited	0.105	0.116	0.338	63504.290	0.108
Kenya Orchards Limited	0.089	0.098	0.338	65152.540	0.092
Mumias Sugar Limited	0.073	0.081	0.338	66800.790	0.075
Unga Group Limited	0.057	0.063	0.337	68449.040	0.059
Access Kenya Group Limited	0.041	0.045	0.337	70097.290	0.042
Safaricom Limited	0.025	0.028	0.337	71745.540	0.026
A.Baumann & Co Limited (BAUM)	0.025	0.028	0.341	72628.010	0.026
Kurwitu Ventures Limited (KURV)	0.026	0.028	0.345	73521.335	0.026
Atlas Development & Support Services (ADSS)	0.026	0.029	0.349	74425.647	0.027
Flame Tree Group Holdings Limited (FTGH)	0.026	0.029	0.354	75341.083	0.027
Umeme Limited (UMME)	0.026	0.029	0.358	76267.778	0.027
Liberty Kenya Holdings Limited (CFCI)	0.027	0.030	0.362	77205.872	0.028
Home Afrika Limited (HAFR)	0.027	0.030	0.367	78155.504	0.028
British-American Investments Company Kenya Limited (BRIT)	0.027	0.030	0.371	79116.816	0.028

Appendix III: Size of the firm

	2010	2011	2012	2013	2014
Eaagads Limited	9.30	9.31	9.26	9.30	9.27
Kakuzi Limited	10.08	10.22	10.31	10.43	10.50
Kapchorua Tea Limited	10.51	10.52	10.53	10.63	10.64
Limuru Tea Limited Company	10.03	10.05	10.14	10.18	10.21
Rea vipingo plantations Limited	9.51	9.59	9.75	9.76	9.83
Sasini Limited	9.14	9.18	9.24	9.30	9.33
Williamson Tea Kenya	10.12	10.17	10.16	10.11	10.16
Car and General Kenya Limited	9.27	9.29	9.35	9.35	9.37
CMC Holding Limited	10.54	10.58	10.69	10.74	10.78
Masharls E.A Limited	9.55	9.66	9.70	9.80	9.83
Sameer Africa Limited	10.08	10.08	10.13	10.15	10.19
Barclays Bank of Kenya Limited	8.41	8.41	8.55	8.76	8.70
CFC Stanbic Bank	9.00	9.08	9.01	9.06	9.09
Diamond Trust Bank	9.11	9.13	8.88	8.70	8.59
Equity Bank Limited	9.46	9.51	9.58	9.55	9.61
Housing Finance Company Limited	9.07	9.18	9.20	9.29	9.33
I&M Holdings	11.04	11.18	11.21	11.21	11.27
Kenya Commercial Bank Limited	10.47	10.48	10.66	10.51	10.61
National Bank of Kenya	10.88	10.87	10.90	10.89	10.89
NIC Bank Limited	7.90	7.87	7.85	7.82	6.85
Standard Chartered Bank Limited	10.85	10.93	11.08	11.13	11.19
Co-operative Bank of Kenya Limited	7.93	8.20	8.28	8.51	8.55
Express Kenya	8.63	8.72	8.85	8.82	8.89
Hutchings Biemer Limited	9.16	9.05	9.03	8.75	8.77
Kenya Airways limited	10.24	10.26	10.36	10.44	10.47

Longhorn Kenya Ltd	9.82	9.90	9.95	10.03	10.05
Nation Media Group Limited	9.25	9.14	9.12	8.84	8.86
ScanGroup Limited	10.41	10.47	10.56	10.58	10.63
Standard Group Limited	10.42	10.48	10.58	10.59	10.64
TPS EA (Serena)Limited	10.41	10.47	10.56	10.58	10.63
Uchumi Supermarkets Limited	10.42	10.48	10.58	10.59	10.64
Athi River Mining Limited	10.43	10.49	10.59	10.60	10.65
Bamburi Cement Limited	10.44	10.50	10.60	10.62	10.67
Crown Paints Kenya Limited	10.45	10.52	10.61	10.63	10.68
East Africa Cables Limited	10.41	10.47	10.56	10.58	10.63
East Africa Portland Cement	10.42	10.48	10.58	10.59	10.64
KenGen Limited	10.43	10.49	10.59	10.60	10.65
KenolKobil Limited	10.44	10.50	10.60	10.62	10.67
Kenya Power and Lighting Company	10.45	10.52	10.61	10.63	10.68
Total Kenya Limited	10.46	10.52	10.62	10.64	10.69
CIC Insurance Group Ltd	10.47	10.53	10.63	10.65	10.70
Jubilee Holdings Limited	10.41	10.47	10.56	10.58	10.63
Kenya Re Corporation Limited	10.42	10.48	10.58	10.59	10.64
Pan Africa Insurance	10.43	10.49	10.59	10.60	10.65
Centum Investment Company	10.44	10.50	10.60	10.62	10.67
City Trust Limited	10.45	10.52	10.61	10.63	10.68
Olympia Capital Holdings Limited	10.46	10.52	10.62	10.64	10.69
Trans-Century Ltd	10.47	10.53	10.63	10.65	10.70
B.O.C Kenya	10.48	10.54	10.64	10.66	10.71
BAT Kenya Limited	10.49	10.55	10.65	10.67	10.72
Carbacid Investments Limited	10.50	10.56	10.66	10.68	10.73
East African Breweries Limited	10.51	10.57	10.67	10.69	10.74

Eveready East Africa Limited	10.52	10.58	10.68	10.70	10.75
Kenya Orchards Limited	10.53	10.59	10.69	10.71	10.76
Mumias Sugar Limited	10.54	10.60	10.70	10.72	10.77
Unga Group Limited	10.54	10.61	10.71	10.73	10.78
Access Kenya Group Limited	10.55	10.61	10.72	10.74	10.79
Safaricom Limited	10.56	10.62	10.72	10.74	10.79
A.Baumann & Co Limited (BAUM)	10.57	10.63	10.73	10.75	10.80
Kurwitu Ventures Limited (KURV)	10.58	10.64	10.74	10.76	10.81
Atlas Development & Support Services (ADSS)	10.58	10.64	10.75	10.77	10.82
Flame Tree Group Holdings Limited (FTGH)	10.59	10.65	10.76	10.78	10.83
Umeme Limited (UMME)	10.67	10.73	10.83	10.85	10.90
Liberty Kenya Holdings Limited (CFCI)	10.46	10.52	10.62	10.64	10.69
Home Afrika Limited (HAFR)	10.47	10.53	10.62	10.64	10.69
British-American Investments Company Kenya Limited (BRIT)	10.47	10.53	10.63	10.65	10.70

Appendix IV: Market to Book Value Ratio

	2010	2011	2012	2013	2014
Eaagads Limited	75193.2	4262.8	3356.4	3512.8	2052.1
Kakuzi Limited	73474.0	4165.3	3279.7	3432.5	2005.2
Kapchorua Tea Limited	465.5	107.8	77.1	200.1	98.4
Limuru Tea Limited Company	471.6	109.2	78.2	202.7	99.7
Rea vipingo plantations Limited	477.9	110.6	79.2	205.4	101.0
Sasini Limited	484.2	112.1	80.2	208.1	102.3
Williamson Tea Kenya	6168.5	1681.4	4316.7	1799.0	747.7
Car and General Kenya Limited	6232.2	1698.8	4361.2	1817.5	755.4
CMC Holding Limited	6296.5	1716.3	4406.2	1836.3	763.2
Masharls E.A Limited	12772.1	5712.4	8500.2	8158.5	12097.2
Sameer Africa Limited	17140.2	7666.0	11407.3	10948.7	16234.4
Barclays Bank of Kenya Limited	23002.1	10287.8	15308.5	14693.2	21786.6
CFC Stanbic Bank	30868.9	13806.2	20544.0	19718.2	29237.6
Diamond Trust Bank	72624.7	165055.2	452303.1	729013.6	421510.2
Equity Bank Limited	57329.9	130294.6	357048.1	575483.3	332740.2
Housing Finance Company Limited	45256.2	102854.5	281853.7	454286.5	262665.1
I&M Holdings	35725.3	81193.4	222495.3	358613.8	207347.8
Kenya Commercial Bank Limited	28201.5	64094.1	175637.8	283089.7	163680.4
National Bank of Kenya	22262.3	50595.8	138648.5	223471.0	129209.3

NIC Bank Limited	56.1	13.5	107.2	51.6	290.1
Standard Chartered Bank Limited	37329.4	5881.0	22513.9	7202.5	26455.4
Co-operative Bank of Kenya Limited	53119.7	8368.7	32037.3	10249.2	37646.1
Express Kenya	66231.9	8147.2	57461.9	25890.0	88344.9
Hutchings Biemer Limited	41792.4	5140.9	36258.5	16336.6	55745.6
Kenya Airways limited	26371.0	3243.9	22879.1	10308.4	35175.5
Longhorn Kenya Ltd	16640.1	2046.9	14436.7	6504.6	22195.7
Nation Media Group Limited	10499.9	1291.6	9109.6	4104.4	14005.5
ScanGroup Limited	6625.4	815.0	5748.1	2589.9	8837.5
Standard Group Limited	4180.6	514.3	3627.1	1634.2	5576.4
TPS EA (Serena)Limited	2638.0	324.5	2288.7	1031.2	3518.7
Uchumi Supermarkets Limited	1664.6	204.8	1444.2	650.7	2220.3
Athi River Mining Limited	1050.3	129.2	911.3	410.6	1401.0
Bamburi Cement Limited	662.8	81.5	575.0	259.1	884.0
Crown Paints Kenya Limited	418.2	51.4	362.8	163.5	557.8
East Africa Cables Limited	263.9	32.5	228.9	103.2	352.0
East Africa Portland Cement	166.5	20.5	144.5	65.1	222.1
KenGen Limited	105.1	12.9	91.2	41.1	140.1
KenolKobil Limited	13241.4	6457.5	25548.7	52661.9	44631.1
Kenya Power and Lighting Company	13512.7	6595.6	27152.8	61196.2	52106.0
Total Kenya Limited	13791.5	6732.9	28906.8	72428.4	61933.2
CIC Insurance Group Ltd	14078.1	6869.5	30832.9	87877.8	75430.2
Jubilee Holdings Limited	14372.8	7005.3	32957.6	110468.5	95124.8

Kenya Re Corporation Limited	14676.1	7140.3	35313.3	146640.0	126557.7
Pan Africa Insurance	14988.2	7274.6	37940.0	213902.6	184678.4
Centum Investment Company	15309.6	7408.1	40887.1	382554.6	328547.9
City Trust Limited	15640.7	7540.9	44217.1	1583291.0	1281576.0
Olympia Capital Holdings Limited	15982.0	7673.0	48009.8	-783319.0	-723286.0
Trans-Century Ltd	16333.8	7804.3	52369.0	-321055.0	-289732.0
B.O.C Kenya	10273.5	6329.1	13196.2	14676.8	12254.2
BAT Kenya Limited	10399.8	6407.0	13358.6	14857.3	12404.9
Carbacid Investments Limited	10527.7	6485.8	13522.9	15040.1	12557.5
East African Breweries Limited	10657.2	6565.5	13689.2	15225.1	12711.9
Eveready East Africa Limited	10788.3	6646.3	13857.6	15412.3	12868.3
Kenya Orchards Limited	10921.0	6728.0	14028.0	15601.9	13026.6
Mumias Sugar Limited	11055.3	6810.8	14200.6	15793.8	13186.8
Unga Group Limited	11191.3	6894.6	14375.2	15988.1	13349.0
Access Kenya Group Limited	11329.0	6979.4	14552.1	16184.7	13513.2
Safaricom Limited	11468.3	7065.2	14731.0	16383.8	13679.4
A.Baumann & Co Limited (BAUM)	6564.4	2160.2	13731.2	56126.4	47997.4
Kurwitu Ventures Limited (KURV)	6170.4	1749.9	12760.3	55375.5	47711.0

Atlas Development & Support Services (ADSS)	5776.4	1339.7	11789.4	54624.6	47424.5
Flame Tree Group Holdings Limited (FTGH)	5382.5	929.4	10818.5	53873.7	47138.1
Umeme Limited (UMME)	4988.5	519.1	9847.5	53122.8	46851.7
Liberty Kenya Holdings Limited (CFCI)	4594.5	108.9	8876.6	52372.0	46565.3
Home Afrika Limited (HAFR)	4200.6	601.4	7905.7	51621.1	46278.8
British-American Investments Company Kenya Limited (BRIT)	3806.6	88.0	6934.8	50870.2	45992.4

Appendix V: Stock return

	2010	2011	2012	2013	2014
Eaagads Limited	2.620	2.722	8.187	2.028	(233.008)
Kakuzi Limited	2.33	2.42	7.29	1.81	(189.44)
Kapchorua Tea Limited	0.11	10.44	20.91	12.95	10.49
Limuru Tea Limited Company	(0.04)	18.60	(29.35)	(23.83)	(14.40)
Rea vipingo plantations Limited	(0.00)	0.22	(0.35)	(0.29)	(0.17)
Sasini Limited	0.38	6.10	6.34	7.87	26.76
Williamson Tea Kenya	0.19	13.25	5.50	5.68	(9.62)
Car and General Kenya Limited	(0.15)	(26.64)	58.55	102.59	20.79
CMC Holding Limited	0.22	34.76	11.61	205.84	59.51
Masharls E.A Limited	(0.20)	57.14	(8.99)	(0.14)	(3.87)
Sameer Africa Limited	0.74	(72.74)	(91.68)	(47.85)	70.18
Barclays Bank of Kenya Limited	0.75	(0.23)	(0.29)	(0.15)	0.22
CFC Stanbic Bank	0.77	(0.23)	(0.29)	(0.15)	0.23
Diamond Trust Bank	0.78	(0.24)	(0.30)	(0.16)	0.23
Equity Bank Limited	0.80	(0.24)	(0.31)	(0.16)	0.23
Housing Finance Company Limited	0.62	(5.09)	(0.72)	(1.73)	0.18
I&M Holdings	1.23	(10.19)	(1.44)	(3.46)	0.36
Kenya Commercial Bank Limited	0.94	0.90	0.28	(3.67)	1.23
National Bank of Kenya	0.31	(0.53)	(1.50)	(0.30)	(6.93)
NIC Bank Limited	0.03	17.65	4.02	7.55	15.94
Standard Chartered Bank Limited	0.24	117.74	5.22	4.29	0.83
Co-operative Bank of Kenya Limited	(0.33)	(1.76)	1.99	(1.88)	0.24
Express Kenya	0.12	6.59	5.79	(11.62)	(57.64)
Hutchings Biemer Limited	(0.14)	(9.37)	7.77	26.25	5.00
Kenya Airways limited	0.40	(154.01)	14.24	8.74	19.35
Longhorn Kenya Ltd		17.71		72.41	20.16

	0.16		7.86		
Nation Media Group Limited	0.09	11.44	5.17	36.67	7.17
ScanGroup Limited	-	(160.93)	167.16	170.99	88.43
Standard Group Limited	-	8.93	5.32	10.13	7.39
TPS EA (Serena)Limited	(0.35)	(89.20)	69.63	23.59	111.76
Uchumi Supermarkets Limited	0.63	3.07	5.08	20.71	11.53
Athi River Mining Limited	1.38	5.57	12.12	41.00	16.52
Bamburi Cement Limited	0.03	16.73	14.31	63.66	12.65
Crown Paints Kenya Limited	(0.11)	3.45	41.24	16.13	(33.43)
East Africa Cables Limited	(0.25)	3.44	8.41	3.39	11.82
East Africa Portland Cement	(0.12)	69.12	15.73	(27.99)	22.28
KenGen Limited	1.03	(34.18)	37.47	(978.43)	5.54
KenolKobil Limited	0.83	(27.75)	30.43	(794.48)	4.49
Kenya Power and Lighting Company	0.68	(22.53)	24.71	(645.12)	3.65
Total Kenya Limited	0.55	(18.30)	20.06	(523.84)	2.96
CIC Insurance Group Ltd	0.45	(14.86)	16.29	(425.36)	2.41
Jubilee Holdings Limited	0.78	(26.05)	28.56	(977.16)	4.22
Kenya Re Corporation Limited	0.61	4.91	24.97	97.21	27.90
Pan Africa Insurance	(0.61)	(4.91)	24.97	97.21	27.90
Centum Investment Company	0.75	4.56	91.91	31.13	147.53
City Trust Limited	0.46	3.72	18.91	73.64	21.13
Olympia Capital Holdings Limited	(0.46)	(3.72)	18.91	73.64	21.13
Trans-Century Ltd	0.57	3.45	69.63	23.59	111.76
B.O.C Kenya	0.62	5.09	0.72	1.73	0.18
BAT Kenya Limited	0.31	0.53	1.50	0.30	6.93
Carbacid Investments Limited	0.94	0.90	0.28	3.67	1.23
East African Breweries Limited	0.78	26.05	28.56	977.16	4.22

Eveready East Africa Limited	0.17	(16.15)	23.15	42.26	26.05
Kenya Orchards Limited	0.03	17.65	4.02	7.55	15.94
Mumias Sugar Limited	(0.04)	16.44	6.86	10.19	13.45
Unga Group Limited	0.24	117.74	5.22	4.29	0.83
Access Kenya Group Limited	0.33	1.76	1.99	1.88	0.24
Safaricom Limited	(0.35)	2.39	3.26	3.18	3.31
A.Baumann & Co Limited (BAUM)	0.63	3.07	5.08	20.71	11.53
Kurwitu Ventures Limited (KURV)	1.38	5.57	12.12	41.00	16.52
Atlas Development & Support Services (ADSS)	0.03	16.73	14.31	63.66	12.65
Flame Tree Group Holdings Limited (FTGH)	0.29	3.45	41.24	16.13	33.43
Umeme Limited (UMME)	0.25	3.44	8.41	3.39	11.82
Liberty Kenya Holdings Limited (CFCI)	0.38	69.12	15.73	27.99	22.28
Home Afrika Limited (HAFR)	0.12	5.57	167.16	170.99	88.43
British-American Investments Company Kenya Limited (BRIT)	0.72	16.73	6.86	10.19	13.45