INFLUENCE OF CASH FLOW TRENDS ON SHAREHOLDERS' RETURNS AMONG LISTED COMMERCIAL BANKS IN KENYA.

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DECLARATION

This research project is my original work and has not been submitted to any other university for award of a degree.

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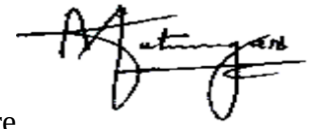
This research project has been presented for examination with my authority as the university supervisor.

Signature  Date 23/11/2022

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DEDICATION

This research project is dedicated to my late father Cosmas Kasina Adongo for laying a foundation to my education.

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LIST OF ABBREVIATIONS

CAPEX	Capital Expenditure
CBK	Central Bank of Kenya
CFFFA	Cash Flows from Financing Activities
CFFIA	Cash Flows from Investing Activities
CFFOA	Cash Flows from Operating Activities
DTB	Diamond Trust Bank
EOQ	Economic Order Quantity
FSRF	Financial Sector Regulation Forum
GDP	Gross Domestic Product
I&M	Investment & Mortgages
KCB	Kenya Commercial Bank
KFSRFR	Kenya Financial Sector Regulation Forum Report
M &O	Miller &Orr
NIC	National Industrial Company
ROA	Return on Assets
ROE	Return on Equity
UK	United Kingdom
USA	United States of America

ABSTRACT

Trends in cash flows have been issues encountered by most firms if not only the listed commercial banks in Kenya, leading companies struggling in clearing short term obligations as well as long term obligations as they fall due. This results into low profits or losses, negative operating cash flows, declining revenues and reduced profit margins. The research project objective was to determine the influence of cash flow trends on shareholders returns among Kenyan banks', this narrowed down to the following specific objectives: to examine influence that the operating cash flows have on shareholders returns, to ascertain the influence that investing activities cash flows have on shareholder returns and to assess the influence of financing cash flows on the shareholder returns. The study adopted correlation research to find relationship of independent and independent variables. The study population was a total of 42 banks listed in NSE. Census technique was adopted due the fact data from some banks were fully available while other banks did not have published account in some years which led to their exclusion from research. Therefore, the study was based sample size of nine institutions whose secondary data from published accounts were used in the study covering period from 2014 to 2020. On the relationship between cash flows from operating activities, it was concluded that there was an insignificant positive relationship, while cash flows from investing activities and financing activities had insignificant negative effect on return on equity. It was therefore a general conclusion that fixed variables had insignificant influence on responding variable as was evidenced by ANOVA and summary residual values. The study findings through the adjusted R square revealed that there was negligible combined negative effect that the predictors had on return on equity. At the same time from The NOVA results, findings showed the regression model had less predictive power. The study recommended similar studies to be conducted probably in all banks both listed and unlisted including cross listed ones if this can provide more reliable results. The other recommendations were that banks should channel more cash to operating activities and less to investing and financing activities so as to generate more returns to shareholders. Finally the study had its share of limitations such as use of only quantitative data that might provide skewed results and researcher could not access data from other banks due to either acquisitions or mergers leading to reduced sample size which could compromise reliability of the results.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The success of corporate entities like banks and related institutions offering financial services to various stakeholders is determined by prudent management of cash flow and how well or bad it is utilized. Cash flow is a major component determining level of organization's liquidity (Lev, Li & Sougiannis, 2010). The cash inflows are receipts of cash while cash outflows are payment of cash. Therefore, cash flow indicates money coming into and out of the organization (Andres, 2017). Momen (2013) emphasized importance of cash in facilitating daily organization's operations. A company might be having positive cash flows due to sale of one of its long term investments, hence positive cash flow does not necessarily mean improved liquidity position (Jeppson, Ruddy & Salemo, 2016). The return on equity is a product of the general efficiency of all commercial enterprise (Niculescu, 1997). Shareholder return combines increase in share value and dividends payout resulting into overall shareholders returns.

Three theories were used namely Miller & Orr's cash model, Boumal model, Keynesian theory. Keynes (1936), came up with Keynesian theory, revealed three motivations of maintaining cash flows as precautionary motivation, transaction motivation and speculative motivation. The theory states that, a firm should hold cash for future profitable investments opportunities to improve shareholder returns (Nayan, Kadir, Yusuf & Ali, 2015). Keynes stated that firms hold cash for safety reasons (Keynes, 2016). Boumal model of cash management model (1952), states that firms need to hold optimal cash balance. The boumal model assumes that firms cash balance takes an up and down pattern over time (Weston, 1998). Miller and Orr model (1966), assumes that cash balances may

move to maximum level and minimum levels over time that may determine point of investing in securities and selling the securities, hence affecting level of shareholder returns in a firm.

During the previous few years, several banks have encountered cash flows challenges in facilitating their operations forcing them to conduct restructuring or be put under liquidation or in receivership. For example, co- operative bank carried out employee downsizing with the intention of reducing cash outflows, imperial bank and chase bank were put in receivership as a result of poor cash management (CBK Report, 2019). So far eleven commercial banks are listed in Kenya public securities market (NSE, 2019). The concern of Kenya government emanates from the fact that, banking sector contributes a lot to the GDP. According to CBK report quite a number of issues have arisen in previous ears. Financial institutions like banks are required to raise their minimum core capital which means that commercial banks may be forced to issue more shares that will change cash flow level hence influencing current shareholder returns.

1.1.1 Cash Flow Trends

Cash flow trends in firms are categorized as operating, investing and financing activities (Noor *et al.* (2012). The foundation of this breakdown is originating from financial theory stating that a firm derives cash utilized from investments and extinguishment of accruing financial liabilities in a financial year from within and from outside sources, relating to trading activities such as interest received on loans advanced to clients and fees charged on services offered to clients.

CFFIA emanate from acquiring and disposing non-current assets and long-term financial investments excluding bank acquiring shares, disposal of the shares and selling P, P&E.

Lastly cash flow as a result of financing events are the ones changing an entity's equity structure (Basi, Kruse & Freeman, 2017), and borrowing of the enterprise, such as issue of equity shares to investors, borrowing loans, redeeming loans and leasing property.

1.1.2 Shareholder Returns

Banking sub- sectors financial performance dropped in 2017, curtailing banks' power to build high equity base via undistributed profits. Especially ROA plummeted from 3.2 % late 2016 to 2.6% late 2017, on the other hand ROE also plummeted from 24.4% to 20.6% in the period. However, in the recent past banks have realized some stability due to increased cash management by financial institution and support from CBK. Generally financial institutions have weathered the shocks due to adequate size of equity in the banking sector (KFSRFR, 2018). Richard *et al.* (2009) argue that banks' financial performance consists of ROA, ROI and total shareholder returns.

It is comprehensive in reviewing decision of the management team (restructuring, acquisition, and share purchases) to provide an early sign of when past company strategies have reached limit of effectiveness. It is hard to manipulate and it is objective measure of comparing the investment performance of firms.

1.1.3 Cash Flow Trends and Shareholders Returns

Cash flow trends can take the perspective of operations, investments and financing while shareholders return generally take the form of dividend payout and overall return on equity. Shareholders returns in form of dividends payout depends on free cash flow of the firm as anchored on free cash flow theory that was established by Jensen (1986). He stated agency problems between management and shareholders in that management may prefer to retain

surplus cash while shareholders may demand such surplus cash distributed as returns to shareholders. The onset of entities as going concern established key principles of entities to make decisions on the portion of organization's income to distribute to the shareholders and established the initial dividend policy (Frankfurter & Wood, 1997).

Hubbard (1998) indicated positive correlation between profits and cash flows of a firm since increase in profitability is determined by investing surplus cash flows on investments with positive returns. However, this does not mean that excess cash flows do necessarily lead to increased shareholders returns, since a firm may have positive operating cash flows but lacks profits from which to pay returns to shareholders on their investments. On the other hand, CFFIA might not have direct impact on shareholders returns since some firms may have investment projects but their dividend policy does not allow them to distribute returns to shareholders. Financing activities cash flows mostly involve sale of stock (Basi, Kruse & Freeman, 2017). When a firm issues shares in exchange of cash, its CFFFA increase.

Generally, firms are expected to pay returns to shareholders on their investments when they issue shares. However, the level of return payout may not directly relate to level of sources in combination with application of cash from financing activities due to issue of shares since the determinant factor might be dividend policy adopted by the firm that may either lead to increase or decrease in shareholders returns notwithstanding the nature of the firms' cash flow trends.

1.1.4 Listed Commercial Banks

In Kenya there are 42 banks, 1 mortgage firm, 130 forex firms and fifteen micro-finance firms (CBK, 2012). Banking industry assets increased by 8.1 %, although credit advanced

to the private sector reduced from 5.5% in December 2016 and 2.2% in December 2017. Reduction in credit growth is caused by supply and demand side factors like cash flow problems that affected a majority of banks and precautionary measures initiated by financial institutions to strengthen lending benchmark to reduce additional exposures to private sector.

Assets growth were caused by improved credit to public sector which is highly rewarding. Banks also reduced loan periods to less than five years to depict short term financing dominated by shot term deposits, and improved credit sizes despite decline in quantity of loan approvals. The intention of all these policies was to find proper ways of managing their cash flows properly so as to maintain the right cash balance at all times (KFSRFR, 2018).

1.2 Research Problem

Organization's management like holding cash and cash equivalents and having investments in other forms of tangible assets. However, past research showed that firms have not been fair to shareholders. Management like investing in projects that will offer them personal benefits as opposed to investing in projects that increases shareholders returns. Surplus cash flows above what is needed to finance all positive NPV projects normally gives rise to conflict between firm owners and managers. Different commercial banks have varied cash flows depending on their operations. These cash flows may have negative influence or positive influence on shareholder returns. The shareholder returns will be measured using Return on equity to find out how the cash flows influence shareholder returns.

In comparison with more economically advanced countries, commercial banks in Kenya are few at forty-two licensed banks of which only eleven commercial banks are trading in

Nairobi Securities Exchange market. These are KCB, NBK, Co-operative, NCI, DTB, CFC Stanbic holdings, I&M holdings, Barclays bank, Standard chartered bank, Equity bank and Housing finance group Ltd. However, some commercial banks are not listed but pay returns to their shareholders just like the listed ones (NSE, 2019). In the recent past Kenyan banks have been facing numerous challenges that have impacted on operations such as interest capping that has resulted into reduction in cash flows from their operations hence having negative impact on returns to the shareholder. At the same time due to stiff completion in the banking sector, commercial banks have resorted to mergers and acquisitions to strengthen their capital base and operational capacity so as to gain competitive edge. The current mergers include CFC and Stanbic banks. Kenyan government has tried to intervene by supporting collapsing banks on several occasions by identifying state agencies to act as receivers such as Imperial bank was put under receivership of KCB (CBK, 2019). The concern of the Kenyan government emanates from the fact that banking sector contributes a lot to the GDP of the country which in away supports 2030 vision.

Studies conducted globally including Kenya by different researchers especially on trends in cash flow and shareholder returns. Robert and Hamacher (2015) investigating the effect of cash flow trends on American banks, concluded that improvement in cash flows positively affected the return to shareholders. A study by Turcas (2011) found out that the solvency, flexibility and level of returns to shareholders of the Bucharest banking firms are set on the firm's ability to generate positive cash flows from operating cash flows, investing cash flows and financing cash flow which had some influence on shareholder return. In Nigeria, a study carried out by Amah, Michael and Ihendinihu (2016), examined the relationship between cash flow and shareholder returns of listed banks in Nigeria. The

study revealed that cash flow from operating activities has significant and strong relationship with performance of sampled banks.

The known studies in record that had been conducted in the country to find how cash flows influence shareholders return in Kenya banking sector have not managed to substantially disclose the cash flows effect on return to shareholders. Hence research aims at solving the following research question; to what extent does cash flow trends influence shareholders returns?

1.3 The Study Objectives

To determine influence cash flow trends, have on shareholders returns among Kenyan banks.

Specific Objectives

i. Examine influence that cash flows generated from operations have on shareholders returns among Kenyan banks.
ii. Ascertain the influence investing activities cash flows have on shareholders returns among Kenyan banks.
iii. To assess the influence of financing activities cash flows, have on shareholders returns among Kenyan banks.

1.4. Value of the Study

Research shall assist in developing structure of knowledge and provide scholars and researchers with foundation establish other theories in discipline of finance. Research shall assist in adjusting existing theories towards financial improvements to seal research gaps.

To management, this study will enable them determine whether prudent balance in cash flow would create success in companies. If that is the case, then they should invest funds in projects that improve the liquidity position of the business. This study can also enable bank managers to initiate financial basis to better the general liquidity performance of the company, which will increase shareholders returns.

To the equity holders, the research improves their scope of knowledge in relation to how banks handle cash flows and how this in turn impact on their investments hence informing equity holders whether they need to continue doing business with such an institution or not, depending on the cash flow trends on the above variables which affect their returns positively or negatively.

To the supervisory body (CBK), to alleviate Kenyan banks from the cash flow risks that they normally encounter in conducting their business. Cash flow trends can be basis on which CBK prepares its annual report for the banking sector.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Literature review touches on cash flows and returns to shareholders comprising two components. The first component entails theories about impact of dependent and independent variables. The next component is on past studies including summarized conclusions.

2.2 Theoretical Review

This part focusses on theories underpinning research study. Theories can assist researchers in identifying research variables and identifying discrete relationship that would be used to arrive at research findings. In this regard, the study will be guided by Keynesian theory, Boumal cash theory and M &O theory.

2.2.1 Keynesian theory

Keynes (1936) carried out research in relation to interest and money. He identified that there are three motives why firms hold funds in his theory as follows:

The speculative motive is facilitated by the store of value function of money. Keynes pointed out that this as motive for holding cash but also in general economic activity. There is always the possibility that more money may be held than is required to satisfy the transaction and the precautionary motives and this decreases the velocity of money. With this motive firms should hold cash so as to enjoy the advantages of investment opportunities with positive outcomes (Naya, Kadir, Yusof & Ali, 2015).

Keynes (2016) argued that precautionary motive of holding cash is for safety reasons. Therefore, precautionary motivation for retaining funds, means company's behavior to

retain funds to take care of the emergencies or unexpected circumstances emerging from normal business operations. However, the counter arguments that some securities can easily be converted into cash, so there is no need to hold lots of cash for precautions (Sardoni, 2017).

Transaction motivation of retaining cash is for the organizations to transact their daily business operations. The motivation is that companies require cash to pay expenses. At the same time the firm receives cash from revenue transactions, return on investments such as dividend income. Normally sources of cash and uses of cash do not agree, and hence, the cash is held up to meet its routine commitments (Keynes, 2016).

This theory is of relevance in this research study since it clearly outlines the key objectives of retaining cash. Firms should have CFFOA to meet its transaction motive. CFFIA is anchored on the speculative motive in which case firms should have cash flows to enjoy benefits of possible sudden investments (Deleplace & Nell, 2016).

2.2.2 Boumal model

It assists organizations in realizing right quantity of cash balances that a firm should maintain in conditions of contingency (uncertainty). Boumal model depends on the balance between interests forfeited by retaining certain assets that are not yielding interest. Boumal couldn't be convinced by Keynes assertion of transactional need of cash, hence coined a model managing finances to examine cost and benefits of retaining cash (Da costa, Morales & Nagano, 2014). Boumal stated that firm tends to suffer cost of holding cash to maintain right cash balances (Alvarez & Lippi, 2017).

Relevance of this model in relation to cash flow trends in line with this research study is that right cash balance is determined by cash flows from the acquisition and disposal of marketable securities which supports research variable of cash flow from investing activities.

2.2.3 Miller and Orr's Cash Management Model

M & O (1966) presented an idea explaining inconsistency in cash movement, but continuing to emphasize the existence of only two assets, cash and investment. Their model defines two boundaries of cash levels as an asset; the minimum and the maximum, hence when an entity reaches the upper limit at given time there is need to invest excess cash so as to move cash balance back to the right level and when the firm reaches the minimum limit at given time, it should dispose of the investment to generate more cash to achieve optimal level once more (Ross, Wester field & Jaffe, 2002). M& O argued firms tend to buy securities when the upper limit is hit while they sell securities when the lower limit is hit so as to re instate cash balance to a desirable level (Mikalski, 2004).

The application of the model is normally varied between firms. However, managers are required to abide by some policies to determine right level of cash to be held. Miller-Orr model is relevant in this research because it relates to the tendency of firms to acquire and dispose investments to obtain the correct level of cash.

2.3 Determinants of Shareholder Returns

The decision as to the level of shareholder returns offered varies from one organization to the other. Generally, in most firms' shareholder returns are determined by various factors

such as nature of shares a firm issue, dividend policy adopted by a firm, nature of cash flows financing a firm and financial performance of the business.

2.3.1 Nature of Shares issued

As for the nature of shares issued, firms that issue ordinary shares have the option of paying the dividends to the shareholders depending on profit levels but for entities issuing irredeemable preference shares have no option but to pay dividends to shareholders even if being deferred to future periods when profits become available.

2.3.2 Nature of Cash flows

Firms that are fully levered tend not pay dividends because the obligation they have is to pay interest to the financiers. However, in case they secured loans from cheaper sources such that they spend little from profits to pay finance cost then such firms would decide to pay dividends to the shareholders.

2.3.3 Dividend Policy

At the same time, dividend policy of the firm may determine whether dividends need to be paid or not. Firms that have strategic plan to expand would prefer not to pay dividends so as to cumulate enough cash for investments while entities with no plan to expand are likely to pay dividends.

2.3.4 Financial Performance

Generally, firms that have high financial performance (high profitability) tend to pay dividends to their shareholder since they normally have surplus retained earnings after financing their operations. However, this is not guaranteed for all firms since other firms

prefer to retain their profits for speculative purpose or precautionary purpose or transactional purpose (Keynes, 2016).

2.4 Empirical Review

Empirical work was conducted by previous researchers with an aim of making clear how entities' cash flow trends affect return to shareholders.

Watson (2005), examined the association of cash flows and stock returns. The researcher used multiple regression to analyze data. Ashtami (2002), studied relationship between operating cash flows, investments and financing and stock returns in Tehran stock exchange. The researcher tested the hypothesis via Pearson correlation and simple linear regression method to analyze data of a sample of 650 listed companies for the year 1998 to 2004.The results showed that there was meaningful relationship between operating cash flows, investing cash flows with return on stock but there was no meaningful relationship between financing cash flows and security returns.

Vakilifard and Shamoradi (2014), researched on relationship between free cash flows and firm performance which revealed significant negative relationship. James and Frank (2010), studied on food and beverages firms trading at Nigerian public stock market. Study revealed low relationship between cash flow from investing activities and free cash flows.

Pawlina and Renneboog (2005) carried out an investigation in the UK listed companies about the correlation between cash flow and shareholders returns. Their study confirmed that investing activities are sensitive to cash flow. Previous efforts have not been successful in establishing the relationship between cash flows and variation in dividend as one of the shareholder returns (Fama & Babiak, 1968). They concluded that original cost is a more

appropriate evidence of shareholder return variations since cash flows do not predict variations in shareholder returns in a better way. Relationship between shareholder returns and cash flows are weak such cash flow trends measures proposed in the study had no strong association with ROE as shareholder return.

Researches done in UK supported cash flows recognition because it limits allocation of cash, hence important to stakeholders to forecast on expected returns to shareholders in form of dividends (Laorson & Starks, 1981), based on information from firms in Germany, Lawson and Moeller (1996) contradicted perspective that original cost and undistributed profits lead to periodic variations in shareholder returns may not be accompanied by same cash flow change.

Studies in Nigerian entities gave rise to varied, inconclusive outcome. Soyede (1975), found out that excessive cash flows in Nigerian firms was leading high dividend distribution.

Marsh *et al.* (1982) concurred that an entity that is financed with lots of debt suffers more obligation through payment of interest which eats into their earnings hence reducing shareholder returns.

Operating activities cash sources come from its key business transactions not including cash originating from activities such as investing and change in capital structures. This is an area entities need to emphasize since it reveals how good business operations are generating cash which eventually trickle down to the equity holders. Net operating inflows or outflows is generated out of the profit or loss prior to taxation as reported in financial statements, but after adjusting for various items to find operating activities net cash flow (Gerakos et al., 2016). This is aimed at finding the actual CFFOA to be used to pay out

returns to the shareholders. These cash flows are analyzable using indirect method or direct method. Irrespective of the method used net cash flow remains same (Chang, Dasgupta, Wong & Yao, 2014). Firm should make investment generating positive cash flows that improves future returns (Das & Parida, 2016).

CFFIA entails acquisition or disposal of non-current investments whether financial or non-financial by the firm. An investing activity is that one which causes changes in non-currents assets both financial and non-financial such as receiving dividends from firm's stock. Therefore, an investing activity is an event involving changes in long term assets such as P, P&E, acquisition of shares, foreign currency or governments bonds which generate returns to investors in form of dividends from other entities and gains from sale of non-current assets (Gordon *et al.*, 2017) and (Bik *et al.*, 2016). Such cash flows are measuring investment the firm has made in other companies expected to generate returns.

There is no known influence that investing activities cash flows have on shareholder returns since some firms get involved in activities that are generating lots of profit. However, firms with irregular dividend payout policy may not distribute dividends to shareholders in certain years though it might have made lots of profits from the investments. Firms that do not have any dividend policy will not pay dividends even after making profits from its investments. Contrary to the above arguments (Michaely and Qian, 2016) stated that those firms that have regular dividend policy must distribute dividend whether they make profits or losses from their investments.

CFFFA are the ones that involving company's equity holders or lenders, for example, the sale of equity or repayment of loans, and dividends distributed to equity holders (Farshadfar & Monem, 2013). To the shareholder's, dividend paid is what investors should

be considering in relation to the shares a company is selling. Selling shares or repurchase of shares is key in this by shaping components firm's equity and debt to show how firm is funding its operations. Share repurchases and dividend payments are typical two ways a firm can enrich it shareholders with it cash flow, in which case dividends form the return to shareholders. It is possible that some companies fail to pay dividends in given years but that does not mean that they are suffering from liquidity problems. The firms that fail to pay dividends might be concentrating on expanding their operations while others do not pay dividends because they value business growth (Renneboog & Szilagyi, 2015).

Lewellen & Lewellen (2016) argued that when a company distributes more profits in form of dividends, it results into higher shareholder returns. However, when a company reduces the amount of dividends paid to shareholders for whatever reason compared to the payments in the previous periods, it might send wrong signal that the company is facing cash flow problems.

2.5 Literature Review summary and Research Gap

This emphasizes comparison of cash flow trends with shareholder returns of commercial banks in Kenya trading in security market. Fama and Babiak (1968), concluded that relationship between shareholder returns and cash flows is weak, but none of the three cash flow trend measures proposed in the study had a strong effect on shareholder return and firms ability to pay dividends can be controlled by firm's unique characteristics, government policies such as interest rate policy, which are normally referred to as control variables. Literature captured the key theories to explain the correlation between the cash flows and shareholder returns as stated above. The literature discussed into the details the

dependent and independent variables. The review touched on both local and international literature in relation to both independent and dependent variables.

Keynes (2016) argued that normally sources of cash and uses of cash don't agree and hence, the cash is held up to meet routine commitments. In M & O model, Alvarez, Lippi and Robatto, (2017) concurred that application of the model varies between firms since firm procedures followed by managers are dissimilar especially when picking right level of cash to be held by a firm. Costa, Morales and Nagano, (2014) concluded that Boumal model is practicable but leads to uncertainties of future cash flows in assessing cash flows of a firm.

There is scanty literature concerning cash flows impact on shareholder returns within Kenyan commercial banks that are trading their securities. Therefore, there is need to carry out this research to fill the gap in existence.

2.6 Conceptual Framework

This is diagrammatical comparison of mostly predictors and dependent variable that researcher adopted, but might also include control variable as may be appropriate. Independent variables in the study are the three cash flows trends while dependent variable is the shareholder returns which might be measured using dividend per share. While the control variable in the study is interest policy. The study conceptual frame is shown below.

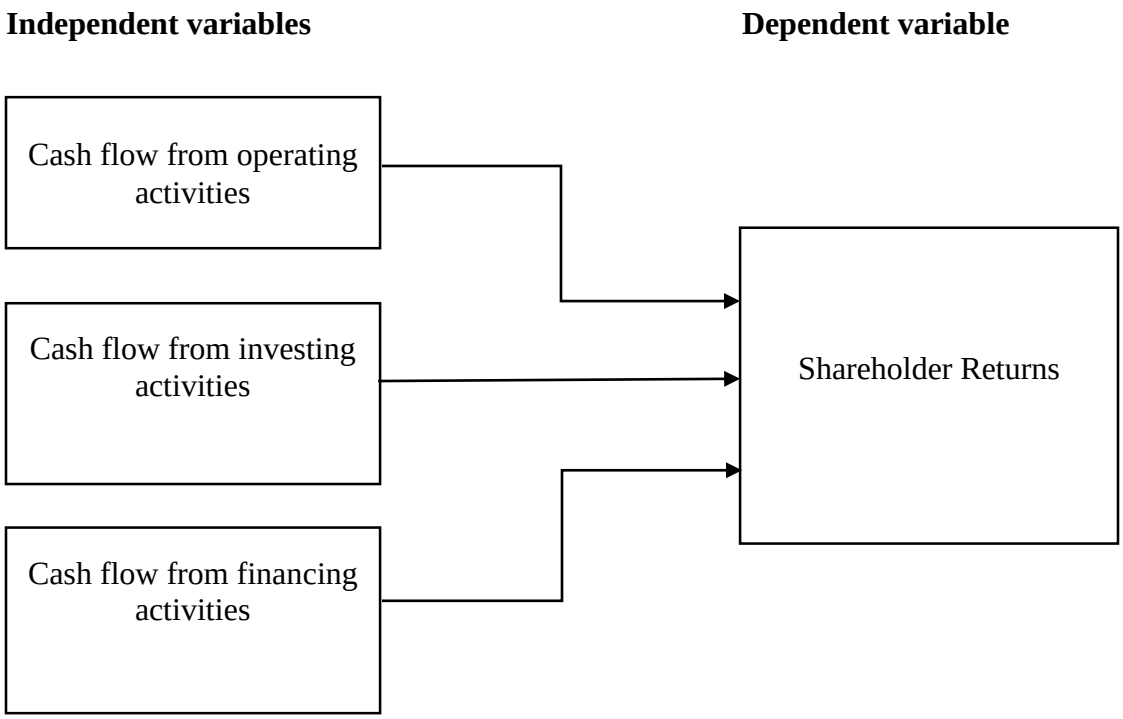

Figure 2.1: Conceptual framework

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section covers methodology as well as techniques of conducting research. It discusses research design, population, collection of data and data analysis methods applied during the research work.

3.2 Research Design

The study will be modeled on correlation research design, and adopting descriptive techniques which will assist in collecting large amount of data. This design is key in finding cause-effect relationship between variables in the research to understand in depth influence of changes in cash flows on the shareholder returns. Descriptive technique is the model of generating data so as to respond to questions in relation to core of the study (Mugenda & Mugenda, 2003).

In the study, the independent variable being the cash flow trends while dependent variable being the shareholder returns. The descriptive design assists in analyzing the extent to which independent and dependent variables relate by applying correlation and regression analyses (De Vaus & De Vaus, 2001). Research design will entail generating numerical secondary data based on accounts for publication.

3.3 Population of Study

It means all characters in the study of interest. It consists of total number of elements for purposes of inferences (Cooper & Schilder, 2006). Study population comprised of all 42 licensed banks (CBK, 2019).

However not all the listed banks will contribute to data used analysis in the study but use of published accounts data for listed nine banks whose financial statements were fully available across the study period.

3.4 Sampling Technique and Sample size

A sample represents whole population upon which significant estimates and conclusions concerning population may be generated (Saunders, Lewis & Thornhill, 2012). This study will adopt convenience sampling technique, also known as judgement sampling in which sample elements judged to be representative are picked from the population.

Convenience sampling technique, it is believed that some subjects are more suitable to be sampled for the research than others since data from them can be conveniently reachable and available, so they are chosen as subjects of study to represent the whole population. In this regard, this study will use nine (9) banks trading their securities in NSE as sample size. These include DTB, CFC Stanbic holdings, I&M Holdings, Absa bank, Stan chart bank, Co-op bank, KCB, Equity Bank and Housing finance group ltd.

3.5 Data Collection

Secondary data will be adopted to accomplish objective of this research. The data will be sourced from the published accounts of the listed nine banks as sample over a period spanning seven years from 2014 to 2020 to provide cash flow trends. This period has been given priority so that the study accommodates current factors that have affected the operations of commercial banks such as interest cap, mobile banking adopted by various banks, mergers and acquisitions.

At the same time accounts for publication from these sample banks will provide information on shareholder returns in relation to dividend payout for past five years in line with the adopted dividend policy.

3.6 Data Analysis

Analysis of data will incorporate statistical description. In this research study regression analysis will be used to find effect that cash flows trend has on shareholder returns. Wagner and Raghunath (2007), concurred that regression model is applied to find effect of predictors on dependent variable which can either be strong or weak.

3.6.1 Analytical Model

A regression equation will be applied in measuring predictors effect on dependent variable as shown below.

$Y=ß_0+ß_1X_1+ß_2X_2+ß_3X_3+Ɛ$

Y=Shareholder returns

$ß_0$=Constant

X_1=CFFOA

X_2=CFFIA

X_3=CFFFA

Ɛ=Error term at 95% confidence level representing other factors other than the above cash flow trends which are not defined in above cash flow trends which are not defined in the regression model.

Table 3.1: Operationalization of the Study Variables

Symbol	Variable	Measurement	Supporting Literature
Y	Shareholder returns	Return on equity	Frankfurter and Wood (1997) Michaely and Qian (2016)
X1	CFFOA	Net earning Non-cash expenditure Net current asset changes	Chang and Dasgupta (2014) Wong and Yao (2014) Lewellen and Lewellen (2016)
X2	CFFIA	Changes in fixed assets Changes in long-term investments Changes in intangibles assets	Vial *et al.* (2016) Gordon *et al.* (2017)
X3	CFFFA	Changes in shares issuance Changes in loans Dividend payment	Farshadfar and Momen (2013)

Source: Researcher 2021

3.6.2 Diagnostic Tests

Shapiro – walk will be applied to test data normality and if p-value is above 0.05, it will be an indicator that the data is normal. Though Kolmogorov-smirnov can be used as alternative to Schapiro –walk test or used at the same time to test normality of data.

Durbin-Watson test for autocorrelation will be used. The test runs from 0-4. A value of 2.0 means that there is no autocorrelation. The study will also adopt multi collinearity because more than one independent variable will be used in the study with an objective of finding linear relationship between the independent variables.

3.6.3 Test of significance

F-Test will be employed to establish whether regression model is of statistical significance at 95% confidence level. Co efficient of determination, R^2 will be employed in establishing goodness of fit of overall regression model.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSION.

4.1 Introduction

Chapter presented results of study analysis as well as findings. It was divided into various components namely: diagnostic tests, descriptive statistics, autocorrelation, regression analysis of the data on the relationship between CFFOA and ROE, CFFIA and ROE and CFFFA and ROE. Finally, discussion of research findings.

4.2 Descriptive Statistics

Mean, minimum, maximum together with standard deviation values for this research study were used.

Table 4.1: Descriptive Statistics

variables	N	Minimum.	Maximum.	Mean.	Std. Deviation.
ROE	9	6.03	19.70	15.6305	4.14432
CFFOA	9	-5,238,273.71	27,897,722.29	8,748,237.5091	12,178,865.21523
CFF1A	9	-9,438,917.57	5,965,142.86	-1,226,176.6985	4,181,1640.92631
CFFFA	9	-11,234,969.14	797,928.71	-27,184,269.85	3,866,887.49193

The above values indicated that CAFFOA as measured by net CFFOA annually showed higher figure of Kshs 27,897,722.29 among the maximum and highest value of Kshs 5,238,273 amongst the minimum.

This meant that banks listed in NSE prefer to hold cash for operations purposes. This might be informed by tendency of commercial banks to lay off staff and introduce digital banking to cut on operating staff costs. At the same time operating cash flows reported the highest

mean value of Kshs 8,748,237.5091 compared to other variables. Further, standard deviation indicated cash flows from operating activities had the highest variation of Kshs 12,178,865.2153 during the seven-year study period as compared to other variables while financing activities cash flows posted the lowest variation of Kshs 3,866,887.49193. The high variance in CFFOA could be a product of unpredicted nature of the demand for cash to facilitate daily activities of the firms; hence due to high change in operating cash flows, banks should hold more cash to offer foundation for seamless operations.

4.3 Correlation analysis

In determining the association between CFFOA, CFFIA and CFFFA with ROE, analysis of correlation was done to check if independent variables had significant influence upon return on equity.

Cash flows were correlated with ROE among listed nine commercial bank in NSE. Value of the coefficients run between -1 and +1, meaning correlation can be negative or positive. Values nearer to -1 or +1 depicts stronger correlation. Outcome of analysis was as tabulated below.

Table 4.2: Correlation Analysis Matrix

	ROE	CFFOA	CFFIA	CFFFA
ROE: Pearson correlation	1	-	-	-
Sig (2tailed)				
N	9			
CFFOA: Pearson correlation	.499	1	-	-
Sig (2 tailed)	.174			
N	9	9	-	-
CFFIA: Pearson Correlation	-.335	-.438	1	-
Sig (2tailed)	.378	.238		
	9	9	9	
CFFFA: Pearson Correlation	-.327	-.490	-.277	1
Sig (2 tailed)	.390	.180	.471	
	9	9	9	9

Table 4.2 above, showed the cash flows had mixed correlation with ROE. Operating activities cash flows had a positive correlation with ROE of (r .499, P .174) followed by cash flows from financing activities which posted negative correlation with ROE of (r -0.327, P .390), finally cash flows from investing activities showed least correlation, (negative correlation 0f (r -.335, P .378).

Operating activities cash flows have moderate negative association with investing activities cash flows with correlation coefficients of -0.438. Operating activities cash flows posted moderate negative association financing activities cash flows with a correlation coefficient of -0.277.

4.3.1 Discussion of Results

The study was to find out association between cash flows and ROE for the nine banks listed at NSE under study. As for operating activities cash flows, it had positive relationship with return on equity. This is because operating activities cash flows generate more return to banks as compared to investing activities and financing activities which showed negative relationship with banks' ROE.

4.4 Diagnostic Tests

The study used various tests of assumptions. These included Shapiro-Wilk test of normality, Durbin Watson test of autocorrelation, Breusch–pagan test for heteroscedasticity of multi collinearity using tolerance and variance inflation factors.

4.4.1 Test for Normality

Shapiro -Wilk was used to determine whether sample data was drawn from a normally distributed population (with same tolerance level). When Shapiro- Wilk is greater than 0.05 the data is normal. If it is below 0.05 the data significantly deviate from normal distribution. The normality results were as below using Shapiro- Wilk test.

Table 4.3: Normality Test

Variables	Statistics	df	Sig
Operating activities cash flows	.919	9	.385
Investing activities cash flows	.952	9	.709
Financing activities cash flows	.883	9	.170

a. Lilliefors significance correction
b. Base lending rate is constant. It has been omitted
Source. Secondary data (2020)

Result from above table showed that values ranging from 0.170 to 0.385. Shapiro -Wilk tests were larger than 0.05 implying that data was normally distributed.

4.4.2 Test for Multicollinearity

Tolerance and VIFs were used to measure Multicollinearity

Table 4.4: Multicollinearity

Model	Collinearity test	
1	Tolerance	VIF
CFFOA &ROE	.403	2.420
CFFIA & ROE	.490	2.040
CFFFA & ROE	-461	2.171

Multicollinearity test result in table 4.4 above demonstrated that tolerance values ranged from .403 to .461 and the Variance inflation factors values ranged from2.420 to 2. 171.

Hair et al. (2010) stated that if tolerance values are less than 0.2 and VIF values exceed 4, then Multicollinearity will be a problem. Therefore, values of the tolerance and VIF from the test outcome showed no Multicollinearity.

4.4.3 Autocorrelation

The existence or nonexistence of autocorrelation performed through Durbin – Watson statistics to determine similarity between the value of same variables over time intervals with an aim of showing changing patterns that are either repetitive or varying from the expectation. The Durbin – Watson test statistics normally run between 0 and 4. Tests statistics figures near 0 depicts positive autocorrelation but figures near 4 depict negative autocorrelation. Durban – Watson outcome were as tabulated below.

Table 4.5: Test for Autocorrelation.

Results of Durbin – Watson for auto correlation tests.		
Model	Variable	Durbin Watson test
1	CFFOA	2.234
	CFFIA	2.041
	CFFFA	2.211

Table 4.5 provided statistical outcome between 2.041 and 2.234. Field (2009) underlying rule when interpreting the Durbin – Watson test statistics is that the values should be between 1.5 and 2.5 indicating no autocorrelation.

4.4.4: Heteroscedasticity

Heteroscedasticity of data was determined through Breusch-Pagan test.

Table 4.6 below shows outcome of Breusch-pagan tests.

Table 4.6: Heteroscedasticity Test

Model	Breusch-Pagan Test
	Sig
CFFOA & ROE	.343
CFFIA& ROE	.699
CFFFA& ROE	.396

Source: Secondary data (2021)

Table above reported values above 0. 05.. The p- values from the test, therefore showed no heteroscedasticity among variables which qualified the data fit for regression analysis at confidence level of 95%.

4.5 Regression Analysis

This was conducted to show impact cash flows had upon ROE of commercial banks listed in NSE. Study was after finding the impact operating, investing as well as financing cash flows had on return on equity. Additionally, the research considered the degree of confidence of close estimated association was to the relationship. The research adopted linear regression model below to help accomplish this objective.

$Y=\beta_{o+}\beta_1 x_1+\beta_2 x_2+\beta_3 x_3+e$

Where Y stands for ROE (dependent variable), β_o is a constant, β_{1s} stood for regression coefficients while X_1, X2 and X_3 are operating activities, investing activities and financing activities cash flows respectively, being independent variables. Therefore, regression analysis consisted of summary of the model, the ANOVA outcome and the coefficients of regression.

4.5.1 Model Summary

Table 4.7 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
	.563[a]	.317	-.093	4.33271	.317	.773	3	5	.557

Predictors: (Constant), CFFOA, CFFIA, CFFFA.

Coefficient of determination adjusted R square of -0.093 which explained a response that was very low or negligible. So a negative adjusted R square showed an insignificance of explanatory variables. This implied an overall effect of the three independent variables had combined negative effects on return on equity of 0. 093.This may be improved by increasing the sample size. The table provided R value representing combined multiple correlation of 0.563, indicating moderate effect of independent variables on dependent variables (ROE).

4.5.2 ANOVA

Table 4.8 Variance Analysis

Model		Sum of Squares	D f	Mean Square	F	Sig.
1	Regression	43.541	3	14.514	.773	.557[b]
	Residual	93.862	5	18.772		
	Total	137.403	8			

a. Dependent Variable: Return on Equity measured by Percentage.

b. Predictors(constant),CFFOA, CFFIA, CFFFA

Results from table above showed ANOVA (analysis of variance) to show the combined influence that the predictors have on the constant. ANOVA result showed combined Probability value of 0.557 above 0.05 while summarized F- figure was 0.773. The overall outcome showed that regression model had less predictive power.

4.5.3 Regression Coefficients

The coefficients of regression as tabulated below were used by the researcher with an aim of finding association among research variables.

Table 4.9 Multi Linear Regression Coefficients

Mode	Unstandardized coefficient.		Standardized coefficient.	t	sig
	β	Std. error	Beta		
(Constant)	13.584	2.044		6.645	.001
CFFOA	6.213	0.000	.183	.314	.766
CFFIA	-3.447	0.000	-.348	-.659	.539
CFFFA	-3.578	0.000	-.334	-.613	.567

a. Dependent Variable: ROE

The following values were generated as outcome of the study.

βo=13.584, β_1=6.213, β_2=-3.447 and β_3=-3.578

The regression model was as follows

$Y=13.584+6.213X_1-3.447X_2-3.578X_3+e$

The regression model indicated that CFFOA had positive coefficient while CFFIA and CFFFA both had negative coefficients. The regression results above indicated that CFFOA had positive influence on ROE but is not significant because it posted p- value of 0.766 which is more than 0.05. Cash flows from investing activities had negative influence on ROE and at the same time not significant because its Probability- value of .539 was above

threshold of 0.05. Finally, cash flows from financing activities had negative effect on ROE and wasn't significant by posting probability-value of .567 above .05.

Therefore, results showed that, having the other variables held at zero, a unit of increase in operating cash flows results in 6.213 increase in ROE. It could be deduced from the findings that setting the variables at zero constant, results in ROE of 13.584.

The findings also show that CFFOA had greater connections to ROE followed by investing activities finally financing activities. However, CFFIA and CFFFA have negative effect on ROE.

4.6 Discussion of Research Findings

Firstly, regarding correlation between CFFOA, results showed an insignificant positive association between it with ROE of the nine banks listed in NSE. This study agreed with Ashitiani (2002), research on association between study variables, which showed material association between research variables except for CFFFA.

Secondly on the cash flows from investing activities, the regression analysis indicated low negative association between CFFIA and ROE, with no significant statistical relationship. This was in agreement with study on food and beverage firms listed on the Nigerian securities exchange market (Frank James, 2014). The study also agreed with Vakilifard and Shahmoradi (2014), research on the relationship between cash flows and returns of firms in Tehran securities market.

Lastly the results from regression analysis on the seven years' data from 2014-2020 disclosed that there was insignificant negative relationship between financing activities with ROE. The result supported research by Fahad Mohamad (2008) on effect of financing

cash flows on ROE that revealed insignificance effect. The ANOVA showed p- value of 0.557 more than the bench mark 0.05 which depicted a regression model with a weak predictive power. This was supported by the results from summary model that revealed an overall insignificant effect that the three variables had on ROE.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The study sought to find the effect of cash flow trends on ROE within listed banks at NSE.

5.2 Summary of Findings

The analysis was based on three cash flow trends: Operating activities, investing activities and financing activities cash flows. The objective of the study was to assess the influence of each cash flows on ROE. These were study objectives: to examine influence that the CFFOA have on shareholders returns, to ascertain the influence investing activities cash flows have on shareholders returns and to assess the influence of financing activities have on shareholders returns.

Data was generated from the published accounts of nine banks that published their accounts fully during the study period, out of initially targeted eleven banks. The study constituted a total of nine banks as sample size for a seven-year period between 2014 and 2020.

The descriptive statistics findings revealed that 15.6305 was mean return on equity for the nine listed banks. The R square was .371 implying that predictors variables explained 31.7% of changes in ROE. Other determinants not in the model contributed to 68.3% of changes. However, adjusted R square revealed an overall negative insignificant effect of independent variables on the ROE of -0.093.

The multiple regression model was therefore statistical less significant hence had less predictive power in determining the effect of independent variables on ROE of the listed nine banks. This is also evidenced in the ANOVA results which showed a value of 0.557 above a p-value of 0.05.

5.3 Conclusion of the Study

Conclusions were derived as follows:

A conclusion was drawn that ROE of the nine listed banks was to some extent affected by the cash flows from operating activities, investing activities and financing activities. Cash flow from operating activities had positive effect on ROE but was insignificant. Therefore, it was concluded that CFFOA increased ROE for the nine listed banks between 2014 and 2020.

Research provided a conclusion whereby CFFIA showed negative impact on these banks' ROE. This meant that a unit variation in CFFIA led to reduction in ROE. However, this effect was insignificant in line with study results, hence the higher the investment the lower the ROE. The study additional made a conclusion that CFFIA had negative impact on ROE. This meant that a unit variation in CFFA caused a reduction in ROE, which was insignificant as well.

Research concluded that the ROE for nine banks trading at NSE whose financial statements were available fully across the study period was less affected by the independent variables. Therefore, a conclusion could be made that ROE equity is insignificantly influenced by CFFOA, CFFIA and CFFFA combined as evidenced by the P values in ANOVA summary. Additionally, this confirmed by adjusted R square from the model summary that showed combined contribution of all the independent variables towards change in ROE was negative.

5.4 Recommendations of the Study

Study showed CFFOA had a positive influence on return on equity. Therefore, this study recommended that listed companies should channel most of their cash flows to the operating activities to maximizes investors wealth.

The study concluded that CFFIA and CFFFA had negative impact upon return on equity. Recommendation for this was that listed banks should not put lots of cash in investing activities and financing activities but they should have regulated cash flows in these two areas.

5.5 Limitations of the study

As much as the objective of research was to add material contribution to body of knowledge on how shareholder returns are affected by different cash flow trends in the listed commercial banks in NSE, there is need to expand body of knowledge. This may be an uphill task since different banks pursue different operations and some have subsidiary activities while others do pursue their core business activities in different economic conditions.

The study also had limitation in that quantitative data was entirely used to generate results with exclusion of qualitative data that could have contributed to more reliable results because qualitative features of the organization could as well influence their activities.

The cash flows of firms are limited to the three categories used in the study model. This did not allow for more independent variables to be include in study so as to provide more reliable results.

Due to merger of some banks and acquisition of a bank, finding published data for years 2019 and 2020 was not possible leading to reduction in sample size from eleven banks to nine banks. This might have interfered with findings reliability.

5.6 Suggestion for Further Research

The results should have been confirmed by carrying out similar research in other banks that are not listed in NSE. This may assist to verify if non listed banks provide same results. The study findings are as per data gathered from audited published account from listed nine banks.

The study confined itself to the ROE as a measure of shareholder return but it is that, other measurement bases should be used to measure shareholder returns such as dividend per share and dividend yield for similar studies. More research need to be conducted on variables not included in the study which may influence shareholder returns (ROE) as well.

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APPENDIX

Appendix 1: Secondary Data Collection Sheet

The following data collection sheets were used to collect data concerning the listed banks forming the sample size.

1. **CO-OPERATIVE BANK**

Year	Return on equity	CFFOA Shs000	CFFIA Shs000	CFFFA Shs000
2014	20.0%	104,076,637	(1,1716,762	5,767,543
2015	25.0%	18,731,590	(12,835,259)	(3,178,748)
2016	22.7%	(5,138,295)	(2,445,239)	(3,369,234)
2017	17.4%	6,068,852	(8,327,432)	2,003,250
2018	18.3%	31917527	(10,568,318)	(5,618,143)
2019	18.5%	(17,000,637)	(27,671,824)	(4594751)
2020	16%	21478187	(3047589)	13244837

2. **STANCHART BANK**

Year	Return on equity	CFFOA Shs000	CFFIA Shs000	CFFFA Shs000
2014	**25.7%**	**15337093**	**1328761**	**(6109299)**
2015	**15.2%**	**27718885**	**(43739)**	**(3987615)**
2016	**19.8%**	**(5374722)**	**(89416)**	**(7564723)**
2017	**14.6%**	**(2143629)**	**(370456)**	**(6503928)**
2018	**17.4%**	**37331000**	**(204000)**	**(6137000)**
2019	**19.0%**	**(3777000)**	**(1950000)**	**(6861000)**
2020	**10.6%**	**34492000**	**(1523000)**	**(2959000)**

3. **STANBIC BANK**

year	Return on equity	CFFOA Shs000	CFFIA Shs000	CFFFA Shs000
2014	**20.6%**	**(18339275)**	**(459902)**	**(178100)**
2015	**16.6%**	**20771677**	**(833025)**	**(2146954)**
2016	**14.6%**	**(8751467)**	**(898772)**	**(5130636)**
2017	**13.1%**	**8985225**	**(6293240)**	**(1896895)**
2018	**17.8%**	**53120365**	**(18256322)**	**574770**
2019	**16%**	**16615128**	**7367324**	**263002**
2020	**12.3%**	**2288000**	**0**	**(2293000)**

4. **EQUITY BANK**

Year	Return on equity	CFFOA Shs000	CFFIA Shs000	CFFFA Shs000
2014	27.0%	19259000	(260000)	(32506000)
2015	11.6%	(1513000)	(4546000)	(3495000)
2016	16.2%	(555000)	19600000	(12923000)
2017	11.4%	293000	8600000	(8587000)
2018	14.2%	(2521000)	10450000	(8572000)
2019	15.5%	7800000	12488000	(7547000)
2020	0.02%	(1133000)	(13668000)	10925000

5. **I&M BANK**

Year	Return on equity	CFFOA Shs000	CFFIA Shs000	CFFFA Shs000
2014	**25.8%**	**(27020934)**	**13980826**	**1821851**
2015	**22.2%**	**13899567**	**(559618)**	**(793679)**
2016	**20.3%**	**1740217**	**(1014274)**	**(1262026)**
2017	**15.7%**	**3149721**	**873275**	**(3960937)**
2018	**16.5%**	**33824559**	**(1475278)**	**(2688294)**
2019	**14.1%**	**(1137172)**	**(430620)**	**(1446)**
2020	**12.4%**	**3369737**	**(894588)**	**(2108367)**

6. **HOUSING FINANCE BANK**

Year	Return on equity	CFFOA Shs000	CFFIA Shs000	CFFFA Shs000
2014	**13.9%**	**18530**	**(1034)**	**(160240)**
2015	**13.4%**	**20340**	**(1360)**	**(170360)**
2016	**10.6%**	**253915**	**(1972)**	**(230041)**
2017	**1.9%**	**145816**	**(380)**	**(184884)**
2018	**(0.4%)**	**148213**	**(265)**	**(142165)**
2019	**0.4%**	**12279**	**(258)**	**(15032)**
2020	**2.4%**	**(4298)**	**0**	**(6662)**

7. **DIAMOND TRUST BANK**

Year	Return on equity	CFFOA Shs000	CFFIA Shs000	CFFFA Shs000
2014	16.1%	(2532415)	(668194)	7334906
2015	16%	(12395270)	(18318620	10983878
2016	16.9%	(3577753)	(2404183)	(5869466)
2017	12.8%	(1624841)	(1771555)	(6709740)
2018	12.1%	2055880	(621331)	(4591525)
2019	10.9%	(13240524)	(988955)	(2512711)
2020	11.2%	(5352993)	194540	6950159

8. **ABSA BANK**

Year	Return on equity	CFFOA Shs000	CFFIA Shs000	CFFFA Shs000
2014	**21.9%**	**(16063000)**	**(763000)**	**(3708000)**
2015	**21.1%**	**(3653000)**	**(1029000)**	**(3502000)**
2016	**26.6%**	**(11338000)**	**(591000)**	**(5431000)**
2017	**15.3%**	**4917000**	**482000**	**(5431000)**
2018	**16.5%**	**(10380000)**	**(550000)**	**(5431000)**
2019	**16.2%**	**6478000**	**(1685000)**	**(3889000)**
2020	**8.3%**	**(2225000)**	**(673000)**	**(4130000)**

9. **KENYA COMMERCIAL BANK**

Year	Return on equity	CFFOA Shs000	CFFIA Shs000	CFFFA Shs000
2014	**22.0%**	**(5122842)**	**(2984073)**	**(1025451)**
2015	**20.4%**	**(17147102)**	**(4819561)**	**(105333)**
2016	**24.4%**	**5884000**	**(435000)**	**(29533000)**
2017	**21.6%**	**12720000**	**(519000)**	**(12264000)**
2018	**21.6%**	**174430000**	**(479000)**	**(16953000)**
2019	**18.2%**	**16062000**	**(5052000)**	**(10731000)**
2020	**(1.7%)**	**8458000**	**(456000)**	**(8033000)**