

**AN ANALYSIS OF THE INFORMATION CONTENT OF ECONOMIC VALUE
ADDED AS A PERFORMANCE MEASURE OF BANKS IN KENYA**

BY

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DECLARATION

This Research project is my original work and has not been submitted for a degree in this or any other University or Institution of Higher Learning.

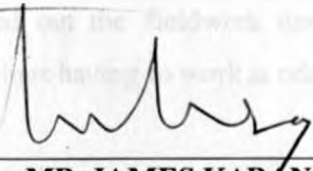
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ABSTRACT

This paper analyses the information content of Economic Value Added (EVA) performance indicator in the light of creating shareholder value within the banking industry. With increasing pressure on firms to deliver shareholder value, there has been a renewed emphasis on devising measures of corporate financial performance and incentive compensation plans that encourage managers to increase shareholder wealth.

There is a growing number of studies examining which performance measure is the most compatible with shareholder value maximization, but the evidence surrounding this issue is mixed. In addition, few papers deal with this issue in the banking industry context.

This study examines both relative and incremental information content focusing on the Kenyan banking industry. The investigation technique follows Biddle et al., (1997), with a few departures to better tailor the analysis to the peculiarities of a bank.

Our results suggest that the superiority of EVA is not verified in terms of relative information content, but there is confirming evidence when considering the incremental contribution provided by its components. One feature of our findings is that our results are sensitive to accounting adjustments that deal with a bank's peculiar features and if these distinctive characteristics are ignored when calculating EVA, there is little evidence to support EVA's superiority as an indicator of shareholder value.

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CHAPTER 1

INTRODUCTION

1.1 Background of the Study

The basic and continued existence of a firm is based on its ability to create value. First and foremost it must create value to the consumer known as external value creation that subsequently translates to surplus revenue for the shareholder referred to as internal value addition. A firm that is able to create value to the customer is rewarded by the market through generation of greater cash flows which accrue to the shareholder. Consequently, value addition to the customer translates to shareholder value added and subsequently into stock price gains (Stewart 1994).

Shareholder value is the financial value created for shareholders by the companies in which they invest. The shareholder value theory states that a company creates this value when it meets or exceeds a cost of capital that suitably reflects its investment risk. Companies are choosing to employ a system of measuring shareholder value for many reasons. First, value is the best metric of performance as it is the only measure that is comprehensive and hence is useful for decision-making. By increasing shareholder value, companies can maximize the value for other stakeholders. Secondly, shareholders are the only stakeholders of a company who simultaneously maximize everyone's claim in seeking to maximize their own. Finally, companies that are unable to create shareholder value will find that capital flows away from them and towards their competitors who are creating shareholder value (O'Byrne 1996).

With the increasing global competition, companies are focusing their efforts on creating shareholder value in order to survive the intense competition. It is becoming important for companies to measure the value they create for their shareholders. Keeping track of the value created year-on-year enables companies to evaluate past decisions and make decisions that will improve shareholder value. (O'Byrne 1996)

The development of corporate performance measurement over the past century has its genesis in the work of statisticians, economists and managers who sought to understand the functions of the American corporation and through this understanding to improve its operation. The first comprehensive data on the financial performance resulted from Senate legislation. The 1918 Senate report "Corporate Earnings and Government Revenues" compiled the statistics of 31,500 US Corporations which earned more than 15% on their capital in 1917. Harvard's Ralph Epstein in 1920 used this government data to examine the distribution of profits, capital and profitability. Though his data was biased, it motivated other work on how corporate performance should be measured. (Epstein 1925)

The most ambitious study of the profits of American Corporations was Corporate Earning Power by Leonard Crum (1929). He analyzed US Internal Revenue data on the net return on sales from 455,000 corporations over the period 1916 to 1927 – returns on assets being available only for the last few years in the sample. The data were used to establish norms and extremes for performance. With Corporate Earning Power, the modern era of benchmarking had begun. The importance of these early academic works is that they standardized measures of corporate performance across firms and industries. A subtle theme shared by all three is the question of whether there is a fair rate of return or profit and how many firms met or exceeded this threshold. (Goetzmann 2006)

The precursor to Standard and Poors Laurence H Sloan wrote a book; A study of Their Size, Variation, Use and Distribution in a Period of Prosperity (1929). The goal of the book is ...provide a unit of comparison which will be of at least some value to those who are constantly under the necessity of analyzing corporation statements and of formulating, as a result of such analysis, an opinion which becomes the basis for future business decisions. The focus of his analysis is to distill corporate accounting data into performance measures that will provide the basis for informed decision making. Sloan championed Earnings on Invested Capital (EOIC) as the prime measure of corporate performance. On average it is true that a high rate of earnings on invested capital constitutes an earmark of a concern which is commercially successful if judged on any other economic basis. (Sloan 1929)

A year after Sloan's work, Yale Professor Irving Fisher in 1930 published "The Theory of Interest". Fisher's insight was that a straightforward mathematical equation allowed the future benefits and costs of investment to be reduced to cash flows, discounted to the present and summed to determine the economic value of an investment decision. While the maximum present value rule was revolutionary and related directly to the problem of how to make a capital budgeting decision, or how to value a corporation, Fisher's principle of return over cost related more clearly to the performance measures current in his time thus largely ignoring growth. (Fisher 1930)

Shareholder Value has traditionally been measured by such indicators as Return on Equity (ROE), Return on Assets (ROA) and Net Income. However, these methods have proved to have some constraints especially with regard to performance benchmarking. These traditional measures basically indicated year-on-year trends but could not convey whether the firm is generating adequate returns to meet the cost of capital replacement. Subsequently the introduction of Economic Value Added (EVA) (1989), which benchmarks a company's income against its cost of capital, which its promoters believe is a better indicator of both year-on-year growth and the adequacy of capital replacement. Accordingly, whilst the traditional measures are merely concerned with accounting returns, EVA leans towards economic returns to the extent that it deals with discounting the replacement cost of capital to arrive at the returns. EVA is seen by its proponents as providing the most reliable year-to-year indicator of a market-based performance measure known as Market Value Added.

In arriving at shareholder value (SHV) creation, monitoring of earnings trends is not enough. It is necessary to plough back some of those earnings into business so as to cater for replacement costs of capital arising from wear and tear of a company's assets. These replacement costs are also known as the costs of capital. Accordingly, the cost of capital is deducted from the prevailing earnings; this gives rise to the economic value added. (Gregory, 2006)

Citing in-house research, Stewart (1994) further suggests that "EVA stands well out from the crowd as the single best measure of wealth creation on a contemporaneous basis and

is almost 50% better than its closest accounting-based competitor including EPS, ROE and ROI in explaining changes in shareholder wealth". Using these findings, Stern Stewart has built a significant presence in the highly-competitive value-based performance consulting market with "literally hundreds of firms adopting EVA to some degree, among them Coca-Cola Co., Eli Lilly and Co., and the Postal Service in the US" (Biddle 1998). EVA figures have also been heavily promoted in the UK, Australia, Canada, Brazil, Germany, Mexico, Turkey and France, amongst others (Stern Stewart, 1999), used to provide published rankings of managerial performance (Ferguson, 1997), and several international companies have adopted EVA for performance measurement and/or incentive compensation packages. For example, in Australia the ANZ Banking Group, Fletcher Challenge Limited, James Hardie Industries and the Wrightson Group, have implemented EVA financial management systems in recent years (O'Bryne, 1996).

1.2 The Banking Industry in Kenya

At the end of 2007, there were 46 financial institutions up from 45 in 2006 of which 9 are quoted in the Nairobi Stock Exchange (NSE). During the same period, the balance sheet of the banking sector expanded with total assets increasing by 20.2 percent or Kshs 152.6 billion from Kshs 755.3 billion as at November 2006, to Kshs 907.9 billion as at November 2007. Growth of the asset portfolio was funded mainly by the increase in deposits and injection of capital as well as retention of profits. Net loans and advances net of provisions stood at Kshs 477.2 billion and comprised 52.6 percent of total assets compared with Kshs 385.9 billion or 51 percent of total assets in November 2006.

The stock of non-performing loans (NPLs) was estimated at Kshs 59.1 billion or 11.4 percent of gross loans, at the end of November 2007, compared with Kshs 103.8 billion or 22.3 percent of total loans at the end of November 2006. The sharp reduction in the level of non-performing loans was attributed mainly to write-offs against provisions held and recoveries by some of the banks during the period under review. Expressed as a percentage of total loans and advances, non-performing loans net of loan loss provisions improved from 5.9 percent in November 2006 to 4.1 percent in November 2007.

Deposit liabilities in the banking system, including accrued interest, increased by 17.6 percent from Kshs 620.8 billion as at the end of November 2006 to Kshs 730.0 billion as at November 2007. The increase in deposit base was attributed to aggressive marketing campaigns for new deposits by some institutions and rapid expansion of branch network. Increase in deposits was also attributed to external donor inflows to various government agencies and non-governmental organizations coupled with the increase in earnings from tourism and exports.

As a result of favourable economic conditions, gross un-audited profit before tax of the banking system increased by 33.9 percent or by Kshs 8.4 billion to Kshs 33.2 billion in November 2007, compared with Kshs 24.8 billion reported in a similar period in 2006. The improved profitability was attributed to an increase in interest income on loans and advances, interest income on government securities and from fees and commissions coupled with reduction in bad debt charges. Favourable economic conditions, among other things, contributed to the improvement in banks profitability. As a result, annualized return on assets rose from 2.8 percent in November 2006 to 3.2 percent as at November 2007, while return on shareholders funds increased from 28.6 percent to 30.8 percent over the same period. (Central Bank of Kenya, Dec 2007).

Since EVA has only been used in the U.S. banking industry and to a minor extent in the emerging markets in general and Kenya in particular, as other measures of bank performance, it is the objective of this study to introduce EVA and to determine the extent to which it causes the stock price movements and by extension impacts returns of commercial banking stocks listed at the Nairobi Stock Exchange (NSE).

The Banking industry in Kenya is governed by the Companies Act, the Banking Act, the Central Bank of Kenya Act and the various prudential guidelines issued by Central Bank of Kenya. The banking sector was liberalized in 1995 and exchange controls lifted. (<http://centralbank.go.ke>)

1.3 Statement of the Problem

In making a buy decision, investors look at various aspects of a bank that is profitability, capital strength and asset quality.

Firstly, a firm's profitability is mainly monitored by its earnings. However, a more thorough approach involves the assessment of the quality of earnings through the analysis of Economic Value Added (EVA). Secondly, capital strength can be stated as the firm's capital base which is adequate to meet the requirements of the central bank which by extension determines its ability to generate future growth by way of deposits and loans. Commercial Bank lending through loans and advances generate interest income while deposits generate fee based income. Thirdly, asset quality is determined by the extent of the bank's non-performing loans portfolio (NPL); the greater the NPL the lower the asset quality and thus the less income it is likely to generate in future by way of interest income. However, of the three main factors, investors tend to focus mainly on profitability.

EVA is based on the principle that since a company's management employs equity capital to earn a profit; it must pay for the use of this equity capital. As management consultant Peter Drucker (1995) once said, "Until a business returns a profit that is greater than its cost of capital, it operates at a loss... The enterprise still returns less to the economy than it devours in resources... until then it does not create wealth; it destroys it" (Ivancevich, 2002). Including a cost for the use of equity capital sets EVA apart from more popular measures of bank performance, such as Return on Assets (ROA), Return on Equity (ROE) and the efficiency ratio, which do not consider the cost of equity capital employed. As a result, these measures may suggest a bank is performing well, when in fact it may be diminishing its value to its shareholders. While accounting profit measures are the most commonly used performance measures, they are often criticized for not taking into consideration the total cost of capital and for being unduly influenced by accrual-based accounting conventions. In contrast, EVA, the difference between after-tax operating profits and the total cost of capital, is promoted as a measure of a company's real profitability. Since value is a primary concern to

investors, proponents claim that EVA is the only performance measure that ties directly to a stock's intrinsic value (Stewart, 1991). Stock prices and EVA show a remarkable tendency to move up and down together. Uyemura et al., (1996), focused on banking from an analysis of the largest 100 U.S. bank holding companies over a period of ten years and found EVA to have the highest correlation with Market Value Added (MVA).

Most of the studies (Black et al 1998; Uyemura et al 1996; Stewart 1991) dealing with SHV sought to find the performance measure with the strongest correlation with stock market returns. The evidence surrounding this issue is mixed and one may cast a doubt about their reliability, according to the degree of independence of the researchers. In order to investigate this issue, our empirical investigation follows the procedure proposed in Biddle et al (1997) and assumes that equity markets are efficient in a semi-strong way and forward looking.

1.4 Objective of the Study

To analyze the information content of EVA, as a measure of performance of Commercial Banks in Kenya.

1.5 Importance of the Study

This study will enable stock market players to better assess the direction of a banks stock price based on its EVA performance. They will therefore make informed decisions while buying stock and not base their decision on gut feeling.

The banks management will be able to ascertain the extent to which EVA contributes to the creation of wealth for their shareholders. Indeed a strong relationship between EVA and stock returns should be expected as is the case in the more developed stock markets.

Bank shareholders' who understand the workings of EVA will be well placed to judge and assess the quality of a bank's earnings based on the ability of the bank to replenish its cost of capital.

In future regulatory authorities may deem it fit to adopt EVA as a sound measure of bank performance to which all banks should adhere to. Therefore this study will be of utmost importance to Central Bank.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

With increasing pressure on firm's performance to deliver shareholder value, there has been a renewed emphasis on devising measures of corporate financial performance and incentive compensation plans that encourage managers to increase shareholder wealth. This is a worldwide phenomena being practiced in US, UK, Australia, Canada, Brazil, Germany and closer home South Africa. It has trickled down to the Kenyan market to be practised by Standard Chartered, Barclays Bank, Coca Cola and Unilever. Managing to create sustainable shareholder value (SHV) is currently recognised by academics and practitioners as a major objective in banking. Dalborg (1999)

An accepted financial axiom is that the role of managers is to maximise the wealth of shareholders by the efficient allocation of resources. In order to operationalise this objective, shareholder wealth is traditionally proxied by either standard accounting magnitudes (such as profits, earnings and cash flows from operations) or financial statement ratios (including earnings per share and the returns on assets, investment and equity). This financial statement information is then used by managers, shareholders and other interested parties to assess current firm performance, and is also used by these same stakeholders to predict future performance. Heakal (2002) Further, under the semi-strong form of the efficient market hypothesis, the publicly available information contained in these variables is readily interpreted by the market, and thereby incorporated into future stock prices. Worthington, Andrew and West Tracey (2001)

Unfortunately, the empirical literature to date suggests that there is no single accounting based measure upon which one can rely on to explain changes in shareholder wealth. Chen and Dodd (1997); Riahi-Belkaoui, (1993); Rogerson, (1997); Lehn and Makhija (1997). This is despite the fact that such a measure would prove invaluable to the various parties interested in aspects of firm performance. For years, investors and corporate managers have been seeking a timely and reliable measurement of shareholders' wealth.

With such a measure, investors could spot over or under priced stocks, lenders could gauge the security of their loans and managers could monitor the profitability of their factories, divisions and firms.

The primary reason of this interest of banks toward the creation of SHV is that the banking market has evolved becoming more competitive: this new scenario requires a new approach to keep both stakeholders and shareholders satisfied. Resti (1999) and Schuster (2000) came up with three macro-economic factors that contributed to make SHV creation a primary strategic target in banking. These are deregulation and re-regulation, privatisation and mergers and acquisitions. While there are a huge number of contributions sustaining the SHV approach (Black et al 1998; Uyemura et al 1996; Stewart 1991) and especially how SHV should be measured, the identification of the best measure for defining SHV has become critical. A company creates value for the shareholders over a given time period when the return on invested capital is greater than its opportunity cost, or than the rate that investors could earn by investing in other securities with the same risk.

Focused finance, as the phrase implies, is what investors are seeking. It is finance wired to measure, manage and deliver shareholder value. It results from a clear understanding of how the stock market truly values corporate performance and a commitment by top management to concentrate on that to the exclusion of other objectives, other measures and other procedures. (Berlin, 1953) Some of the more traditional measures include Return on Equity (ROE) and Return on Investment (ROI).

2.2 TRADITIONAL PERFORMANCE MEASUREMENT

2.2.1 Return on Equity Employed (ROE)

One of the most important profitability metrics is return on equity. Return on equity reveals how much profit a company earned in comparison to the total amount of shareholder equity found on the balance sheet. It's what the shareholders "own". Shareholder equity is a creation of accounting that represents the assets created by the retained earnings of the business and the paid-in capital of the owners. (Koch, Desalvo and Kennon, 2005).

According to Pandey (1998) the return on shareholders equity is net profit after taxes divided by shareholders' equity. The earning of a satisfactory return is the most desirable objective of a business. The ratio of net profit to owners' equity reflects the extent to which this objective has been accomplished. This ratio is thus of great interest to the present as well as the prospective shareholders and also of great concern to management, which has the responsibility of maximizing the owners' welfare.

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

Van Horne, (1991) argues the ratio is somewhat inappropriate, in as much as profits are taken after interest is paid to creditors. Because these creditors provide means by which part of the total assets are supported, there is a fallacy of omission.

2.2.2 Return on Investment (ROI)

ROI is a performance measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments. To calculate ROI, the benefit (return) of an investment is divided by the cost of the investment; the result is expressed as a percentage or a ratio

$$\text{ROI} = \frac{\text{(Gain from investment – Cost of investment)}}{\text{Cost of Investment}}$$

Return on investment is a very popular metric because of its versatility and simplicity. That is, if an investment does not have a positive ROI, or if there are other opportunities with a higher ROI, then the investment should not be undertaken. This flexibility has a downside, as ROI calculations can be easily manipulated to suit the user's purposes, and the result can be expressed in many different ways. (Ross, Westerfield, Jaffe 2002).

The flaws in rate of return measures are not just that they make it impossible for managers to pick out the best investment projects. If return measures drive their bonuses, managers will actually have the incentive to misallocate capital. In high-return units they will under-invest, and in poorly performing units, over-invest according to Harvard Professor Clayton Christensen.

2.2.3 Earnings per Share (EPS)

The profitability of the common shareholders' investment can also be measured in many other ways. One such measure is to calculate the EPS. The EPS is calculated by dividing the profit after taxes by the total number of common shares outstanding.

$$\text{EPS} = \frac{\text{Profit after tax}}{\text{Number of common shares outstanding}}$$

EPS calculations made over years indicate whether or not the firm's earnings power on per share basis has changed over that period. The EPS of the company should be compared with the industry average and the EPS of other firms. (Pandey 1998)

Proponents of EVA say the use of EPS consequences is dire. Decision making becomes considerably more complex and ambiguous as yet one more metric is tossed into the financial management stew. EPS sets so undemanding a return hurdle for new

investments that it widely prompts managers to misallocate capital. EPS is measured after subtracting the interest cost of debt but before setting aside the significantly higher cost of equity. According to EPS, retained earnings are a free source of capital. As a result, EPS encourages managers to over-retain capital and use it wastefully.

In today's market a management team that aims to boost its earnings at the expense of quality will be more certainly penalized than ever before with a lower stock price and a sullied reputation. Managers today have even more reason to take the opposite tack, to take actions to increase the quality of earnings, to reduce and control risk, to increase transparency and to create intangible values even if EPS according to Generally Accepted Accounting Principles (GAAP) makes such decisions look foolish in the short term.

As a conclusion, Bennett Stewart (2003) ascertains that managers typically rely on cash flow, Net Present Value (NPV), Internal Rate of Return (IRR) and the like for making capital budgeting and valuation decisions, but when it comes time for them to set goals and measure actual performance, they put aside those cash metrics and turn to a separate set of yardsticks. Earnings, growth, margins, market share, unit costs, returns on equity/investment/assets and Earnings before Interest, tax, Depreciation and Rentals (EBITDAR) are among the reporting indicators that take centre stage for those purposes. In the standard financial model, a wide gulf invariably separates the use of cash flow for capital budgeting on the one side and a long laundry list of accounting measures that are applied on the other. Without really thinking about it, most Chief Financial Officers have accepted that different measures apply for different purposes, but it should not be so.

2.3 MODERN PERFORMANCE MEASUREMENT

2.3.1 Economic Value Added (EVA)

One professedly recent innovation in the field of internal and external performance measurement is a trade-marked variant known as Economic Value Added (EVA). EVA is the invention of Stern Stewart and Company (Stewart, 1991), a global consulting firm, which launched EVA in 1989. The constellation of EVA applications commences with EVA as a performance measure, as simply another-and far better-way to define earnings than taking reported accounting profit at face value. And, because it is just at heart an earnings figure, EVA has the virtue of being relatively simple to explain and to understand, even to the basic shop floor worker. It is neither complicated like cash flow, nor is it a meaningless percentage ratio. It is a full-blooded, dollar and cents, living and breathing measure of corporate earnings that anyone can understand and learn to manage to measure firm performance. (Worthington, Andrew and West Tracey, 2001).

EVA is based on the principle that since a company's management employs equity capital to earn a profit; it must pay for the use of this equity capital. As management consultant Peter Drucker once said, "Until a business returns a profit that is greater than its cost of capital, it operates at a loss... The enterprise still returns less to the economy than it devours in resources...Until then it does not create wealth; it destroys it" (Ivancevich, 2002). Including a cost for the use of equity capital sets EVA apart from more popular measures of bank performance, such as return on assets (ROA), return on equity (ROE) and the efficiency ratio, which do not consider the cost of equity capital employed. As a result, these measures may suggest a bank is performing well, when in fact it may be diminishing its value to its shareholders. Accordingly, this diminishing or increasing in value should be reflected in the stock price in cases where stock markets are responsive to EVA. In the developing markets a significant link has been found between EVA stock returns. (Myers 1996)

2.3.2 EVA and the Role of Accounting Adjustments

The calculation of EVA consists of two separate but related steps. The primary adjustment is where a capital charge is subtracted from net operating profit after-tax (NOPAT). The capital charge is derived from multiplying the firm's overall financing cost, as reflected in the Weighted Average Cost of Capital, by the amount of invested capital. Invested capital in turn is defined as total assets, net of non-interest bearing current liabilities. (Young, 1999).

The second step consists of a series of adjustments to GAAP (Generally Accepted Accounting Principles) -based numbers. Consisting of some 120 to 150 possible adjustments, these changes are made on the basis of both empirical and theoretical concerns. First, it is argued that adjustments to accounting numbers are required in order "...to achieve higher correlations between the short term measure (in this case EVA), and stock prices, which in turn can lead to more congruent goals for divisional managers and shareholders as well as a more reliable indicator of corporate performance for security analysts and portfolio managers (Young, 1999).

The large number of adjustments that are possible, companies adopting EVA generally make no more than fifteen adjustments to published accounts, though Young (1999) observes that this figure has progressively fallen in recent years.

$$\text{EVA} = \text{NOPAT} - (\text{cost of capital} * \text{capital employed})$$

Where NOPAT = Net operating profit after tax adjusted for non-cash expenses

Cost of capital * capital employed = imputed charge for the capital consumed, the cost of capital being the weighted average cost of capital for the firm's target capital structure.

Adjustments may be needed to the profit figures in the accounts to arrive at NOPAT. Interest and tax relief on interest should be excluded from NOPAT, as they are taken into account in the imputed capital charge.

Investing cash flows should be excluded from NOPAT but added to capital employed. These include goodwill, research and development and advertising, and other expenditure designed to build the business up over the next few years. The amount added to capital employed should be a figure that reflects the expenditure that has affected profit this year, say the research and development charge for the last four years or goodwill that has previously been written off.

Lease charges should be excluded from NOPAT but added in as part of capital employed. In theory accounting depreciation should be added to the profit figures, and economic depreciation subtracted from profit figures to arrive at NOPAT. Economic depreciation is a depreciation figure in the accounts is often used as an approximation for economic depreciation, so no adjustment is necessary.

The EVA measure of economic profit is ideally suited to bind together the various financial management applications and incentive plans into one common language and framework. It is unique in its ability to play that role because as a measure of profit, EVA is conceptually easy to understand, and as a measure of performance, it is the only one that directly ties to NPV and the creation of shareholder wealth and that legitimately qualifies for a mission of continuous improvement. EVA is truly the hedgehog of finance, and the key to value-focused management.

EVA deducts not just the interest on debt that all can see, but also an invisible charge for the use of equity capital (WACC) that is the shareholders funds-to recognize that shareholders too expect and deserve a return that compensates them for bearing risk. Unlike EPS, EVA does not begin to count profit until the shareholders receive a minimum acceptable return on their investment. Retained earnings are no longer a free form of finance. (Bennett, 1994)

A calculation of a firm's cost of capital in which each category of capital is proportionately weighted. All capital sources – common stock, preferred stock, bonds and any other long-term debt- are included in a WACC calculation.

WACC is calculated by multiplying the cost of each capital component by its proportional weight and then summing:

$$\text{WACC} = \frac{E}{V} * R_e + \frac{D}{V} * R_d * (1-T_c)$$

Where:

R_e = cost of equity

R_d = cost of debt

E = market value of the firm's equity

D = market value of the firm's debt

$V = E + D$

E/V = percentage of financing that is equity

D/V = percentage of financing that is debt

T_c = corporate tax rate

A company's assets are financed by either debt or equity. WACC is the average of the costs of these sources of financing, each of which is weighted by its respective use in the given situation. By taking a weighted average, we can see how much interest the company has to pay for every dollar it finances.

A firm's WACC is the overall required return on the firm as a whole and, as such, it is often used internally by company directors to determine the economic feasibility of expansionary opportunities and mergers. It is the appropriate discount rate to use for cash flows with risk that is similar to that of the overall firm.

2.3.3 Benefits of Economic Value Added

Economic value added focuses on the long-term net present value (NPV) of a company. Managerial performance will be improved by investing in positive NPV projects, not investing in negative NPV projects and lowering the cost of capital.

By including a financing element, the cost of capital is emphasised, and hence managers must have regard for careful investment and control of working capital. If managers choose negative NPV projects, the imputed capital charge will ultimately be greater than earnings.

The adjustments within the model mean that economic value added should be based on cash flows rather than accounting data and hence it may be less distorted by the accounting policies chosen.

EVA is a monetary figure rather than a ratio, and one that can be easily linked to financial objectives. In conclusion the adjustments made on EVA, produce an EVA figure that is closer to cash flows, and therefore less subject to the distortions of accrual accounting. It removes the arbitrary distinction between investments in tangible assets, which are capitalised and intangible assets, which tend to be written off as incurred, prevent the amortisation, or write-off, of goodwill. It eliminates the use of successful efforts accounting, bring off-balance sheet debt into the balance sheets and correct biases caused by accounting depreciation.

2.3.4 Drawbacks of Economic Value Added

EVA does not measure NPV in the short-term. Projects with good long term NPV, but large initial cash investments or poor initial returns, may be rejected by managers who are being judged on their short-term performance.

EVA is based on historical accounts which may be of limited use as a guide to the future. In practice also the influence of accounting policies on the starting profit figure may not be completely negated by the adjustments made to it in the economic value added model.

Other value drivers such as non-capitalised goodwill may be important despite being excluded from the accounts. Making the necessary adjustments can be problematic as sometimes a large number of adjustments are required.

The cost of capital used is calculated by the capital asset pricing model, and is therefore based upon the assumptions of that model such as no change in risk. Companies which are larger in size may have larger economic value added figures for this reason. Allowance for relative size must be made when inter-company comparisons are performed.

2.4 Empirical Studies on EVA

5 industrial companies were analyzed by O'Byrne (1996) and found EVA's superiority using a two-step analysis. In the first step, the firm market value was regressed on EVA and then on earnings. In the second step of the analysis, a set of adjustments were proposed; firstly, regression coefficients were allowed to vary for positive and negative value of EVA; secondly, the natural log of capital was introduced as a predictor in order to take into account differences in the way the market value firm of different sizes; thirdly, 57 dummy variables were introduced to consider potential industry effects. In this second stage, O'Byrne (1996) found an R^2 for EVA of 0.56, which enabled him to conclude that EVA was superior to earnings in explaining firm value.

The largest 100 U.S. bank holding companies were analyzed over a period of ten years between 1986 to 1995 by Fiordelisi (1996). By regressing changes in standardized Market Value Added (MVA) against changes in standardized EVA, (defined as EVA divided by capital) and traditional performance measures, EVA, was found to have the highest correlation with MVA.

While in 1997 another group of scholars Lehen and Makhija assessed which performance measure does the best job of predicting the turnover of Chief Executive Officer's (CEO). Focusing on the degree of correlation between different performance measures and stock market returns, Lehen and Makhija (1997) found that correlation coefficients vary from 0.39 and 0.76. In detail, EVA, and MVA are the most highly correlated measure with stock market returns: 0.59 and 0.58, respectively. The other performance measures have smaller correlations: 0.455 for Return on Asset (ROA), 0.455 Return on Equity (ROE) and Return on Sales (ROS) 0.388. It is interesting to note that, similar to other studies, the measure most correlated with MVA is EVA.

EVA is a tool that bankers can use to measure the financial performance of their bank. EVA has only been used in the US banking industry since 1994 and is not as well known as other measures of bank performance. EVA is calculated as a company's "Net Operating Profit after taxes (NOPAT) minus a dollar cost for the equity capital employed by the company. The dollar cost of equity capital employed by a company is equal to the company's equity capital (reported on its balance sheet) multiplied by a percentage return that the company's shareholders require on their investment. The use of this formula will produce either a positive or negative EVA number. A positive EVA reflects that the company is increasing its value to its shareholders, whereas a negative EVA reflects that it is diminishing its value to its shareholders. (Ross, Westerfield, Jaffe 2002)

NOPAT and capital invested should not be calculated on an accounting basis, but need to be calculated on an economic basis. Advocates of EVA have identified more than 160 adjustments, but it is unrealistic even to think of making all these adjustments for any single company. In the empirical investigation, according to Beamish (2000) we calculate a disclosed EVA, which EVA is obtained making some standard adjustments to publicly available accounting data. The calculation of EVA requires, in fact, to express NOPAT and capital invested on an economic basis; for this reason, advocates of EVA Stewart (1991), Uyemura et al (1996), Rappaport (1998), Al Ehrbar (1998) suggest some adjustments in order to avoid mixing operating and financing decisions, provide a long term perspective, avoid mixing flow and stock and to convert GAAP accrual items to a cash-flow basis or, in other cases convert GAAP cash-flow items to additions to capital.

Consequently, should one be able to forecast EVA, one should be able to determine, at least partially, future prices and returns of stocks. Such a conclusion contradicts a body of knowledge recently developed which demonstrates that the stock market is efficient with regard to information. That is, all available information is "fully reflected" in current stock price (Rogalski and Vinso, 1977) and as a result information on EVA is already reflected in the price of listed banks and by extension it cannot gain investors an advantage in forecasting future trends in EVA.

2.5 Conclusion

Chief Financial Officers need to assert control over the design of their financial management systems. They should champion a cross-functional effort to streamline and simplify the overall system and establish a transparent, comprehensive focus on creating shareholder value. EVA is the ideal measure to bind together all of the various applications and incentive plans in one common language and framework. It is unique in its ability to play that role because, as a measure of profit, it is easy to understand conceptually. But also, as a measure of performance, it is the only one that directly ties to NPV and the creation of shareholder wealth and that legitimately qualifies for a mission of continuous improvement. EVA truly is the hedgehog of Finance. (Stewart, 2003).

Several of the studies dealing with shareholder value have investigated the superiority of the innovative performance measures (especially, EVA which is the most popular in the developed markets) over the traditional measures that are ROE, ROA and Net Income. Ross, Westerfield and Jaffe (2002) said that EVA is like looking through the windshield while driving a car. You need to know what lies further down the road to calculate a value. In contrast, performance measurement (ROA, EPS, ROI) is like looking into the rear-view mirror. You find out where you have been. A growing number of studies investigate which performance measures is the most compatible with shareholder value maximization. The evidence surrounding this issue is mixed, and these studies can be divided in two groups; Empirical Studies carried out by consultants and Academic Studies. As stated in Lehen and Makhija (1997, pp 90), "EVA is seen by its proponents as providing the most reliable year-to-year indicator of a market-based performance measure known as Market Value Added ... Despite the wide interest in EVA, little is known empirically about the efficacy of this measure versus other measures of performance...the evidence from these studies is mixed, however, and has not resolved the debate over performance measures". In addition, as far as we are aware, few papers investigated this issue focussing on the banking industry. (Dalborg 1999). It has generally been asserted that stock prices and EVA show a remarkable tendency to move up and down together. EVA proponents insist on the superior information given by the EVA figure when compared to normal accounting figures. This has been empirically tested by Biddle, Bowen and Wallace (1997) and Chen and Dodd (1997).

EVA figures have been heavily promoted in the UK, Australia, Canada, Brazil, Germany, Mexico, Turkey and France amongst others (Stem Stewart, 1999), used to provide published rankings of managerial performance (Ferguson, 1997), and several international companies have adopted EVA for performance measurement and/or incentive compensation packages. Support for EVA has also been forthcoming from other sources. Fortune has called it “today’s hottest financial idea”, *The Real Key to Creating Wealth* (30 September, 1993) and a “New Way to Find Bargains” (9 December, 1996), and has printed EVA performance rankings since 1993 (cited in Stem, Stewart and Chew, 1995). Peter Drucker (1998) in the *Harvard Business Review* suggests that EVA’s growing popularity reflects, amongst other things, the demands of the information age for a measure of ‘total factor productivity’. Finally, there has been widespread adoption of EVA by security analysts since “instead of using a dividend discount approach, these models measure value from the point of the firms’ capacity for ongoing wealth creation rather than simply wealth distribution” (Herzberg, 1998, pp45).

Traditional and value-added measures of performance have been analyzed and compared with stock returns (Peterson and Peterson 1996). According to their findings, traditional measures are not empirically less related to stock returns than return on capital: as a result, traditional measures should not be eliminated as a means of evaluating performance, though these have no theoretical appeal. From this point of view, Peterson and Peterson (1996) rule out the possibility of value added measures not being worthwhile: since value added measures focus on economic rather than accounting profit, these play an important role in evaluating performance because managers will aim towards value creation rather than mere manipulation of short-sighted accounting figures. Biddle et al., (1997 and 1999) analyzed a sample of 6174 firms -years over the period 1984-93 by comparing adjusted R_2 obtained regressing stock market adjusted returns against EVA, Residual Income (RI), accounting earnings (namely, Earning Before Extraordinary Item - EBEI) and Operating Cash Flow (CFO). According to their results, EBEI has the highest adjusted R_2 and EVA has a smaller adjusted R_2 : these results do not support the hypothesis that EVA dominates traditional performance measure in its association with stock market returns.

On the other hand, Uyemura et al., (1996), undertook a particularly interesting study for the purpose of this study since it focuses on banking from an analysis of the largest 100 U.S. bank holding companies over a period of ten years. By regressing changes in standardized MVA against changes in standardized EVA (defined as EVA divided by capital) and traditional performance measures, EVA was found to have the highest correlation with MVA.

In this study, we shall not only take into account traditional performance measures but other operational measures shall be included to assess sensitivity of MVA to operational factors which are capital adequacy and non-performing loans.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Conceptual and Analytical Model

The model takes on a similar approach to Biddle et al (1997 & 1998), and assumes that stock performance, as measured by stock returns, is a function of profitability. However, within the banking industry several non-profit based factors are normally used in gauging the financial strength of banks. Consequently, several control variables are added to the equation to cater for the non-profit aspects of a bank's value as follows:

Share Performance (SP) = f (firm performance)

SP = f (EVA, EPS, DPS, ROE, ROTA, CADQ, NPL)

Where

EVA – economic value added

EPS – Earnings per Share

DPS – Dividend per Share

ROE – Return on Equity

ROTA – Return on Total Assets

CADQ – Capital Adequacy

NPL – Non Performing Loans Portfolio

MVA = $sp_t - sp_{t-1}$

3.2 Research design

The research design will be in form of a case study to assess and compare the effects of EVA and the more traditional banking performance measures on Market Value Added. The case study design will be applied in order to allow for in-depth statistical analysis.

3.3 Population

The population of interest in this study is the quoted companies in the Main Investment Market Segment (MIMS) board of the Nairobi Stock Exchange.

3.4 Sampling

Data will consist of stock prices of listed banks and their respective earnings and invested capital on a quarterly basis.

3.5 Data Collection

The sample will consist of seven banks listed at the NSE namely Barclays Bank, CFC Bank, Diamond Trust Bank, Kenya Commercial Bank, National Bank of Kenya, National Industrial Credit Bank and Standard Chartered Bank.

The banking stock prices will be sourced from the Nairobi Stock Exchange while capital investment data will be sourced from the banks' financial statements on a quarterly basis.

The data will be based on a five year period from 2002 – 2006 on a quarterly basis. This duration is considered adequate in deriving sufficient data to perform a regression analysis. Equity Bank is not included in the banking sample because it was listed recently and further it only began to operate as a bank in 2005. As a result it does not have adequate price and earnings data for the purposes of conducting the above tests.

3.6 Diagnostic Tests

3.6.1 Autocorrelation

The regression equation will be tested for the strength of correlation between the independent variable (EVA/share) and the dependent variable (MVA/share). A strong correlation will be the basis for further analysis while a weak correlation will be an indication that there is no strong relationship between banking stock prices and EVA and as a result there will be no basis for further tests that link EVA to MVA. Consequently, it will also mean that price movement can mainly be attributed to other factors other than EVA.

To adjust for multicollinearity and autocorrelation, correlation matrix will be used to identify independent variables with a strong correlation. If there are instances of two independent variables having a strong correlation, one of the variables will be dropped since it would be difficult to know which of the two highly correlated variables is more responsible for the changes in the dependent variable.

3.6.2 T-test

A T-test will be undertaken to establish whether the difference between the means of the actual MVA and that of the projected MVA are statistically significant. If the results of the Chi-test point to significance in variance between projected and actual MVA then the t-test will be applied assuming unequal variances in the variables. Accordingly, the t-test shall be used to reaffirm the findings of the Chi-test. If the t-test does not record any significance in the variation of the means then it would mean that EVA is a good tracker of MVA and by extension EVA is a useful stock price forecasting tool. However, if the t-test registers significance in the means then it will tend to lend weight to the contrary.

CHAPTER 4

DATA ANALYSIS AND FINDINGS

4.1 Industry Trends

		MVA	EVA (Kshs 'bn)	EPS	DPS	ROE	ROTA	CADQ	NPL
2002	Q1	-3.45%	-1.3258	6.67	0.00	22.80%	2.94%	19.10%	39.40%
	Q2	-4.81%	0.22428	5.34	0.00	18.35%	2.30%	17.50%	32.40%
	Q3	-2.89%	0.8598	5.42	0.00	18.76%	2.29%	17.00%	29.60%
	Q4	19.95%	-1.10426	4.55	2.07	15.72%	1.91%	16.60%	29.90%
2003	Q1	8.67%	3.2003	8.41	0.00	24.03%	3.48%	17.50%	29.20%
	Q2	51.24%	4.0906	7.33	0.00	24.43%	2.99%	17.20%	29.40%
	Q3	11.25%	5.84597	7.05	0.00	26.05%	3.22%	17.60%	28.70%
	Q4	32.17%	6.48556	7.86	2.33	25.08%	3.13%	17.30%	27.70%
2004	Q1	19.52%	3.37424	6.36	0.00	20.50%	2.49%	18.70%	25.40%
	Q2	10.43%	3.35475	7.06	0.00	22.76%	2.60%	16.50%	23.40%
	Q3	-9.30%	0.8501	6.15	0.00	21.50%	2.43%	16.10%	23.20%
	Q4	9.50%	0.741	6.74	2.21	21.70%	2.57%	16.50%	21.70%
2005	Q1	-4.00%	1.218	8.39	0.00	24.83%	2.95%	16.20%	20.50%
	Q2	10.52%	0.38064	8.30	0.00	24.18%	2.94%	16.20%	19.80%
	Q3	7.87%	0.04458	8.14	0.00	24.26%	2.90%	15.70%	19.30%
	Q4	10.35%	-0.38053	8.10	2.65	24.40%	3.05%	16.00%	19.00%
2006	Q1	-3.17%	1.92752	9.77	0.00	25.83%	3.27%	18.50%	17.30%
	Q2	23.43%	5.02224	11.40	0.00	29.18%	3.19%	17.40%	16.70%
	Q3	30.45%	5.47966	11.45	0.00	27.20%	3.36%	16.40%	15.13%
	Q4	10.28%	6.2504	12.35	3.28	28.85%	3.50%	16.40%	15.70%

The above statistics represent an average of the listed banks in terms of stock returns (MVA), profitability (EVA, EPS, DPS, ROE, ROTA) and operating performance (CADQ, NPL). Economic value added (EVA) for the listed banks appears to have been erratic throughout the five year period mainly as a result of the volatility in inflation which had a tendency to raise the required rate of return. Earnings per share (EPS), which is based on industry average estimates of listed banks from figures sourced from both NSE and CBK, was more or less on a gradual incline for the five year period while

return on equity (ROE) and return on total assets (ROTA) were generally volatile. However, the gradual decline in non-performing loans (NPL) may have contributed significantly to the rise in profitability as the banks' loan impairment costs declined with a reduction in their non-performing loans portfolios.

4.2 Correlation Analysis

	<i>MVA</i>	<i>EVA</i>	<i>EPS</i>	<i>DPS</i>	<i>ROE</i>	<i>ROTA</i>	<i>CADQ</i>	<i>NPL</i>
<i>MVA</i>	1							
<i>EVA</i>	0.303951	1						
<i>EPS</i>	0.17099	0.577799956	1					
<i>DPS</i>	0.102287	0.086835662	0.138513	1				
<i>ROE</i>	0.250608	0.649101743	0.907928	0.044026	1			
<i>ROTA</i>	0.25376	0.596355126	0.834324	0.045242	0.917062	1		
<i>CADQ</i>	-0.15147	0.099949079	-0.12633	-0.3003	-0.06028	0.078581	1	
<i>NPL</i>	-0.00591	0.294409477	-0.73211	-0.19212	-0.5938	-0.40571	0.525502	1

From the correlation matrix table above it is evident that the independent variables EPS and ROE have a strong correlation, in addition to variables EPS and ROTA and variables ROE and ROTA as all these variables are profitability measures. Accordingly, the regression equation should only take one of these variables into account to adjust for multicollinearity. Consequently, in deriving the regression equation EPS was used as the profitability indicator that represents the traditional accounting measures.

4.3 Regression Analysis

	Quarter	MVA	EVA (Kshs 'bn)	EPS	DPS	CADQ	NPL
2002	Q1	-3.45%	-1.3258	6.67	0.00	19.10%	39.40%
	Q2	-4.81%	0.22428	5.34	0.00	17.50%	32.40%
	Q3	-2.89%	0.8598	5.42	0.00	17.00%	29.60%
	Q4	19.95%	-1.10426	4.55	2.07	16.60%	29.90%
2003	Q1	8.67%	3.2003	8.41	0.00	17.50%	29.20%
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	Q3	11.25%	5.84597	7.05	0.00	17.60%	28.70%
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	Q4	9.50%	0.741	6.74	2.21	16.50%	21.70%
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	Q2	10.52%	0.38064	8.30	0.00	16.20%	19.80%
	Q3	7.87%	0.04458	8.14	0.00	15.70%	19.30%
	Q4	10.35%	-0.38053	8.10	2.65	16.00%	19.00%
2006	Q1	-3.17%	1.92752	9.77	0.00	18.50%	17.30%
	Q2	23.43%	5.02224	11.40	0.00	17.40%	16.70%
	Q3	30.45%	5.47966	11.45	0.00	16.40%	15.13%
	Q4	10.28%	6.2504	12.35	3.28	16.40%	15.70%
		b	b ₁	b ₂	b ₃	b ₄	b ₅
		1.5748	-8.1892	0.00069	0.03036	0.02127	0.79886**

Significance at 10% **

Trends in EVA for the five year period were generally mixed for the listed banks with 2003 and 2006 registering strong performance. As for the more traditional measures, EPS average has been on a gradual rise while the capital adequacy operated in the 16% - 19% range. On the other hand, Non-performing loans were on a gradual and consistent decline over the same period as a result of which they recorded a significant impact on market value added.

Thus using the remaining five independent variables a multiple regression equation was derived as follows:

	MVA	EVA	EPS	DPS	CADQ	NPL
Coefficient	1.574808	-8.189246481	0.000688	0.030365	0.021275	0.798862
STDEV	0.173864	2.429001769	1.846813	0.97438	0.009559	0.063277
T-statistic	9.057676	3.371445252	0.000373	0.031163	2.225616	12.62485
Critical T-statistic (5%)	12.7062	12.70620473	12.7062	12.7062	12.7062	12.7062
Critical T-statistic (10%)	6.313752	6.313751514	6.313752	6.313752	6.313752	6.313752

$$\text{MVA} = 1.5748 - 8.1892 b_1 + 0.00069 b_2 + 0.03036 b_3 + 0.02127 b_4 + 0.79886 b_5$$

The subsequent t-test on the coefficients b_1 , b_2 , b_3 , b_4 and b_5 indicated a significant and positive relationship between MVA and NPL. The positive relationship is surprising given that non-performing loans tend to diminish profitability (EPS) which has a direct and positive impact on market value added. On the other hand, the positive relationship could be explained by the presence of a lag period between non-performing loans reporting and market response. Hence the market adjustment to non-performing loans does not occur immediately.

In addition, market value added was not found to be significantly sensitive to either the traditional measures (EPS, DPS, ROE and ROTA) or the more modern measures EVA. This study only found significant sensitivity of MVA to an operational performance measure namely the non-performing loans (NPL).

Further, the relationship between MVA and EVA although not significant was found to be negative. The lack of significance is an indication that the information on EVA has already been factored into the price of banking stocks. The negative relationship, on the

other hand, maybe due to the lack of market awareness of EVA hence market prices do not track EVA and as a result, there is a divergence in the relationship between MVA and EVA.

CHAPTER 5

RECOMMENDATIONS AND CONCLUSION

This paper investigated the information content of Economic Value Added and to a lesser extent traditional performance measures in the light of creating shareholder value within the banking industry. While there is debate as to the best method for assessing the value created by firms for their owners, as researchers and practitioners grapple with different performance metrics a number of salient points emerged. There is a growing number of studies investigating which performance measure is the most compatible with shareholder value maximization, but the evidence surrounding this issue is mixed. In addition, few papers investigate this issue focusing on the banking industries.

Given that no significant or positive relationship between MVA and EVA was found, it can be generally concluded that as yet, there is little market awareness of the EVA performance benchmark at the Nairobi Stock Exchange (NSE) and as such EVA may not be an appropriate tool in forecasting future trends in shareholder value and stock returns as it does not significantly contribute to the information content of price movements for listed banks. Accordingly, the findings of this study indicate that information on EVA is already reflected in the banking stock prices and as such it can not be used to predict the future trends in banking stock prices.

Our findings were consistent with earlier studies. Empirical evidence concerning EVA has been mixed. Biddle et al (1997) used relative and incremental information tests to examine whether stock returns were more highly associated with EVA, residual income or cash flow from operations. He concluded that while for some firms EVA may be an effective tool for internal decision making, performance measurement and incentive compensation, it does not dominate earnings in its association with stock market returns. Chen and Dodd (1997) likewise examined different dimensions of the EVA system and concluded not a single EVA measure was able to account for more than 26 percent of the variation in stock return. Lehn and Makhija (1997) Rogerson (1997) and Biddle, Bowen and Wallace (1997) reached similar conclusions. Lastly, Clinton and Chen (1998)

compared share prices and returns to residual cash flow, EVA and other traditional measures and recommended that companies using EVA consider residual cash flow as an alternative.

However, Bao and Bao (1998) in an analysis of price levels and firm valuations concluded that the results are not consistent for earnings and abnormal economic earnings, but are consistent for value added, i.e., value added is significant in both levels and changes deflated by price analyses. Similarly, Uyemura (1996) demonstrated that EVA has a high correlation with market value added and thereby stock price, while O'Byrne (1996) estimated that changes in EVA explain more variation in long-term stock returns than changes in earnings. Finally, and from a stock selection perspective, Herzberg (1998) concluded that the residual income valuation model including EVA appears to have been very effective in uncovering firms whose stock is underpriced when considered in conjunction with expectations for strong earnings and growth. Nevertheless, the bulk of empirical evidence indicates that the superiority of EVA vis a vis earnings has not been forthcoming.

In conclusion, these limitations in the existing literature all suggest future directions for research. There is an obvious requirement to examine the usefulness of EVA vis a vis traditional financial statement measures in an alternative institutional (corporate) milieu. Another direction is to follow an avenue for future research suggested by the findings of this study to examine more closely which components of EVA and earnings contribute to, or subtract from, information content. Put differently, given that EVA consists of nearly 150 potential changes to accounting figures grouped across adjustments to accounting measures of operating profits and capital, there is the requirement to quantify the contribution of these sub-components to overall firm performance. Also in view of the findings, other studies may be undertaken to cast more light into the relationship between non-performing loans of listed banks and the market value added. In undertaking such studies the non-performing loans should be lagged as it is probable that the stock market takes a longer period to respond to non-performing loans data. Examination of EVA over a longer time frame would allow greater empirical certainty on its status as a corporate performance measure.

6.0 REFERENCES

1. Al Ehrbar (1999), Using **EVA to measure performance and assess strategy.** Strategy and Leadership, May-June, 20-24
2. **Annual Financial Reports and Accounts** for BBK, SCB, DTB, NIC, KCB, NBK and CFC.
3. Bao, B. H., (1996), **The Time Series Behaviour and Predictive Ability Results of Annual Value Added Data,** Journal of Business Finance and Accounting 23(3) April, 449-460
4. Black A., Wright P., Bachman J.E., (1998), **In search of shareholder value.** FT Pitman Publishing, London
5. Biddle, G.C., (1998), Economic Value Added: **Some Empirical Evidence,** Managerial Finance 24(11)
6. 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
7. Dalborg H. (1999), **Shareholder value in banking.** paper prepared for the May 1999 session of Institut International d'Etudes Bancaire
8. Drucker, P., 1998. **The Information Executives Truly Need to Know.** in Harvard Business Review on Measuring Corporate Performance, Boston: Harvard Business School Press

9. Epstein, Ralph C. (1925) **"Industrial Profits in 1917"** The Quarterly Journal of Economics, 39(2) 241-266
10. Ferguson, A., 1997, **Australia's Best Value in Chief Executives**, Business Review Weekly, November 24, 57-61
11. Fiordelisi Franco, Molyneux, Phil, (2005) **Shareholder value and the clash in performance measurement**
12. Fisher, Irving, 1930. **"The Theory of Interest"**, The MacMillan Company, New York. p. 175.
13. Fraker Gregory T, **Using Economic Value Added (EVA) to Measure and Improve Bank Performance** RMA Arizona Chapter
14. Herzberg, M. M., 1998, **Implementing EBO/EVA Analysis in Stock Selection**, Journal of Investing, Spring: 45-53
15. Horne James C Van (1991), **Financial Management and Policy**, Eighth Edition Prentice Hall of India, New Delhi
16. Ivancevich John M, Konoposke Rober, Matteson Michael (2002), **Organizational Behaviour and Management**
17. Jose A. Scheinkman and Blake LeBaron (2006) **Nonlinear Dynamics and Stock Returns**, Journal of Business, Vol 62 No. 3
18. Lehen K., Makhija A. K. M. (1997), **EVA, accounting profits and CEO turnover: an empirical examination, 1985-1994**, Journal of applied corporate finance, 10, 2, 90-97
19. Marcucci Juri (2005) **Forecasting Stock Market Volatility with Regime-Switching GARCH Models**, Journal of Studies in Nonlinear Dynamics & Econometrics, 6

20. Mugenda Olive M., Mugenda Abel G., (2003) **Research Methods Quantitative & Qualitative Approaches**. ACTS Press, Nairobi

21. Myers, R., 1996, **The Metric Wars**. The Magazine for Chief Financial Officers (CFO), October, 18.

22. O'Byrne S. F. (1996) **Eva and Market Value**. Journal of Applied Corporate Finance, 9, 1, 116-25

23. Pandey I M (1998), **Financial Management**, Prentice Hall of India, New Delhi

24. Rappaport A. (1998). **Creating shareholder value**. The free press, New York

25. Richard J. Rogalski; Joseph D. Vinso. (Sep., 1977) "Stock Returns, Money Supply and the Direction of Causality," *The Journal of Finance*, Vol. 32, No. 4., pp. 1017-1030

26. Resti A. (1999), **La creazione di valore in banca: canali endogeni e canali esogeni**. APB news, n., 19-37

27. Riahi-Belkaoui, A., 1996. **Earnings>Returns Relation versus Net Value Added>Returns Relation**: A Case for Nonlinear Specification, *Advances in Quantitative Analysis of Finance and Accounting*, 4,1: 175-185

28. Rogerson, W.P., 1997, Intertemporal Cost Allocation and Managerial Investment Incentives: **A Theory Explaining the Use of Economic Value Added as a Performance Measure**. *Journal of Political Economy*, 105, 4: 770-795

29. Ross Stephen A, Westerfield, Randolph W, Jordan Bradford D (2001), **Essentials of Corporate Finance**

30. Scheinkman, A Jose, LeBaron, Blake (1989) **Non Linear Dynamics and Stock Returns**. The Journal of Business, Vol 62 No. 3
31. Sharpe William F, Alexander Gordon J, Bailey Jeffrey V, (2004) **Investments** 6th Edition Prentice Hall of India, New Delhi
32. Slater, S. (1992). **Journal of Management**. Vol. 18, No. 4, 1992, pp 717-732
33. Sloan, Laurence H., 1929, **Corporate Profits: A Study of Their Size, Variation, Use and Distribution in a Period of Prosperity**. Harper and Brothers Publishers, New York
34. Srivastava U.K., Shenoy G.V., Sharma S.C. (1999) **Quantitative Techniques for Managerial Decisions** 2nd Edition New Age International (P) Limited Publishers, Mumbai
35. Stern Stewart, 1999, Internet site
http://www.sternstewart.com/about_eva/about_eva_main.html>
36. Stern, J. M., Stewart, G. B., & Chew, D.H., 1995, **EVA Financial Management System**, Journal of Applied Corporate Finance, 8 2: 32-46
37. Stewart, G.B., 1994. **EVA: Fact and Fantasy**, Journal of Applied Corporate Finance 7(2), Summer, 71-84
38. Uyemura D.G., Kantor G.C., Pettit J.M., (1996), **EVA for banks: value creation, risk management and profitability measurement**, Journal of Applied Corporate Finance, 9, 2, 94-105
39. West Tracey, Worthington Andrew C (2004) **A Review and Synthesis of the Economic Value Added Literature**. School of Economics and Finance.

40. West Tracey, Worthington Andrew C (2004) **Economic Value-Added: A Review of the Theoretical and Empirical Literature**. School of Economics and Finance.
41. William N Goetzmann and Stanley J. Garstka (2006) **The Development of Corporate Performance Measures: Benchmarks Before EVA**
42. <http://www.centralbank.go.ke>
43. Young, D., 1997, **Economic Value-Added: A Primer for European Managers**. European Management Journal, 15, 4: 335-343
44. <http://www.barclays.com>
45. <http://www.kcb.co.ke>
46. <http://www.iba-nic-bank.com>
47. <http://www.standardchartered.com>