EFFECTS OF EARNINGS MANAGEMENT ON STOCK RETURNS OF COMMERCIAL BANKS LISTED AT THE NAIROBI SECURITIES EXCHANGE

WAGUMA BRENDA

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN FINANCE, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

2019

DECLARATION

I declare that this is my original work and has not been submitted at any academic institution for examination purposes.

Signature…… Date ……

Brenda Akinyi Waguma

D63/70833/2014

This research Project has been submitted for presentation with my approval as the university supervisor.

Signature…… Date……

Mr. James Karanja

Lecturer, Department of Finance and Accounting

School of Business, University of Nairobi

ACKNOWLEDGEMENT

I give honor and thanks to the Almighty God for giving me good health, strength, perseverance and the enthusiasm during the period of study. I also take this opportunity to sincerely thank my supervisor, Mr. James Karanja, for his guidance, wisdom and patience throughout the course of this project. Without his guidance I would not have delivered on this project

I most sincerely thank my siblings and parents, Mr. and Mrs. Thomas Waguma Okong'o for the encouragement and support they accorded me. I am also truly indebted to my friends Chris Arunga and Carole Wangeci for their moral and unwavering support during the course of this study. May the Lord God bless you abundantly!

DEDICATION

This research project is dedicated to my daughters, Janelle Ilona Wang'oma and Eliana Becca Wang'oma. You have been my source of inspiration and strength throughout my postgraduate studies.

TABLE OF CONTENTS

LIST OF TABLES

ABREVIATIONS

EM: Earnings Management

KNBS: Kenya National Bureau of Statistics

NSE: Nairobi Security Exchange

ABSTRACT

The paper was commissioned to ascertain the tie-in between earnings administration and the stock returns of Kenya's listed commercialized banks in the NSE. The dependent parameter is the stock returns while the independent parameter include earnings management, economic growth, inflation, interest rate and size of the company. The earnings management was measured using the modified Jones model of estimating non-discretionary accruals while the size of the company was gauged using the natural log of total assets. The economic growth, interest rate and inflation data were obtained from the KNBS statistical abstract. Financial data about the size of the company was gathered from the published, audited financial statements for a period of five years. Information about the stock return was obtained from the trading data that is available at the NSE. The data was collected from ten listed commercial banks as at 30 June 2019.The data covered five years from 2014 to 2018.A non-directional Pearson correlation revealed that stock returns of the listed commercialized banks is negatively tied-up with interest rate, inflation, earnings management and economic expansion rate. The model summary indicated that the selected predictors explains 27% of the changes in the variations of the stock returns. The ANOVA statistic shows that the selected independent variables collectively affect the dependent parameters. Ordinary least regression methodology was employed to assess the statistical tie-up between the independent parameters and the dependent parameters. The results confirm that there is a negative constant level of return which is not affected by the variables under consideration. The research found that the establishment's size has a negative relationship with the stock returns which is attributable to the growth prospects of the small firms. Interest rate was also found to have a positive tie-in with earnings management. However, inflation, earnings management and economic growth are found not to have a statistically substantial link. These relationships were tested for statistical significance at 95% confidence level. These results validate the assertions of efficient market hypothesis which postulates that investors have the capacity to identify earnings management and include it in decision making. This means that investors are likely to adjust the financial statements figures to reflect the true figures after removing the discretionary accruals.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The recent corporate scandals, receiverships and liquidation of companies in Kenya is a bitter reminder of Smith's (1776) assertions that managers of public enterprises cannot be expected to watch over shareholders interest with the same vigilance that the shareholders themselves would have. In Kenya shelter Afrique, Chase bank and Dubai Bank are classical cases where the private interest of economic agents in charge of public mission conflicted with the general good of shareholders wealth maximization. In these three cases the CEOs gave subprime mortgages to unqualified borrowers which led to a surge in the non-performing accounts, these banks have also been accused of creative accounting where they reclassify the non-performing accounts multiple times to hide the loss. The CEO of Shelter Afrique has also been accused of wasteful spending on personal luxuries (Business Daily).

A research done on US telecom industry reveal that management dishonesty and self-interest contributed to the loss of 600,000 jobs between 2001 and 2003.During the same period investors lost over 7000 billion dollars to the ploy of earnings management (Vranceanu, 2005). The collapse of Crossing, Tyco, Enron, WorldCom, Qwest and Adelphia is widely blamed on earnings management. The CEOs and CFOs of these companies produced statements that overvalued the firm's stock prices; they then disposed their shareholding to the public and made capital gains. According to Carson (2003) lack of rigor in audit assignment limits the monitoring role of independent assessment. In worst cases auditors are bribed by management to issue unqualified opinion leading to massive loses (Lev, 2003).

According to Grossman and Hart (1982) managers tend to engage in discretionary behaviors which erode shareholders wealth. Their study concluded that inclusion of debt in capital composition amplifies supervision by the debt holders who compel the management of the firms to make decisions that are favorable to the shareholders. Correspondingly, Harris and Raviv (1988) postulates that management will tend to resist liquidation despite the fact that it could be in the best interest of shareholders.

Earnings management has gained popularity in the recent past in both academic and media circles (McNichols 2000). This attention is motivated by the various accounting scandals caused by pre-mature revenue recognition criteria (e.g., Enron, WorldCom, and Parmalat) consequently regulations have been tightened to limit management discretion with regards to revenue recognition. Beneish (1999, 24) identifies analysts, regulators, equity researchers, investors and other investment professional as the interested parties in the discussion of earnings management. Investors and analysts are interested in measuring earnings quality, regulators are not only interested in identifying the firms which practice earnings manipulation but also how they do it, this will enable them to promulgate preventative rules. The frequency of a form of earnings management will justify the creation of new standards and increase disclosure requirements with regards to the specific element.

1.1.1 Earnings Management

Earnings administration is the tactful proceeding of deliberately manipulating an establishment's profits to achieve a specific target. The main motivation for earnings management is to create a rosy picture of the performance of an entity, it can also take the form of earnings reduction for a particular year to cater for the expected future bad performance. Dechow et al. (1995), the practice therefore eliminates the noise in earning by reducing or increasing the earnings. Stolowy and Breton (2004) import the

idea of management discretion in the definition of earnings administration. Accounting constitutes a social science which utilizes a lot of judgment, earnings administration arises when management skews their judgment to increase or decrease wealth conveyance between the establishment and the community/stakeholders. Yet in the opinion of Fischer and Rosenzweig (1995) management of earnings can only occur if the management increases/decreases the current earnings without any parallel changes in the long-term economic gain.

Schipper (1989) was the earliest authors to provide formal interpretation of earnings administration. She defined EM as the intentional orchestration of accounting figures while preparing the financial statements of an organization with an aim of securing a private benefit. Later on, Healy and Whalen (1999) defined EM as the process of using managerial judgments in financial reporting that are intended to mislead the stakeholders with the main intention of influencing contractual outcomes that are linked to accounting numbers.

There are several incentives for management to participate in EM. The desire to reduce loses, increase earnings and to meet analysts' expectations usually top the list of incentives. Sloan (2000) reveals that stock markets react negatively to missed targets, this therefore acts as a main trigger for the management of companies to prejudice the earnings in order to attain their goals. Moreover, López and Rees (2001) study indicate that the market re-word companies which meet their revenue targets.

Other empirical evidence blames contractual motivations such as; bonus plans Healy (1985), Management buyout offers (Perry & Williams, 1994) and acquisitions (Erickson & Wang, 1999) as motivators for accounting creativity. Yet other studies link EM to the strength of board of management and auditor's independence. Peasnell

et al., (2001) concluded that firms with weaker boards are more prone to EM than firms with stronger board of management. Additionally, auditor's independence plays a role in the propagation of creative accounting. Gore *et al.* (2001) opine that EM as a practice is more probable in the absence of external independent auditors. Their study found out that companies with well-established external auditors experience less instances of creative accounting.

Empirical evidence reveals that earnings management has been overly measured by accrual models. Beaver et al. (2000) used explicit accruals measures such as non-performing accounts, provision for bad debts and loss reserves to measure accounting manipulation. However, in the contemporary past accounting scholars have proposed the use of more robust models such as deferred tax liability to measure. The use of deferred tax expense is supported by Phillips et al. (2002) as it exposes the discretionary items in the financial statements. Other available means of detecting accounting creativity include assessment of direct extraordinary transactions and events such as asset write offs (Bartov, 1993)), sale of non-current assets (Black et al., 1998) and reporting of special extra ordinary items (Kinney & Trezevant, 1997).

1.1.2 Stock Returns

Stock market return is the gain obtained from an investment within a given duration of time. In a strong form of market environment all the establishment's information is availed to the public freely. If such an environment exists then stock price will be the same as stock return (Mwangi & Mwiti, 2015). Investors will usually invest their resources if the return in the investment pays a premium on top of the cost of capital (Wang, 2012). Stock return aide investors decision because they are usually forward looking and therefore provide an effective guide on whether to buy or sell. The stability of stock returns determines the efficiency and reliability of stock markets.

Stock price volatility therefore diminishes investors' confidence and hinders trade (Taofik & Omosola, 2013).

Aliyu (2011) connects the performance of stock returns to that of the economy. His research found that economic performance is positively interrelated with the stock market's performance. Therefore, instability in security prices is characterized by a general slowdown in economic growth, reduced aggregate demand and reduced output (Erdugan, 2012). Returns for stock is measured as the percentage yield or loss of the value of a share in a period.

Mugambi and Okech (2016) opine that stock return is a combination of capital gain/loss through the appreciation/depreciation of price and dividend return. The performance of the market is measured through market capitalization and liquidity. Market capitalization measures the stock market size and liquidity measures the available opportunities for investors to acquire and sell off. Stock market returns, in Kenya, is gauged by the performance of NSE 20 share mark. This index refers to both the performance and the condition of the securities market (Daferighe & Sunday, 2012).

1.1.3 Earnings Management and Stock Returns

Scot et al. (2011) posits that release of accounting results leads to a significant change in prices of stock. This research concluded presence of a direct tie-in between stock fee and the abnormal/supernormal profits. Qiang et al. (2010) also supported the tie-up between results and stock prices. According to them the higher the surprise effect; whether the information is positive or negative, the higher the market reaction. Intuitively earnings management that lead to higher results will generally increase the stock prices.

Empirical evidence supports earnings administration as a management technique of smoothening earnings and consequently reduce stock price volatility. Zhou (2003) discovered presence of a positive tie-up between earnings administration of a firm and its share prices. EM orchestrated through management discretionary tends to stabilize earnings. Present and potential investors place a premium on companies that experience fewer volatile profits and as such this will increase the stock prices of companies.

Subramanyam (1996) has confirmed that indeed manipulated amounts increase a firm's market price. This study assumes that manipulated results reflect better the potential of future cash flow generation. Similarly, Janin (2000) found results supporting EM. Their inquest into a selection of French firms found that firms who creatively designed their books of accounts to fit an expectation were rewarded by growth in stock fee. This postulates that financiers placed a premium on meeting targets and that they will prefer to hold stocks of companies which have met their revenue targets Irrespective of whether the numbers are real or fabricated.

1.1.4 Banking Industry in Kenya

Kenya's banking industry is a critical player in the operationalization of monetary policy. The banks have a fiduciary role because they take deposits from household in the economy and lend it back to those in need (Mugume, 2010). Significance of the banking sector is more striking in Kenya because the financial market is still developing and to this extent banking industry acts as the major providers of capital and in the same breath as the major savings repository (Arun & Turner, 2002).

The Banking Survey of Kenya Report (2008) attributes Kenya's economic growth to the sprouting financial sector. Financial sector has experienced a tremendous growth,

with total profit before tax growing from Kshs.6 Billion in 2002 to 48.9 Billion in 2009.This represents an 8.15% growth rate in seven years. This growth is attributed to liberalization of the Kenyan economy, a stringent regulatory framework and an efficient and effective Central bank that plays the role of the supervisor (Central Bank of Kenya, 2005-2009).

At the closure of the year 2007, the entire banking sector assets was reported to be Kshs. 978 billion, whereas the total liabilities were approximately Kshs.845 billion. By the conclusion of financial year 2008, the composite assets had increased by 24% which is equivalent to 1.214 trillion Kenyan Shillings. In December 2011, the banking sector magnified its total assets thus reporting a total of Kshs.2.02 trillion. This further grew to Kshs. 2.32 trillion (15.3% rise) by end of December 2012. The assets growth over the five-year period was largely attributed to the increase in loans and advances by customers.

In 1999, the customer deposits were recorded at Kshs. 390 billion and this increased to approximately Kshs. 790 billion by the year 2007. Between 2008 and 2011, the sector realized a tremendous growth in customer deposits. By the closure of December 2011, there was a total of Kshs. 1.49 trillion reported as customer deposits. This growth was realized due to the aggressive approach the banks adopted in mobilizing its customers and the unbanked population through opening of new branches and product diversification to suit the needs of different customers (Central Bank of Kenya, 2012).

1.2 Research Problem

The justification for studying the ramification of earnings administration on stock returns is premised on two fundamental research gaps. The first research gap is

explained by the conflicting theoretical expectations. That is assumptions of different theories explaining the relationship between EM and stock price lead to conflicting results. Secondly empirical evidence has not agreed on the direction of association, some studies concluded presence of a positive link between EM and stock returns. yet others conclude that there is a statistically significant negative association. Better still some studies indicate that EM does not alter stock returns.

The theories explaining the correlation between earnings administration and returns of stock give conflicting predictions on the expected association. The efficient market hypothesis (EMH) makes the presumption that the investors within an economy have the technical know-how to interpret and understand the published accounting information. Hand (1990) opines that investors have the capacity to ascertain the true cash flow position of an establishment from the financial statements. This therefore means that earnings management practices that do not change the true cash flow of a firm will not pose any repercussion on the stock returns.

However, the signaling theory postulates that earnings management affect stock returns negatively. Managers are naturally incentivized to mislead the market by reporting earnings that coincide with analyst predictions. Yet Hearly's (1985) bonus maximization theory seems to suggest that creative accounting resulting into performance growth of stock fees. Unit managers are incentivized by their personal goals and as such will be engaged in discreet earnings management practices which are intended to increase their bonuses.

Empirical evidence has also shown varied results about the relationship between stock prices and earnings management. Some business ethicists have argued that earnings administration derails stock returns. Madiavale (2011) concluded that earnings

administration reduces stock returns. High accruals relative to cash flows lead to negative stock price reaction (Manyuru, 2005). Ogoye (2002) studied the ramifications of EM on stock returns and ascertained absence of a statistical tie-up between the research variables. On the other hand, Subramanyam (1996) and Janin (2000) obtained results which support the business case for earnings management. The two independent researches confirmed that stock returns respond positively to earnings administration. Yet some researchers have revealed non-existent bond between earnings management and stock returns (Piotroski, 2000)

Moreover, Gisbert and García (2003) recommend for earnings management studies to be done in Africa. Their literature review on earnings management revealed that most published research papers were based on US data this therefore calls for further research in EM and accounting transparency. The justification for the similar studies in Africa is based on the fact that African stock markets are either semi strong or weak nature of market compared to the strong market nature in the US and the Europe

1.3 Research Objective

The main intent of this investigation is to ascertain the effects of earnings management on stock returns of listed Kenya’s commercialized banks.

1.4 Value of the Study

Financial statements portray the effects of transactions and events, which occurred on the firm. This information must therefore be presented in a timely manner to be able to exert influence user's decision. It must also portray the effects faithfully for it to be relied upon. The research will be instrumental to practitioners by aiding them to understand how to identify earnings management in the books. The identification of this falsification of information may save investors from making bad investment decision.

The study will also contribute to policy; Banks perform a fiduciary role in the economy. The money they lend to their clients do not entirely belong to them. They collect money from depositors and lend it out. This therefore justifies the need for regulation. Central bank of Kenya is the legal body mandated to regulate the banks to ensure that the stakeholders' interests are protected. This research will be fundamental to policy making because it will supply the regulators with a framework on how to identify creative accounting and consequently put legislations to prevent it.

The signaling theory avers that managers are naturally incentivized to mislead the market by reporting earnings that coincide with analyst predictions. The theory therefore avers that EM will affect stock returns negatively. The bonus maximization theory on the other hand suggests that creative accounting causes an escalation in the performance of stock cost. Unit managers are incentivized by their personal goals and as such will be engaged in discreet earnings management practices, which are intended to increase their bonuses. This study will validate the assertions of these two theories and provide direction on the direction of interrelation between EM and returns of stock.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter will analyze the previous empirical studies conducted on the ramifications of earnings management on stock returns. This chapter will also analyze the theories explaining the tie between EM and returns of stock.

2.2 Theoretical Review

The section deals with theories explaining the effect of EM on stock returns. These theories include bonus maximization theory, market efficiency theory and signaling theory.

2.2.1 Bonus Maximization Theory

The bonus maximization theory was proposed by Hearly (1985). The theory postulates that leaders with bonus arrangements linked to the performance of the enterprises that they manage are have a higher tendency of adopting aggressive accounting methods which increase the current period earnings. The theory assumes that bonuses act as the main incentives for EM. Hearly assumed that managers will participate in EM when their divisions are below targets consequently take no action if they are meeting their targets. The theory further assumes that managers are incentivized to participate in EM if managers' salaries have a variable component which is dependent on the stock return (Hearly, 1985). The Bonus Maximization theory is therefore pertinent to this investigation as it demonstrates the motivations behind aggressive accounting practices.

Table 2.1: Predicted Outcomes Based on Bonus Maximization Theory Hearly (1985)

Current Income Level	Bonus Status	Predicted Decision
Income level > Target	Receive bonus	No income decreasing action taken
Income level < Target	No bonus	Income increasing Action taken

Table 2.1 above shows that leaders are more inclined to administer earnings in order to expand stock returns to earn their bonus. Therefore, if the income is below level they are likely to increase the discretionary accruals with the intention of achieving better financial results. These managed earnings are likely to deceive investors to buy more of the shares and consequently this will increase the stock price. Increased stock prices lead to more bonus pay. On the other hand, if income is above target the directors are likely to reduce on the non-discretionary accruals. This will lead to smooth earnings and savings for future bonus.

Zimmerman (1986) provide empirical support for the Bonus maximization theory, He urges that accounting choices are significantly influenced by managers incentives. These findings are consistent with Hearly's (1985) preposition that unit managers with bonus arrangements are more prone to manipulate earnings as compared with their counterparts who are not entitled to bonuses. Given these assumptions earnings management would therefore lead to positive stock prices because management would engage in actions that are likely to increase stock prices to increase their own bonuses.

2.2.2 Market Efficiency Theory

The hypothesis of Market efficiency as proposed by Fama (1970) opines that capital markets are highly streamlined in relaying the information about its share fees. The theory presupposes that any stock information would spread quickly without any delay and it would be reflected into stock prices as and when the information is made

available. The efficient market theory also presupposes that future stock prices are not related to past information. Therefore, present prices mull over all known accounting and non-accounting information, and even amateur investors who are keen on investing on a diversified portfolio from the market will be able to obtain a rate of return that is similar to those purchased by the experts.

In finance, market efficiency occurs when stock fees incorporate all the obtainable information including inside information which is relevant for decision making. Therefore, efficient markets will give the right incentives for production and investment decisions. Grossman and Ztiglitz (1976) concluded that rational investors will always guide naïve investors. This basically leads to reallocation of funds to the right companies producing goods and services which are demanded by the economy. The assumptions of market efficiency theory imply a positive tie-in between information and performance of stock market. That is the repercussion of details on stock fees is noticeable. The hypothesis presupposes that investors are rational and as such will rely on cash flows to make predictions about a company's future. Regarding this, accounting manipulations which have no impact on cash flows can neither influence stock neither prices nor investors' expectations.

Managers are likely to disrupt the market prices of the company's outstanding shares based on the form of the capital markets. In economies with effectual capital markets, stock prices of listed securities entirely reveal all the accessible information and when it's available (Fama, 1970, 1976). The effectual market theory makes the presumption that the economy has financiers who have the technical know-how of interpreting any new information that affects the securities. Based on the efficient market theory, the share prices are believed to react to any financial announcements that comprise particulars on un-anticipated alterations on distribution of company's cash flows in

the near future as long as the information was not availed beforehand to the market from other origin with equal accuracy (Tinic, 1990).

Keynes (1936) holds an opposite view of the way stock market operates, he deserts the argument that market prices are determined based on fundamental aspects of the company. He argues that stock markets operate like beauty contest where stock fee are determined premised on speculation and not intrinsic value of the firm. Market participants value a stock based on the value other investors place on the stock.

2.2.3 Signaling Theory

Signaling theory as presupposed by Miller and Rock (1985) describes the communication behavior of two parties which have access to different information. In this relationship the sender chose whether to send the information and how to communicate the information. On the other hand, the receiver chooses how to interpret the information given. The theory presumes that managers usually have inside information about the company performance as compared to investors.it also assumes that managers exploit this information asymmetry to determine the direction of stock returns. Managers usually manipulate earnings to enhance stock returns or reduce future loses by underestimating current earnings with a view to increasing future earnings later.

Given the assumptions of the signaling theory it is expected that managers utilize their discretion to alter results to fit a predetermined target. Investors will also choose to interpret information based on their experience and future expectation. Xie (2005) examined US firms considered to have managed their earnings and found out that those firms produced results which correspond exactly to analysts' forecasts. Koh (2003) also conclude that firms can produce results that are similar to investors'

predictions. This is because accounting rules offer latitude for discretion and professional judgment and as such managers can determine the profit levels.

In relation to this, accounting manipulation may be used as a tool of communicating information to shareholders and prospective investors. Managers obviously are in possession of superior information and they use their discretion to choose which information to release to the investor community and when to release it (Kim & Verrecchia, 1991). Bamber and Choen (1995) concluded that that information skewness steer stock fees reactions. This means that the market may be easily be misled by the publications of accounting report. However, Watts and Zimmerman (1986) postulates that competition for capital forces managers to disclose relevant information and hence making detection of earnings management easy.

Consequently, financiers have a mixed reaction to the particulars provided Balsam et al. (2002) postulates that investors take no action immediately they receive an earnings announcement. This is because at that point in time they lack the detailed information to assess the released earnings. Subsequently aggressive manipulations that results in exaggerated profits attract a negative stock price reaction, while prudent representation of financial information attract a positive stock cost reaction (Burgstahler et al., 2004). Given the foregoing it is evident that the assumptions of signaling theory proposes a negative tie-in between earnings management and stock costs.

2.3 Determinants of Stock Returns

The section will deal with the determinants of stock returns which include but not limited to firm size, inflation and economic growth.

2.3.1 Firm Size

The anomalous tie-up between establishment's size and stock prices was first uncovered by Banz (1981). His reserch discovered the negative tie-up between firm size and stock prices; stocks of organizations with wide market values possess smaller return compared to stocks of micro companies. This negative relationship was ascertained by Keim (1983) despite controlling for plausible bias in the estimates. His study concluded that securities of small firms are more rewording that those of big firms. This is because of the growth potential of small firms as compared to large firms and the up-word cash flow trajectory. Also, Fama and French (1992) exhibited the negative tie-up between size and stock returns.Their research indicates that this relationship is robust for even longer periods that are they tested this hypothesis using data for the periods 1941-1990 and still concluded that the negative relationship is statistically significant for those periods.

2.3.2 Inflation

Empirical evidence provides evidence that inflation affect stock prices, Literature however does not agree on the direction of influence. Boudhouch and Richardson (1993) concluded that an increase in inflation reduces the aggregate demand and consequently the real projected cash flows. This gives more managerial incentives to participate in invetive accounting. The research findings from Boudhouch and Richardson (1993) have been found to be consistent with Fisher's generalized hypothesis which states that stock prices lag inflation. In Greece Ioannidis et al. (2004) conducted a probe to investigate the explanatory power of inflation in the changes of securities returns. This study found that inflation illustrates a remarkable proportion of the movements in stock returns. Kessal (1956) on the other hand opines

that inflation reassigns wealth from lenders to borrowers thus during inflation the stock prices of net debtor companies increase.

Empirical literature also provides evidence which support the negative association between inflation and securities prices. Fama (1981) revealed a strong statistically significant negative association between stock prices and inflation. He explained that this was due to the reduction in aggregate output and demand. Inflation diminishes the aggregate demand in an economy that is experiencing full potential, it reduces the purchasing power of the citizens this therefore affect purchases of goods and services and hence the multiplier effect on the stock returns. Spyrou (2001) found similar results in Greece. He regressed stock returns against inflation for the period 1990 to 1995 and found negative relationship. Both studies prove the persistence of the negative relationship. However other studies provide mixed results with Amihud (1996) finding in the short run, negative tie-in, and a positive link in the long term. Mark (2001) also confirmed the findings of Amihud (1996).

2.3.3 Economic Growth

The nexus between economic development and security prices is unidirectional. Duca (2007) surveyed the bond between capital market performance and economic expansion for the top global stock markets, USA, Japan, France and UK. The Granger causality technique indicated a unidirectional causality. Adaramola (2011) concluded that economic growth has a positive explanatory power on the Nigerian security prices. His results indicate that economic expansion impacts stock costs positively. Hsing (2011) also examined the association between the performance of the securities market and growth in economy over a ten-year period. His out-turn concluded that a rise in economic growth causes a stock returns rise.

Pakistan, Sohail and Hussain (2009) surveyed the effect of macroeconomic variable on the stock return. Using the Johansen and Juselius co-integration and vector error correction models they found a substantially positive relationship between economic expansion and stock prices both in the long term and in the short run. Their study utilized data that was generated on a monthly cycle from December 2002 to June 2008. During the same time Daferighe and Aje (2009) reviewed the hypothetical association between capital market achievement and economic expansion in Nigeria. Their results supported the findings of Sohail and Hussain (2009), even though they used a longer period 1997 to 2006 in two different countries Pakistan and Nigeria.

2.4 Empirical Review

Hand (1990) found results that support the efficient market hypothesis. His research views investors as sophisticated experts who have the capacity to discern the representation in the financial reports. They have the capacity to determine the true cash flow of an entity given the financial statements. To this end earnings management has no relevance in the purchase or sell decision because the investors will adjust their expectations accordingly. Hand therefore concluded that earnings administration has no statistically significant influence on stock price.

Sloan (1996) study found results that affirmed the presence of a negative tie-in between earnings management and stock returns. He opines that stocks associated with high provisions for accruals relative to cash experience lower returns in the stock markets. He concludes that stocks whose earnings have been managed underperform stocks whose earnings reflect a fair representation of status of the accounts. Abarbanell and Lehavy (2003) equate accruals with accounting mischief. As the management alters the earnings upwards above cash flows, accruals rise. These can

take the design of increasing accounts receivable due to pre-mature revenue recognition, or underestimation of liabilities like warranty expense.

Subramanyam (1996) confirmed that indeed manipulated amounts increase a firm's market price. His study assumes that manipulated results reflect better the potential of future cash flow generation. Janin (2000) also obtained results that are similar to Subramanyam while carrying out research on a selection of French firms thus agreeing with the hypothesis that earnings management improves information about a company and as such manipulated accounting figures influences stock prices positively.

However, some empirical evidence shows the positive part of earnings administration. Teoh, Welch, and Wong (1998) documents that overstating earnings may lead to overs subscription for the newly introduced shares in the capital market. Their results indicate increased equity uptake for the firms with overstated revenues. Recently Burgstahler and Eames (2006) supported the EM on account that it helps managers meet the analysts forecast. Their research indicated that firms with smooth earnings usually exhibit less stock price volatility. Andrade (1999) in his research found a positive and substantial correlation between the abnormal returns of a share price and the change in the firm's aggregate earnings which he attributed it to the accounting method used by the management or analysts in reporting for mergers and acquisitions.

Yet Piotroski (2000) provides extensive evidence that indicates that the stock price will respond slowly to indicators of earnings management, stakeholders would generally take time before they understand the impact of accrual build up. According to Edwards (1968) this under-reaction reflects a behavioral trait exhibited by humans that states that human beings are too slow in updating what they believe in even when

new evidence arrive. Zhou (2003) found empirical support for earnings management he concluded that earnings management orchestrated to stabilize earnings tend to inspire confidence in the investor community. Their study indicate that Present and potential investors place a premium on companies that experience fewer volatile profits. Therefore, earnings management engineered to reduce volatility of earnings tends to increase stock prices.

On the other side, investors have a mixed reaction to the information provided Balsam et al. (2002) postulates investors take no action immediately they receive an earnings announcement. This is because at that point in time they lack the detailed information to assess earnings management. Subsequently aggressive manipulations that results in exaggerated profits attract a negative stock price reaction while prudent representation of financial information attract a positive stock price reaction (Burgstahler et al., 2004).

Scot et al. (2011) posits that release of accounting results leads to a significant change in stock prices. Their research found a statistically substantial bond between stock prices and abnormal profits. Qiang et al. (2010) also supported the tie-in between results announcements and stock prices. According to them, the higher the surprise effect; whether the information is positive or negative, the higher the market reaction. Intuitively earnings management that leads to higher results will generally increase the stock prices.

2.5 Conceptual Framework

The focus of the research which constitutes the conceptual framework is to assess the ramification of EM on stock returns. The research will investigate whether EM affects the stock price and whether the investors are able to identify managed earnings or not. EM is grounded on three theories namely signaling theory, bonus maximization and market efficiency hypotheses. These theories explain the association of EM and stock returns. The theories also explain the way details are processed in the stock market. EM will be gauged through discretionary accruals and stock returns by the buy sell difference and the dividend returns. Figure 2.1 beneath presents the conceptual framing explaining the tie-in between EM and stock returns.

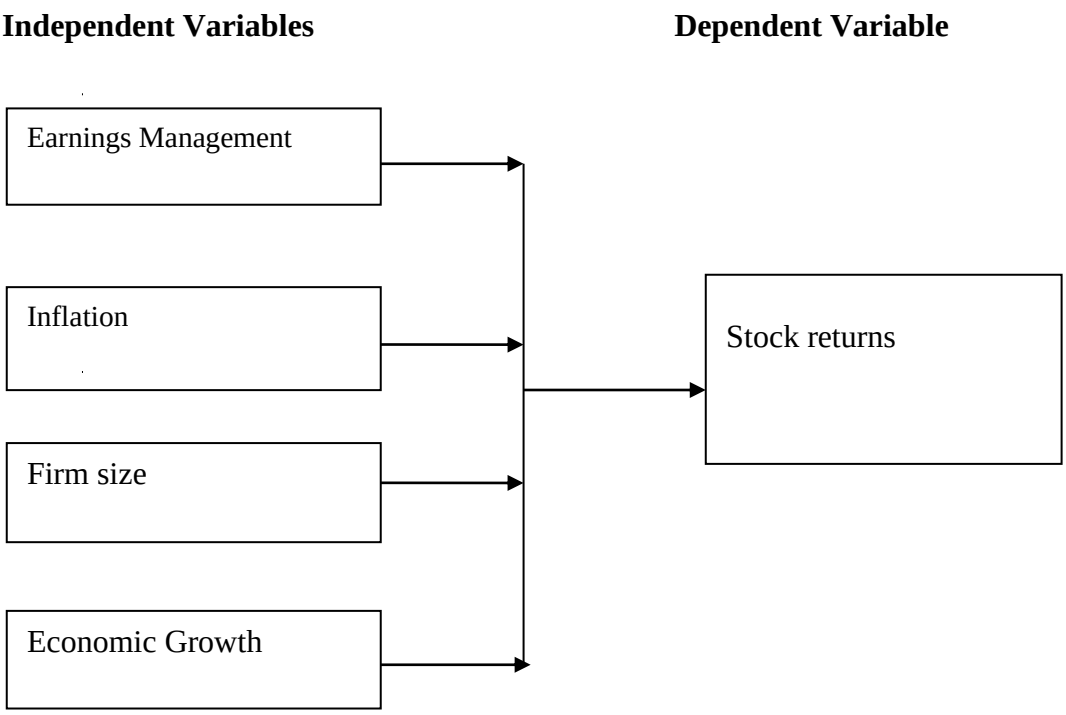


Figure 2.1: Conceptual Framework

Source: Author (2019)

2.6 Summary of Literature review

In summary, empirical evidence have shown conflicting results about the association between stock returns and creative accounting. Some scholars have unearthed a positive tie-up between EM and the accomplishment of stock returns, yet others have indicated a negative relationship. The theories explaining the link between stock returns and EM give conflicting predictions on the expected association. The efficient market hypothesis opines that EM and stock performance are not related at all. Conversely signaling theory postulates that earnings management affect stock returns negatively. Yet Hearly's (1985) bonus maximization theory opines that growth in EM causes performance expansion of stock returns.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section is dedicated to look at the various approaches and methodologies that will be utilized by the scholar to conduct the research. This will include the analysis of sampling techniques, sampling procedures, data gathering apparatus, data assembling techniques and the research design.

3.2 Research Design

A research approach is a coherent procedure which a scholar can follow to help him/her in conducting a study that has a logical conclusion. The series of activities followed by a researcher makes the research results reliable and relevant for decision making. These activities include planning, organizing, gathering and scrutiny of data.

A descriptive research plan will be adopted to conduct the study. Mugenda and Mugenda (1999) recount descriptive statistics as a structured, empirical analysis in which the scholar has no direct check of independent variable because the event has already transpired or because it cannot just be exploited by its nature. This research design is appropriate for this study since the study will look at the effect of macroeconomic events that have already occurred by the time the research is conducted.

3.3 Population of the Study

A population constitutes the entire enumeration of all possible items in an environment (Kothari & Garg, 2014). The research's population target comprise of all the 10 listed banks at NSE at June 30th, 2019.The study will employ a census survey since the total population of the listed banks are small and manageable.

3.4 Data Collection Methods

This paper will examine the 10 listed banks at the NSE for a time frame of 2014 to 2018. The data that will be used will be collected from published financial position statements and it will be used in the calculation of discretionary accruals. The establishments listed on the Nairobi stock exchange were chosen for chosen for the study due to the availability of stock prices. It is technically impossible to curry out the study with non-listed entities because their stock prices are not readily available. Moreover, the establishments listed on the Nairobi stock exchange are sanctioned by law to make public their financial reports which present true and fair figures because they are competing for capital with other firms. Efficient disclosure is a recipe of easy capital formation.

3.5 Data Analysis

The research will employ both descriptive statistics and the model of OLS regression to investigate the association between EM and other illustrative variables through SPSS.

3.5.1 Analytical Model

The research will employ the use of a linear analytical model to explain the effect of independent variables on EM.

$Yi = Lo + \beta 1Ii + \beta 2Si + \beta 3Iii + \beta 4EM + ei$

3.5.2 Measurements and Parameterization

The independent variables and explanatory variables will be operationalized as below.

$Yi = Lo + \beta 1In + \beta 2Si + \beta 3Ir + \beta 4EM + \beta 5G + ei$

Where

Yi = stock returns measured by the buy sell difference and dividends earned.

$\beta 1n$ = the expected variation in stock return given a unit change of inflation

β2 = a unit change in stock return given a unit change in the size of the firm.

B3= a unit change in stock return given a unit change in interest rate.

β4 = a unit change in stock return given a unit change in Earnings management.

β5= a unit change in stock return given a unit change in economic expansion

In = rate of inflation gauged by Consumer Price index

Ir = interest rate gauged by the 91 Day Treasury bill.

Si = Firm's size; Measured by the logarithm of the total assets

G = Economic expansion measured by the change in the GDP from year to year.

ei = error term

Lo = Autonomous stock returns that is not dependent on any the variables under study

EM = Earnings management measured using the discretionary accruals

This paper will use modified Jones (1995) model to measure discretionary accruals as a proxy to measure earnings management.

Equation 1 Modified Jones Model (1995) for measuring Discretionary Accruals

DAi,t = (Accrual si,t)/TAi,t - NDA i,t

Where

DAi,t = Discretionary accruals for the ith cross section unit and time t.

TAi,t-1 represents the total assets of ith cross section unit for the previous year as represented as t-1 in subscript.

NDAi, t represents the nondiscretionary accrual for the ith cross section unit for the year t. Given by the following formulae.

Equation 2 ; Modified Jones Model (1995) for measuring Non-discretionary accruals

$$NDA_t = \alpha_1\left(\frac{1}{A_{t-1}}\right) + \alpha_2\left(\frac{\Delta REV_t - \Delta REC_t}{A_{t-1}}\right) + \alpha_3\left(\frac{PPE_t}{A_{t-1}}\right)$$

Where

- NDAt = for non-discretionary accruals,
- ΔREVt = change in revenues
- ΔREC = changes in receivables for the year t with respect to year t-1.
- PPE = Change in the value of fixed assets for the year.
- α1, α2 and α3 are firm specific variables.

Total accruals = Net profit – cash flow from operations.

Equation 3: Modified Jones Model (1995) for measuring Total Accruals

TAt= NIt – CFO (1) where

- TAt = Total accruals for the year.
- Nit = Net profit for the year.
- CFOt = Cash flow from operation

3.5.3 Diagnostic Tests

The research will use a two tailed P-test to assess the interpretive power of independent variables on the dependent variables. Model validity will be analyzed using the F-statistics at 95% confidence level.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This section will cover the following areas; data analysis, the results of research and the discussion of the results with reference to other empirical studies and the theories. More specifically this section will look at general descriptive statistics of the variables and the normality of the data sets. The section will also look at the regression results and the correlation of variables.

4.2 Response Rate

The research obtained from 10 listed commercialized banks in Kenya as at 30 June 2019. The data collected was for a five year-period from 2014 to 2018 all years inclusive. The primary justification for this was because the research used most recent data that was readily available from the banks published statements and the statistical abstract from the KNBS.

4.3 Data Validity

The collected data was obtained from the audited published statement of finance of the listed companies. The audited statements provide valid data to the extent that auditors are mandated to grant affirmation services to the users of financial statements. The macroeconomic data was collected from the statistical abstract of KNBS. This is the authoritative body mandated by the government to collect and analyze macroeconomic data. The two sources of data provide us with credible and valid data source for the research.

4.4 Descriptive Statistics

Descriptive statistics are simple summary statistics utilized to describe the data. They include mean, median, mode, standard deviation, maxim and minim values, skewness and kurtosis. Table 4.1 underneath illustrates the analysis turn-out.

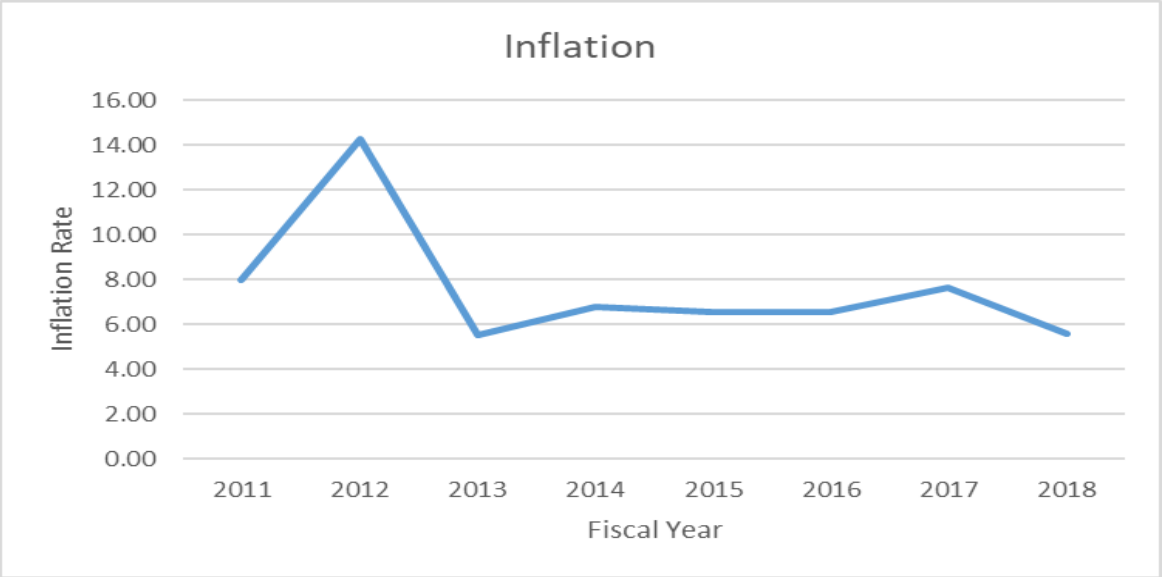
Table 4.1: Descriptive Statistics

Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Deviation
Stock Returns	80	5.54	334	74.98138	73.38396667
Size	80	3.2E+10	7.14E+11	2.29E+11	1.37796E+11
Inflation	80	5.5625	14.2775	7.626771	2.656348095
Earnings Management	80	-1.3E+10	34149448	-3.8E+08	1943073474
Growth	80	41.95	87.9	63.32	13.74870673
Interest Rate	80	10.50477	11.85389	11.28167	0.274289516
Valid N (listwise)	80				

Source: Research Findings (2019)

The minimum stock return as shown in table 4.1 is 5.54 with a maxim figure of 334, a mean of 74.98 and a standard deviation of 73.38. The minimum inflation rate is 5.56, with a maximum level of 14.27 and a 7.62 mean and a 2.65 standard deviation. The minimum level of economic growth was 41.95 billion dollars with a maximum level of 87.9 billion dollars, a mean of 63.32 million dollars and a standard deviation from the mean score of 13.74. The maximum interest rate is 11.85%,with a minimum level of 10.50 % with a 11.28% average and a standard deviation derived from the means score of 0.27%.

Table 4.2: Rate of Inflation



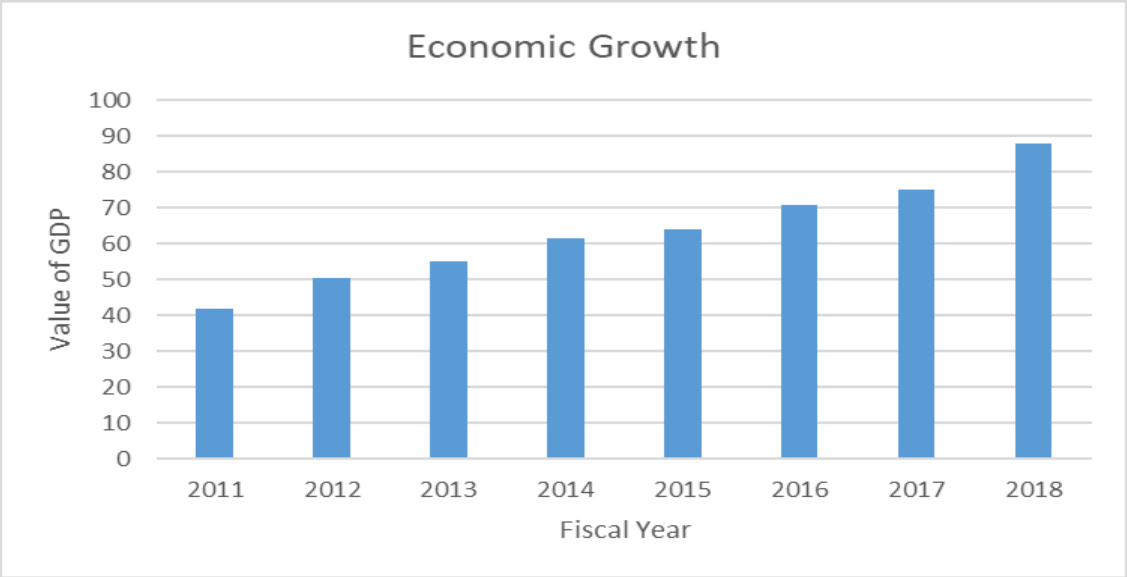
Source: Research Findings (2019)

Year	Inflation	Year to Year Change
2011	7.99	100%
2012	14.28	79%
2013	5.56	-61%
2014	6.81	22%
2015	6.54	-4%
2016	6.58	1%
2017	7.67	17%
2018	5.59	-27%

Source: Research Findings (2019)

The graph shows that the inflation rate has been erratic over time, using 2011 as the base year. The data expresses that there was a 79% increase in the rate of inflation in 2012. However, there was a decline of 61% in inflation rate in 2013.and in 2014 there was an increase by 22% as compared to 2015.Thre was a 1% and 17% increase for the years 2016 and 2017 respectively. Finally, there was a decrease of 27% in 2018.

Table 4.3: Economic Growth Rate



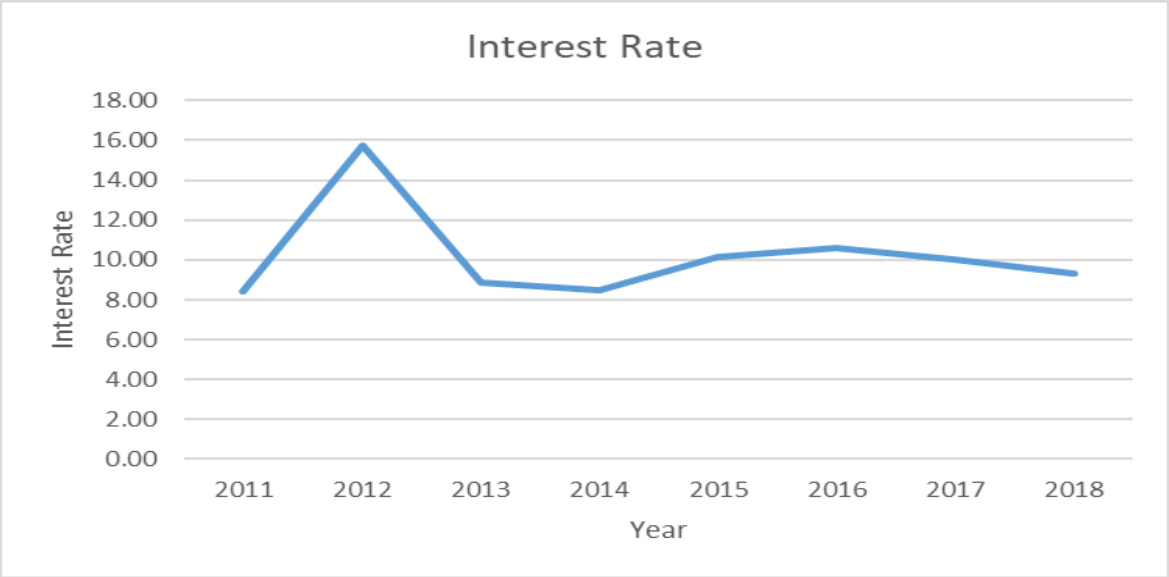
Source: Research Findings (2019)

Year	Economic Growth	Year to Year Change
2011	41.95	100%
2012	50.33	20%
2013	55.1	31%
2014	61.45	46%
2015	64.01	53%
2016	70.88	69%
2017	74.94	79%
2018	87.9	110%

Source: Research Findings (2019)

The graph above shows that the economic expansion rate has been increasing over the period under study. Using 2011 as a base year, it is evident that there has been an increase of economic growth by 31%, 46%, 53%, 69%, and 79% for the years 2012, 2013,2014,2015,2016 and 2017.In 2018 there was a 110% increase, this was the highest increase in all the years under review.

Table 4.4: Interest Rate



Source: Research Findings (2019)

Year	Interest Rate	Year to Year Change
2011	8.40	100%
2012	15.75	88%
2013	8.83	5%
2014	8.50	1%
2015	10.13	21%
2016	10.63	27%
2017	10.00	19%
2018	9.33	11%

Source: Research Findings (2019)

The interest rate has remained relatively stable with a few peaks and troughs. Using 2011 as the base year. There was an 88%,5%,1%,21%,27%,19% and 11% increase in interest rate for the fiscal years 2012,2013,2014,2015,2016,2017and 2018.

4.5 Pearson Correlation

Table 4.5: Pearson Correlation

Correlations		Stock returns	Inflation	Interest rate	Earnings management	Economic growth
Stock Returns	Pearson Correlation	1	-0.062	-0.083	-0.098	-0.014
	Sig. (2-tailed)		0.585	0.462	0.385	0.898
Inflation	Pearson Correlation	-0.062	1	.889**	-0.09	-.464**
	Sig. (2-tailed)	0.585		0	0.429	0
Interest rate	Pearson Correlation	-0.083	.889**	1	-0.06	-0.162
	Sig. (2-tailed)	0.462	0		0.595	0.15
Earnings Management	Pearson Correlation	-0.098	-0.09	-0.06	1	0.18
	Sig. (2-tailed)	0.385	0.429	0.595		0.109
Growth	Pearson Correlation	-0.014	-.464**	-0.162	0.18	1
	Sig. (2-tailed)	0.898	0	0.15	0.109	
** Correlation is significant at the 0.01 level (2-tailed).						

Source: Research Findings (2019)

The study used a two tailed non directional hypothesis to investigate whether the correlation between the variables is statistically significant. Correlations do not show relationship but the direction of the relationship. It can either be negative or positive, the null hypothesis which was tested by the Pearson statistics posit that there is no correlation between the variables. The significance figure provides the probability that the null hypothesis is true. This statistic is tested for significance at 95% confidence interval. Thus, this infers that if the statistics is more than 5% then the null is accepted otherwise the void hypothesis is dismissed and the alternate hypothesis is admissible.

The out-turn above indicates that the stock returns of the listed commercialized banks is negatively tied-in with interest rate, inflation, earnings management and economic expansion rate. This implies that a rise in these variables will cause a drop in the stock returns. The significance for the variables under consideration are all above 0.05, this illustrates absence of a statistically substantial tie-in between the study variables. This

depicts absence of multicollinearity between the independent variables. However, the relationships between the variables shall be tested statistically using regression analysis.

4.6 The Modified Jones Model (1995); Calculation of Non-discretionary Accruals

The research attempted to assess the ramification of earnings management on the stock returns of the listed commercialized banks. Earnings management was computed through modified Jones model (1995). The model's independent variable is derived from the total accruals divided by the entire preceding year's assets. Total accrual is computed as Net income from normal operations in the current year less the cash flow from operating proceedings. The independent variable in the equation is the total accruals divided by the entire preceding year's assets. The dependent variable includes the lag of total assets, PPE/lag of total asset and the difference between the changes in revenue and receivable. The variables are then regressed to determine the alpha values which eventually helps to calculate the earnings management.

4.6.1 The Regression Model for the Modified Jones Model (1985)

Table 4.6: The Modified Jones Model (1985); NDA Equation

Coefficientsa	Unstandardized		Standardized Coefficients	T	Sig.
Model	Coefficients B	Std. Error	Beta		
(Constant)	38835885.65	16056996.93		2.419	0.018
PPE LAG	-56.388	8.801	-1.335	-6.407	0
LAG TA	0.256	0.023	2.333	11.194	0
REV-REC	-3007532.329	1604656.886	-0.012	-1.874	0.065
a Dependent Variable: Lag Total Accruals					

Source: Research Findings (2019)

Table 4.6 atop demonstrates the regression model for the amended jones design. The coefficients of the regression model represent the various Alphas in the Jones model.

The unstandardized coefficients of the B show the alpha values which are embedded in the jones formulae below.

$$NDA_t = \alpha_1\left(\frac{1}{A_{t-1}}\right) + \alpha_2\left(\frac{\Delta REV_t - \Delta REC_t}{A_{t-1}}\right) + \alpha_3\left(\frac{PPE_t}{A_{t-1}}\right)$$

Source: Jones (1995).

Therefore, the regression model of NDA1 = β0+ β1X1+β2X2 + β3X3+ e translates to NDA1= 38835885.65+ 0.256 X1 - 3007532.329 X2 - 56.388 X3.

These variables were tested for statistical significance at 95% conference interval. The null hypothesis for this regression was set as, non-existent statistically significant tie-in between dependent and independent variables. The significance figure in table 4.6 depicts the chance that the void hypothesis is true. The table illustrates that all the parameters under consideration possess a statistically significant relationship and hence the equation is enough in explaining the variations of the discretionary accruals.

4.6.2 The Model summary and test of serial correlation

Table 4.7: The Model Summary and Test of Serial Correlation

Model Summaryb			**Adjusted**		**Durbin**
	R	R Square	R Square	Std. Error of the Estimate	Watson
1	.998a	0.997	0.997	84369152	2.145
a Predictors: (Constant), REV-REC, PPE LAG, LAG TA					
b Dependent Variable: Lag Total Accruals					

Source: Research Findings (2019)

Table 4.7 is a summary of the model showing the proportion of the discretionary accruals which is estimated by the selected independent variable. The R square statistic illustrates the percentage of the dependent variable which is explained. The

table above shows that 99.7% of the movements in the discretionary accruals is explained by a Constant, Lag of REV-REC, PPE LAG and LAG TA.

4.6.3 The ANOVA for the Modified Jones Model (1985).

ANOVAa	Sum of Squares	Df	Mean Square	F	Sig.
Regression	1.68E+20	3	5.59E+19	7851.067	.000b
Residual	5.41E+17	76	7.12E+15		
Total	1.68E+20	79			
a Dependent Variable: Lag Total Accruals					
b Predictors: (Constant), REV-REC, PPE LAG, LAG TA					

Source: Research Findings (2019)

The ANOVA statistics shows the probability that the designl as set out is statistically substantial. The null hypothesis asserts that the independent parameters collectively don't impact the dependent parameters. The substantial figure shows the probability that the void hypothesis is significant. Thus, the void hypothesis is dismissed since the probability of its truthfulness is 0.000%. This therefore implies that the design as set out is statistically substantial in explaining the changes in the discretionary accruals.

4.7 Regression Analysis and Hypothesis Testing

The research used a pooled regression model and multiple ordinary least square regression methodology. The pooled regression was utilized to determine the regression equation for the modified Jones model (1995). Multiple regression methodology was employed to assess the extent to which the independent variables (earnings administration, economic expansion, interest rate and inflation) affect the dependent variable (stock return). This chapter will show the results of the regression model that has been used to approximate the unrestricted accruals which is the quantification of earnings administration.

The next section will show the regression model for the main model where stock returns is regressed against the independent variables. Diagnostic tests on linearity and autocorrelation will be conducted on the data before the regression analysis is done. The model summary detailing the fraction of the dependent variables which is demonstrated by the independent parameter is explained first. The ANOVA statistics which shows the whether the regression model as set up is statistically significant will also be analyzed. Finally, this section will look at the regression table and the equation therefrom.

4.7.1 Test of Normality

Table 4.8: Test of Normality

Skewness and Kurtosis	**Skewness**		**Kurtosis**	
	Statistic	Std. Error	Statistic	Std. Error
Stock Returns	1.501	0.269	1.854	0.532
Size	1.357	0.269	2.309	0.532
Inflation	1.898	0.269	2.355	0.532
Earnings Management	-1.569	0.269	31.784	0.532
Growth	0.217	0.269	-0.717	0.532
Interest Rate	-0.481	0.269	0.317	0.532

Source: Research Findings (2019)

Normality was tested using the skewness and Kurtosis. This statistic postulates that the data set is evenly distributed if the skewness and kurtosis values is within the range of +-1.96. Anything beyond the value is treated as a non-normal distribution the above results indicate that stock returns, size, interest rate and inflation, and growth and earnings management are normally distributed.

4.7.2 Durbin Watson Test of Auto Correlation

Table 4.9: Test of Auto correlation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.562a	0.316	0.27	2.468062	2.466
a Predictors: (Constant), Economic Growth, Earnings Management, Inflation, Interest Rate, Size					
b Dependent Variable: Stock Return					

Source: Research Findings (2019)

The Durbin Watson test of autocorrelation ranges from 0 to 4. The values closer to 2 +or – (0.5) indicate that autocorrelation does not exist. Any values nearing 0 displays a positive autocorrelation while values nearing 4 depicts negative autocorrelation. Therefore, according to this examination, our Durbin Watson figure is 2.466 that is closer to 2 and is within the range of + or – 0.5. This therefore implies that auto correlation does not exist in the data.

4.7.3 Model Summary

Table 4.10: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.562a	0.316	0.27	2.468062	2.466
a Predictors: (Constant), Economic Growth, Earnings Management, Inflation, Interest Rate, Size					
b Dependent Variable: Stock Return					

Source: Research Findings (2019)

The model summary in table 4.10 estimates the proportion of the dependent parameter stock returns that is demonstrated by the predictors (Economic Growth, Earnings Management, Inflation, Interest Rate, Size). This statistic recognizes existent of several elements that impact stock return. It therefore estimates the proportion of stock returns which is influenced by the variables under study. The adjusted R square demonstrates the fraction of the dependent parameter which is illustrated in the

model. According to this study, 27% of the changes in the variations of the stock returns is explained in the current model.

4.7.4 Analysis of Variance

Table 4.11: Analysis of Variance

ANOVAa	Sum of Squares	Df	Mean Square	F	Sig.
Regression	208.102	5	41.62	6.833	.000b
Residual	450.758	74	6.091		
Total	658.86	79			
a Dependent Variable: Stock Return 1					
b Predictors: (Constant), Growth, Earnings Management, Inflation, Interest Rate, Size					

Source: Research Findings (2019)

The ANOVA statistic examines whether the analytical model as set out by the researcher describes the changes in the dependent variable. This test provides the assurance that the independent parameter under consideration impacts the dependent parameter. In this case the ANOVA statistics will investigate whether Growth, Earnings Management, Inflation, Interest Rate, Size collectively affect stock returns.

The null hypothesis assumes that the predictors collectively do not influence the stock returns. Therefore, the null is accepted if the significance figure is more than 5%. Table 4.11 above shows that the chance of the void hypothesis being true is 000%. Thus, the void hypothesis is dismissed, and the alternate hypothesis is admissible. The research therefore concludes that the selected independent parameters collectively impact the dependent parameters.

4.7.5 Regression Model

Table 4.11: Regression Model

Coefficientsa	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		Std. Error			
(Constant)	-1763.287	810.571		-2.175	0.033
Size	-3.74	0	-0.703	-2.513	0.014
Interest Rate	171.487	74.396	0.641	2.305	0.024
Inflation	-2.099	3.456	-0.076	-0.607	0.546
Earnings Management	-4.24	0	-0.112	-0.987	0.327
Growth	0.058	0.751	0.011	0.077	0.939
a Dependent Variable: Stock Returns					

Source: Research Findings (2019)

Y = -1763.287-3.74X1 +171.5X2-2.099X3--4.24X4 + 0.058 X5

The regression model tests the statistical tie-in between the independent parameters and the dependent parameters. The model test how the individual variables on their own affect the dependent variable. Each variable is tested for statistical significance individually. The null hypothesis assumes that the independent parameters are not statistically substantial in explaining the changes in the dependent variables. The null hypothesis is tested for statistical significance at 95% confidence level. The significance figure in the regression model is an expression of the probability that the void hypothesis is true. The null hypothesis is therefore admitted if the probability is more than 5%.

The regression model shows that the constant, company size, and interest rate pose a statistically substantial relation. The probability that the coefficients of constant, company size, rate of interest are not different from zero is 3.3%, 1.4% and 2.4%. These probabilities are below the threshold of 5%. We can therefore decline the void hypothesis and make a conclusion that the coefficients are different from zero. On the flip side; inflation, earnings management and economic growth are revealed not to

possess a statistically substantial tie-in. The probability that the coefficients of these parameters are similar to zero is 54.6%, 32.7% and 93.9% respectively. Therefore, we approve the void hypothesis and make a conclusion that their coefficients are not distinct from zero.

4.8 Discussion of Research Findings

The out-turn from the regression model have confirmed absence of a statistically substantial bond between earnings administration and stock returns. These results validate the assumptions of the efficient market hypothesis theory which posit that investors have the technical know-how to interpret and understand the published accounting information. This means that the investors have the capacity to determine the true cash flow position of the companies and can eliminate the non-discretionary accruals and make objective assessments. Earnings management will therefore not impact stock returns because it would be detected before stocks are purchased.

However, these results contradict the assumptions of the signaling theory which avers that earnings administration and stock return possess a negative tie-in. It also contradicts the bonus maximization theory which postulates that earnings administration pose a positive impact on stock returns. The theory assumes that smooth earnings improves confidence of the shareholders. Managed earnings provide more consistent dividends. This increases the demand of the stock thus leading to increased stock prices and capital gains.

Empirically these outcomes corroborate the revelations of Ogoye (2002) who carried out a probe on the impact of EM on stock returns and made a conclusion that there was no statistical association between the variables. However, it contradicts the findings of Madiavale (2011) who concluded that EM and stock returns pose a

negative statistical relationship. High accruals relative to cash flows leads to negative stock price reaction. The results also contradict the findings of Janin (2000) who concluded that EM is positively tied to stock returns.

The out-turn of this study have validated the presence of a statistically substantial negative tie-in between stock returns and company size. These out-turn endorse the conclusions of Keim (1983) who found that the securities of smaller firms are more rewarding than those of big firms. Keim's research argued that the expansion potential of smaller firms is greater than those of big and mature firms. This increases the demand for the stocks and consequently the stock returns through future capital gains. The results also concluded that a positive tie-in exists between the interest rate and stock returns. This is owing to the fact banks earn income by pricing interest on their products; therefore, a rise in interest rates is probable to grow the profits and consequently this will increase the appetite for the stocks. As the stock demand increases, so will the price of the stocks thereby make them more attractive to investors.

Inflation and economic growth were found not to have any statistical relationship with stock returns. These results contradict the general macroeconomic theory. Fama (1981) concluded that inflation increases the general prices of commodities and services, this therefore result to a decline in the aggregate demand of goods and services. The reduction in demand reduces the sales volume and profits and hence the stock returns. Empirically and theoretically, inflation is likely to pose a negative tie-up with performance. Consequently, economic expansion is expected to trigger a stock returns rise due to the increased aggregate demand.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This paper sought to investigate the impact of earnings management on the stock returns of listed commercial banks. The data was gathered from the audited financial statements, statistical abstract and NSE publications. This chapter therefore reviews and documents findings summary, drawn conclusions and the policy commendations. This segment will also give suggestions for future studies premised on the research outcomes.

5.2 Summary

This paper was commissioned to determine if there exists a tie-up between earnings administration and stock returns of listed commercial banks in Kenya. The dependent parameter is the stock returns while the independent parameter includes earnings management, economic expansion, inflation, interest rate and size of the company. Data was assembled from ten listed commercialized banks as at 30 June 2019.The data was spread over a 5 year-period, 2014 to 2018. The financial data about the size of the company was gathered from the audited and issued financial statements for a period of five years. Information about the stock return was obtained from the trading data at the NSE.

The macroeconomic data about inflation, economic growth and interest rate was obtained from the statistical abstract of KNBS. The modified Jones model was used to compute the earnings administration variable. The components of the model were established from the audited financial statements. Diagnostics test were done on the

data and they concluded that data was normally distributed. The Durbin Watson test also revealed that no serial correlation in the data points exists.

Both the descriptive statistics and regression analysis was utilized to scrutinize the collected data. There was 100% response rate since the data was publicly available. The Pearson correlation statistics shows that stock returns of the listed commercialized banks are negatively tied-up with rate of interest, inflation, earnings management and economic expansion rate. This means that a rise in these variables will lead to a declined stock return. The model summary which estimates the fraction of the dependent variable stock returns which is justified by the predictors indicate that 27% of the changes in the variations of the stock returns is justified in the current model. The ANOVA statistic confirms that this study's independent parameters jointly affects the dependent parameters.

The regression model tests the statistical tie-in between the independent parameter and the dependent parameter. The model test how the individual variables on their own affect the dependent variable. Each variable is tested for statistical significance individually. The null hypothesis assumes that the independent parameters are not statistically substantial in determining the changes in the dependent variables. The void hypothesis is tested for statistical significance at 95% confidence level. The significance figure in the regression model is an expression of the probability that the void hypothesis is true. The null hypothesis is therefore accepted if the probability is more than 5%.

The regression model illustrates the constant, company's size, and interest rate pose a statistically substantial link. The out-turn thus confirm presence of negative constant level of return which is not affected by the variables under consideration. The establishment's size was found to have a negative tie-in with stock returns which is

attributable to the growth prospects of the small firms. The researcher also determined that interest rate and earnings administration possess a positive relationship. However; inflation, earnings administration and economic growth do not have a statistically significant relationship. These relationships were tested for statistical significance at 95% confidence level.

5.3 Conclusions

The results of this study therefore draw the conclusions that there is an autonomous negative stock return which is not related to any of the variables being studied. These results show that on average there was a capital loss in the period under consideration. The regression out-turn also concluded absence of statistical tie-up between earnings management and stock returns. These results validate the assertions of efficient market hypothesis which postulates that investors have the capacity to identify earnings management and include it in decision making. This means that investors are likely to adjust the financial statements figures to reflect the true figures after removing the discretionary accruals.

These results conclude that the assumptions of the signaling theory which posit that earnings management and returns of stock are negatively tied-up and that of the bonus maximization theory which postulates that earnings administration impacts positively on stock returns do not hold. Kenyan investors prefer true and fair earnings as opposed to managed smooth earnings. Empirically the results confirmed the findings of Ogoye (2002) who revealed non-existent statistical tie-in between earnings management and stock returns. However, these results contradict finings of Madiavale (2011) who concluded that earnings administration and stock returns pose a negative statistical tie-in as well as the findings of Janin (2000) who concluded that earnings administration is positively tied-in to stock returns.

The out-turn of this research also concluded that establishment's size has a negative statistically significant relationship with stock returns. These results indicate that smaller companies surpass the older firms because of their growth prospects. Therefore, potential investors are advised to invest in smaller firms. The results also drew conclusions that interest rate and stock returns are positively linked. This means that the borrowers are not price sensitive, since a rise in rate of interest does not cause to a decline in the demand for loans rather it increases the earnings of the bank. These results also show that the banks can pass down the inflationary pressures to their customer without experiencing a decrease in the profits.

The results also concluded that Inflation and economic growth were found not to have any statistical relationship with stock returns. These rival the assumptions of the general macroeconomic theories. The macro-economic theory of aggregate demand avers that increases in general prices decease the aggregate demand and consequently this reduces stock returns, the results therefore indicate that banks are not affected by inflation because their customers will still borrow even during the hard-economic times. Economic growth was also found not to affect stock returns, the demand for bank loans is not affected by economic growth.

5.4 Policy Recommendation

The results concluded that earnings management does not affect the stock returns. These findings assert the assumptions of efficient market theory. The hypothesis postulates that Investors have the capability of identifying non-compulsory accretion in the audited financial statements. To that extent the policy recommends that CMA organize trainings on financial reporting and analysis to shareholders. These trainings will enhance the ability of investors to make objective decisions.

The study also recommends that efforts on curbing insider trading should be increased. Dishonest management's boards are likely to exploit the loopholes in the information asymmetry by disclosing sensitive information to selected investors for their personal gain. They are likely to resort to this methodology because potential investors have the capacity of detecting earnings management. Therefore, the study recommends that CMA should enhance the monitoring with regards to insider trading. Punitive measures should be established for the directors found guilty.

5.5 Limitation of the Study

The greatest challenge in the research was the computation of the accounts receivable. Accounts receivable is a key variable needed to compute the discretional accretion in the modified Jones model. Most banks lump up accounts receivable in the current assets. The researcher solved the problem by looking at the explanatory accounting notes accompanying the financial statements. The notes segregate the accounts receivable. In some case the money due from the customers was used as a proxy to accounts receivable.

The accuracy of data collected in the financial statements was premised on the facts that listed firms publish financial statements that are free from error and that are compliant with the international financial reporting standards, in some cases there were gross violations of the standards where different figures are reported for the same year. The researcher solved the problem by seeking for clarification from the auditors on which figures represent the fair and true representation of the establishment's status.

5.6 Suggestion for Further Studies

The out-turn of the research indicate the earnings management does not impact the stock returns of commercialized banks listed in the NSE in Kenya. These results validate the averment of the efficient market hypothesis. Nevertheless, the results contradict the assumptions of the signaling theory and that of the bonus maximization theory. Therefore, a study should be carried out to specifically review the assumptions of the signaling theory and the bonus maximization theory in Kenya. This study will help in understanding how investors make decisions, it will also assess whether investors make objective decisions based on statistical fundamentals or not.

The study also makes recommendations for a similar study be conducted within the East African community. The study will look at the ramifications of earnings administration on the stock returns of the listed commercial banks in East Africa. The panel data regression methodologies such as fixed effect regression methodology and the random regression methodology will be used to analyze if there is a statistical difference in the four countries. The difference in difference analysis will also show if the various levels of earnings management are statistically different from each other.

REFERENCES

Abarbanell, J. & Bushee, B. (1998). Abnormal returns to a fundamental analysis strategy. *Accounting Review* 73:19–45.

Abarbanell, J. & Reuven, L. (2003). Biased forecasts or biased earnings: The role of reported earnings in explaining apparent bias and over/underreaction. *Journal of Accounting and Economics* 36:105–46.

Adaramola, A.O. (2011). The impact of macroeconomic indicators on stock prices in Nigeria, *Developing Country Studies*,

Amihud, Y. (1996). Unexpected inflation and stock returns revised - Evidence from Israel. *Journal of Money Credit and Banking*, 28, 22-33.

Andrade, G. (1999). Do appearances matter? The impact of EPS accretion and dilution on stock prices, *working paper*, Harvard Business School, Boston, MA.

Arun, T. & Turner, J. (2002). Financial sector reforms in developing countries: the Indian experience, *World Economy*, 429-445.

Balsam, S., Marquart, C.A, & Bartov, E. (2002). Accruals management, investor sophistication, and equity valuation: evidence from 10-Q filings. *J. Account. Res.;* 40(4): 987-1012

Bamber, L.S., Cheon, Y.S., & Christensen, T.E. (2001). Factors associated with differences in the magnitude of abnormal returns around NYSE versus Nasdaq firm's earnings announcements. *J. Bus. Finance and Accounting*, 28(9 & 10): Nov/Dec.

Banz, R. W. (1981). The relationship between return and market value of common stocks. *Journal of Financial Economics, 9,* 3–18.

Bartov, E. (1993). The timing of asset sales and earnings manipulation. *The Accounting Review*, 68: 840-855.

Bartov, E. Givoly, D. & Hayn, C. (2002). The rewards to meeting or beating earnings expectations. *Journal of Accounting and Economics.* 33: 173-204

Beaver, W.H. & Engel, E.E. (1996). Discretionary behavior with respect to allowances for loan losses and the behavior of security prices. *Journal of Accounting and Economics*, 22: 177-20

Beaver, W.H. & McNichols, M.F. (1998). The characteristics and valuation of loss reserves of property- casualty insurers. *Review of Accounting Studies*, 3: 73-95

Beaver, W.H., McNichols, M.F. & Nelson, K.K. (2000). Management of the loss reserve accrual and the distribution of earnings in the property casualty insurance industry. *Working paper*, Standford University.

Beneish, M. (1999). The detection of earnings manipulation. *Financial Analysts Journal* (Sep/Oct): 24-36. 2001. Earnings management: A perspective. *Managerial Finance,* 27: 3-17.

Black, E.L., Manly, T.S. & Sellers, K.F. (1998). Earnings management using asset sales: an international study of countries allowing noncurrent asset revaluation. *Journal of Business, Finance and Accounting,* 26: 1287-1317.

Boudhouch & Richardson (1993). Stock returns and inflation: A long horizon prospective. *American Economic Review,* 1346-1355.

Burgstahler, D. & Eames, M. (2006). Management of earnings and analysts' forecasts to achieve zero and small positive earnings surprises. *Journal of Business Finance and Accounting,* 33:5/ 6, 633–52.

Burgstahler, D., Hail, L. & Leuz, C. (2004). The importance of reporting incentives: earnings management in European private and public firms. *Working Paper,* Wharton Financial Institutions Center

Central Bank of Kenya (2005-2009), Bank supervision annual report, Central Bank of Kenya, Nairobi.

Central Bank of Kenya (CBK) (2012), Bank supervision report, Central Bank of Kenya, Nairobi.

Daferighe, E.E. & Aje, S.O. (2009). An impact analysis of real gross domestic product, inflation and interest rate on stock prices of quoted companies in Nigeria, *International Research Journal of Finance and Economics,* No. 25.

Dechow, P. M., Sloan, R. G. & Sweeney, A. P. (1995). Detecting Earnings Management. *The Accounting Review 70*: 193-225.

Dechow, P., Richard, S., & Amy, S. (1995). Detecting earnings management. *Accounting Review* 70: 3–42.

Duca, G. (2007). The relationship between the stock market and the economy: experience from international financial markets, *Bank of Valletta Review,* Vol. 36 No. 3, pp. 1-12.

Edwards, W. (1968). Conservatism in human information processing. In *Formal representation in human judgment,* ed. B. Kleinmuntz. New York: Wiley.

Fama, E. (1970). Efficient Capital Markets: A Review of Theory and Empirical Work. *Journal of Finance.* 25:2, pp. 383-417

Fama, E. (1970). Efficient capital markets: a review of theory and empirical work, Journal of Finance, Vol. 25, pp. 383-417.

Fama, E. (1998). Market Efficiency, Long-Term Returns, and Behavioral Finance. *Journal of Financial Economics.* 49:3, pp. 283-306.

Fama, E. F. (1981). Stock returns, real activity, inflation and money. *American Economic Review,* Volume 71(4), pp. 545-565.

Fama, E. F., & French, K. R. (1992). The cross-section of expected stock returns. *Journal of Finance, 47,* 427–465.

Fischer, M. & Rosenzweig, K. (1995). Attitudes of students and accounting practitioners concerning the ethical acceptability of earnings management. *Journal of business ethics, 13,* 205-221.

Gore, P., Pope, P. & Singh, A. (2001). Non-audit services, auditor independence and earnings management. *Working Paper* Lancaster University.

Grossman, S.J., & Stiglitz, J.E. (1976). Information and competitive price systems. *The American Economic Rev.;* 66(2):246–253.

Hand, J.R. (1990). A test of the extended functional fixation hypothesis, The *Accounting Review,* Vol. 65, pp. 740-63.

Healy, J. (1985). The effect of bonus schemes on accounting decisions. *Journal of Accounting and Economics,* 7: 85-107.

Healy, P. & Palepu, K.G. (1990). Effectiveness of accounting- based dividend covenants. *Journal of Accounting and Economics,* 12: 97-123.

Healy, P. & Palepu, K.G. (1993). The effect of firm's financial disclosure strategies on stock prices. *Accounting Horizons,* 7: 1-11.

Healy, P. M. (1985). The effect of bonus schemes on accounting decisions. *Journal of Accounting & Economics, 7*(1–3), 85–107.

Healy, P.M. & Wahlen, M.W. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons,* 13: 365-383.

Hsing, Y. (2011). Macroeconomic determinants of the stock market index and policy implications: the case of Central European country, *Eurasian Journal of Business and Economics,* Vol. 4 No. 7, pp. 1-11.

Janin, R. (2000). Gestion des chiffres comptbles, contenu informationnel du résultat et mesure de la création de valeur. Thèse de doctorat, Université Pierre Mendès France, Grenoble, 321.

Keim, D. B. (1983). Size-related anomalies and stock return seasonality: Further empirical evidence. *Journal of Financial Economics, 12,* 13–32.

Kessel, N. (1956). Inflation caused wealth redistribution: A test of hypothesis. *American Economic Review,* pp. 128-141.

Keynes, J. M. (1936). *The general theory of employment, interest and money.* New York: Harcourt Brace.

Kim, O. & Verrecchia, R.E. (1991). Trading volume and price reactions to public announcements. *J. Account. Res.;* 29(2):302–321

Kinney, M. & Trezevant, R. (1997). The use of special items to manage earnings. *Journal of Financial Statement Analysis,* 3: 45-53.

Kithinji, A. & Waweru, N.M. (2007). Merger restructuring and financial performance of commercial banks in Kenya, *Economic, Managerial and Financial Markets Journal,* 2(4), 9-39.

Koh, P.S. (2003). On the association between institutional ownership and aggressive corporate earnings management in Australia. *The British Account. Rev.;* (35):105-128.

Kothari, C. R., & Garg, G. (2014). *Research methodology methods and techniques,* (third edition). New Delhi: New Age International (P) Limited, Publishers.

Long, Malitz, & Ravid (1993). Trade credit, quality guarantees and product marketability. *Financial Management,* 22(4), 117-127.

Madiavale, C. (2011). The relationship between corporate governance and financial performance of previously government owned companies quoted on the Nairobi Stock Exchange. *Unpublished MBA Project*, University of Nairobi.

Manyuru, P.J. (2005). Corporate governance and organizational performance: The case of companies quoted at the Nairobi Securities Exchange. *Unpublished MBA Project,* University of Nairobi.

Mark, C. (2001). *Stock returns and inflation,* mimeo.

McNichols, M., & P. Wilson. (1988). Evidence of earnings management from the provision for bad debts. Journal of Accounting Research 26 (Supplement): 1-31. 2000. Research design issues in earnings management studies. *Journal of Accounting and Public Policy* 19: 313-345. -. 2002. Discussion of the quality of accruals and earnings: The role of accrual estimation errors. The Accounting Review 11 (Supplement): 61-69.

Miller, M. & K. Rock, (1985). Dividend policy under asymmetric information. *Journal of Finance,* 40, 1031-1051.

Mugenda O, M., & Mugenda A, G. (1999). *Research methods; Quantitative and qualitative approaches.* Nairobi: Acts Press.

Mugume, A. (2010). Market structure and performance in Uganda's banking industry, Makerere University, Kampala, *AERC research paper,* Nairobi.

Ngugi, R. (2001). An empirical analysis of interest rate spread in Kenya, *AERC Research Paper No. 106, African Economic Research Consortium,* Nairobi.

Pandey, I. M. (2010). *Financial management* (tenth edition). New Delhi: Vikas Publishing House PVT LTD.

Peasnell, K.V., Pope, P.F. & Young, S. (2001). Board monitoring and earnings management: Do outside directors influence abnormal accruals? *Working Paper* Lancaster University.

Perry, S.E. & Williams, T.H. (1994). Earnings management preceding management buyout offers. *Journal of Accounting and Economics,* 18: 157-179.

Phillips, J., Rncus, M., & Rego, S.O. (2002). Earnings management: new evidence on deferred tax expense. *Working Paper,* University of Iowa.

Piotroski, J. D. (2000). Value investing: The use of historical financial statement information to separate winners from losers. *Journal of Accounting Research* 38 (suppl.): 1–41.

Qiang, K. Qiao, L. & Rong, Q. (2010). Predicting stock market returns with aggregate discretionary accruals. *J. Account.* Res.

Rees, L., Ot, T. S. & Gore, R. (1996). An investigation of asset write-downs and concurrent abnormal accruals. *Journal of Accounting Research,* 34 (supplement): 157-170.

Scott, D., Michelle, H., Edward, L. & May, D. (2011). Where do firms manage Earnings? *Working Paper*

Shipper, K. (1989). Commentary on earnings management. *Accounting Horizons* 3: 91-102.

Skinner, D.J. & Sloan, R.G. (2000). Earnings surprises, growth expectations and stock returns: Don't let an earnings torpedo to sink your portfolio. *Working Paper,* University of Michigan Business School

Sloan, R. G. (1996). Do stock prices fully reflect information in accruals and cash flows about future earnings? *Accounting Review* 71:289–315.

Sohail, N. & Hussain, Z. (2009). Long run and sort run relationship between macroeconomic variables and stock prices in Pakistan: the case of Lahore stock exchange, *Pakistan Economic and Social Review*, Vol. 47 No. 2, pp. 183-198.

Spyrou (2001). Inflation and stock returns. Applied Economic Letters, pp. 447-450.

Subramanyam KR (1996). The pricing of discretionary accruals. *J.Account. Econ.*, 22, Issues 1-3:249-281.

Teoh, S.H., I. Welch, & T.J. Wong. (1998a). Earnings Management and the Long-Run Market Performance of Initial Public Offerings. *Journal of Finance*, 53:6, 1935–74.

Teoh, S.H., T.J. Wong, & G.R. Rao. (1998). Are accruals during initial public offerings opportunistic? *Review of Accounting Studies*, 3, 175–208.

Teoh, S.H., Y. Yang, & Y. Zhang. (2008). Noise or firm-specific information? *Working paper,* University of California–Irvine and Chinese University of Hong Kong.

Tobin, J. (1982). On the efficiency of the financial system. *Lloyd's Banking Review*, 153, 1–15.

Wallsten, S.J. (2001). Telecommunications investment and traffic in developing countries: the effects of international settlement rate reforms, *Journal of Regulatory Economics*, Vol. 20 No. 3, pp. 307-323.

Watts, R., & Zimmerman, J. (1986). *Positive Accounting Theory.* Prentice- Hall, Inc. Englewood Cliffs

Watts, R., & Zimmerman, J., (1990). Positive accounting theory: A ten-year perspective. *The Accounting Review*, 65, 131-156.

Xie, F., & Wei, K. (2005). Earnings management, corporate investments and stock returns. *Working paper.*

Zhou, C., Mei, J. & Guojun, W. (2003). Behavior based manipulation: Theory and prosecution evidence. *Working Paper,* New York University

Zimmerman, J., Gao, F., & Shuang, W.J. (2009). Unintended consequences of granting small firms' exemptions from securities regulation: evidence from the Sarbanes – Oxley –Act. *J. Account. Res.*

APPENDIX

Appendix I: Raw data

CompanyName	YEAR	Stock Returns	Size	Interest Rate	Inflation	Earnings Management	Growth
Barclays Bank Ltd	2011	12.30	11.22	11.22	7.99	14.68	41.95
Diamond Trust Bank Kenya Ltd	2011	134.00	10.89	10.89	7.99	13.53	41.95
Equity Group Holdings	2011	32.04	11.25	11.25	7.99	14.53	41.95
HF Group Ltd	2011	23.23	10.50	10.50	7.99	15.60	41.95
I&M Holdings Ltd	2011	89.78	10.89	10.89	7.99	19.66	41.95
KCB Group Ltd	2011	47.56	11.45	11.45	7.99	15.87	41.95
NIC Group PLC	2011	32.12	10.87	10.87	7.99	14.31	41.95
Stanbic Holdings Plc	2011	56.89	11.15	11.15	7.99	12.76	41.95
Standard Chartered Bank Ltd	2011	178.90	11.22	11.22	7.99	14.30	41.95
The Co-operative Bank of Kenya Ltd	2011	12.34	11.22	11.22	7.99	15.49	41.95
Barclays Bank Ltd	2012	15.70	11.27	11.27	14.28	14.66	50.33
Diamond Trust Bank Kenya Ltd	2012	115.00	10.98	10.98	14.28	14.10	50.33
Equity Group Holdings	2012	23.75	11.33	11.33	14.28	14.70	50.33
HF Group Ltd	2012	15.50	10.61	10.61	14.28	15.48	50.33
I&M Holdings Ltd	2012	120.00	10.96	10.96	14.28	19.93	50.33
KCB Group Ltd	2012	29.75	11.48	11.48	14.28	16.10	50.33
NIC Group PLC	2012	38.25	11.01	11.01	14.28	13.46	50.33
Stanbic Holdings Plc	2012	41.50	11.13	11.13	14.28	10.49	50.33
Standard Chartered Bank Ltd	2012	235.00	11.29	11.29	14.28	14.42	50.33
The Co-operative Bank of Kenya Ltd	2012	13.30	11.30	11.30	14.28	15.60	50.33
Barclays Bank Ltd	2013	17.60	11.32	11.32	5.56	14.73	55.1
Diamond Trust Bank Kenya Ltd	2013	192.00	11.06	11.06	5.56	14.52	55.1
Equity Group Holdings	2013	30.75	11.38	11.38	5.56	14.81	55.1
HF Group Ltd	2013	31.25	10.67	10.67	5.56	15.11	55.1
I&M Holdings Ltd	2013	120.00	11.04	11.04	5.56	20.25	55.1

CompanyName	YEAR	Stock Returns	Size	Interest Rate	Inflation	Earnings Management	Growth
KCB Group Ltd	2013	47.25	11.51	11.51	5.56	16.13	55.1
NIC Group PLC	2013	59.00	11.05	11.05	5.56	13.11	55.1
Stanbic Holdings Plc	2013	89.00	11.23	11.23	5.56	11.53	55.1
Standard Chartered Bank Ltd	2013	304.00	11.34	11.34	5.56	14.43	55.1
The Co-operative Bank of Kenya Ltd	2013	17.80	11.36	11.36	5.56	16.02	55.1
Barclays Bank Ltd	2014	16.60	11.35	11.35	6.81	14.79	61.45
Diamond Trust Bank Kenya Ltd	2014	235.00	11.15	11.15	6.81	14.63	61.45
Equity Group Holdings	2014	50.00	11.44	11.44	6.81	14.85	61.45
HF Group Ltd	2014	45.50	10.78	10.78	6.81	14.88	61.45
I&M Holdings Ltd	2014	123.00	11.14	11.14	6.81	15.44	61.45
KCB Group Ltd	2014	57.00	11.58	11.58	6.81	16.23	61.45
NIC Group PLC	2014	57.00	11.14	11.14	6.81	13.56	61.45
Stanbic Holdings Plc	2014	125.00	11.23	11.23	6.81	11.77	61.45
Standard Chartered Bank Ltd	2014	334.00	11.35	11.35	6.81	14.43	61.45
The Co-operative Bank of Kenya Ltd	2014	28.06	11.45	11.45	6.81	16.03	61.45
Barclays Bank Ltd	2015	13.60	11.38	11.38	6.54	14.83	64.01
Diamond Trust Bank Kenya Ltd	2015	187.00	11.28	11.28	6.54	14.84	64.01
Equity Group Holdings	2015	40.00	11.53	11.53	6.54	14.90	64.01
HF Group Ltd	2015	22.25	10.84	10.84	6.54	14.32	64.01
I&M Holdings Ltd	2015	100.00	11.17	11.17	6.54	11.91	64.01
KCB Group Ltd	2015	43.75	11.67	11.67	6.54	14.97	64.01
NIC Group PLC	2015	43.25	11.20	11.20	6.54	13.94	64.01
Stanbic Holdings Plc	2015	82.50	11.30	11.30	6.54	10.64	64.01
Standard Chartered Bank Ltd	2015	195.00	11.37	11.37	6.54	14.25	64.01
The Co-operative Bank of Kenya Ltd	2015	18.00	11.53	11.53	6.54	15.99	64.01
Barclays Bank Ltd	2016	9.10	11.41	11.41	6.58	14.86	70.88
Diamond Trust Bank Kenya Ltd	2016	118.00	11.39	11.39	6.58	15.38	70.88
Equity Group Holdings	2016	30.00	11.58	11.58	6.58	14.96	70.88

CompanyName	YEAR	Stock Returns	Size	Interest Rate	Inflation	Earnings Management	Growth
HF Group Ltd	2016	14.00	10.83	10.83	6.58	13.97	70.88
I&M Holdings Ltd	2016	90.00	11.22	11.22	6.58	14.13	70.88
KCB Group Ltd	2016	28.75	11.77	11.77	6.58	15.03	70.88
NIC Group PLC	2016	26.00	11.21	11.21	6.58	14.08	70.88
Stanbic Holdings Plc	2016	70.50	11.33	11.33	6.58	11.30	70.88
Standard Chartered Bank Ltd	2016	189.00	11.40	11.40	6.58	14.17	70.88
The Co-operative Bank of Kenya Ltd	2016	13.20	11.55	11.55	6.58	16.22	70.88
Barclays Bank Ltd	2017	9.60	11.43	11.43	7.67	14.88	74.94
Diamond Trust Bank Kenya Ltd	2017	192.00	11.45	11.45	7.67	15.63	74.94
Equity Group Holdings	2017	39.75	11.72	11.72	7.67	14.99	74.94
HF Group Ltd	2017	10.40	10.90	10.90	7.67	14.02	74.94
I&M Holdings Ltd	2017	127.00	11.26	11.26	7.67	14.24	74.94
KCB Group Ltd	2017	42.75	11.81	11.81	7.67	15.06	74.94
NIC Group PLC	2017	33.75	11.26	11.26	7.67	14.03	74.94
Stanbic Holdings Plc	2017	81.00	11.40	11.40	7.67	12.79	74.94
Standard Chartered Bank Ltd	2017	208.00	11.46	11.46	7.67	14.87	74.94
The Co-operative Bank of Kenya Ltd	2017	16.00	11.59	11.59	7.67	16.14	74.94
Barclays Bank Ltd	2018	10.95	11.51	11.51	5.59	14.90	87.9
Diamond Trust Bank Kenya Ltd	2018	156.50	11.51	11.51	5.59	15.73	87.9
Equity Group Holdings	2018	34.85	11.76	11.76	5.59	15.04	87.9
HF Group Ltd	2018	5.54	10.94	10.94	5.59	13.76	87.9
I&M Holdings Ltd	2018	85.00	11.30	11.30	5.59	14.32	87.9
KCB Group Ltd	2018	37.45	11.85	11.85	5.59	15.07	87.9
NIC Group PLC	2018	27.80	11.30	11.30	5.59	13.89	87.9
Stanbic Holdings Plc	2018	90.75	11.46	11.46	5.59	13.21	87.9
Standard Chartered Bank Ltd	2018	194.50	11.46	11.46	5.59	14.92	87.9
The Co-operative Bank of Kenya Ltd	2018	14.30	11.62	11.62	5.59	16.10	87.9

Appendix II: Financial Statement Line Items

CompanyName	YEAR	TA (Shs M)	1/A	1/A(T-1)	PPE(Shs000)	REV (000)	Δ in REV (000)	Rec (000)	Δ in Rec (000)	NI	OPCF
BBK	2010	172,415.24		-	3.24	15.67		87.15		87.15	1.61
BBK	2011	167,304.90	0.00	5.80	3.06	16.34	0.66	99.07	11.93	99.07	10.22
BBK	2012	185,101.50	0.00	5.98	2.67	18.15	1.81	104.20	5.13	104.20	8.97
BBK	2013	207,009.60	0.00	5.40	2.79	18.86	0.72	118.36	14.16	118.36	3.81
BBK	2014	226,118.10	0.00	4.83	2.85	19.60	0.74	125.42	7.06	125.42	16.06
BBK	2015	241,152.60	0.00	4.42	3.26	20.41	0.81	145.38	19.96	145.38	- 3.65
BBK	2016	259,718.00	0.00	4.15	3.08	22.33	1.92	168.51	23.13	168.51	- 10.92
BBK	2017	271,572.00	0.00	3.85	2.74	21.80	- 0.53	168.40	- 0.11	168.40	4.51
BBK	2018	325,313.00	0.00	3.68	2.96	19.15	- 2.66	127.07	- 41.33	127.06	3.83
DTB	2010	83,600.18		-	1,510.82	4,882.76	-	51,260.07	-	57,653.65	115,307.46
DTB	2011	77,447.70	0.00	11.96	2,013.94	6,826.95	1,944.19	71,297.72	20,037.65	80,138.62	160,277.37
DTB	2012	94,511.80	0.00	12.91	2,770.07	9,246.39	2,419.43	87,707.24	16,409.52	99,723.70	199,447.51
DTB	2013	114,136.40	0.00	10.58	4,879.25	11,002.64	1,756.25	110,945.44	23,238.20	126,827.32	253,654.84
DTB	2014	141,175.70	0.00	8.76	5,272.27	12,787.60	1,784.96	137,654.55	26,709.11	155,714.42	311,429.07
DTB	2015	190,947.90	0.00	7.08	5,618.77	15,190.21	2,402.61	177,544.87	39,890.32	198,353.85	396,707.88
DTB	2016	244,123.80	0.00	5.24	6,738.19	19,385.28	4,195.07	186,303.19	8,758.32	212,426.66	424,853.44
DTB	2017	282,529.55	0.00	4.10	6,716.25	19,675.08	289.80	196,048.16	9,744.96	222,439.48	444,879.16
DTB	2018	326,502.99	0.00	3.54	6,410.67	20,021.51	346.44	193,074.36	- 2,973.80	219,506.55	439,013.25
EGH	2010	143,018.11		-	6.97	11.71	-	78.30	-	78.30	15.11

CompanyName	YEAR	TA (Shs M)	1/A	1/A(T-1)	PPE(Shs000)	REV (000)	Δ in REV (000)	Rec (000)	Δ in Rec (000)	NI	OPCF
EGH	2011	176,910.90	0.00	6.99	7.59	16.22	4.51	113.82	35.53	113.82	149.35
EGH	2012	215,829.30	0.00	5.65	9.07	23.96	7.74	135.69	21.87	135.69	157.56
EGH	2013	238,194.30	0.00	4.63	9.80	26.49	2.53	171.36	35.67	171.36	207.03
EGH	2014	276,115.70	0.00	4.20	10.53	29.18	2.68	214.17	42.81	214.17	256.98
EGH	2015	341,329.30	0.00	3.62	14.06	33.92	4.75	269.89	55.72	269.89	325.62
EGH	2016	379,748.99	0.00	2.93	13.75	44.92	11.00	266.07	- 3.83	266.07	262.24
EGH	2017	524,465.00	0.00	2.63	10.87	37.57	- 7.36	279.09	13.02	279.09	292.12
EGH	2018	573,384.00	0.00	1.91	10.28	41.42	3.85	297.23	18.14	297.23	43.78
HF Group Ltd	2010	29,325.84		-	600.42	1,400.99	-	19,503.40	-	19,503.40	6,118.59
HF Group Ltd	2011	31,972.00	0.00	34.10	705.21	1,901.56	500.57	25,222.84	5,719.44	25,222.84	- 2,812.17
HF Group Ltd	2012	40,685.90	0.00	31.28	716.71	1,950.04	48.47	30,293.71	5,070.88	30,293.71	2,201.04
HF Group Ltd	2013	46,755.00	0.00	24.58	945.52	2,553.38	603.34	35,215.90	4,922.19	35,215.90	1,741.34
HF Group Ltd	2014	60,490.80	0.00	21.39	1,282.25	3,033.98	480.60	45,243.54	10,027.64	45,243.54	3,265.26
HF Group Ltd	2015	68,808.60	0.00	16.53	1,341.93	3,611.95	577.98	53,021.02	7,777.48	53,021.02	- 5,806.72
HF Group Ltd	2016	68,084.00	0.00	14.53	1,458.09	3,934.12	322.16	54,469.61	1,448.58	54,469.61	- 4,860.54
HF Group Ltd	2017	79,110.80	0.00	14.69	1,517.38	2,976.37	- 957.75	49,368.69	- 5,100.92	49,368.69	5,217.83
HF Group Ltd	2018	86,341.28	0.00	12.64	2,078.98	2,265.67	- 710.70	43,186.29	- 6,182.40	43,186.29	2,204.39
I&M Holdings Ltd	2010	62,552.11		-	1,734,367.05	3,832,241.18	-	50,257,348.92	-	50,257,348.92	- 11,358,912.15
I&M Holdings Ltd	2011	76,903.20	0.00	15.99	1,915,489.87	5,562,855.94	1,730,614.76	66,365,869.99	16,108,521.07	66,365,869.99	- 5,148,080.50
I&M Holdings Ltd	2012	91,519.62	0.00	13.00	2,129,369.02	6,560,598.65	997,742.71	71,012,960.12	4,647,090.13	71,012,960.12	- 9,297,899.49
I&M Holdings Ltd	2013		0.0		2,608,195.74	8,884.14	- 6,551,714.51	91,882,663.91	20,869,703.78	91,882,663.91	- 25,726,064.51

CompanyName	YEAR	TA (Shs M)	1/A	1/A(T-1)	PPE(Shs000)	REV (000)	Δ in REV (000)	Rec (000)	Δ in Rec (000)	NI	OPCF
		110,315.60	0	10.93							
I&M Holdings Ltd	2014	137,299.30	0.00	9.06	2,225.34	9,094.84	210.70	101,610.56	- 91,781,053.34	101,610.56	- 7,107.87
I&M Holdings Ltd	2015	147,846.30	0.00	7.28	2,388.85	11,017.52	1,922.68	114,927.25	13,316.69	114,927.25	13,899.57
I&M Holdings Ltd	2016	164,116.10	0.00	6.76	891.80	13,564.28	2,546.76	120,696.86	5,769.61	120,696.86	1,740.22
I&M Holdings Ltd	2017	182,881.45	0.00	6.09	856.76	13,543.24	- 21.04	135,098.39	14,401.53	135,098.39	3,442.65
I&M Holdings Ltd	2018	200,076.30	0.00	5.47	827.53	13,127.85	- 415.39	147,623.51	12,525.12	147,623.51	33,920.99
KCB Group Ltd	2010	251,356.20		-	8,271.65	19,645.33	-	148,113.36	-	148,113.36	- 14,127.61
KCB Group Ltd	2011	282,493.50	0.00	3.98	8,017.60	23,286.41	3,641.09	198,724.92	50,611.56	198,724.92	6,328.22
KCB Group Ltd	2012	305,161.00	0.00	3.54	8,895.57	30,636.23	7,349.82	211,664.23	12,939.31	211,664.23	11,920.25
KCB Group Ltd	2013	323,312.00	0.00	3.28	8,484.84	32,984.29	2,348.05	227,721.78	16,057.56	227,721.78	5,971.97
KCB Group Ltd	2014	376,969.00	0.00	3.09	8,838.07	35,951.40	2,967.11	283,732.21	56,010.42	283,732.21	- 5,122.84
KCB Group Ltd	2015	467,741.10	0.00	2.65	9.03	39.30	- 35,912.10	345.97	- 283,386.24	345.97	17.15
KCB Group Ltd	2016	595,240.00	0.00	2.14	9.37	47.03	7.73	385.75	39.78	385.75	5.88
KCB Group Ltd	2017	646,668.00	0.00	1.68	10.45	48.39	1.36	422.69	36.94	422.69	12.72
KCB Group Ltd	2018	714,313.00	0.00	1.55	11.01	48.83	0.45	455.88	33.20	455.88	17.44
NIC Group PLC	2010	59,013.92		-	750.53	3,213.65	-	40,754.98	-	40,754.98	1,591.00
NIC Group PLC	2011	73,581.32	0.00	16.95	967.99	4,279.49	1,065.84	56,624.62	15,869.64	56,624.62	- 328.17
NIC Group PLC	2012	101,771.70	0.00	13.59	1,009.89	5,483.87	1,204.38	71,540.09	14,915.47	71,540.09	3,937.23
NIC Group PLC	2013	112,916.80	0.00	9.83	1,119.26	7,267.98	1,784.11	83,493.31	11,953.22	83,493.31	- 3,217.12
NIC Group PLC	2014	137,087.40	0.00	8.86	1,079.11	7,998.12	730.14	100,575.33	17,082.02	100,575.33	1,079.38
NIC Group PLC	2015	156,762.00	0.00	7.29	1,063.76	9,742.53	1,744.41	114,657.64	14,082.31	114,657.64	- 4,831.08

CompanyName	YEAR	TA (Shs M)	1/A	1/A(T-1)	PPE(Shs000)	REV (000)	Δ in REV (000)	Rec (000)	Δ in Rec (000)	NI	OPCF
NIC Group PLC	2016	161,847.30	0.00	6.38	1,043.50	12,168.60	2,426.06	113,040.86	- 1,616.78	113,040.86	829.40
NIC Group PLC	2017	183,769.90	0.00	6.18	1,148.71	11,774.51	- 394.09	118,446.49	5,405.62	118,446.49	22,935.74
NIC Group PLC	2018	200,416.51	0.00	5.44	1,369.58	12,283.40	508.89	116,853.00	- 1,593.48	116,853.00	8,978.28
Stanbic Holdings Plc	2010	107,138.60		-	1,911.10	4,807.95	-	58,984.96	-	4,807.95	- 3,973.95
Stanbic Holdings Plc	2011	140,086.50	0.00	9.33	2,299.20	6,042.02	1,234.08	64,256.75	5,271.79	6,042.02	- 2,150.02
Stanbic Holdings Plc	2012	133,378.10	0.00	7.14	2,302.67	6,542.79	500.76	66,149.84	1,893.09	6,542.79	2,346.67
Stanbic Holdings Plc	2013	170,726.00	0.00	7.50	2,175.19	7,542.11	999.33	69,133.49	2,983.65	7,542.11	37,289.96
Stanbic Holdings Plc	2014	171,347.00	0.00	5.86	2,348.23	8,461.95	919.83	88,347.44	19,213.95	8,461.95	- 18,209.68
Stanbic Holdings Plc	2015	198,578.00	0.00	5.84	2,244.90	9,303.05	841.10	104,981.57	16,634.13	9,303.05	21,121.98
Stanbic Holdings Plc	2016	214,682.00	0.00	5.04	2,207.97	10,860.05	1,557.00	115,587.72	10,606.16	10,860.05	- 8,486.37
Stanbic Holdings Plc	2017	248,738.00	0.00	4.66	2,305.42	10,644.28	- 215.77	130,535.81	14,948.09	10,644.28	3,537.42
Stanbic Holdings Plc	2018	290,570.00	0.00	4.02	2,234.26	8,025.52	- 2,618.76	146,604.12	16,068.31	8,025.52	393.00
SCB	2010	142,746.25		-	3,341.34	8,115.56	-	3,243.87	-	5,376.19	16,674.40
SCB	2011	164,181.60	0.00	7.01	4,055.77	9,851.29	1,735.73	2,542.43	- 701.44	5,836.82	5,380.86
SCB	2012	195,493.00	0.00	6.09	4,034.21	13,742.20	3,890.91	2,373.58	- 168.85	8,069.53	- 3,155.16
SCB	2013	220,523.80	0.00	5.12	3,671.91	16,401.06	2,658.85	2,098.87	- 274.71	9,262.92	- 3,511.33
SCB	2014	222,635.90	0.00	4.53	3,399.13	17,300.44	899.38	4,802.94	2,704.07	10,436.18	15,337.67
SCB	2015	234,131.00	0.00	4.49	3,124.40	17,601.46	301.03	3,190.92	- 1,612.02	6,342.43	27,718.89
SCB	2016	250,482.00	0.00	4.27	2,938.39	18,922.80	1,321.33	1,566.04	- 1,624.88	9,049.31	- 5,201.27
SCB	2017	285,724.00	0.00	3.99	3.35	17.96	- 18,904.84	5.33	- 1,560.71	6.91	- 2.25

CompanyName	YEAR	TA (Shs M)	1/A	1/A(T-1)	PPE(Shs000)	REV (000)	Δ in REV (000)	Rec (000)	Δ in Rec (000)	NI	OPCF
SCB	2018	285,404.00	0.00	3.50	3.07	19.06	1.11	6.02	0.69	8.10	37.03
Co-op Bank	2010	154,339.99		-	6,355.79	9,502.51	-	86,618.31	-	86,618.31	7,920.99
Co-op Bank	2011	167,772.38	0.00	6.48	8,683.47	9,618.69	116.18	109,408.82	22,790.50	109,408.82	132,199.32
Co-op Bank	2012	199,662.90	0.00	5.96	8,949.53	13,581.08	3,962.39	119,087.75	9,678.93	119,087.75	128,766.68
Co-op Bank	2013	228,874.40	0.00	5.01	11,230.38	15,869.25	2,288.17	137,087.23	17,999.48	137,087.23	155,086.71
Co-op Bank	2014	282,689.00	0.00	4.37	10,078.70	19,134.52	3,265.27	179,486.36	42,399.13	179,486.36	221,885.48
Co-op Bank	2015	339,549.80	0.00	3.54	8,020.78	19,783.13	648.61	208,571.92	29,085.57	208,571.92	237,657.49
Co-op Bank	2016	351,829.00	0.00	2.95	8,308.70	24,581.56	4,798.43	232,307.33	23,735.41	232,307.33	256,042.74
Co-op Bank	2017	386,858.00	0.00	2.84	7,493.57	24,003.39	- 578.16	253,861.64	21,554.32	253,861.64	275,415.96
Co-op Bank	2018	413,671.00	0.00	2.58	6,614.05	31,300.45	7,297.06	245,410.30	- 8,451.34	245,410.30	236,958.96

Appendix III: JONES MODEL THE LAGS FOR REGRESSION

CompanyName	YEAR	LLP (000)	TA (L-M) (000)	Lag TA (000)	REV-REC (000)	PPE LAG	LAG TA (000)	REV-REC	SR	Size (M)	INFN	IR
BBK	2010	5,420.39	85.54			#DIV/0!	#DIV/0!	2010	13.7	172415.237	5.61	6.42
BBK	2011	4,930.01	88.85	15.32	-1.94	526.90	850.01	2011	12.3	167304.9	7.99	8.40
BBK	2012	3,153.55	95.24	15.93	-0.56	446.20	527.60	2012	15.7	185101.5	14.28	15.75
BBK	2013	2,915.24	114.55	21.20	-2.49	515.69	539.62	2013	17.6	207009.6	5.56	8.83
BBK	2014	2,109.56	109.36	22.64	-1.31	589.36	436.70	2014	16.6	226118.1	6.81	8.50
BBK	2015	2,012.92	149.03	33.70	-4.33	736.69	455.16	2015	13.6	241152.6	6.54	10.13
BBK	2016	5,149.45	179.43	43.27	-5.11	742.99	1241.80	2016	9.1	259718	6.58	10.63
BBK	2017	5,570.68	163.89	42.56	-0.11	711.89	1446.80	2017	9.6	271572	7.67	10.00
BBK	2018	3,907.72	123.24	33.47	10.50	803.85	1061.23	2018	10.95	325313	5.59	9.33
DTB	2010	1,376.10	- 57,653.82	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	2010	170	83600.177	5.61	6.42
DTB	2011	549.46	- 80,138.75	- 6,699.61	-1512.62	168365.99	45.94	2011	134	77447.7	7.99	8.40
DTB	2012	809.95	- 99,723.81	- 7,723.38	-1083.50	214535.32	62.73	2012	115	94511.8	14.28	15.75
DTB	2013	972.02	- 126,827.52	- 11,986.70	-2030.30	461146.32	91.87	2013	192	114136.4	5.56	8.83
DTB	2014	1,068.41	- 155,714.65	- 17,772.71	-2844.75	601757.46	121.94	2014	235	141175.7	6.81	8.50
DTB	2015	2,061.47	- 198,354.03	- 28,002.77	-5292.35	793233.36	291.03	2015	187	190947.9	6.54	10.13
DTB	2016	3,983.29	- 212,426.78	- 40,562.45	-871.34	1286643.99	760.60	2016	118	244123.8	6.58	10.63
DTB	2017	1,423.80	- 222,439.67	- 54,302.82	-2308.23	1639596.23	347.58	2017	192	282529.55	7.67	10.00
DTB	2018	1,234.20	- 219,506.70	- 62,017.13	938.06	1811204.84	348.70	2018	156.5	326502.99	5.59	9.33
EGH	2010	1,904.58	63.19	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	2010	27.89	143018.114	5.61	6.42
EGH	2011	1,629.65	- 35.53	- 5.08	-4.44	1085.79	233.07	2011	32.04	176910.9	7.99	8.40

CompanyName	YEAR	LLP (000)	TA (L-M) (000)	Lag TA (000)	REV-REC (000)	PPE LAG	LAG TA (000)	REV-REC	SR	Size (M)	INFN	IR
EGH	2012	1,608.32	-21.87	- 3.87	-2.50	1604.94	284.53	2012	23.75	215829.3	14.28	15.75
EGH	2013	2,401.94	-35.67	- 7.70	-7.15	2114.26	518.41	2013	30.75	238194.3	5.56	8.83
EGH	2014	1,590.86	-42.81	- 10.20	-9.56	2507.71	378.93	2014	50	276115.7	6.81	8.50
EGH	2015	2,433.18	-55.72	- 15.39	-14.08	3881.08	671.84	2015	40	341329.3	6.54	10.13
EGH	2016	6,645.64	3.83	1.31	5.06	4694.64	2268.35	2016	30	379748.99	6.58	10.63
EGH	2017	3,431.33	-13.02	- 4.95	-7.74	4125.97	1303.04	2017	39.75	524465	7.67	10.00
EGH	2018	3,296.25	253.45	132.93	-7.49	5389.40	1728.77	2018	34.85	573384	5.59	9.33
HF Group Ltd	2010	216,292.71	13,384.81	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	2010	18.89	29325.841	5.61	6.42
HF Group Ltd	2011	279,721.25	28,035.00	822.15	-153.05	20680.82	8203.06	2011	23.23	31972	7.99	8.40
HF Group Ltd	2012	335,957.25	28,092.67	898.18	-160.58	22914.59	10741.23	2012	15.5	40685.9	14.28	15.75
HF Group Ltd	2013	390,544.30	33,474.56	1,361.94	-175.72	38469.13	15889.65	2013	31.25	46755	5.56	8.83
HF Group Ltd	2014	501,750.85	41,978.28	1,962.69	-446.37	59951.69	23459.36	2014	45.5	60490.8	6.81	8.50
HF Group Ltd	2015	588,003.13	58,827.74	3,558.54	-435.50	81174.42	35568.78	2015	22.25	68808.6	6.54	10.13
HF Group Ltd	2016	604,067.92	59,330.14	4,082.42	-77.51	100328.93	41565.07	2016	14	68084	6.58	10.63
HF Group Ltd	2017	547,498.73	44,150.85	3,005.97	282.08	103309.30	37275.90	2017	10.4	79110.8	7.67	10.00
HF Group Ltd	2018	478,935.92	40,981.90	3,242.11	432.87	164469.61	37889.00	2018	5.54	86341.28	5.59	9.33
I&M Holdings Ltd	2010	557,353,999.52	61,616,261.07	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	2010	109.08	62552.113	5.61	6.42
I&M Holdings Ltd	2011	735,997,498.19	71,513,950.49	4,473,348.71	-899368.42	119817938.99	46038198.67	2011	89.78	76903.2	7.99	8.40
I&M Holdings Ltd	2012	787,533,727.76	80,310,859.61	6,176,162.10	-280646.49	163755291.70	60563863.77	2012	120	91519.622	14.28	15.75
I&M Holdings Ltd	2013	1,018,978,742.72	117,608,728.42	10,763,506.37	-2509597.84	238701088.41	93256549.36	2013	120	110315.6	5.56	8.83
I&M Holdings Ltd	2014	1,126,861.13	108,718.44	11,993.34	10124905.21	245489.72	124310.36	2014	123	137299.3	6.81	8.50

CompanyName	YEAR	LLP (000)	TA (L-M) (000)	Lag TA (000)	REV-REC (000)	PPE LAG	LAG TA (000)	REV-REC	SR	Size (M)	INFN	IR
I&M Holdings Ltd	2015	1,274,543.17	101,027.68	13,871.03	-1564.39	327987.71	174993.88	2015	100	147846.3	6.54	10.13
I&M Holdings Ltd	2016	1,338,528.19	118,956.64	17,587.30	-476.49	131848.74	197896.44	2016	90	164116.1	6.58	10.63
I&M Holdings Ltd	2017	1,498,241.19	131,655.75	21,606.83	-2366.98	140608.77	245885.50	2017	127	182881.45	7.67	10.00
I&M Holdings Ltd	2018	1,637,144.71	113,702.52	20,794.08	-2366.58	151339.34	299403.40	2018	85	200076.3	5.59	9.33
KCB Group Ltd	2010	1,642,577.21	162,240.97	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	2010	37.89	251356.2	5.61	6.42
KCB Group Ltd	2011	2,203,859.35	192,396.70	48,360.10	-11806.32	2015272.21	553953.71	2011	47.56	282493.5	7.99	8.40
KCB Group Ltd	2012	2,347,356.27	199,743.97	56,426.37	-1578.99	2512941.55	663112.89	2012	29.75	305161	14.28	15.75
KCB Group Ltd	2013	2,525,434.55	221,749.81	67,669.39	-4183.61	2589241.04	770664.13	2013	47.25	323312	5.56	8.83
KCB Group Ltd	2014	3,146,590.15	288,855.05	93,390.30	-17149.54	2857455.38	1017330.36	2,014	57	376969	6.81	8.50
KCB Group Ltd	2015	3,836.80	328.82	123.96	93290.08	3403.28	1446.35	2015	43.75	467741.1	6.54	10.13
KCB Group Ltd	2016	4,277.91	379.86	177.68	-14.99	4384.14	2000.96	2016	28.75	595240	6.58	10.63
KCB Group Ltd	2017	4,687.58	409.97	244.03	-21.18	6222.64	2790.23	2017	42.75	646668	7.67	10.00
KCB Group Ltd	2018	5,055.71	438.44	283.52	-21.18	7117.87	3269.37	2018	37.45	714313	5.59	9.33
NIC Group PLC	2010	1,527.83	39,163.98	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	2010	33.45	59013.922	5.61	6.42
NIC Group PLC	2011	987.56	56,952.79	3,361.01	-873.63	57124.77	58.28	2011	32.12	73581.32	7.99	8.40
NIC Group PLC	2012	1,652.99	67,602.87	4,974.31	-1008.88	74309.11	121.63	2012	38.25	101771.7	14.28	15.75
NIC Group PLC	2013	2,592.03	86,710.44	8,824.67	-1034.93	113909.40	263.80	2013	59	112916.8	5.56	8.83
NIC Group PLC	2014	2,680.36	99,495.95	11,234.76	-1846.40	121849.65	302.66	2014	57	137087.4	6.81	8.50
NIC Group PLC	2015	2,776.63	119,488.73	16,380.40	-1691.37	145828.09	380.64	2015	43.25	156762	6.54	10.13
NIC Group PLC	2016	5,022.09	112,211.47	17,590.49	633.76	163580.68	787.27	2016	26	161847.3	6.58	10.63
NIC Group PLC	2017	5,265.71	95,510.75	15,458.16	-938.67	185915.94	852.24	2017	33.75	183769.9	7.67	10.00

CompanyName	YEAR	LLP (000)	TA (L-M) (000)	Lag TA (000)	REV-REC (000)	PPE LAG	LAG TA (000)	REV-REC	SR	Size (M)	INFN	IR
NIC Group PLC	2018	2,800.12	107,874.73	19,824.13	386.35	251686.66	514.58	2018	27.8	200416.51	5.59	9.33
Stanbic Holdings Plc	2010	1,367.89	8,781.90	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	2010	76.56	107138.602	5.61	6.42
Stanbic Holdings Plc	2011	1,179.25	8,192.04	877.68	-432.60	246333.29	126.34	2011	56.89	140086.5	7.99	8.40
Stanbic Holdings Plc	2012	1,347.30	4,196.12	587.82	-195.05	322573.12	188.74	2012	41.5	133378.1	14.28	15.75
Stanbic Holdings Plc	2013	956.00	- 29,747.84	- 3,967.71	-264.67	290122.04	127.51	2013	89	170726	5.56	8.83
Stanbic Holdings Plc	2014	1,103.07	26,671.62	4,553.54	-3123.28	400903.74	188.32	2014	125	171347	6.81	8.50
Stanbic Holdings Plc	2015	1,271.15	- 11,818.94	- 2,025.14	-2706.09	384657.22	217.81	2015	82.5	198578	6.54	10.13
Stanbic Holdings Plc	2016	1,716.86	19,346.42	3,841.77	-1796.96	438453.27	340.93	2016	70.5	214682	6.58	10.63
Stanbic Holdings Plc	2017	3,243.60	7,106.86	1,525.72	-3255.41	494931.96	696.34	2017	81	248738	7.67	10.00
Stanbic Holdings Plc	2018	1,658.90	7,632.52	1,898.50	-4648.18	555744.62	412.63	2018	90.75	290570	5.59	9.33
SCB	2010	481.21	- 11,298.21	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	2010	189.78	142746.249	5.61	6.42
SCB	2011	423.50	455.96	65.09	347.90	578945.53	60.45	2011	178.9	164181.6	7.99	8.40
SCB	2012	614.65	11,224.69	1,842.89	666.54	662343.05	100.91	2012	235	195492.999	14.28	15.75
SCB	2013	1,509.56	12,774.25	2,497.28	573.49	717832.89	295.11	2013	304	220523.8	5.56	8.83
SCB	2014	4,153.42	- 4,901.49	- 1,080.89	-397.98	749589.51	915.93	2014	334	222635.9	6.81	8.50
SCB	2015	4,763.35	- 21,376.46	- 4,759.17	425.91	695603.61	1060.49	2015	195	234131	6.54	10.13
SCB	2016	4,914.95	14,250.57	3,336.50	689.80	687968.42	1150.74	2016	189	250482	6.58	10.63
SCB	2017	6,808.88	9.17	2.30	-4344.39	839.37	1705.50	2017	208	285724	7.67	10.00
SCB	2018	1,897.89	- 28.93	- 8.27	0.12	877.46	542.27	2018	194.5	285404	5.59	9.33
COOP BANK	2010	798.67	78,697.33	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	2010	17.67	154339.991	5.61	6.42
COOP BANK	2011	709.90	- 22,790.50	- 3,517.49	-3499.55	1340207.14	109.57	2011	12.34	167772.38	7.99	8.40

CompanyName	YEAR	LLP (000)	TA (L-M) (000)	Lag TA (000)	REV-REC (000)	PPE LAG	LAG TA (000)	REV-REC	SR	Size (M)	INFN	IR
COOP BANK	2012	999.88	- 9,678.93	- 1,623.86	-959.08	1501483.78	167.75	2012	13.3	199662.9	14.28	15.75
COOP BANK	2013	773.29	- 17,999.48	- 3,593.83	-3136.97	2242290.04	154.40	2013	17.8	228874.4	5.56	8.83
COOP BANK	2014	1,133.52	- 42,399.13	- 9,704.07	-8956.74	2306755.96	259.43	2014	28.06	282689	6.81	8.50
COOP BANK	2015	2,007.36	- 29,085.57	- 8,222.17	-8038.81	2267385.71	567.46	2015	18	339549.8	6.54	10.13
COOP BANK	2016	2,594.57	- 23,735.41	- 8,059.35	-6430.05	2821216.74	880.98	2016	13.2	351829	6.58	10.63
COOP BANK	2017	3,547.24	- 21,554.32	- 7,583.43	-7786.85	2636456.65	1248.02	2017	16	386858	7.67	10.00
COOP BANK	2018	1,570.35	8,451.34	3,269.47	6092.39	2558697.38	607.50	2018	14.3	413671	5.59	9.33