THE RELATIONSHIP BETWEEN MARKET CAPITALIZATION AND PROFITABILITY OF COMMERCIAL RANKS LISTED ON THE NAIROBI SECURITIES EXCHANGE

BY:

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DECLARATION

This Research project is my original work and has not been presented in any other University.

Signed... **Date ... A ^ V v W . ^ . V ^**

Loltianya Thomas Skamo   1)61/60417/2011

This Research project has been submitted lor presentation with my approval as University Supervisor.

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DEDICATION

I dedicate this research project to my son and daughter ParvezDumee and NajmaSintei

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This Research Project would not have been possible without the cooperation and support of a number of people, who in one way or the other steered me towards my ultimate goal. I would like to express my appreciation to them and especially to the following:-

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To all, I remain forever grateful

ABSTRACT

Market capitalization is an important measure for investors in the determination of the returns on their investment. Day-to-day stock price fluctuations provide freely available information on the health of a publicly traded company. Market capitalization represents the public consensus on the value of a company's equity. Efficient stock market theory states that stock price can reflect all relevant information about a company's historical or present and public or private. Market capitalization can denote the amount of a company's future cash Hows to its shareholders, primarily the dividends, and the riskiness of receiving the cash flows, effectively the expected rate of return. The objective of this study was to establish the relationship between market capitalization and profitability of commercial banks listed at the NSE.

The study used cause and effect research design. The population of this study comprised of 10 commercial Banks quoted at the NSE as at 31^{M} December 2011 because of the readily available data on share prices. The data was collected from the NSE handbooks for the period ranging from 2007 to 2011 due to limited availability of data and high level of changes in the number of commercial banks listed. The study established that there was a weak positive relationship between market capitalization and the profitability of commercial banks.

The study concludes based on the data presentations in chapter four and the summary of the findings above that market capitalization affects the profitability of commercial banks in Kenya and at the same time, the profitability also affects the market capitalization. The study also indicates that although there is a relationship, it is weak and may not be the sole determinant of the changes witnessed in each variable from time to time. Each variable is influenced by other variables beyond those discussed in this study

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ABBREVIATIONS

ANOVA   Analysis of Variance

CAPM   Capital Asset Pricing Model

CBK   Central Bank of Kenya

CRBs   Credit Reference Bureaus

L)TMs   Deposit-Taking Microlinancc Institutions

EMH   Efficient Market Hypothesis

HPS,   Earnings per share

GDP   Gross Domestic Product

MFC   Mortgage Finance Company

MPT   Modern Portfolio Theory

MSE   Means Square Error

NSE   Nairobi Security Exchange

NYSE   New York Stock Exchange

OLS   Ordinary Least Square

ROA   Return of Assets

ROE   Return on Equity

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Market capitalization is a measure of the value of companies and stock markets which is an on-going market valuation of a public firm whose shares are publicly traded on a stock exchange computed by multiplying the number of outstanding shares held by the shareholders with the current per share market price at a given time (Oilman, 2004). A market capitalization calculation is a critical part of any stock valuation formula as it represents the total market value of all the company's outstanding shares. This represents the value the market has placed on the value of a company's equity. As outstanding stock is bought and sold in public markets, capitalization could be used as a proxy for the public opinion of a company's net worth and is a determining factor in some forms of stock valuation. Market capitalization represents the public consensus on the value of a company's equity. In public corporation, ownership interest is freely bought and sold through purchases and sales of stock, providing a market mechanism which determines the price of the company's shares (Kaundal and Sharma, 2010).

Investment in equity shares is one of the most liquid forms of investment. Market price of the share is one of the most important factors which affect investment decisions of investors. It is also suggested from the theories that market price of the share depends upon many factors, such as earning per share, dividend per share, payout ratio, si2C of the firm and dividend yield, management, diversification. For predicting share prices there

are different approaches (Ologunde, Klumilade and Saolu, 2006). Fundamental approach predicts share price on the basis of financial, environmental and managerial factors, whereas, technical approach takes the help of past trends in predicting future share price. Understanding of the effect of various fundamental variables on share price is very much helpful to various parties such as investors, management, government, as it will help them in taking various important decisions. In developed countries many studies have been undertaken to study the determinants of the share price, but in India there are few studies which have been conducted on this issue. So. in the present study attempt has been made to study the impact of selected accounting variables on the equity prices of Indian companies. Further the discussion has been divided into five sections. Section II is related with the review of literature. Section lll explains research methodology and explains the profitability variables used in the study. Section VI shows results of study. Finally, Section V represents conclusions of the study.

Market capitalization is the value the stock market places for the entire company or, simply, market estimate of a company's value, based on perceived future prospects, economic and monetary conditions (Woo, 1981). It is, however, not necessarily the price a buyer would pay for the entire firm and is not a realistic estimate of the firm's actual size, because a share's market price is based on trading in only a fraction of the firm's total outstanding shares. Besides, preferred shares are not included in the calculation. In addition, being that many companies have a dominant shareholder, which may be a government entity, a family, or another corporation, market capitalization calculation might adjust for these by calculating on a free float basis, i.e. the market capitalization that they use is the value of the publicly tradable part of the company (Lease. McConnell

and Mikkelson. 1983) Thus, market capitalization is one measure of "float" i.e., share value times an equity aggregate, with free and public being others.

There are many competing views about the relationship between market capitalization and profitability, most of which have never been reconciled. Woo (1981) states that though the correlation between market capitalization and profitability has been sustained over the years, he noted that the close association between market capitalization and profitability strongly is acknowledged by many management scholars. She also found that market capitalization does not always translate into profitability. Newton (1983) states that if the possibility of coincidence is ignored, the correlation between market capitalization and profitability can be interpreted as follows: Market capitalization determines profitability; Profitability determines market capitalization; or some other variables determine both market capitalization and profitability which can be interpreted as well managed and successful firms enjoy high profitability and natural growth (Basu, 1977).

As stated above Buzzel, Gale and Sultan (1975) argued that higher market capitalization leads to greater profits, because of market power and lower cost resulting to economies of scale effects. O'Regan (2002) states that profitability stems from pursuing opportunities in growing markets rather than in competing in mature markets and thus firms should seek to align their product offering with market type. Profitability will thus be enhanced.

Venkatraman and Prescott (1990) found that there was a positive and significant relationship between market capitalization and profitability and that the positive relationship is not the same across different environmental contexts. However he insists

that the correlation between market capitalization and profitability is meaningless unless related to an environmental context, the strategies pursued as well as particular macroeconomic conditions This is in agreement with Shankil (1989) who also concluded that there is a strong link between market capitalization and profitability but also warned against blindly following a market penetration strategy as a company's market share strategy needs to How from corporate objectives.

In Kenya, ten commercial banks have been listed at the NSF: Barclays Bank Ltd, CFC Stanbic Holdings Ltd, Diamond Trust Bank Kenya Ltd. Kenya Commercial Bank Ltd, National Bank of Kenya Ltd. NIC Bank Ltd, Standard Chartered Bank Ltd, Equity Bank Ltd, Co-operative Bank of Kenya Ltd and Housing Finance Limited.

1.1.1   Market Capitalization

Market capitalization refers to the sum derived from the current stock price per share multiplied by the total number of shares outstanding. As outstanding stock is bought and sold in public markets, capitalization could be used as a proxy for the public opinion of a company's net worth and is a determining factor in some forms of stock valuation. Preferred shares are included in the calculation (Woo. 1981). The total capitalization of stock market or economic regions may be compared to other economic indicators.

Although the market capitalization of a company is an indication of the value of the company, it is only a temporary metric based on the current stock market. The true value ol the company which is represented by its profits, product positioning, balance sheet, among other variables may not be reflected in the market capitalization at all times

because of information asymmetry (O'Kegan, 2002). Of course, the perfect example occurred during the dot-com explosion of the late 1990s, when the market caps of many companies that never made a dime in profit rose to astronomical heights. Conversely, a company can be doing well, but still have a low market capitalization if its products and reputation have not caught the fancy of the masses (Ologunde, Elumilade and Saolu, 2006).

1.1.2 Bank Profitability

fhe term 'profit' is an accounting concept which shows the excess of income over expenditure viewed during a specified period of time. Profit is the main reason for the continued existence of every commercial organisation (Amandecp, 1991). On the other hand, the term profitability is a relative measure where profit is expressed as a ratio, generally as a percentage. Profitability depicts the relationship of the absolute amount of profit with various other factors. Profitability is the most important and reliable indicator as it gives a broad indicator of the ability of a bank to raise its income level. Profitability of banks is affected by a number of factors. Some of these arc endogenous while others are exogenous (Chaudhuri, 2002).

In practice executives define profits in banks as the difference between total earnings from all earning assets and total expenditure on managing entire asset-liabilities portfolio. In case of banks, the main source of income is interest earned and discount on bills discounted. Since banks accept various types of deposits from people so interest paid to customer is an important expenditure of the banks (Pitre. 2003). The difference between interest earned and interest paid is known as spread and is a good indicator of bank's

efficiency. Establishment expenses covering salaries, provident fund, allowances, and bonus and so on. form another important component of expenditure. Profit is the very reason for the continued existence of every commercial organisation. The rate of profitability and volume of profits are therefore rightfully considered as indicators of efficiency in the deployment cf resources of banks (Chaudhuri, 2002).

1.1.3 The Ranking Sector-

As at 31st December 2011, the banking sector comprised of the Central Bank of Kenya, as the regulatory authority, 44 banking institutions (43 commercial banks and 1 mortgage finance company - MFC), 4 representative offices of foreign banks, 6 Deposit-Taking Microfinance Institutions (DTMs), 118 Forex Bureaus and 2 Credit Reference Bureaus (CRBs). Out of the 44 banking institutions, 31 locally owned banks comprise 3 with public shareholding and 28 privately owned while 13 are foreign owned as shown in Chart 1. The 6 DTMs, 2 CRBs and 118 forex bureaus are privately owned (CBK supervision Report. 2011) (Central Bank of Kenya, 2012).

1.1.4 The Nairobi Securities Exchange

The Nairobi Securities Exchange was formed in 1954 as a voluntary organization of stock brokers and is now one of the most active capital markets in Africa. As a capital market institution, the Stock Exchange plays an important role in the process of economic development. It helps mobilize domestic savings thereby bringing about the reallocation of financial resources from dormant to active agents. Long-term investments are made liquid, as the transfer of securities between shareholders is facilitated. The Exchange has

also enabled companies to engage local participation in their equity, thereby giving Kenyans a chance to own shares. There are as of December 2011, 55 companies listed at the stock exchange (www.nse.co.ke, 2011).

Stock markets promote higher standards of accounting, resource management and transparency in the management of business. This is because financial markets encourage the separation of owners of capital, on the one hand, from managers of capital, on the other. The stock exchange also improves the access to finance of different types of users b> providing the flexibility for customization. Lastly the stock exchange provides investors with an efficient mechanism to liquidate their investments in securities. The very fact that investors are certain of the possibility of selling out what they hold, as and when they want, is a major incentive for investment as it guarantees mobility of capital in the purchase of assets (www.nse.co.kc,2011). Currently the Nairobi Stock Exchange market has got fifty five companies listed at the market. The companies are categorized into four different sections; Agriculture, Commercial and Services, Finance and Investment, Industrial and Allied.

Capital market studies are as old as the finance discipline itself. This is because of the role that capital markets play in pricing or valuing the securities traded in the market. Efficient valuation of securities enables optimal investment decisions to be made and efficient allocation of scarce investment resources. In order to make rational investment decisions investors require knowledge about the securities' prices and the factors that aftect them. Such knowledge can be obtained from the understanding how capital markets enact to new as well as past information. However a look at the role of capital

markets in economic development would be necessary as a first step (www.nse.co.ke, 2009).

1.2 Statement of the Problem

Market capitalization is an important measure for investors in the determination of the returns on their investment. Day-to-day stock price fluctuations provide freely available information on the health of a publicly traded company. Customers can condition their payment of invoices on this information. If they do so, then stock price fluctuations will reflect corporate cash. I'he stock exchange is an exceedingly fluid, dynamic and engaging entity. It facilitates thousands of transactions which occur simultaneously from traders striving to outbid and outsell each oilier bring about fluctuation in the stock prices which in turn determine the market capitalization of companies (Ologunde, Elumilade and Saolu. 2006). The changes in stock prices reflect investor expectations of the future performance of a given stock. It is what informs the investors in the selection of their stocks to include in their portfolios.

Efficient stock market theor> states that stock price can reflect all relevant information about a company's historical or present and public or private. Market capitalization can denote the amount of a company's future cash flows to its shareholders, primarily the dividends, and the riskiness of receiving the cash Hows, effectively the expected rate of return. Apart from company specific factors, studies suggest that the macroeconomic environment has an effect on the stock market capitalization rate such as gross domestic product, exchange rates, interest rates, current account and money supply (Kurihara, 2006

and Ologunde, Elumilade and Saolu, 2006). However, these studies did not relate company market capitalization with the firms' profitability.

Gaunt (2004) studied the market capitalization by dividing his dataset into 25 portfolios ranking them into varying amounts of book to market value and market capitalization. lie found evidence of both the size and value effects and observed that less risky stocks offered better rav. return. Locally, two scholars have researched on market value of the firms quoted on the Nairobi Securities Exchange. Wangechi (2010) studied the relationship between firm valuation methods and market value for companies quoted at the NSF where it was established that valuation methods used greatly influenced the market value of firms quoted on the NSF.. Kimani (2009) studied the relationship between firms' profitability and its size and book to market value: evidence from the NSF.. From the above discussion, il is clear that little research has been done on market value. The existing studies have concentrated on profitability and valuation methods as shown above. This study seeks to add to the existing knowledge on market capitalization by establishing the effect of market capitalization on the company profitability for the commercial banks quoted on the NSF. In doing this, this study will seek to answer one question: Is there a relationship between market capitalization and profitability of commercial banks listed at the Nairobi Securities Exchange?

1.3 Objective of the Study

The study sought to establish the relationship between market capitalization and profitability of commercial banks listed at the NSE.

1.4 Significance of the Study

This study would be of value to different stakeholders:

Slock market investors, the findings of this study would be important in establishing the contributions of stock market prices to a firm's profitability which in turn determines how the company shares perform in future.

Managers working in the firms quoted on the NSLi. this study would help them establish the influence of their financial management styles on the profitability and market value of the firms. This would help promote accountability and corporate governance in these firms.

Government through its regulatory agencies would be able to use the findings of this study to formulate policies governing the operations of the Security exchange in Kenya.

Academicians and scholars, the findings of this study would be important in establishing areas for further study where future scholars can further the knowledge in areas of market capitalization.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The literature deals with the effect of market capitalization on profitability of commercial banks listed at the Nairobi Securities Exchange. The specific areas covered by this chapter include theoretical framework, empirical review, measures of organizational profitability and chapter summary.

2.2 I'heoretical Framework

2.2.1 Capital Asset Pricing Model (CAPM)

The capital asset pricing model (CAPM) was derived by Sharpe (1964) and Lintner 11965). According to the CAPM. the expected excess return of an asset is linearly proportional to the expected excess market return, called the market risk premium. F.xcess returns are returns above the risk-free interest rate. The market risk of an asset is measured by its beta, which reflects the systematic risk of the asset. Formally, it can be written in the following way:

$$E\ (Ri) = Rf + pi\ (E(Rm) - Rf)$$

Where F.(Ri) is the expected return of asset i; (E(Rm) Rf) is the market risk premium; |ii is the systematic risk. The capital asset pricing model (CAPM) relies on several assumptions including: investor preferences which looks at investor behavior as risk averse individuals seeking to maximize the expected utility of their wealth at the end of

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the period; Mean-variance preferences which holds that investors consider only the first two movements of return distribution when choosing an investment: the expected return and the variance; CAPM also holds that there are no operational friction like taxes and transaction costs; and that all assets are infinitely divisible. The theory further holds that all assets can be traded meaning that all claims to future cash-flows can be freely exchanged. This also means that each investor's wealth is entirely made up of tradable assets; the theory also assumes homogeneous beliefs where the investment period is the same for all investors and all investors have the same investment preferences. CAPM also holds that information is accessible free of charge and is available simultaneously to all investors therefore, there is nothing like information asymmetry. All investors therefore have the same return, variance, and covariance expectations for all assets.

The CAPM derived by Sharpe (1%4), Lintner (1965) and Mossin (1966) and in its zero-beta version by Black (1972) has a history of more than thirty years over four decades. While the CAPM received early empirical support, it was subsequently challenged on the basis of incompleteness. Furthermore, the Fama & French (1988) study sparked a debate regarding the validity of the CAPM. A number of papers attempted to address the incompleteness issue, for example studies by Merton (1987).

The work of Markowitz (1959) on portfolio selection and Sharpe (1964), Lintner (1965) and Mossin (1966) on the Capital Asset Pricing Model derived the concept of the slope parameter, βi of the security market line, as a measure of systematic risk. Blume (1973) presented a conscious non-rigorous justification of the use of the beta coefficient as a

measure of risk. The portfolio approach and the equilibrium approach were used for its

justification. He also examined the stationary of beta coefficient over time using

portfolios of n securities with // smallest estimates of pj Each portfolio is ranked in

ascending order and the product movement and rank order coefficient between the risk

measure beta for portfolio of n securities in one period and corresponding risk measure

for the same portfolio in the next period is tabulated. His findings indicated that the

product movement correlations increased with the number of securities in the portfolio.

This implied that at least for a portfolio with a large number of securities, the estimated

beta coefficients are relatively special over time. The estimated beta coefficients show a

tendency to regress towards the mean of I. His proposed method of correlation for beta is

to regress the estimated values of pi in one period on the values estimated in a previous

period. The estimated relationship is used to adjust for the beta.

Blume (1973) further explored the tendency of estimated betas to regress towards the

grand mean of all betas, namely one. In simpler terms, there is a tendency for a portfolio

with either an extremely low or high estimated beta in one period to have a less extreme

beta as estimated in the next period. The empirical results obtained in his research

indicated that the major reason for the observed regression is real non-stationeries in the

underlying values of beta.

2.2.2 Theory of Investment

According to Krugman (1994), the theory of investment was explored by economic

theorists such as Keynes (1936) and Hayek (1941). who focused on the employment of

capital and investment from a firm's point of view. They viewed investment as the change in capital stock during a period. One of the earliest investment theories, however, came from Irving Fisher in his "Nature of Capital and Income" (1906) and his later work "Theory of Interest" (1930). In his theory, although simplistic and open to a number of assumptions, he developed a basic investment frontier.

According to Goetzmann (1997). an investor should first be answering the question on what rate of return he will demand to hold a risky security in his portfolio because there is a trade-off between these two motivations. As such, the investor needs to assess the inherent risk of not losing any money against the expected return of the investment. The rate of return measures the growth in wealth and is expressed as a percentage over a specific time period. One of the greatest allies for an investor seeking investment returns is time. This is because of the compounding effect which can make someone's money grow substantially over a relatively short period of time. It refers to the growth of an investment trom reinvesting any money that is earned until the withdrawal period which means that the investment not only earns a return based on the original amount invested, but also on any return already paid.

According to Goetzmann (1997), over a 68 year period from 1926 to 1995, a dollar invested in the SPS00 grew to$889. Over the same period, a dollar invested in corporate bonds grew to $40. Although the returns of the corporate bonds were much lower, the risk o! achieving the expected return over any period in this time was much lower, as the return curve was flatter, though fairly straight. The SP500 yielded a far higher return, but may have yielded a negative return at any time within that period. The return curve would

therefore be much more erratic. This puts the investor in front of the classical trade-off of risk vs. return. This is in line with the investing principle which holds that the higher the risk the investor is prepared to take, the higher the return that he can expect from the investment will be. The margin an investor earns as the result of investing in a more risky investment is called the risk premium.

Each investor has a certain risk appetite or risk tolerance. Both refer to the same behavior, which indicates how much risk an investor is prepared to take for an expected return. To give the investor a broad risk - return profile within one portfolio, the portfolio manager needs to make capital allocation decisions which would determine how much of the overall portfolio is going to be invested in low- risk, low-return investments vs. risky. high-return investments. Bodie, Kane and Marcus (1999) describe the investment process as consisting of two broad tasks. One task is security and market analysis, from which the risk and expected return attributes of the entire set of possible investment -chicles are assessed. The second task is the formation of an optimal portfolio of assets. This latter task is referred to as portfolio theory, which plays an integral part in the construction of a collective investment portfolio and on which this study is based. The father of modern portfolio theory (MPT) was Harry Markowitz. One of the most important and influential economic theories dealing with finance and investment was developed by him and published under the title "Portfolio Selection" in the 1952 Journal of Finance. MPT says it is not enough to look at the expected risk and return of one particular stock. By investing in more than one stock, an investor can reap the benefits of diversification - chief among them, a reduction in the riskiness of the portfolio. Markowitz (1959) also proposed that investors expect to be compensated for taking

additional risks, and that an infinite number of 'efficient' portfolios exist along a curve defined by three variables: standard deviation, correlation coefficient and return.

The efficient frontier curve consists of portfolios with the maximum return for a given level of risk, or the minimum risk for a given level of return.   Sharpe (1981, p. 144). however, believes that the market itself is the most efficient portfolio. Every investor is assumed to have the same information, and to analyze and process it in the same way. Investors are assumed to be concerned only with risk and return. The market consists of a large number of rational, profit-seeking, risk-averting investors who compete freely with each other in estimating the future value of individual stocks. Any changes affecting a stock are quickly incorporated in its value.   When is a market efficient? According to Elton & Gruber (1995), a market is efficient when security prices fully reflect all available information. Hie Efficient Market Hypothesis (EMH) was first defined by Fama (1970) which states that the prices of shares on the stock market are the best available estimates of their real value because of the highly efficient pricing mechanism inherent in the stock market (Ross, 2002). For the individual investor this would mean that he is better off by owning a proportionate slice of every financial asset available. An efficient way to manage risk in a portfolio is therefore by way of diversification. To eliminate firm (or security) specific risk, the number of individual stocks in a portfolio could be increased. This will result in a much lower impact on a portfolio if one (out of 20) stocks should underperform vs. one alone or one out of two.   In which he used data of stocks listed on the New York Stock Exchange (NYSE). His findings show that the ultimate number of stocks to negate risk in a portfolio is about 20.   Bodie, *el al.* (1999) notes that the total security risk of the portfolio can therefore be expressed as the sum of

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the unique risk, otherwise known as diverifiable risk, and market risk, otherwise known as non-diversifiable risk.

The Capital Asset Pricing Model (CAPM) was developed through articles by Sharpe (l%3). Lintner (1965) and Mossin (1966) which gives a prediction of the relationship that should observe between the risk of an asset and its expected return. This relationship serves two vital functions whereby it provides a benchmark rate of return for evaluating possible investments; and also the model helps us to make an educated guess as to the expected return on assets that have not yet been traded in the marketplace. According to Gitman (1085), the CAPM links the relevant risk and returns for all assets. In addition. Elton and Gruber (1995) argue that the CAPM is based on an objectionable set of assumptions, but it does an amazingly good job of describing prices in the capital market. The only portfolio of risky assets an investor will own under the CAPM assumptions is the market portfolio. However, each investor can construct his unique optimum portfolio by combining a market fund with a riskless asset (the two mutual fund theorem). The mutual fund theorem generally relates to the principle that investors follow a passive strategy of investing in a market index portfolio that is efficient. Bodie, et al. (1999). also posits that the portfolio selection can be separated into two components, namely the creation of mutual funds by professional managers, and the investor's allocation of his complete portfolio between the mutual fund and risk-free assets.

Cass and Stiglitz (1970), and Merton (1973) asserts that the two mutual fund theorem steins from the two-fund separation theorem, which states that investors who hold a number of risky assets and a riskless security should all hold the same mutual fund of

risky assets. An investor's risk aversion affects only the proportions of wealth that he invests in the risky mutual fund and the riskless security. The allocation of wealth across the different risky assets does not depend on the investor's preferences and thus all investors will hold a portfolio along a curve called the 'efficient frontier'. Furthermore, Gitman (1985) and Malkiel (1973) argued that, based on fundamental as well as technical analysis, it is impossible to outperform the market consistently on an efficient basis. He suggests that price movements are totally random and that investors should adopt a buy-and-hold strategy. However, this strategy ignores the risk associated with continuous investment in the market. There will always be a correlation between risk and return. The Dow Theory, for example, seeks to move into risk-free treasuries when a bear market is signaled, significantly reducing the risk associated with that portfolio.

2.2.3 Investment Portfolio Theory

Investment portfolio theories guide ihe way an individual investor or financial planner allocates money and other capital assets within an investing portfolio. Markowitz (1991) developed a theory of "portfolio choice," which allows investors to analyze risk relative to their expected return. Markowitz's theory is today known as the Modern Portfolio Theory, (MPT). The MPT is a theory of investment which attempts to maximize portfolio expected return for a given amount of portfolio risk, or equivalently minimize risk for a given level of expected return, by carefully choosing the proportions of various assets. A 'though the MPT is widely used in practice in the financial industry, in recent years, the sic assumptions have been made in its usage

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2.3 Measures of Profitability

There are many profitability measures that can be used. Previous studies had widely used return on assets (ROA): return on equity (ROF.) and return on invested capital (ROIC) also known as return on investment (ROI). Szymanski (1993) states that ROI and ROA can be viewed collectively While these measures of profitability are widely accepted as reliable and strong measures of profitability they have certain shortfalls, most commonly that they are based on accounting information and thus account for neither time value of money nor the investment risks faced by the shareholders.

Firth (1979) argues that prioi research into the profitability of mergers and acquisitions has centred on two (2) distinct types of methodology. One has examined the financial characteristics based on accounting data, of acquiring and acquired and/or merging and merged firms, before and after the merger. The other method has used an efficient market model where the impact on share prices is measured.

2.4.1 Return on Assets (ROA)

Rothschild (2006) states that perhaps the most critical financial goal of manufacturing firms is ROA. Investors rate the management performance of Chief Executive Officers (C EOs) and Chief Financial Officers (CTOs) of manufacturing firms largely by their ability to wring profits from the assets under their control. As such, ROA is perhaps the premier metric of quarterly and annual results. However, virtually no company is able to measure and report on ROA at transactional level to allow managers to know how ROA impacts on their day-to-day, deal-by-deal choices. The implications of this is that ROA is nothing more than high level after the effect report card on CFOs and CEOs reveal that

there is no link between the day to day operations and the key financial goals of manufacturing firms

Selling and Stickney (1989) state that the behaviour of ROA is affected by both operating leverage and product life-cycle phenomena and that firms with a high proportion of fixed cost usually experience greater variability in their ROAs than firms with lower levels of leverage. Selling and Stickney (1989) conclude that as products move through their life cycles, their ROA's should move in a north-easterly direction.

2.4.2 Return on Equity (ROE)

Return on Equity (ROE) is the best accounting ratio to measure shareholder performance (Ward and Price. 2006). Ward and Price (2006). Rothschild (2006) comment that the fact that ROE represents the end results of structured financial ratio analysis, also known as Du Pont analysis, it contributes to its popularity among analysts, financial managers and shareholders.

The components are profitability, asset turnover and financial leverage. From the equation it is clear that ROE can therefore be improved by improving profitability and, by using assets more efficiently as well as by increasing financial leverage. Over time it has become clear that improving the ROE may not necessarily improve shareholder value.

According to De Wet (2007) some of the limitations of ROE include: ROE docs not consider the timing of cash Hows and thus may overstate returns; Asset turnover may be affected by inflation; Earnings can be manipulated legally within the framework of

Generally Accepted Accounting Practice (GAAP). Thus earnings may not truly represent true earnings; ROE is calculated after the cost of debt before taking into account the cost of own capital, which is not a free resource. This may lead to some companies reporting profits while not creating any value or even destroying value.

2.4.3 Return on Investment (KOI)

Return on Investment (ROl) is sometimes referred to as return on invested capital (ROIC). "Return on assets or return on investment is a measure of profit per rand of assets invested in the firm" (Hirer, Ross. Westerfield and Jordan, 2008: p.65). It can thus be classified as an indicator of operating performance. Stead (1095) comments that return on capital which is the return on the assets less the general credit received by the company, is the essential prerequisite for profitability. Unless this is a healthy rate of return, the return on the equity investment cannot really be satisfactory whatever degree of debt gearing the company has.

Jacobson (1985) observed that higher ROl is earned by companies that are able to charge higher prices (most likely because of successfully differentiating their products) and the firms that operate at cost advantage. While this measure is widely accepted, there are a number of objections. These are mainly based on the following views: ; Fisher and Mc Ciowan (1983) assets in the balance sheet might not be inclusive depending on the accounting policy of the specific company, Jacobson (1985) argued that ROl docs not properly relate to the stream of profits of the investment that produced it; Stead (1995) argues that although calculating the rate of return of operating profit on the operating

assets is fine, if the capital invested in brand names, goodwill and the like are not counted in the operating assets the calculated return is unrealistic.

1A Empirical Review

Several researcher and scholars have looked at the area of market capitalization and profitability of organizations. Nainder and Reetu (2007) did a study on profitability analysis of public sector banks in India. They concluded that evaluation of banks in terms of profitability is very essential. In order to study the relative efficiency of banks and trends in profitability both Concentration Index and Exponential Growth Rate were used along with relevant ratios. As far as bank-wise statistical analysis was concerned in Credit Deposit Ratio IOBI Ltd., Bank of India, Corporation Bank and State Bank of Patiala took the first three positions respectively and the banks at the lower level were Punjab &. Sind Bank, Central Bank of India and United Bank of India. In Return On Asset ratio Andhra Bank, Oriental Bank of Commerce and Vijaya Bank take the first three positions respectively and the banks at the lower level arc Dena Bank, State Bank of Saurashta and Bank of India. In nutshell the overall profitability hac increased in PSBs in India during the period of study.

Oluwatoyin and Gbadebo (2009) studied the impact of share market capitalization on a company's performance using a case study in the Nigerian confectionary industry. Their study faces on the impact of companies' shares on their performance, using one of the largest confectionary companies in Nigeria as a case study. In other words, the article analyses the correlation between the sales of shares and the growth of the company. While it adopts the Ordinary Least Square (OLS) analytical technique, using the

company's annual data for 20 years, it recommends that the confectionary company should implement policies .hat would encourage increase in their profit after tax, dividends and turnover as these variables have positive and statistically strong significance on the changes in the company's performance and the value of its market capitalization. They concluded that when a company has a high turnover, it usually records a high profit after tax. Given a high profit after tax. if such a company declares a good bonus and dividends for its shareholders, this will also lead to an increase in its share price index. Investors will be attracted if a good dividend and bonus history is maintained and this will then increase the value of the market capitalization of the company. Consequently, more funds would be at the company's disposal for growth purposes and this will then lead to an increase in its turnover in an ever-flowing cycle. Their study recommended that the confectionary company should create policies that will encourage increases in its profit after tax and their dividends as these variables have been statistically proven to have strong significances on the changes in the company's performance and the value ot its market capitalization. Furthermore, it should improve on the policies relating to its dividends, market capitalization and turnover since they have some form of influence on each other, even though they are not statistically significant in the analysis.

Adebayo, Olanrewaju, and Oluwayinka (2011) studied liquidity management and commercial banks' profitability in Nigeria. The major aims of the study were to find empirical evidence of the degree to which effective liquidity management affected profitability in commercial banks and how commercial banks could enhance their liquidity and profitability positions. Considering the nature of the survey, quantitative

methods of research were applied. In attempt to achieve the objectives of the study, several findings were made through the analysis of both the structured and unstructured questionnaire on the management of banks and the financial reports of the sampled banks. Findings from the testing of this hypothesis indicate that there was significant relationship between liquidity and profitability. That means profitability in commercial banks was significantly influenced by liquidity and vice versa. The study concluded that for the success of operations and survival, commercial banks should not compromise efficient and effective liquidity management and that both illiquidity and excess liquidity are "financial diseases" that can easily erode the profit base of a bank as they affect bank's attempt to attain high profitability-level.

Ilaugen and Nardin (1991) did a study on the efficient market inefficiency of capitalization-weighted stock portfolios. They concluded that Market-matching to domestic cap-weighted stock indexes was likely to be a suboptimal investment strategy when investors disagree about risk and expected return, when short-selling was restricted, when investment income was taxed, when some investment alternatives were not included in the target index, or when foreign investors were in the domestic capital market. In the presence of these factors, there would be alternatives to cap-weighted portfolios that had the same expected return but lower volatility. This will be true even in the context of an efficient market where all investors take efficient mean-variance positions within the context of their individual tax exposure and within the context of the constraints placed on their portfolio weights, including the required investment in their human capital.

Kabajeh, Mukhled and Dahmash (2012) did a study on the Relationship between the ROA. ROE and ROI Ratios with Jordanian Insurance Public Companies Market Share

Prices. I'heir study examined the relationship between the ROA, ROE and ROI ratios together and separately with Jordanian insurance public companies share prices during the period (2002-2007). Four regression models were used to test the hypotheses of the study. Based on the results of the study, the pooled analysis of the three ratios of ROA, ROE and ROI together showed a strong and positive relationship with share prices, and a strong explanatory power; the separated pooled analysis showed a positive but low relationship between each of ROA and ROI ratios with market share prices of Jordanian insurance public companies. However, the separated pooled analysis showed no relationship between the ROE ratio with market share prices of Jordanian insurance public companies.

Dastgcrdi (2012) studied profitability levels and relation between earnings, equity value and equity book value The statistical results indicate that all hypotheses are confirmed but the coefficients indicate that the relationship between earnings and the current value per share, respectively, in companies with high profitability, strong, medium and low levels of profitability. In other words the level of profitability of companies has effect on relation between earnings and market value per share. In other word one can say companies' profitability is the criteria of companies' ability in value creation. In fact the higher profitability level of company leads to more power to create value. This ability is lesser in low- profit and medium profit companies

2.5 Chapter Summary

This chapter has discussed literature related to market capitalization and profitability of commercial banks. It stalled by looking at the theoretical review where it reviewed three theories including Capital Asset pricing model, the theory of investment and investment portfolio theory The chapter then reviewed the measures of bank profitability where it

brought to the fore three main measures of bank profitability including: Return of Assets; Return on Equity and Earnings per Share. The chapter also discussed the several studies that have been done on the subject of market capitalization and profitability of commercial banks. Oluwatoyin and Gbadebo (2009) studied the impact of share market capitalization 0ll a company's performance using a case study in the Nigerian confectionary industry. Nainder and Reetu (2007) did a study on profitability analysis of public sector banks in India. Adebayo. Olanrewaju, and Oluwayinka (2011) studied liquidity management and commercial banks[1] profitability in Nigeria. Haugen and Nardin (190|) did a study on the efficient market inefficiency of capitalization-weighted stock portfolios. Kabajell, Mukhled and Dahmash 2012 did a study 0ll the Relationship between the ROA, ROE and ROl Ratios with Jordanian Insurance Public Companies Market Share Prices.

Locally. Kithinji (2010) did a study on credit risk management and profitability of commercial banks in Kenya; Mwalukumbi (2011) did a study on the impact of mergers and acquisitions on profitability of commercial banks in Kenya; and Bosire (2006) did a survey of the impact of operational losses on profitability of commercial banks in Kenya. From the above discussions, it is evident that further study needs to be done to establish the relationship between market capitalization and the profitability of commercial banks in Kenya.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents various stages and phases that will be followed in completing the study. This identifies the research design, the target population, procedures and techniques that were used in the collection, processing and analysis of data. Specifically the following subsections are included; research design, target population, sampling design, data collection instruments, data collection procedures and finally data analysis.

3.2 Research Design

This used a cause and effect research design. Cause and effect studies are concerned with learning why, that is, how one variable produces changes in another (Cooper & Schindler, 2003). This study sought to establish the relationships among variables, for instance, how the market capitalization affect profitability of commercial banks listed at the NSE.

3.3 Population and Sample

Population refers to an entire group of individual's events or objects having a common observable characteristic. In other words, population is the aggregate of all that conforms to a given specification (Mugenda and Mugenda, 2003). Following the ease of data accessibility on the share prices, the study only included commercial banks listed at the Nairobi Securities Exchange. The population of this study comprised of 10 commercial Banks quoted at the NSH because of the readily available data on share prices. Other

banks not Listed at the NSE were excluded from the study because it would have been difficult to determine the share prices of banks not listed to ascertain their market capitalization. This is because it was easier to determine the market value of the shares listed at NSE. Following the small population, the study included all the ten banks in the analysis so as to give a general over view.

3.4   Data Collection

The study used secondary sources of data from published audited annual reports of accounts for the commercial Banks submitted to the NSE. The data was collected from the NSE handbooks for the period ranging from 2007 to 2011. The period was selected upon because it is a representative of various economic conditions in Kenya and represents the most recent happenings in the lCenya economy in the banking sector.

3.6 Data Analysis

The study used Statistical Package for Social Sciences Version 21.0 to aid in data analysis. The paired t-test, a non-parametric test of differences developed by Sir Williams Cosset (Kothari, 1984; Mugenda & Mugenda, 1999) will be used in this study as a test of significance. The analysis will be at 0.05 level of significance.

In order to determine the relationship between market capitalization and profitability of commercial banks in Kenya, the researcher conducted a correlation analysis using the following model

$$Y - Bo \, I \, B, X. + e$$

Where Y = Market capitalization
X| - Price earnings ratio
8 - Error term

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents analysis and findings of the study as set out in the research objective and research methodology. The study findings are presented the relationship between market capitalization and profitability of commercial banks listed at the NSE. The data was gathered exclusively from the secondary data from the archives of the Nairobi Securities Exchange. Data was gathered on the two main variables including the market capitalization and price earnings ratio for the commercial banks listed at the NSE.

4.2 Price Earnings Ratio

The researcher computed monthly price earnings ratios for all the commercial banks listed at the Nairobi Securities Exchange for the study period starting 2007 January to 2011 December (See appendix 1). From the monthly Price Earnings ratio computed, the researcher calculated average monthly for each commercial banks for ease of data presentation. The findings were as presented in the table 4.1 below.

Table 4.1: Price Earnings Ratio

Name of the Bank	Yr. 2007	Yr. 2008	Yr. 2009	Yr. 2010	Yr. 2011
Barclays Bank	22.53	17.84	11.08	13.27	8.11
CFCStanbic Bank	22.78	22.99	21.34	18.89	7.33
Diamond Trust	21.32	20.29	14.79	13.23	11.18
Equity Bank Ltd	44.26	35.90	11.21	19.40	13.00
Housing Finance	35.97	42.45	14.62	24.31	12.86
K.C.B Bank	19.83	20.23	11.29	11.88	9.42
National Bank	17.76	11.51	5.70	6.63	7.04
National Industrial Credit	21.05	19.96	10.04	12.36	7.69
Standard Chartered Bank	19.31	16.34	12.10	14.32	12.24
The Co-operative Bank of Kenya Ltd	0.00	19.63	12.69	17.78	13.57

Source: (Research data, 2012 ;

From the data findings shown above, the Price earnings ratio for Barclays bank of Kenya was 22.53% which reduced to 17.84% in 2008. 11.08% in 2009 and then increased slightly to 13.27% in the year 2010 before recording another drop in the year 2011 to 8.11%. For CFC Bank, the P/E ratio started at 22.78% in 2007 which then increased marginally to 22.99% in the year 2008 before reducing to 21.34% in the year 2009. The downward trend set in the year 2010 where it was 18.89% before recording a further decrease to 7.33%. For Diamong Trust bank, the P/E was 21.32% in the year 2007. and then reduced continuously throughout the study period to settle at 7.33% by the year 2011. For Equity Bank Limited, the P/E ratio was 44.26% in 2007 before reducing

hugely to 11.21% then reducing to close the study period at 13%. The same trends continued for the period under study as shown in the table 4.1 above.

4.3 Market Capitalization

The study computed market capitalization for each commercial bank by multiplying the closing monthly share price with the number of outstanding shares (See Appendix 2). From the monthly market capitalization which was too voluminous, the researcher computed Annual monthly averages for each commercial bank throughout the study period for this analysis. The average annual market capitalization for each commercial bank was computed in billion Kenya Shillings as shown in the table 4.2 below:

Table 4.2: Market Capitalization for the Commercial banks

Name of the Commercial Bank	Yr.	Yr.	Yr.	Yr.	Yr.
	2007	2008	2009	2010	2011
Barclays Bank	100.43	86.45	61.64	80.54	74.05
CFCStanbic Bank	19.41	15.61	0.71	18.67	14.30
Diamond Trust	12.23	15.62	14.70	16.12	19.21
Equity Bank l td	35.23	66.95	10.93	81.46	78.11
Housing Finance	3.90	18.03	54.51	5.21	24.54
K.C.B Bank	50.86	56.00	44.67	52.77	37.40
National Bank	9.10	10.15	6.95	10.27	8.13
National Industrial Credit	10.70	15.00	10.54	14.39	13.34
Standard Chartered Bank	51.74	52.78	39.10	62.55	52.76
The Co-operative Bank of Kenya Ltd	0.00	31.11	28.55	51.38	52.97

Source: (Research Data, 2012)

From the research findings shown in the table 4.2 above, the study showed that market capitalization of the commercial fluctuated a lot during the study period. For Barcalys

Bank ol Kenya, the market capitalization started at 100.43 then dropped to 86.45 in the financial year 2008 before dropping further to 61.64 in 2009. In 2010, the Bank reported an increase in the market capitalization fefore reducing again in the year 2011 to stand at 74.05. For CFCStanbic bank, the market capitalization was 15.61 in the year of the merger then fell to 0.71 in 2009. In 2010, the market capitalization for the bank was 18.67 which later decreased to stand at 14.30 in the financial year 2011. The other commercial Banks also recorded mixed trends in the study period as indicated in the table 4.2 above.

4.4 Correlation Analysis

In order to determine the relationship between market capitalization and profitability of commercial banks listed at the NSE, the researcher conducted a correlation analysis. This helped the researcher be able to establish the extent to which the profitability of commercial banks affected their market capitalization. The researcher used the statistical package for social sciences (SPSS) version 21 in the computation of the measurements of the multiple regressions for the study. The findings were as indicated in the table 4.3 below:

Table 4.3: Correlation Analysis

		Market Capitalization
Market Capitalization	Pearson Correlation	1
	Sig. (2-tailed)	
	N	50
Price Earnings ratio	Pearson Correlation	.057
	Sig. (2-tailed)	.694
	N	50

Source: (Research Data, 2012)

From the correlation analysis above, the study shows that there is a weak positive insignificant correlation between market capitalization and profitability of commercial banks listed at the NSE in Kenya. This is because the Pearson correlation coefficient is +0.057 which is very low with the significance two tailed test figure being 0.694 which is greater than 0.05.

CHAPTER FIVE: SUMMARY, CONCLUSIONS ANL) RECOMMENDATIONS

5.1 Introduction

The chapter presents a summary of the results on the relationship between market capitalization and profitability of commercial banks listed at the NSE. Based on the findings in chapter four, the study gives recommendations on the relationship between market capitalization and profitability of commercial banks in Kenya. The study presents the summary of the findings after which it draws the policy recommendations. The recommendations are presented also based on the objective of the study after which recommendations for further studies are drawn.

5.2 Summary

The study aimed at establishing whether there was a relationship between market capitalization and profitability of commercial banks listed at the NSE. From the financial statistics discussed in chapter four above, the study established that the commercial banks experienced various changes during the study period which had some influence on the market capitalization. For example, there were other events like the post election violence which affected the performance trading activities of the equities at the NSE. In addition, there was a merger between CFC Bank and Stanbic Bank to form CFCStanbic bank.. All this communicated some information to the investors which informed their investment decisions thus affecting the price of shares and market capitalization. In addition there was a transaction between Standard chartered bank and Barclays Bank of Kenya on the custodial services. This saw Standard Chartered purchase the custodial services of

Barclays Bank thus leading to unexpected price changes. In addition, the industry witnessed various changes and different forms of earnings which greatly affected the trading of shares. For example, during the month of dividend payment and bonus issue or rights issue, the price of shares rose significantly thus affecting the market capitalization after which the prices fell after the bonus, rights or dividends were paid.

From the correlation analysis indicated in chapter four, the study established that there was a weak positive relationship between market capitalization and the profitability of commercial banks. This is because of the information content of the profits to the investors. With huge profitability registered by commercial banks in the past three years, investors stayed optimistic of even better performance of the sector hence leading to higher prices for their shares.

5.3 Conclusions

The study concludes based on the data presentations in chapter four and the summary of the findings above that market capitalization affects the profitability of commercial banks in Kenya and .it the same lime, the profitability also affects the market capitalization. I'll is is based on the information content of each variable as investors use the information passed on by the variable in judging the likely future performance of the bank.

The study also indicates that although there is a relationship, it is weak and may not be the sole determinant of the changes witnessed in each variable from time to time. Each variable is influenced by other variables beyond those discussed in this study.

5.3 Policy Recommendation

From the findings presented in chapter four and summary above, this study recommends that commercial banks make their decisions carefully so as to send the right signals to the investors as regards their future prospects. This will help in reducing the chances of miscommunication which can distort the performance of the Bank at the NSE.

5.4 Limitations of the Study

A limitation was regarded as any factor that was present and contributed to the researcher getting either inadequate information or if otherwise the response given would have been totally different from what the researcher expected. For this study, the data used was secondary data generated for other purposes hence this may have distorted the findings in this study.

Another limitation ol the study include the fact that the change of government rules and regulations governing the operation of commercial banks from time to time. For example, the changing of the levels of reserves kept with the central banks may affect the ability of commercial banks to lend hence their profitability. In turn, this may also affect the market capitalization of commercial banks.

Another challenge that faced the study included many changes in the macroeconomic variables during the study period. For example, during this period, the economy experience high levels of inflation which forced the central bank to increase the lending rates through Central bank rate thus affecting the operations of commercial banks.

5.5 Recommendation for Further Studies

This study concentrated on the relationship between market capitalization and profitability of commercial banks listed at the NSE. This study therefore recommends that another study be done to establish the impact of market capitalization on the whole NSE performance. This will help enable the generalization of findings to the whole exchange.

In addition, this study recommends that another study seeking to establish the influence of inflation on the performance of NSF. should be carried out following the high inflationary rates recorded in the recent past in Kenya.

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APPENDICES

Appendix 1: List of Listed commercial Banl s in Kenya as at 31st December 2011

1. African Banking Corporation Ltd.
2. Bank of Africa Kenya Ltd.
3. Bank of Baroda (K) Ltd.
4. Bank of India
5. Barclays Bank of Kenya Ltd.
6. CFC Stanbic Bank Ltd.
7. Charterhouse Bank Ltd
8. Chase Bank (K) Ltd.
9. Commercial Bank of Africa Ltd.
10. Consolidated Bank of Kenya Ltd.
1 L Co-operative Bank of Kenya Ltd.
12. Credit Bank Ltd
13. Citibank N.A.
14. Development Bank of Kenya Ltd.
15. Diamond Trust Bank Kenya Ltd.
16. Dubai Bank Kenya Ltd.
17. Ecobank Kenya Ltd
18. Equatorial Commercial Bank Ltd.
19. Equity Bank Ltd
20. Family Bank Limited
21. Fidelity Commercial Bank Ltd
22. Fina Bank Ltd
23. First community Bank Limited
24. Giro Commercial Bank Ltd.
25. Guardian Bank Ltd
26. Gulf African Bank Limited
27. Habib Bank A.G Zurich
28. Habib Bank Ltd.
29. Imperial Bank Ltd
30. 1 & M Bank Ltd
31. Jamii Bora Bank Limited.
32. Kenya Commercial Bank Ltd
33. K-Rcp Bank Ltd
34. Middle East Bank(K) Ltd
35. National Bank of Kenya Ltd
36. NIC Bank Ltd
37. Oriental Commercial Bank Ltd
38. Paramount Universal Bank Ltd
39. Prime Bank Ltd
40. Standard Chartered Bank Kenya Ltd
41. frans-National Bank Ltd
42. UBA Kenya Bank Limited
43. Victoria Commercial Bank Ltd
44. Housing Finance Ltd

Appendix II: List of Listed commercial Banks in Kenya as at 31st December 2011

1. Barclays Bank Ltd,
2. CFCStanbic Holdings Ltd,
3. Diamond Trust Bank Kenya Ltd.
4. Kenya Commercial Bank Ltd,
5. National Bank of Kenya Ltd.
6. NIC Bank Ltd,
7. Standard Chartered Bank Ltd,
8. Equity Bank Ltd, and
9. Co-operative Bank of Kenya Ltd.
10. Housing Finance Limited

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