THE RELATIONSHIP BETWEEN ACCOUNTING VALUE AND ECONOMIC VALUE AMONG COMMERCIAL BANKS IN KENYA

BY

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DECLARATION

I declare that this research project is my original work and has not been submitted for any degree qualification of this or any other university.

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D61/63499/2010

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

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Supervisor: DR. SIFUNJO KISAKA

DEDICATION

This project is dedicated to my family for support and encouragement and to all the commercial banks in Kenya.

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ABSTRACT

Accounting information to equity investors has led to a large body of literature studying the relationship between accounting information and the stock market. In recent years, the performance evaluation criteria is more based on accounting income while accounting income is suffering from clear shortcomings and weakness because financial experts believe that accounting income is subjective and does not reflect true value of a company. The objective of this study was to determine the relationship between accounting value and economic value among commercial banks in Kenya.

The study used survey research design. The population of this research consisted of all the 43 commercial banks in Kenya, from which a sample of 30 banks was utilized. The researcher utilized secondary sources to collect the data. The sources were obtained from NSE and CBK sites. Secondary sources included financial statements for a period of 5 years (2008-2012) and including internet resources, and publications. The study utilized a regression model to predict the relationship between accounting value and economic value.

The findings revealed that there is a significant positive relationship between Return on Equity and Economic Value. A significant positive relationship was found between Return on Asset and Economic Value. In addition, the findings indicated a significant positive relationship between Earnings per share and Economic Value. In conclusion, in order to achieve a proper measure of economic value, Kenyan commercial banks need to integrate emphasis on Return on Equity, Return on Asset and Earnings per share as the measures for accounting. The study recommends that to achieve a proper measure of economic value, Kenyan commercial banks need to integrate emphasis on Return on Equity, Return on Asset and Earnings per share as the measures for accounting.

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LIST OF ABBREVIATIONS/ ACRONYMS

CSR:	Clean Surplus Relation
EBITDA:	Earnings before Interest, Taxes, Depreciation and Amortization
EPS:	Earnings per Share
EV:	Economic Value
MVA:	Market value added
NSE:	Nairobi Securities Exchange
ROA:	Return on Assets
ROE:	Return on Equity
ROI:	Return on Investment
VA:	Value Added

CHAPTER ONE
INTRODUCTION

1.1 Background of the study

According to the International Accounting Standards Board (1989), the objective of financial statements is to provide information about the financial position and performance of an enterprise that is useful to an array of stakeholders in making economic decisions. Investors are among the most important users of such information since it is concluded that if financial statements meet investors' needs, it will also meet most of the needs of other users (International Accounting Standards Board, 1989). High quality accounting information is a necessity for well functioning capital markets and the economy as a whole. Hence, it should be of considerable importance to investors. A basic attribute of accounting quality is value relevance that is the relevance of accounting information for equity valuation. According to Francis et al. (2004 as referenced in Hellström, 2005), value relevance seems to be more important than either timeliness or conservatism

With the appearance of societies and business growth, the appearance of large and multinational companies, the creation of capital market, buying and selling shares, shareholders and the investment issue have taken on a new colour. Besides, the issues of resource optimal allocation and the separation of ownership from management and the representation issue were established and shaped by. According to the issue, this question arises for shareholders: to what extent do the directors consider the interest of

shareholders? (Maury, 2006). In other words, how to measure and assess the management performance is the issue under question.

To answer this question, different methods and criteria have been proposed, which have been divided into two categories including accounting criteria that are mainly based on accounting profit such as ROE, ROA, EPS, P/E, etc and economic criteria which includes economic value added (EV) and market value added (MVA). In these years, the economists' objection to accounting is that whatever accounting is reported as profit is a result of assumptions that do not mainly reflect reality. In terms of economic, benefit means to increase the wealth or wealth difference between the beginning and end of every period (Healy, 1988).

In recent years, financial professionals believe in weakness and imperfection of accounting criteria of performance evaluation due to their use of accounting profit. Because they believe accounting profit is influenced by output price calculation of cash, and also accounting profit experiences some changes with the choice of accounting methods by management. According to accounting profit objections, economic value added (EV) has been recommended for performance criteria which have focused on production actual efficiency and economic profit (Taghavi, 2006).

1.1.1 Accounting Value

According to the International Accounting Standards Board (1989), the objective of financial statements is to provide information about the financial position and performance of an enterprise that is useful to an array of stakeholders in making economic decisions. Investors are among the most important users of such information

since it is concluded that if financial statements meet investors' needs, it will also meet most of the needs of other users. (International Accounting Standards Board, 1989) High quality accounting information is a necessity for well functioning capital markets and the economy as a whole. Hence, it should be of considerable importance to investors. A basic attribute of accounting quality is value relevance that is the relevance of accounting information for equity valuation. According to Francis et al (2004), value relevance seems to be more important than either timeliness or conservatism.

According to Nilsson (2003), the importance of accounting information to equity investors has led to a large body of literature studying the relationship between accounting information and the stock market. This relationship is one that intuitively exists since the value of a firm is strongly related to its financial status and performance. Valuation models used by equity investors often include both the the book value of equity and earnings (see, e.g., Ohlson, 1995).

The research field of value relevance is a discipline under market based accounting research (MBAR) and has grown rapidly since the early research in the 1960's. The larger field of MBAR now contributes to the major journals with more than one thousand published papers which make it one of the most frequently researched areas in accounting (Kothari, 2001 as referenced in Brimble, 2003)

Francis and Schipper (1999) have identified four approaches to studying the value relevance of accounting information. They are: the fundamental analysis view, the prediction view, the information view, and the measurement view of value relevance. This thesis adopts the measurement view of value relevance. Following is a short

description of this approach; all four approaches are described in the theoretical framework. Under the measurement view of value relevance, accounting figures are value relevant if they capture or summarize information that affects stock prices (F rancis and Schipper, 1999).

According to this perspective on value relevance, financial statements do not have to be used by investors per se; it is merely their ability to summarize information that has affected stock prices that make them relevant in equity it valuation (Nilsson, 2003). Earnings, for example, summarize many important economic events that have taken place during the year, as well as decisions made by management. Hence, earnings serve as an aggregate measure of company performance

1.1.2 Economic Value

Economic Value Added or EVA is an estimate of true economic profit after making corrective adjustments to Generally Accepted Accounting Principles, GAAP accounting, including deducting the opportunity cost of equity capital. EVA, or Economic Value Added, is such a metric that seeks to improve and measure efficiency and "value creation" (Shaked & Leroy, 1997).

G. Bennett Stewart III., originator of EVA and author of one of the largest works on the subject (a source heavily drawn on for this paper), naturally believes that accounting earnings and dividends (and EPS) are irrelevant concerning stocks and their valuation (Stewart, p. 3, 43). He says that "Management should focus on maximizing a measure called Economic Value Added (EVA)…which is the only measure to tie directly to intrinsic market value" and that EVA should replace EPS. The difference between the

two measures is reflected in the two schools of thought that they represent. Another expert states that "accounting focuses on the residual income available for residual claims, before they receive any returns" (Dillon & Owners, 1997). It involves itself with what has already happened in the firm's financial history and is to some degree irrelevant for the purposes of judging financial progress for the present period (Dillon & Owners). This takes a different approach to the present and forward-looking views of "the economic concept of income" that judges financial achievement for investors and takes into consideration future outlays of funds; EVA attempts to reconcile these two views somewhat but is mostly aligned with the second position.

EVA gleans only the pertinent data derived from relevant financial statements; as Stewart says, "accounting entries that do not affect cash do not affect value" since cash and value (again, here the term value is referring to the increase in a company's worth) are major factors of successful businesses. The EVA equation helps managers and decision makers to discern which projects will be beneficial to the firm or not, by showing which ones will add to the value of the firm. All projects that do not increase the firm's worth are not used, regardless of the effect that they have on accounting figures (or earnings), such as EPS. Those projects that improve value are conditionally accepted and evaluated further. This is the simple concept of only doing what is good for the firm's financial health, and not doing what would financially hurt the firm.

1.1.3 Accounting Value and Economic value

Market based economic measures are any measures for which the value created can be measured directly for any period as the sum of the dividends paid to shareholders in the

measurement period plus or minus the change in the market value of the stock (Merchant & van der Stede, 2011). The advantages of this are that they are understandable and also cost-effective as the data is widely available. In a study conducted by Richard Lambert and David Larcker (Lambert & Larcker, 1987) it was found that firms will place more weight on market performance when: The variance of the accounting measure of performance is high relative to the variance of the market measure of performance; the firm is experiencing high growth rates in assets and sales and; the value of the manager's personal holdings of his firm's stock is low

Accounting measures of performance can be broadly split into two groups; residual measures including net income, operating profit, EBITDA etc. and ratio measures which include ROI, ROE, ROA or risk-adjusted return on capital. The main benefit of using such measures is that they can be measured on a fairly timely and objective basis. Also important to mention is that using these measures keeps management in line with the organizational goal of profit maximization. However, these also have several disadvantages which EV addresses. Accounting systems are transactions oriented and hence focus on the past, and do not reflect any non-financial transactions that have taken place. The profit accounted for is then highly dependent on the choice of measurement methods, and can thus be slightly subjective. A final problem lies with the investment myopia which results from tying in manager's bonuses with the profits that company makes. This can result in managers discarding potentially positively large NPV projects for fear of the large investment they will have to make which then will affect their bonuses. Using EV as a performance measure should "mitigate this problem as it

involves the capitalization of expenditures managers might try to cut if they were pressured for profits" (Merchant & van der Stede, Management Control Systems, 2011)

Carrying on from accounting measures the focus will now be on one specific ratio measure; Return on Investment. It provides a way of measuring returns in percentage terms which virtually all managers understand (Way, 2012). Unfortunately, this measure is also prone to investment myopia and can create incentives for managers to lease assets as opposed to buying them. Below is the formula for ROI to aide in the explanation:

$$\text{ROI} = \frac{\text{Net Operating Income}}{\text{Average Operating Assets}}$$

A new investment could reduce the ROI of the project as the value of the average operating assets increases. A manager who is evaluated based on ROI will reject any project whose rate of return is below the division's current ROI, even if the investment would be a good one for the company as a whole (Friedlb & Plewa, 1996). EV, as well as Residual Income, would solve this matter as consideration is given to whether or not the net operating income resulting from the project is above the minimum required rate of return. If this is the case then it should increase the residual income of the company overall and should hence be considered a good investment.

The last measure to discuss is the residual income performance measure. In theory, EV is merely an extension of the residual income performance measure, adapting it to suit the various adjustments companies require to make the income statement reflect the company's position in the best possible way. Residual income is calculated by subtracting from profit a capital charge for the net assets tied up in the investment

centre. The capital is charged at a rate equal to the weighted average corporate cost of capital, this gives all investment centre managers an identical incentive to invest. A criticism of residual income is that it, too, can result in myopic behavior. "There is a danger that the failure of the accounting system to reflect economic reality might cause the business to be run without proper regard to the long-term" (O'Hanlon & Peasnell, 1998). EV was tailor-made to address this problem, as the capitalization of expenditures should mitigate the myopia issue as it involves the capitalization of expenditures managers might try to cut if they were pressured for profits (Merchant & van der Stede, Management Control Systems, 2011).

1.1.4 Commercial Banks in Kenya

The banking sector in Kenya comprises of, the Central Bank of Kenya, as the regulatory authority, Commercial Banks, Non-Bank Financial Institutions, Forex Bureaus and Deposit Taking Microfinance Institutions as the regulated entities. As at 31st December 2012, the banking sector was composed of 46 institutions, 44 of which were commercial banks and 2 mortgage finance companies. Commercial Banks and Mortgage Finance Companies are licensed and regulated under the Banking Act, Cap 488 and Prudential Guidelines issued there under. Deposit Taking Microfinance Institutions on the other hand are licensed and regulated under the Microfinance Act and Regulations issued there under. Foreign Exchange Bureaus are licensed and regulated under the Central Bank of Kenya Act, Cap 491 and Foreign Exchange Bureau Guidelines issued there under. Out of the 46 institutions, 33 were locally owned and 13 were foreign owned. The locally owned financial institutions comprised 3 banks with public shareholding, 28 privately owned commercial banks and 2 mortgage finance companies (MFCs).

Players in this sector have experienced increased competition over the last few years resulting from increased innovations among the players and new entrants into the market. The dynamism in the Kenyan banking sector is expected to continue as banks seek new opportunities in the face of an anticipated subdued risk appetite.

1.2 Statement of the Problem

Since investors and decision makers have had a fundamental role in the capital market, they need to know the true value of company and shares while deciding to purchase stock. However, in recent years, the performance evaluation criteria is more based on accounting income while accounting income is suffering from clear shortcomings and weakness because financial experts believe that accounting income do not reflect true value of a company (Merchant & Sandino 2009). Economists believe that the company's ultimate goal should be to maximize the present value of future shareholder wealth. Thus, EV or economic value added is a new analytical tool that can be used to create company wealth and selection process that should be far from the shortcomings of the accounting income and is based on economic profit. EV was adopted early by the society because it was regarded as an innovative technique to find the true value of a company unlike traditional accounting criteria such as ROA, ROE, EPS and P/E which consider only the cost of debt EV, direct costs and indirect debt of shareholders rights, i. e. accounting criteria which does not assume implicitly the ordinary shareholders cost free of charge (Merchant & van der Stede 2011).

Now, given the current realities of the advantages of using EV and traditional performance criteria based on accounting income, this study examines the following issues including the relationship between criteria of earning per share (EPS), return on

equity (ROE), rate of return on assets (ROA), earnings per share ratio (P/E) and market value (MV) and economic value (EV) in the listed banks in NSE in Kenya.

A suitable performance measure should evaluate how the actions of upper management affect the firm's value (Sharma, 2010). Irala (2005) concluded in his study that EV is considered a better measure of performance than the traditional measures such as Return on Equity (ROE), Earnings per Share (EPS), Return on Investment (ROI), or the profit measures. EV used as a performance measure stimulates managers to employ a firm's assets more productively and it assists in reducing differences in the interests of the managers and shareholders (Irala, 2005). Further research has concluded that firms that adopt residual income based incentives plans exhibit increases in income (Biddle, Bowen, & Wallace, 1998). This could lead to one concluding that EV based incentive plans could prove effective in directing and motivating managers for shareholders wealth creation. The fundamental assumption of shareholder value is that a business is worth the net present value of its future cash flows over a defined timeframe, discounted by the cost of capital appropriate for the business (Clarke, 2000). According to Petty and Martin (2001) shareholder value is managed by importantly identifying what drives shareholders value in the capital market. According to Dalborg (1999), shareholders' value creation can be achieved through excellence in operations, practicing right financial structure, being focused, and credible earning growth. A banking firm will earn economic profit if the bank total earning exceeds its opportunity cost of equity employed.

The use of economic profit metrics instead of traditional accounting application ensure that management consider banking business lines cost of equity in their decision making-process and allocate equity capital profitably and in direction of shareholders' interest as whilst their managerial incentive are also monitored based on shareholders wealth maximisation (Ralph C. Kimball, 1998). Based on this review, the study sought to analyze the relationship between accounting value and economic value and guided by the following research question; what is the relationship between accounting value and economic value?

1.3 Objective of the Study

The objective of this study was to determine the relationship between accounting value and economic value among commercial banks in Kenya

1.3.1 Specific Objectives

i. To establish the effect of Return on Equity on economic value among commercial banks in Kenya

ii. To examine the effect of Return on Assets on economic value among commercial banks in Kenya

iii. To find out the influence of Earnings Per Share on economic value among commercial banks in Kenya

1.4 Importance of the Study

Nowadays, in countries with low economic growth, it is necessary for planners to consider the efficient use of resources. The study encourages the current investors who require integration techniques and new methods that reduce the risk for investors. It is ideal for investors to set a real basis for measuring operational status and evaluating the

performance. It offers the management with sufficient information to assist managing unnecessary costs occurs as well as financial resources. The management will devise new ways in addition to the models and procedures for evaluating the accounting and economic performance of the companies. This evaluation assists to compensate for the shortcomings and faults of performance criteria to help manage resources in the right direction.

Economic value added can be regarded as one of the new technique that reflect the true value of companies and does not include the drawbacks of the previous performance evaluating criteria based on accounting income. Therefore the study provides a standard value of listed banks and thus depicting the financial management status to enhance shareholders wealth. To the researchers, this study helps to understand the concepts of economic value on financial performance and develop a deep insight on how to apply to their responsibility area and also to get extensive approaches to the concept of economic value addition. It also makes some statistical contribution to the previous studies or knowledge gaps.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter presents literature review including theoretical and empirical review. Section 2.2 provides the theoretical review, section 2.3, the empirical literature, section 2.4; Review of Local Research while 2.5 presents the summary.

2.2 Theoretical Literature

2.2.1 Theory of Economic Value

According to the theory of economic value, the value of an asset for its owner is the discounted value of all future cash flows which the owner expects to receive as a consequence of the possession and decisions regarding the asset's use (Runsten, 1998, p. 3). The assumption behind the measurement view of value relevance is that the information disclosed in financial statements relates to firm value by capturing information that affects stock prices (Francis and Schipper, 1999). Firm value is thus defined as the total value of a company's stock and accounting figures are value relevant if they can capture or summarize information that affects the value of a company's stock.

However, firms and other assets are valued differently depending on the context. Runsten (1998) defines three value concepts: economic value, market value, and accounting value. Economic value refers to the notion that the value of any asset equals the future cash flows that can be gained from the asset. This value concept is consistent

with the discounted cash flow model, which states that the value of an asset equals all future cash flows discounted to present value.

Market value is the value of a firm on the stock market and is based on trade and investors' consensus beliefs about firm value (Barth, 2000 as referenced in Brimble, 2003). According to Runsten (1998), information is often assumed to be the basis on which investors' beliefs and expectations about market value are formed. He argues that observed stock prices could be viewed as a measure of the market's valuation of the claim on companies' future value creation. He concludes that stock prices thus serve as indicators of the market's expectations of the future success of the firm.

Accounting value refers to the book value of equity found in the balance sheet. While information is often assumed to be the basis on which investors' beliefs and expectations about market value are formed, accounting value is the result of a measurement procedure that corresponds to accounting regulations and law. Accounting generates a description of the firm in an attempt to measure and describe its financial position and performance (Runsten, 1998)

According to Runsten (1998), a close correspondence between equity book value and market value can be achieved if accounting information conveys a good description of the firm's value. He argues that all three value concepts could even coincide, provided a strong set of assumptions. In practice, however, this is not very realistic. Rather than separate systems generating identical descriptions, one type of description may in practice facilitate the functioning of another. "The output of the accounting procedure may, for example, be used as input in the pricing procedure" (Runsten, 1998, p. 6).

The various concepts of value have implications for accounting, which objective it is to provide information about the financial position and performance of companies (IASB, 1989), as well as for the value relevance of accounting information. If accounting provides a poor description of the firm, the value relevance of such information will likely be low.

In developing his model, Ohlson (1995) assumed certain key elements. First, he assumed the market value of firms equals the present value of future dividends. Second, accounting data was assumed to follow a 'clean surplus relation' (CSR) that enables the traditional dividend discount model to be transformed into a fundamental valuation model based upon accounting book values and earnings . Third, the behaviour of abnormal earnings was assumed to follow a stationary first order autoregressive time-series model. Specifically, Ohlson's model implied that share price equals current book value per share plus the present value of expected future abnormal earnings. Lastly, if economic theory supporting an observable relationship between market and book values in aggregate samples has any weight, the same relationship should be evident in time series data of the same length at the firm level.

2.2.2 Measures of economic and Accounting value

The relationship and measures between accounting information and economic value received renewed interest lately (Nilsson, 2003). The accounting information captures or summarizes events that have affected the firm over the reporting period (Easton, 1998 as referenced in Nilsson, 2003).

Under the measurement view of value relevance, accounting information is value relevant if it captures or summarizes information that in turn affects stock prices (Francis and Schipper, 1999). Nilsson (2003, p. 5) states that "if an accounting item has a reliable association with a market metric, then the accounting metric captures or aggregates the information that is used by market participants to determine prices or returns". This is the definition of value relevance under the measurement view.

According to Nilsson (2003), both price and returns can be used as market metrics under the measurement approach, unlike in information content studies. He argues that researchers that use price as the market metric study the validity of accounting information as summary measures of the events that have affected firms up to a specific date. Return-based studies, on the other hand, study the ability of accounting information to capture events that have affected the firm over the return interval. This study is a return based study that uses returns as the market metric.

Another difference between the information view and the measurement view of value relevance is that the timeliness of new information is less important. The information view does not presume that investors actually use accounting information in their valuations; it is good enough if it summarizes the information and events that have affected stock prices during the return window. Hence, accounting information does not have to be decision relevant if more timely information exists (Nilsson, 2003). One last distinction between information content studies and the measurement view of value relevance is the research methods applied. Nilsson (2003, p. 7) states that: "information

content studies often adopt an event-study method, while regression analysis is the bread and butter of value relevance research from the measurement perspective".

According to Nilsson (2003), many of these studies have examined the value relevance of earnings, equity book values, or combinations of the two. He mentions Easton and Harris (1991) for an early US example. Easton et al. (1992 as referenced in Nilsson, 2003) extend that study by aggregating earnings and returns over periods up to 10 years. Their results suggested that a ten-year return period is capable of significantly explaining stock returns (Brimble, 2003). Using somewhat different approaches, Runsten (1998) and Marton (1998) provided evidence of the value relevance of earnings and book values in Sweden. Runsten (1998) found that changes in equity book values could describe an increasing amount of stock prices.

According to Runsten (1998, p. 302): "it has been argued that the observation that one unit of change in equity seems to be associated with more than one unit of change in stock price, largely stems from the general use of a prudent cost-based accounting convention". Marton (1998) examined the value relevance of earnings in Sweden between 1983 and 1995. In addition, he examined the difference before and after the harmonization efforts made in Sweden in the early 1990's. He used both a 12-month return window and a 15-month return window. For the full sample, he found that earnings could explain up to 13 per cent of stock prices using the 12-month return window and excluding outliers, and up to 12 per cent using the 15-month return window and excluding outliers.

2.3 Empirical Review

According to Marton (1998), there are two trends in worldwide stock markets: increasing internationalization and increasing importance. Internationalization refers to increasing cross border investment activities while importance refers to the increasing activity on stock markets by both companies and people. He argues that stock markets are historically national in scope but that they are currently going through an increasing internationalization. Financial market deregulation and technological change are seen as explanatory factors behind this occurrence (Smith, 1991; OECD, 1996 as referenced in Marton, 1998).

According to Marton (1998), the implication for accounting of internationalized stock markets is that financial statements that are regulated on a national level are now issued in other countries to investors that might be used to different accounting regulations. He argues that annual reports from different countries differ both in terms of valuation and disclosure. Whereas valuation issues determine the values of accounting figures, disclosure relates to how much information is included in financial statements. Marton (1998) concludes that investors may encounter difficulties when comparing accounting information from different countries. There are different ways of interpreting value relevance. Francis and Schipper (1999) have identified four different approaches to studying the value relevance of accounting information. They are: the fundamental analysis view, the prediction view, the information view, and the measurement view of value relevance. According to Nilsson (2003), the various studies differ, among other ways, in the perspective on accounting (measurement versus information), market assumptions (efficient versus inefficient), and research methods applied.

Each perspective is illustrated by past studies that serve as examples of the implementation of the different approaches. The fundamental analysis view of value relevance is related to fundamental analysis research in accounting, which involves determining the intrinsic value of a firm without reference to the stock price (Bauman, 1996, as referenced in Nilsson, 2003). The fundamental analysis approach to value relevance focuses on the usefulness of accounting information in equity valuation. Financial statement information is assumed to be relevant for valuation if portfolios based on this information are associated with abnormal returns. Thus, it is not assumed that the market is at all times efficient but that there is the possibility of earning abnormal returns simply by using accounting information. The value relevance is examined by measuring returns generated by implementing trading strategies based on accounting information (Nilsson, 2003)

Nilsson (2003) presents several studies that have adopted the fundamental analysis view of value relevance. He mentions Chan et al. (1996 as referenced in Nilsson, 2003), who dealt with investment strategies based on historic accounting earnings growth; Sloan (1996 as referenced in Nilsson, 2003), who examined trading strategies that imply a long position in firms with relatively less accruals and selling short firms with relatively more accruals in their accounting earnings; Lakonishok et al. (1994 as referenced in Nilsson, 2003), who studied investments in firms with low ratios of market value to accounting fundamentals.

The prediction view of value relevance interpretation of value relevance is also related to fundamental analysis research. Accounting information is assumed to be value relevant

if it can be used in forecasting underlying value attributes derived from valuation theory; that is, if it can be used to predict future earnings, dividends, or future cash flows. Most researchers adopting this view of value relevance have studied the usefulness of accounting information for earnings prediction (Nilsson, 2003)

Ou and Penman (1989) studied whether the information contained in financial ratios can be combined to yield accurate forecasts of future earnings. They also examined whether trading strategies based on information about future earnings growth generated abnormal returns, which relates to the fundamental analysis view of value relevance. The study serves as an example of how closely related the prediction view is to the fundamental analysis view.

Another study that adopts the prediction view of value relevance is the study by Skogsvik (2002), who examined whether one could accurately predict future return on equity (ROE) by the means of information contained in a large number of financial ratios. Like Ou and Penman (1989), Skogsvik (2002) then implemented trading strategies based on these predictions. A third study adopting the prediction view is that of Lev and Suogiannis (1996 as referenced in Nilsson, 2003). In their study, they examined whether current research-and-development expenditures were associated with future earnings.

The information view of value relevance interpretation of value relevance, accounting information is value relevant if investors use it in setting market prices (Francis and Schipper, 1999). However, researchers adopting this approach typically refer to

accounting figures as having “information content” instead of using the term “value relevance” (Beaver, 1997 as referenced in Nilsson, 2003).

Accounting figures are assumed to have information content if the release of new information modifies investors’ beliefs about future cash flows and thus causes price revisions. Information content studies use statistical association models to examine how the stock market reacts to the disclosure of new accounting information. Hence, a return is the natural market metric in such studies (Nilsson, 2003). Early studies under the information view of value relevance were the groundbreaking works of Ball and Brown (1968) and Beaver (1968). Ball and Brown (1968) studied the market reaction in terms of returns while Beaver (1968) examined the reaction in terms of trading volume. The purpose was to find out if investors use information about earnings when setting market prices, which was examined by measuring the market response to new earnings information.

Ball and Brown (1968) examined the effect on the stock market of unexpected earnings following the disclosure of the annual report. They also conducted an association study that tested the correlation between earnings and returns in one year return windows. The underlying assumption in using unexpected earnings is that only unexpected earnings will have an impact on stock prices since expected earnings should already be incorporated in stock prices (Lev, 1989). Studies adopting this approach will thus have a problem in distinguishing between expected and unexpected earnings. According to Lev (1989, p. 6), "The emphasis on unexpected earnings led to the use of proxies for expected earnings, such as time-series or analysts' forecasts".

In the case of Ball and Brown (1968), however, they used both a random walk and a market model for expected earnings to see if unexpected earnings would be followed by abnormal returns. Ball and Brown (1968) concluded that there is a statistically identifiable relationship between unexpected earnings and market returns. In particular, they found that earnings capture at least half of all information about a company that is released during a year. Hence, they came to the conclusion that the information content of earnings is considerable. They add, however, that although earnings have information content, the earnings measure is not timely. They base this remark on the fact that 85 to 90 per cent of the information conveyed in earnings had already been released by more prompt media.

Beaver (1968) focused on changes in trading volume associated with the release of new earnings information. He found that both trading volume and return volatility increase at the time of earnings announcements. Together, Ball and Brown (1968) and Beaver (1968) were the originators of empirical association studies using statistical models in the field of value relevance of accounting information (Neelan, 2007). The motivation for their work was the assertion that accounting information, as a measure of company performance, should be reflected in stock prices and thus useful for investors. Their conclusion was that financial statements must have some worth to shareholders since they cost money to produce.

The relationship between accounting information and stock prices received renewed interest in the beginning of the 1990's under the label *value relevance* (Ryan et al., 2002 as referenced in Nilsson, 2003). The researchers behind these studies focused more on

the view that accounting information captures or summarizes events that have affected the firm over the reporting period (Easton, 1998 as referenced in Nilsson, 2003). Hence, they moved away from the information view of value relevance that requires new information to actually be used by investors and moved closer to a measurement view of accounting (Marton, 1998). However, according to Skogsvik (2002), the terms *information content* and *value relevance* have both been used in the meaning of accounting information as being useful in equity valuation.

Under the measurement view of value relevance, accounting information is value relevant if it captures or summarizes information that in turn affects stock prices (Francis and Schipper, 1999). Nilsson (2003, p. 5) states that "if an accounting item has a reliable association with a market metric, then the accounting metric captures or aggregates the information that is used by market participants to determine prices or returns". This is the definition of value relevance under the measurement view.

According to Nilsson (2003), both price and returns can be used as market metrics under the measurement approach, unlike in information content studies. He argues that researchers that use price as the market metric study the validity of accounting information as summary measures of the events that have affected firms up to a specific date.

2.4 Review of Local Research

Research work done in Kenya has rarely focused on relationship between accounting value and economic value among commercial banks in Kenya. Mathenge (2013) investigated the value system of commercial banking in Kenya. He investigated the

effectiveness of loans, equality in banking services and the reliability of the products offered with respect to ethical banking in Kenya. The study was a census survey conducted on all the banks. This research formed a framework for ethical banking in the industry by recommending concrete measures on the cases of increasing financial slavery, indiscriminate banking, and unethical conduct. A major finding was found to be that in order to create a formidable ethical banking in Kenya; commercial banks have to be at the fore front of embracing and employing ethical considerations in their banking practices. This study is focused on the ethical considerations in banking industry in Kenya.

Ongiri's (2002) study sought to establish the effect of payment of dividends on Kenyan firms quoted in the NSE. The research covered the firms which were in operation for the periods between 1988 and 1998. The research was geared towards the effect of government change on the above two variables as it touched on both the pre-multiparty and post-multiparty era The study 87/, this study attempted to examine evidence on three related questions, that is, how does payout ratio relate to market share prices of listed companies, how does 100% retention and dividend announcement affect market share prices.

Murithi (2010) conducted a study on an investigation into the economic value of mergers and acquisitions on financial performance of companies in Kenya (2003 - 2007). The research covered all the companies in Kenya that had undergone mergers and acquisitions between the year 2003 and 2007. The researcher used purposive sampling where he took 40% of these companies for the study to obtain a sample of 28

companies. From the findings, the study found that that mergers and acquisitions increase the market share of companies the firms entered into new geographical areas, diversify business growth, acquire states of art and technology, comply with new legislation, acquire brand loyalty and overcome entry barriers. Mergers and acquisitions also assisted in the attainment of returns on investment in companies. The study also established that there exist positive relationships between economic value of merger and acquisition and predictor factors which are market share, profitability of the company, diversification of risk, achievement of synergy and return on investment.

Mwancha (2012) did a study on the value content of mergers and acquisitions announcement for companies quoted at the Nairobi Securities Exchange. The objective of this study was to establish whether Nairobi Securities Exchange market reacts to merger and acquisition announcements. The study was conducted based on twelve listed companies that had undergone mergers and acquisition within a period of 10 years beginning 1st January 2001 to 31st December 2010. The study found that there was weak relationship between company returns for the period before and after the mergers and acquisition announcements. The regression analysis also revealed that the relationship between the returns and the dummy variables was not statistically significant. The analysis of the difference between the projected and the realized returns for the period after the mergers for the companies was significant recording a Z-value of -50.13 whose absolute value is higher than the critical value of 1.96.

Kinyua (2011) conducted a research on the information value of mergers and acquisitions on financial performance of oil companies in Kenya. This study took on a

causal research design. In this study the target population was the oil companies in Kenya with keen interest on those that have gone through mergers and acquisition. The process of data collection involved self administered drop and pick questionnaires distributed to management and employees of the oil industries involved. The use of audited accounts enhanced the data received from respondents.

A Chi-Square test was used to establish the relationship between pre and post merger/acquisition and linear regression model enhanced the analyses of the effects of merger and acquisition on financial performance. According to the model, mergers and acquisition, respondent Opinion about M & A, and financial performance were positively correlated with financial performance after merger. A unit increase in mergers and acquisition would lead to increase in application of financial performance by factor of 0.166. This was a clear indication of the firms performing better financially after the resulting merger and/or acquisition.

The study of the relationship between shareholder value and performance is one of the key issues in corporate governance which has been the subject of ongoing debate in the corporate finance literature. The relationship between firm performance and shareholder identity, emanate from Agency Theory. Ongore (2011) argues that the risk-taking behavior and investment orientation of shareholders have great influence on the decisions of managers in the day-to-day affairs of firms.

According to Ongore (2011), the concept of ownership can be defined along two lines of thought: ownership concentration and ownership mix. The concentration refers to proportion of shares held (largest shareholding) in the firm by few shareholders and the

later defines the identity of the shareholders. Morck et al. in Wen (2010) explained that ownership concentration has two possible consequences. The dominant shareholders have the power and incentive to closely monitor the performances of the management. This in turn has two further consequences in relation to firm performance. On the one hand close monitoring of the management can reduce agency cost and enhance firm performance. On the other hand concentrated ownership can create a problem in relation to overlooking the right of the minority and also affect the innovativeness of the management (Ongore, 2011).

Alassana (2002) studied the relationship between firm's capital value and financial performance of quoted companies at the NSE. Kiogora (2000) empirically tested the variations in capital value of companies quoted at the Nairobi Stock Exchange NSE. Odinga (2003) studied the determinants of capital structure of companies listed at the Nairobi Stock exchange. Lutomia (2002) studied the relationship between firm's capital structure and the systemic risk of common stock.

Studies have also undertaken on share value of companies quoted on the stock exchange. Queenvelle (2002) studied the effect of financial information on share prices at the Nairobi Stock exchange NSE. Kalusi (1998) studied a predictive model for Nairobi Stock Exchange share prices. Studies done outside Kenya include, Masulis (1982) examining the effect of capital structure changes on security prices by summarizing the theoretical predictions of exchange of debt for outstanding equity , exchange of preferred stock for common stock and exchange of debt for outstanding preferred stock on the New York Stock Exchange -NYSE.

2.5 Summary

A variety of literature has depicted the relationship between accounting value and economic value. The assumption behind the measurement view of value relevance is that the information disclosed in financial statements relates to firm value by capturing information that affects stock prices. These studies have been conducted by taking different industries, with different time period.

Economists believe that the company's ultimate goal should be to maximize the present value of future shareholder wealth. Thus, economic value added is a new analytical tool that can be used to create company wealth and selection process that should be far from the shortcomings of the accounting income and is based on economic profit. EV was adopted early by the society because it was regarded as an innovative technique to find the true value of a company unlike traditional accounting criteria such as ROA, ROE, EPS and P/E which consider only the cost of debt EV, direct costs and indirect debt of shareholders rights, i.e. accounting criteria which does not assume implicitly the ordinary shareholders cost free of charge. The use of economic profit metrics instead of traditional accounting application ensure that management consider banking business lines cost of equity in their decision making-process and allocate equity capital profitably and in direction of shareholders' interest as whilst their managerial incentive are also monitored based on shareholders wealth maximisation. Based on this review, the study sought to analyze the relationship between accounting value and economic value among commercial banks in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter highlights the methods and procedures used in carrying out the study. It includes the following; section 3.2 presents survey research design; section 3.3 presents the population; section 3.4 presents sampling frame and technique used; section 3.5 entails data collection methods; while section 3.6 presents data analysis, Conceptual and analytical model as well as data presentation methods.

3.2 Research Design

The study used survey research design. Phil (1996) says that descriptive research studies are designed to obtain information concerning the current situation and other phenomena and wherever possible to draw valid conclusion from the facts discussed. This was a survey research to explore the existing status of two or more variables at a given point in time. In this study, the researcher preferred to carry out survey on relationship between accounting value and economic value among commercial banks in Kenya. This design was suitable for this study since through data collection and analysis draw conclusions based on the findings.

3.3 Population and Sample

Borg and Gall (1999) define population as all the members of a real or hypothetical set of people, event or objects to which a researcher wishes to generalize the results of the study. The population of this research consisted of all the 43 commercial banks in Kenya.

The sampling plan describes the sampling unit, sampling frame, sampling procedures and the sample size for the study. The sampling frame describes the list of all population units from which the sample will be selected (Cooper & Schindler, 2003). Kotler et al. (2001) argues that well chosen, samples of about 30-80% of a population can often give good reliable findings. Based on this, a sample of 30 banks (69%) was utilized in this study.

3.4 Data and Data Collection Techniques

The researcher utilized secondary sources to collect the data. The sources were obtained from NSE and CBK sites. Secondary sources included financial statements for a period of 5 years (2008-2012) and including internet resources, and publications.

The time period that this study examined was 5 years, which is quite a long time period for Value relevance studies. A five-year period also corresponds to recommendations given by Easton et al. (1992), who state that a period of five years is able to considerably explain stock returns.

3.5 Data Analysis

Data analysis is the process of bringing order, structure and meaning to the mass of information collected. It involves examining what has been collected and making deductions and inferences Kombo and Tromp (2006). Qualitative data was analyzed using content analysis techniques. For quantitative, descriptive statistics, percentages and frequencies were derived and used. Presentations were done by use of tables, graphs as well as charts. Items from the open-ended questions were analyzed and organized into themes and then presented in narrative form.

3.5.1 Conceptual Model

The relationship among the variables is estimated using a function:

Ev = f (Av)……Equation 1

Ev = Economic Value

Av =Accounting Value

3.5.2 Analytical model

The study used a regression model to predict the extent to which the identified independent variables affect the dependent variable. In this case, SPSS version 18 will be used in regression analysis and computation of coefficients. The regression line is represented by the following model:

$EV = B_0 + B_1ROE + B_2ROA + B_3EPS + \mathbf{e}_t$ **…….Equation** 2

Where;

EV= Economic Value

ROE=Return On Equity

ROA=Return on Assets

EPS= Earnings Per Share

$\mathbf{e}_t$ = Error term

EV= Net Operating Profit after Taxes - (Capital employed * Cost of Capital)

EVA used as a performance measure stimulates managers to employ a firm's assets more productively and it assists in reducing differences in the interests of the managers and shareholders (Irala, 2005). This could lead to one concluding that EVA based incentive plans could prove effective in directing and motivating managers for shareholders wealth creation. The fundamental assumption of shareholder value is that a business is worth the net present value of its future cash flows over a defined timeframe, discounted by the cost of capital appropriate for the business (Clarke, 2000).

$$ROE = \frac{\text{Annual Net Income}}{\text{Average Stockholders' Equity}}$$

$$ROA = \frac{\text{Net Income}}{\text{Total assets}}$$

$$\text{Earnings Per Share} = \frac{\text{Net Income-dividends on Preferred Stock}}{\text{Average Outstanding Shares}}$$

Many experts believe that making financial decisions based only on accounting data can hurt a company (Stewart, 1991). Economic Value (EV) is a useful financial metric that measures value based on adjusted accounting data to assess financial performance and help a company grow (Stewart, 1991; Makelainen & Roztocki, 1998). Economic Value, seeks to improve and measure efficiency and "value creation" (Shaked & Leroy, 1997; Stewart).

In order to find out the value relevance of earnings, the results of the study must also be significant. Results are said to be statistically significant within the 0.05 level, which means that the significance value must be smaller than 0.05. The significance was determined by the t-value, which indicates how many standard error means the sample diverges from the tested value.

CHAPTER FOUR
DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents data analysis and interpretation. Section 4.2 provides summary of statistics, Section 4.3, the estimated or empirical model, section 4.4 discussion of results while section 4.5 presents the summary

4.2 Summary of Statistics

4.2.1 Annual averages of key bank statistics

Table 4.1: Annual averages

	Return on equity (%)	Return on assets (%)	EPS (kshs)	Economic value (billion)
2008	17.70143	2.692598	2.271667	7.6830207
2009	17.8624	2.3501	2.2805	8.4513227700
2010	22.4459	3.2199	2.6164	9.2964550470
2011	22.3267	3.9556	3.2165	12.0853915611
2012	22.60418	4.556987	3.845033	12.37977614

From the data sample of the 30 banks adopted in the study, the average economic value was generally on the rise for the five year period to 2012 accompanied by a similar rise in EPS, Return on Assets and Return on equity. As can be noted, there is a general increment in all the explanatory variables within the 5 year period for the banks. From the findings, it can generally be deduced that Economic value for the banks rose in tandem with a rising EPS, Return on Assets and Return on equity.

Table 4.2: Descriptive statistics of Return on equity

	Return on equity (%)	
Year	Mean	Std. Deviation
2008	17.70033	6.21412
2009	17.8630	7.39549
2010	22.4453	10.43187
2011	22.3270	10.48033
2012	22.6047	18.38638

From the findings there was a significant rise in the mean scores for Return on equity from 17.7 in 2008 to 22.6 in 2012. In addition, the low standard deviation is an indication that the Return on equity for the respective banks has slight variations.

Table 4.3 Descriptive statistics of Return on assets

Return on assets (%)		
Year	Mean	Std. Deviation
2008	2.6927	1.62044
2009	2.35	3.18072
2010	3.2197	3.69108
2011	3.9557	3.04215
2012	4.557	3.42043

The findings as depicted here shows a similar trend to that of ROE values which illustrate a change in mean value from 2.6 in 2008 to 4.5 in 2012 with low standard deviations, indicating slight variation in ROA for the sampled banks.

Table 4.4: Descriptive statistics for Earnings per share

EPS (kshs)		
Year	Mean	Std. Deviation
2008	2.2717	2.4269
2009	2.2813	2.39238
2010	2.616	3.11986
2011	3.2163	2.9889
2012	3.8447	3.9393

From the findings, there is a consistent rise in the mean values for the Earnings per Share from 2.2 in 2008 to 3.8 in 2012. However a recorded high standard deviation in 2012 depicts variation in Earnings per Share, an indication for variation in share prices for the sampled banks.

Table 4.5: Descriptive statistics for Economic value

Economic value '000'		
Year	Mean	Std. Deviation
2008	7683021	5393181
2009	8451323	5932499
2010	9296455	6525748
2011	12085392	8483473
2012	12379776	8690119

From the findings, the Economic values illustrate a consistent increase from 7.6 billion in 2008 to 12.3 billion in 2012, implying that a rise in the values Return on equity, Return on assets and EPS have significant influence on Economic values for the banks.

4.3 Estimated or Empirical Model

4.3.1 Correlation Analysis

To quantify the strength of the relationship between the variables, the study used Karl Pearson's coefficient of correlation. The Pearson product-moment correlation coefficient (or Pearson correlation coefficient for short) is a measure of the strength of a linear association between two variables and is denoted by *r*. The Pearson correlation coefficient, *r*, can take a range of values from +1 to -1.

A value of 0 indicates that there is no association between the two variables. A value greater than 0 indicates a positive association, that is, as the value of one variable increases so does the value of the other variable. A value less than 0 indicates a negative association, that is, as the value of one variable increases the value of the other variable decreases. Pearson's Correlation Coefficient was carried out and the results obtained are presented in table 4.6 below.

Table 4.6: Pearson's Correlation Coefficient Matrix

	ROE	ROA	EPS	EV
ROE	1			
ROA	.630**	1		
EPS	0.155**	0.284**	1	
EV	.211**	0.363**	.155**	1

**. Correlation is significant at the 0.01 level (2-tailed).

Results from table 4.6 above reveal that there is a significant positive relationship between Return on Equity and Economic Value (r = .211**, P-value < 0.01). This implies that Return on Equity as a measure of accounting value influences Economic

Value in Kenyan commercial banks. The findings also revealed a significant positive relationship between Return on Asset and Economic Value (r = .363**, P-value < 0.01). Thus, implying that Return on Asset as a measure of accounting value influences Economic Value in Kenyan commercial banks. The findings indicated a significant positive relationship between Earnings per share and Economic Value (r = .155**, P-value < 0.01) thus, depicting that Earnings per share influences Economic Value in Kenyan commercial banks.

The results above indicate that there was a significant positive relationship between Return on Equity and Return on Asset (r = .630**, P-value < 0.01). A significant positive relationship was noted between Return on Asset and Earning per share (r = .284**, P-value < 0.01) as well as between Return on Equity and Earning per share (r = .155**, P-value < 0.01). This implies that there is interrelationship between the various measures which determine the accounting value of Kenyan commercial banks.

Further, there was no evidence of multicollinearity among the predictor variables since the correlations among them was not very strong thus they were incorporated into the following regression analysis.

4.3.2 Regression Analysis

Table 4.7 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.898[a]	.806	.762	.43816

a. Predictors: (Constant), EPS, ROA, ROE

In this case, the coefficient of determination (the percentage variation in the dependent variable being explained by the changes in the independent variables) R2 equals 0.806, that is, Return on Equity, Return on Asset and Earnings per share explain 70 percent of the variance in Economic Value.

Table 4.8: Analysis of Variance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.65	3	0.55	2.865	.006[a]
Residual	4.991	26	0.192		
Total	6.641	29			

a. Predictors: (Constant), EPS, ROA, ROE

b. Dependent Variable: EV

In this case, the significance value of the F statistic is 0.006 indicating that all the predictor variables (Return on Equity, Return on Asset and Earnings per share) explain a variation in Economic Value and that the overall model is significant

Table 4.9: Coefficients of Regression

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	6.763	0.22		30.774	0
ROE	0.28	0.11	0.372	2.545	. 012
ROA	0.107	0.039	0.61	2.786	0.01
EPS	0.26	0.03	0.148	8.662	0

a. Dependent Variable: EV

Based on regression coefficients results the regression equation can be written as follows;

$EV= 6.763+0.28\ ROE + 0.107\ ROA +0.26\ EPS + e_t$

Regression analysis reveals the extent to which Return on Equity, Return on Asset and Earnings per share significantly predicted the Economic Value. In addition, Return on Equity is a superior predictor of economic value (beta = 0.28) followed by Earnings per share (beta = 0.26) and Return on Assets (beta = 0.107). The findings recommend that to achieve a proper measure of economic value, Kenyan commercial banks need to integrate emphasis on Return on Equity, Return on Asset and Earnings per share as the measures for accounting.

4.4 Discussion

The results revealed that there is a significant positive relationship between Return on Equity and Economic Value (r = .211**, P-value < 0.01). This implies that Return on Equity as a measure of accounting value influences Economic Value in Kenyan

commercial banks. This finding is further confirmed by the findings of Kim, (2006), who noted that changes in operating and financial ratios corresponded to behaviour aimed at increasing EV, whereby this behaviour will in turn result in reported increased in the relative stock market performance of EV firms.

The findings also revealed a significant positive relationship between Return on Asset and Economic Value ($r = .363^{**}$, P-value < 0.01). Thus, implying that Return on Asset as a measure of accounting value influences Economic Value in Kenyan commercial banks. This ratio is usually referred to as "the return on total assets or return on investment" to measure the effectiveness of the use of total resources company (J.Fred Weston and Thomas E. Copeland: 1995).This is consistent with Suad Husnan: 2005, stating that if profitability increases, then stock prices will also rise. In other words, profitability will affect the value of the company through the company's stock price. In this study the profitability used is return on investment (ROI). ROI is a ratio that indicates the return on investment of capital owners. This ratio indicates to investors the company's performance in managing the investment in the company.

The findings indicated a significant positive relationship between Earnings per share and Economic Value ($r = .155^{**}$, P-value < 0.01) thus, depicting that Earnings per share influences Economic Value in Kenyan commercial banks. In the approach Price to Book Value (PBV) as well as other fundamental analysis approach, namely the company's economic value is determined by the Discounted Cash flow Model, using the Gordon Growth Model (Francis: 1991). Dividend model is assumed to have a constant growth

rate, which is usually the company paying the dividends are growing. Growing a company, increasing the dividends paid (Mamduh: 2004)

The results indicated a significant positive relationship between Return on Equity and Return on Asset (r = .630**, P-value < 0.01). A significant positive relationship was noted between Return on Asset and Earning per share (r = .284**, P-value < 0.01) as well as between Return on Equity and Earning per share (r = .155**, P-value < 0.01) . This implies that there is interrelationship between the various measures which determine the accounting value of Kenyan commercial banks. Research on Economic Value performed by Damodaran (1996) in New York Stock Exchange (NYSE) and the Amex companies using financial data from 1987 to 1991 (5 years). Companies with negative economic value are not included in this calculation. The study states the factors that influence the EV as follows, Return on investment, where an ROI increases, the EV also will increase; Return on equity, which when ROE increases, the EV also will increase and Earnings per share, which if EPS increases, the EV also will increase.

Lastly, the regression findings recommend that to achieve a proper measure of economic value, Kenyan commercial banks need to integrate emphasis on Return on Equity, Return on Asset and Earnings per share as the measures for accounting.

4.5 Summary

An appropriate performance measure should assess how managerial actions affect the firm value. In this regard accounting performance measures such as Profits, EPS, and ROE drive managers to employ firm's assets more productively and it helps in reduction of differences in the interests of the managers and shareholders (Irala, 2005).

The results revealed that there is a significant positive relationship between Return on Equity and Economic Value (r = .211**, P-value < 0.01). The findings also revealed a significant positive relationship between Return on Asset and Economic Value (r = .363**, P-value < 0.01). In addition, the findings indicated a significant positive relationship between Earnings per share and Economic Value (r = .155**, P-value < 0.01). The results indicated a significant positive relationship between Return on Equity and Return on Asset (r = .630**, P-value < 0.01). A significant positive relationship was noted between Return on Asset and Earning per share (r = .284**, P-value < 0.01) as well as between Return on Equity and Earning per share (r = .155**, P-value < 0.01). This implies that there is interrelationship between the various measures which determine the accounting value of Kenyan commercial banks

CHAPTER FIVE
SUMMARY AND CONCLUSION

5.1 Introduction

This chapter presents summary of findings, conclusion and recommendations. Section 5.2 provides the summary of the study, section 5.3, the conclusion, and section 5.4, limitations of the study while section 5.5 presents recommendations for further research.

5.2 Summary of the Study

The study established that there is a significant positive relationship between Return on Equity and Economic Value. This implied that an increase on Return on Equity as a measure of accounting value led to an increase in Economic Value in Kenyan commercial banks.

The findings also revealed a significant positive relationship between Return on Asset and Economic Value. Thus, an increase on Return on Asset as a measure of accounting value leads to an increase in the Economic Value in Kenyan commercial banks. The findings further indicated a significant positive relationship between Earnings per share and Economic Value thus, depicting that an increase in Earnings per share resulted in an increase in Economic Value in Kenyan commercial banks.

The results also indicated that there was a significant positive relationship between Return on Equity and Return on Asset. A significant positive relationship was noted between Return on Asset and Earning per share as well as between Return on Equity and Earning per share. This implied that there is interrelationship between the various measures which determine the accounting value of Kenyan commercial banks.

Regression analysis revealed the extent to which Return on Equity, Return on Asset and Earnings per share significantly predicted the Economic Value. In addition, Return on Equity is a superior predictor of economic value followed by Earnings per share and Return on Assets. The findings recommend that to achieve a proper measure of economic value, Kenyan commercial banks need to integrate emphasis on Return on Equity, Return on Asset and Earnings per share as the measures for accounting

.

5.3 Conclusions

As illustrated in the previous sections, accounting value is a practical tool which induces the firm to use its capital as efficiently as possible, enhancing the value of the firm. Management incentives which are based upon accounting value will only increase as the value of the firm increases. Maximizing shareholders value has become the new corporate paradigm in recent years. The Corporate, which gave the lowest preference to shareholders curiosity, are now bestowing the utmost preference to it. Shareholder's wealth is measured in terms of returns they receive on their investment. It can either be in forms of dividends or in the form of capital appreciation or both. Capital appreciation depends on the changes in the market value of the stocks. The market value of stocks depends upon number of factors ranging from company specific to market specific. Financial information is used by various stakeholders to assess firm's current performance and to forecast the future as well. The study concluded that: An increase on Return on Equity as a measure of accounting value leads to an increase in Economic Value in Kenyan commercial banks. In addition, an increase on Return on Asset as a measure of accounting value leads to increase in the Economic Value in Kenyan commercial banks, while an increase in Earnings per share resulted in an increase in Economic Value in Kenyan commercial banks.

There is interrelationship between the various measures which determine the accounting value of Kenyan commercial banks. According to regression analysis the extent to which return on equity, return on asset and earnings per share significantly predicted the economic value. In addition, return on equity is a superior predictor of economic value followed by earnings per share and return on assets. The study concludes that there is significant relationship between accounting value and economic value.

5.4 Limitations of the Study

The study had various limitations. The first limitation regards the measurement of variables. Several authors have brought up disadvantages of using EVA, Brewer mentions that one can make the comparison of two companies and find that one company has a higher EVA, yet a lower ROI (Return on Investment). This indicates that although one company has more value created in terms of the EVA metric, it still would not seem to be as efficient at creating wealth as the other since it did not necessarily make more value with fewer funds.

As he indicated, a larger plant or division will tend to have a higher EVA relative to its smaller counterparts. While the purpose of the study is to find out whether there has been a change in the value relevance of earnings, the study does not attempt to explain why such a change might have occurred. Further limited resources and time limits the study to undertake in-depth analysis on more variables for instance, explanation of stock prices in whole. It merely examines how much of stock prices that can be explained by reported earnings figures. Hence, the stock price of a bank is treated as a variable dependent on various factors and is used as a proxy for the consensus beliefs of the shareholders about firm value.

5.5 Recommendations for Further Research

The findings recommend that to achieve a proper measure of economic value, Kenyan commercial banks need to integrate emphasis on Return on Equity, Return on Asset and Earnings per share as the measures for accounting. The empirical studies highlight that there is no single accounting measure which explains the variability in the shareholders wealth (Chen and Dodd, 1997; Rogerson, 1997). Any financial measures used in assessing economic value must be highly correlated with shareholders wealth and on the other hand should not be subjected to randomness inherent in it. Accounting value performance measures such as EPS, ROI, and ROE etc. have been criticized due to their inability to incorporate full cost of capital thereby accounting income is not a consistent predictor of firm value and cannot be used for measuring corporate performance. Value based management system has gained popularity in academic literature in last two decades. One such innovation in the field of internal and external performance measurement is EVA.

The empirical evidence strongly points towards EVA as an effective compensation system to improve firm profitability, stock market performance and joint coordination. Although there are benefits abound, the matter of adopting an EVA compensation system will require careful analysis for each independent firm as there are costs and risks that are not insignificant. Further studies should take in-depth analysis on more variables that measures the relationship between accounting and economic value. This will for instance enhance examination of how stock prices which depict shareholders value is related to the financial performance of the banks.

REFERENCES

Alasana , Jabby. 2002 .Relationship between capital value and financial performance of quoted companies on the Nairobi Stock Exchange (NSE). MBA. United States International University-Africa, Kenya.

Ball, R., Brown, P. *An Empirical Evaluation of Accounting Income Numbers.* Journal of Accounting Research, autumn, 1968.

Bauman, M. P. 1999. Importance of Reported Book Value in Equity Valuation. *The Journal of Financial Statement Analysis, Winter: 31-40.*

Beaver, W. *The Information Content of Annual Earnings Announcements. Journal of Accounting Research* 6:67, 1968.

Biddle, G.C. (1998). Economic Value Added: Some Empirical EVAdence. *Managerial Finance*, 24(11), 60-70.

Biddle, G., Bowen K., Wallace, G., (1998). The estimation and determinants of association between returns and earnings: Evidence from cross-industry comparisons. *Journal of Accounting, Auditing and Finance* 6, 183-232.

Brimble, M.A. *The Relevance of Accounting Information for Valuation and Risk.* Ph.D. thesis, Griffith University, 2003

Chen, S. & Dodd, J. L. (1997). Economic Value Added (EVA): An Empirical Examination of a New Corporate Performance Measure. *Journal of Managerial Issues*, 9(3), 318-333.

Clarke, P. (2000). Shareholder Value. *Accountancy Ireland, 32*(5), 10-11.

Damodaran. Aswath. 1996. Investment Valuation. 2nd Edition. John Wiley & SonsInc. New York

Dillon, R.D. & Owers, J.E. (1997). "EVA as a financial metric: Attributes, utilization, and relationship to NPV." *Financial Practice and Education*, (Spring/Summer). Retrieved March 19, 2013 from http://207.36.165.114/JAF/fpess974.pdf

Francis, J. & Schipper, K. Have Financial Statements Lost Their Relevance*? Journal of Accounting Research 37:2, 1999.*

Francis. J. C.. 1991. Investment: Analysis and Management. 4th Edition. McGraw-Hill. New York.

Fred J. Weston & Thomas E. Copeland. (1995) Manajemen Keuangan Jilid 1 Edisi 9 (Revisi) Alih Bahasa Drs. A. Jaka Wasana MSM. Binarupa Aksara. Managerial Finance 9th Edition. The Dryden Press 1992

Hanafi, Mamduh M. (2005). Manajemen Keuangan. Yogyakarta: BPFE Yogyakarta.

Healy R., 1988. How does performance evaluation perform? *Journal of Portfolio Management*, 15–19.

Hellström, K. *The Value Relevance of Financial Accounting Information in a Transitional Economy: The Case of the Czech Republic.* Stockholm School of Economics, working paper no 2005:10.

IASB (International Accounting Standards Board). *Framework for the Preparation and Presentation of Financial Statements,* 1989.

Irala, L.R. (2005). EVA: The right measure of managerial performance. *Journal of Accounting and Finance*,19(2), 77-87.

Kim, G.W. (2006). EVA and Traditional Accounting Measures: which Metric is a better predictor of market value of hospitality companies? *Journal of Hospitality & Tourism Research*, 30(1), 34-49.

Kinyua (2011) the information of mergers and acquisitions on financial performance of oil companies in Kenya. *Unpublished University of Nairobi, Kenya*. MBA Project

Lev, B. *On the Usefulness of Earnings and Earnings Research: Lessons and Directions from Two Decades of Empirical Research. Journal of Accounting Research* 27, 1989.

Lutomia, J O .2002 .J O . 2002. The relationship between the firm's capital structure and the systematic risk of common stocks: an empirical study of CQs quoted on the Nairobi Stock Exchange. MBA University of Nairobi, Kenya.

Marton, J. *Accounting and stock markets.* Grafikerna i Kungälv AB, 1998.

Mathenge G.D (2013) the Value System of Commercial Banking in Kenya: An Ethical Perspective *International Journal of Business and Social Science* 4 (153-163)

Maury B., 2006. Family ownership and firm performance: Empirical evidence from Western European corporations. *Journal of Corporate Finance.* 12: 321–341

Merchant, K. A., & Sandino, T. (2009). Four Options for Measuring Value Creation. *Journal of Accountancy*, 1-4.

Merchant, K. A., & van der Stede, W. (2011). *Management Control Systems.* Financial Times/ Prentice Hall.

Murithi (2010) investigation into the effects of mergers and acquisitions on financial performance of companies in Kenya (2003 - 2007). *Unpublished KEMU*. MBA Project.

Mwancha O. V. (2012) the information content of mergers and acquisitions announcement for companies quoted at the Nairobi Securities Exchange *Unpublished University of Nairobi, Kenya*. MBA Project.

Nilsson, H. *Essays on the value relevance of financial statement information.* Print & Media, 2003.

Odinga, G O. 2003 .Determinants of capital structure of companies listed at the Nairobi Stock Exchange. MBA University of Nairobi, Kenya.

Ohlson, J.A. Earnings, Book Values, and Dividends in Equity Valuation. *Contemporary Accounting Research 11(2):661-687, 1995.*

Ongiri, A.O. (2002). *An analysis on the effect of dividend payout on market price per share for quoted companies in Nairobi Stock Exchange*. Unpublished Master's Thesis, Kenyatta University

Ongore, V.O. (2011) the relationship between ownership structure and firm performance: An empirical analysis of listed companies in Kenya. African Journal of Business Management, 5(6), 2120-2128.

Ou, J., Penman, S. *Financial statement analysis and the prediction of stock returns*. Journal of Accounting and Economics 11:295-329, 1989.

Ralph. C, Kimball D., (1998). Goodwill in accountancy. *The Journal of Accountancy*, July, 28-50.

Runsten, M. *The Association between Accounting Information and Stock Prices.* Elander Gotab, 1998.

Shaked, I., Allen, M., & Leroy, P. (1997). Creating value through E.V.A.- myth or reality. Retrieved March 20, 2013 from http://www.strategybusiness. com/press/16635507/12756

Sharma, A. K. (2010). Economic Value Added (EVA) - Literature Review. *International Journal of Economics and Financance, 2*(2), 200-220

Skogsvik, S. Economic value. Ph.D. thesis, Stockholm School of Economics, 2002

Stewart III, G. B. (1991). The quest for value: A guide for senior managers. New York: HarperCollins.

Suad Husnan 2005. Dasar-dasar Teori Portofolio dan Analisis Sekuritas. UPP AMP YKPN. Yogyakarta

Taghavi M., 2006. *Financial Management*. Payam Noor Publication, Tehran.

Appendices

Appendix i Financial Data 2008

	2008				
Name of Bank	**return on equity (%)**	**return on assets (%)**	**EPS (kshs)**	**economic value '000'**	**Log EV**
ABC BANK	25.33	1.54	2.70	9652843.00	6.98
BANK OF AFRICA	8.53	1.02	0.20	1253428.00	6.10
BARCLAYS BANK	27.00	3.28	1.02	1245387.00	6.10
CBA BANK	10.12	0.87	4.80	5683482.00	6.75
CFC STANBIC BANK	6.24	1.02	4.20	5642871.00	6.75
CHASE BANK	18.64	1.53	0.28	12543651.00	7.10
CITIBANK	17.32	2.32	4.20	9782453.00	6.99
CONSOLIDATED BANK	11.38	2.07	4.83	8571245.00	6.93
CO-OPERATIVE BANK	18.33	2.84	0.80	13482760.00	7.13
CREDIT BANK	8.11	1.49	12.00	4352871.00	6.64
DEVELOPMENT BANK	4.21	0.65	0.63	2583456.00	6.41
DIAMOND TRUST BANK	17.35	1.82	5.07	6528452.00	6.81
EQUITORIAL COMMERCIAL BANK	11.20	4.60	1.20	3562712.00	6.55
ECO BANK	18.50	3.25	1.32	11568723.00	7.06
EQUITY BANK	21.64	4.12	1.40	15364521.00	7.19
FAMILY BANK	21.36	5.24	1.20	8543810.00	6.93
FIDELITY BANK	16.86	6.22	1.23	8584682.00	6.93
FINA BANK	12.01	2.14	4.12	7473624.00	6.87
GIRO BANK	27.45	1.34	0.28	1253468.00	6.10
HCFK	22.32	1.35	0.12	1356824.00	6.13
I&M BANK	20.13	5.34	2.10	8679245.00	6.94
IMPERIAL BANK	25.13	1.24	2.50	1264824.00	6.10
KENYA COMMERCIAL BANK	18.12	3.66	1.94	23458723.00	7.37
K-REP BANK	23.12	4.36	4.21	8769258.00	6.94
NATIONAL BANK OF KENYA	19.63	5.54	0.31	7586825.00	6.88
NIC BANK	15.12	1.45	1.20	15428670.00	7.19
PRIME BANK	21.00	2.37	1.67	2358468.00	6.37
STANCHART BANK	23.10	2.35	1.20	11238450.00	7.05
TRANSNATIONAL BANK	22.33	4.56	0.12	12538245.00	7.10
VICTORIA COMMERCIAL BANK	19.43	1.20	1.30	136650.00	5.14
Annual statistics	17.70142688	2.692598019	2.2716667	7683020.7	6.7184045

Appendix ii: Financial data 2009

Year	2009				
Name of Bank	**return on equity (%)**	**return on assets (%)**	**EPS (kshs)**	**economic value '000'**	**Log EV**
ABC BANK	27.86	1.70	2.97	10618127.30	7.03
BANK OF AFRICA	7.66	1.14	0.22	1378770.80	6.14
BARCLAYS BANK	25.00	3.69	1.32	1369925.70	6.14
CBA BANK	11.14	0.96	5.28	6251830.20	6.80
CFC STANBIC BANK	6.86	1.13	4.62	6207158.10	6.79
CHASE BANK	16.16	1.52	0.23	13798016.10	7.14
CITIBANK	19.09	2.55	4.63	10760698.30	7.03
CONSOLIDATED BANK	8.73	1.17	3.20	9428369.50	6.97
CO-OPERATIVE BANK	18.96	2.68	0.85	14831036.00	7.17
CREDIT BANK	7.90	1.58	11.00	4788158.10	6.68
DEVELOPMENT BANK	4.63	0.71	0.69	2841801.60	6.45
DIAMOND TRUST BANK	17.87	1.88	6.19	7181297.20	6.86
EQUITORIAL COMMERCIAL BANK	-0.63	-11.63	-0.32	3918983.20	6.59
ECO BANK	19.43	3.58	1.39	12725595.30	7.10
EQUITY BANK	22.73	4.54	1.47	16900973.10	7.23
FAMILY BANK	22.42	5.77	1.26	9398191.00	6.97
FIDELITY BANK	17.71	6.85	1.29	9443150.20	6.98
FINA BANK	12.61	2.35	4.33	8220986.40	6.91
GIRO BANK	28.83	1.48	0.29	1378814.80	6.14
HCFK	23.44	1.49	0.13	1492506.40	6.17
I&M BANK	21.14	5.89	2.21	9547169.50	6.98
IMPERIAL BANK	26.39	1.36	2.63	1391306.40	6.14
KENYA COMMERCIAL BANK	19.03	4.03	2.04	25804595.30	7.41
K-REP BANK	24.28	4.81	4.42	9646183.80	6.98
NATIONAL BANK OF KENYA	20.61	6.10	0.33	8345507.50	6.92
NIC BANK	15.88	1.60	1.26	16971537.00	7.23
PRIME BANK	22.05	2.61	1.75	2594314.80	6.41
STANCHART BANK	24.26	2.60	1.26	12362295.00	7.09
TRANSNATIONAL BANK	23.45	5.03	0.13	13792069.50	7.14
VICTORIA COMMERCIAL BANK	20.40	1.33	1.37	150315.00	5.18
Annual statistics	17.86240234	2.3500993	2.2805133	8451322.77	6.7597972

Appendix iii Financial data 2010

Year	2010				
Name of Bank	**return on equity (%)**	**return on assets (%)**	**EPS (kshs)**	**economic value '000'**	**Log EV**
ABC BANK	28.15	4.64	3.20	11679940.03	7.07
BANK OF AFRICA	12.06	1.33	0.38	1516647.88	6.18
BARCLAYS BANK	34.00	6.15	1.95	1506918.27	6.18
CBA BANK	12.25	1.06	5.81	6877013.22	6.84
CFC STANBIC BANK	7.54	1.24	5.08	6827873.91	6.83
CHASE BANK	17.77	1.68	0.25	15177817.71	7.18
CITIBANK	24.82	3.32	6.02	11836768.13	7.07
CONSOLIDATED BANK	11.68	1.65	8.66	10371206.45	7.02
CO-OPERATIVE BANK	22.92	2.97	1.31	16314139.60	7.21
CREDIT BANK	3.57	0.70	4.00	5266973.91	6.72
DEVELOPMENT BANK	6.03	0.93	0.90	3125981.76	6.49
DIAMOND TRUST BANK	25.56	2.73	11.31	7899426.92	6.90
EQUITORIAL COMMERCIAL BANK	-7.01	-11.63	-6.17	4310881.52	6.63
ECO BANK	25.25	4.65	1.80	13998154.83	7.15
EQUITY BANK	29.54	5.90	1.91	18591070.41	7.27
FAMILY BANK	29.15	7.50	1.64	10338010.10	7.01
FIDELITY BANK	23.02	8.91	1.68	10387465.22	7.02
FINA BANK	16.40	3.06	5.62	9043085.04	6.96
GIRO BANK	37.47	1.92	0.38	1516696.28	6.18
HCFK	30.47	1.94	0.16	1641757.04	6.22
I&M BANK	27.48	7.65	2.87	10501886.45	7.02
IMPERIAL BANK	34.31	1.77	3.41	1530437.04	6.18
KENYA COMMERCIAL BANK	24.74	5.24	2.65	28385054.83	7.45
K-REP BANK	31.56	6.25	5.75	10610802.18	7.03
NATIONAL BANK OF KENYA	26.79	7.93	0.42	9180058.25	6.96
NIC BANK	20.64	2.08	1.64	18668690.70	7.27
PRIME BANK	28.67	3.39	2.28	2853746.28	6.46
STANCHART BANK	31.53	3.37	1.64	13598524.50	7.13
TRANSNATIONAL BANK	30.48	6.54	0.16	15171276.45	7.18
VICTORIA COMMERCIAL BANK	26.52	1.72	1.77	165346.50	5.22
Annual statistics	22.44587677	3.219884724	2.6163707	9296455.047	6.8011899

Appendix iv: financial data 2011

Year	2011				
Name of Bank	**return on equity (%)**	**return on assets (%)**	**EPS (kshs)**	**economic value '000'**	**Log EV**
ABC BANK	26.54	1.21	3.53	15183922.04	7.18
BANK OF AFRICA	10.18	1.09	0.50	1971642.24	6.29
BARCLAYS BANK	30.00	4.86	1.49	1958993.75	6.29
CBA BANK	15.65	1.71	7.38	8940117.19	6.95
CFC STANBIC BANK	10.00	1.60	6.72	8876236.08	6.95
CHASE BANK	15.01	1.23	0.16	19731163.02	7.30
CITIBANK	3.94	1.95	6.20	15387798.57	7.19
CONSOLIDATED BANK	1.26	0.98	7.52	13482568.39	7.13
CO-OPERATIVE BANK	25.61	3.19	1.54	21208381.48	7.33
CREDIT BANK	4.91	0.87	6.00	6847066.08	6.84
DEVELOPMENT BANK	6.97	0.95	1.20	4063776.29	6.61
DIAMOND TRUST BANK	22.92	2.47	13.15	10269255.00	7.01
EQUITORIAL COMMERCIAL BANK	6.01	0.74	1.32	5604145.98	6.75
ECO BANK	27.78	5.58	1.98	18197601.28	7.26
EQUITY BANK	32.50	7.08	2.10	24168391.53	7.38
FAMILY BANK	32.07	9.01	1.80	13439413.13	7.13
FIDELITY BANK	25.32	10.69	1.85	13503704.79	7.13
FINA BANK	18.04	3.67	6.19	11756010.55	7.07
GIRO BANK	37.95	2.31	0.42	1971705.16	6.29
HCFK	30.85	2.33	0.18	2134284.15	6.33
I&M BANK	27.83	9.18	3.15	13652452.39	7.14
IMPERIAL BANK	34.74	2.12	3.75	1989568.15	6.30
KENYA COMMERCIAL BANK	25.05	6.29	3.33	36900571.28	7.57
K-REP BANK	31.96	7.50	6.32	13794042.83	7.14
NATIONAL BANK OF KENYA	27.13	9.52	0.47	11934075.73	7.08
NIC BANK	20.90	2.50	1.80	24269297.91	7.39
PRIME BANK	29.03	4.07	2.51	3709870.16	6.57
STANCHART BANK	31.93	4.05	1.80	17678081.85	7.25
TRANSNATIONAL BANK	30.87	7.85	0.18	19722659.39	7.29
VICTORIA COMMERCIAL BANK	26.86	2.07	1.95	214950.45	5.33
Annual statistics	22.32673073	3.955576499	3.2165473	12085391.56	6.9151332

Appendix v: Financial data 2012

Year	**2012**				
Name of Bank	**return on equity (%)**	**return on assets (%)**	**EPS (kshs)**	**economic value'000'**	**Log EV**
ABC BANK	16.09	1.93	3.63	15553782.83	7.191836
BANK OF AFRICA	1.22	4.70	0.80	2019668.91	6.3052802
BARCLAYS BANK	30.00	4.73	1.61	2006712.32	6.3024851
CBA BANK	24.26	2.64	12.71	9157886.93	6.9617953
CFC STANBIC BANK	13.00	2.91	9.90	9092449.77	6.9586809
CHASE BANK	21.26	2.20	0.23	20211788.75	7.3056048
CITIBANK	25.53	6.36	6.30	15762625.53	7.1976286
CONSOLIDATED BANK	8.85	0.00	3.60	13810986.39	7.1402247
CO-OPERATIVE BANK	26.30	3.85	1.84	21724990.35	7.3369596
CREDIT BANK	5.91	1.09	7.00	7013851.80	6.8459566
DEVELOPMENT BANK	0.55	0.55	1.10	4162764.65	6.6193819
DIAMOND TRUST BANK	21.96	2.68	17.44	10519400.83	7.021991
EQUITORIAL COMMERCIAL BANK	-56.68	-2.34	-0.12	5740655.76	6.7589615
ECO BANK	30.56	6.14	2.40	18640871.42	7.2704662
EQUITY BANK	35.75	7.79	2.73	24757102.43	7.3936998
FAMILY BANK	35.27	9.91	2.34	13766779.93	7.1388324
FIDELITY BANK	27.85	11.76	4.65	13832637.65	7.140905
FINA BANK	19.84	4.04	8.04	12042371.83	7.080712
GIRO BANK	41.74	2.54	0.55	2019733.36	6.305294
HCFK	33.94	2.56	0.23	2186272.57	6.3397043
I&M BANK	30.61	10.10	4.10	13985008.55	7.1456627
IMPERIAL BANK	38.22	2.34	4.88	2038031.47	6.3092109
KENYA COMMERCIAL BANK	27.56	6.92	3.74	37799421.69	7.5774852
K-REP BANK	35.15	8.25	4.32	14130047.96	7.1501436
NATIONAL BANK OF KENYA	29.84	10.47	0.61	12224774.45	7.0872409
NIC BANK	23.00	2.75	2.34	24860466.76	7.3955093
PRIME BANK	31.93	4.48	3.26	3800237.82	6.5798108
STANCHART BANK	35.13	4.45	2.34	18108697.16	7.2578872
TRANSNATIONAL BANK	33.95	8.63	0.23	20203077.98	7.3054175
VICTORIA COMMERCIAL BANK	29.55	2.28	2.54	220186.37	5.3427904
Annual statistics	22.60417667	4.556987242	3.8450331	12379776.14	6.9255853