USING EARNINGS AND FREE CASH FLOW TO EVALUATE CORPORATE PERFORMANCE

BY

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Declaration

This project is my own original work and has not been presented for any academic award in any institution before now.

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

16/2/2005

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Dedication

To the Almighty God who provided strength and the most needed financial prowess to go through this course. To my beloved wife Grace who patiently endured and encouraged me during the time it took to complete my studies. No words can express my feelings for her and the sacrifices she made together with my family.

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LIST OF TABLES

LIST OF GRAPHS

Abstract

Corporate valuation is a very central theme to the subject of Finance. Valuation models are of various types based on either the income statement or the balance sheet approaches. Valuation is important in both acquisition and or disposal of assets as going concerns or stand alone investment(s).

While there is considerable agreement that the firm's value will be determined by the net present value of the cash distribution it is expected to generate, opinion is however divided as whether to use earnings as supported by practitioners (analysts, investors, managers) or focus on free cash flow supported by modern Finance text books.

The focus of this paper was to compare the earnings based measures of corporate performance against that obtained using free cash flow. Using (Beaver, 1966) free cash flow definition, cash flow from operations (CFFO) has been computed and compared with earnings measures of corporate performance.

The findings of this research which are expounded under section 4.2 of this paper indicate that there is no significant difference between free cash flow measure of corporate performance and that of earnings especially when the amount of maintenance capital spending cannot be properly segregated. Further this research found that neither average profit after tax nor cash flow from operations (CFFO) approximates to the market return model for stocks quoted at the Nairobi Stock Exchange (NSE) at the time of this study.

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Background

1.1.1 Meaning and measurement of earnings and free cash flow

There is a general agreement that a company's value should be established with reference to the net present value of the cash distributions it is expected to generate. There is considerable disagreement, however, concerning practical applications of the valuation process (Sloan, 1996). While security analysts, investors, managers and business press for focus on earnings, modern finance text books advocate focus on free cash flow. How then do we define earnings and free cash flow?

Blitzer, Friedman and Silverblatt (2002) identify four types of earnings: reported earnings, operating earnings, pro forma earnings and core earnings. Reported earnings are earnings including all charges except those related to discontinued operations, the impact of cumulative accounting changes, and extraordinary items, as defined by Generally Accepted Accounting Principles (GAAP). This is the traditional measure of earnings and has along history, having been used for the S&P 500 and company analyses for decades.

Second, operating earnings focuses on the earnings from a company's principal operations, with the goal of making the numbers comparable across different time periods. Operating earnings are usually considered to be as reported earnings with some charges reversed to exclude corporate or one-time expenses. Despite the lack of any generally accepted definition, operating earnings are increasingly popular in corporate reports. The use of this measure seems to come from internal management controls used when a business unit manager is not responsible for managing corporate-level costs.

Third, pro forma earnings, originally meant a special analysis of a major change, such as a merger, where adjustments were made for an "as if" review. In such cases, pro forma measures are very useful. However, the specific items being considered in an "as if" review must be clear. In some recent cases, "as if" has come to mean "as if the company didn't have to cover proper expenses." In the most extreme cases, pro forma is nicknamed EBBS, or "earnings before bad

stuff." Such abuses notwithstanding, pro forma earnings do have a place and should be used for special analyses of potential changes in a corporation. In such cases, pro forma earnings are defined for the particular analysis.

Given the lack of any definition of operating earnings and the widespread and sometimes inconsistent use of the term, Standard & Poor's felt that to use it might only add to the confusion. Core Earnings refer to the after-tax earnings generated from a corporation's principal business or businesses. Since there is a general understanding of what is included in as reported earnings, the definition of Core Earnings begins with as reported earnings and then makes a series of adjustments. As Reported is earnings as defined by GAAP, with three exclusions — extraordinary items, cumulative effect of accounting changes, and discontinued operations, all as defined by GAAP.

Investors are often advised to focus on Cash Flow instead of on accounting net income. Investors need to understand exactly what Cash Flow means and how and when it can be a legitimate substitute for net income (Shawn, 2002). Unfortunately, the term Cash Flow is subject to multiple definitions and this causes much confusion for investors. The broadest definition is that Cash Flow is the total increase in cash over a year or quarter. The Statement of Cash Flows provides this and breaks it out into three components; 1. Cash Flow from or used in operations, 2. Cash Flow from or used in financing (borrowing and re-payments) and 3. Cash Flow from or used in investing activities (capital spending). This broad definition of Cash Flow is of great use in understanding exactly how the company generated and used cash but it is not a useful performance measure since borrowed cash is certainly no substitute for net income (Shawn, 2002).

In most cases net income is a better measure of free cash flow compared to the various figures that many companies rather loosely refer to as cash flow. However, there are indeed cases where investors should focus on free cash flow rather than net income.

Many companies and analysts take only the first of these three components, Cash Flow from operations and call it simply "Cash Flow" and imply that it is a performance indicator. This definition omits the Cash Flow from financing which seems quite appropriate since borrowing or repaying loans is not in any way an indicator of profitability. But this (Operating) Cash Flow

also omits the required capital spending that is necessary to replace worn out assets. For that reason it is very flawed as a measure of profitability. This definition of Cash Flow should not be used as any kind of substitute for net income.

To add to the confusion about Cash Flow another large group of companies and analysts use the term Cash Flow to mean simply net income plus depreciation and deferred income taxes. This is actually only a sub-component of Cash Flow from Operations. Technically speaking, it is Cash Flow from Operations before the "increase in non-cash working capital". This accounting jargon means the Operating Cash Flow before the net increase in money tied up in accounts receivable and inventories less the cash effectively provided by suppliers through accounts payable. Most growing businesses need to tie up increasing amounts of cash each year in this "working capital".

Finally, a few companies focus on "Free Cash Flow". This is best calculated as Cash Flow from Operations before changes in working capital and minus sustaining capital spending that is necessary to replace worn out assets. Free Cash Flow can also be stated as net income plus depreciation minus sustaining capital spending. This effectively replaces the accountant's non-cash depreciation with the actual cash outlay to replace worn out assets (Shawn, 2002). Sustaining capital spending is the capital spending required to maintain current operations. It should omit capital spending on major projects and corporate acquisitions that are designed to boost growth and capacity beyond the current level of operations.

1.1.2 Using earnings and free cash flow in assessing firm performance

Different people are interested in performance at various levels. No firm wishes to hire or retain non performing managers. No investor likes to retain a non performing investment to his/her portfolio.

The issue of performance is thus so critical that by extension people have developed various methods of measuring performance. The question however is, is there a best method of measuring performance? At what point do we/do we not use one method to measure performance?

Caught up in our measurement jag, it seems as though we believe that if we do it hard enough, we'll wring out some elusive cause-and-effect relationship. With such intensity, we measure as though it was *the* end, and not a means to the end, that mattered.

This begs the important questions: In a business context, what does measuring mean? What is the purpose of measuring? What "ends" does measurement seek to provide insight into?

To answer these questions, we must begin with the end in mind. Management must always, in every decision and action, put economic performance first (Drucker, 1954). He goes further to argue that "It can only justify its existence and its authority by the economic results it produces. There may be great non-economic results: the happiness of the members of the enterprise, the contribution to the welfare or culture of the community, etc. Yet, management has failed if it fails to produce economic results. ...It has failed if it does not improve or at least maintain the wealth-producing capacity of the economic resources entrusted to it."

Free Cash Flow is an excellent performance measure and is often superior to net income as an indicator of value. In fact, forecast Free Cash Flow is the most theoretically sound way to place a fair value on any company (and therefore 1 share of any company). If investors focus on Free Cash Flow then they are in good company. Warren Buffett, the world's richest investor uses historic and forecast Free Cash Flow to value the businesses that he buys.

Technically, Free Cash Flow often includes the change in working capital and all capital spending. This definition of Free Cash Flow is used by business valuators and is forecast for a period of years. In this manner, all investment spending is considered and so is the cash flow that results from the total investment.

When calculating Free Cash Flow for a single year, it is best to omit the change in working capital and discretionary, non-maintenance capital spending because the ultimate pay-off from those investments is not yet included in operating cash flow. For this reason, Free Cash Flow for a single year is calculated as Operating Cash Flow before the change in working capital less sustaining capital spending.

Free Cash Flow is the only version of Cash Flow that investors should accept as a substitute for net income. Unfortunately most companies and analysts do not directly provide the Free Cash Flow figure. But it can often be approximated as Operating Cash Flow (before changes in

working capital) less ***total*** capital investments. However, large capital spending amounts designed to materially expand the scope of operations including spending on corporate acquisitions should be omitted if it can be identified. In addition Cash Flow from Operations should ideally be adjusted to remove any material unusual or one-time items.

In many cases good old GAAP net income is a better estimate of Free Cash Flow than is so called Cash Flow due to the omissions noted above. This is particularly true in cases where depreciation is roughly equal to the capital spending that is required in an average year or quarter to replace worn out assets.

However, there are some notable situations where net income is systematically less than Free Cash Flow. In those cases a focus on Free Cash Flow could lead to identification of stocks that deserve a high P/E ratio and could lead to some bargains if the market is focusing on net income.

Certain asset intensive industries tend to have large and continuously growing amounts of deferred tax. GAAP net income treats this as an expense since it can theoretically reverse and have to be paid. In reality some companies defer these amounts indefinitely and so Free Cash Flow is systematically greater than net income for this reason.

In addition certain industries have very long lived assets that will not need to be replaced for many years. GAAP net income charges an annual depreciation expense which is often a reasonable estimate of required capital spending to replace worn out assets. But in cases where assets will not be replaced for many years, the present value of that eventual capital spending may be minimal and again annual Free Cash Flow is systematically greater than net income.

Also accounting net income always assumes the company is a going concern and that therefore capital assets will in fact be replaced as they wear out or as resources are depleted. However some companies with mines and large oil and gas deposits may be worth more as wind-down operations. In a wind-down operation Free Cash Flow tends to systematically exceed net income.

In conclusion Free Cash Flow is a superior performance and value indicator, but only if investors take the time to understand it and how to calculate it properly. The so called Cash Flow that most companies and many analysts quote is flawed as a measure of the true Free Cash Flow that a

company is generating because it usually omits the necessary capital spending to replace worn out assets. Investors should ignore those flawed versions of Cash Flow. In most situations investors should simply focus on net income. However, investors should calculate and focus on Free Cash Flow in those cases as identified above where Free Cash Flow tends to systematically exceed net income.

The focus of this paper is not to attempt to address the controversies arising above. I will only attempt to compare the robustness of two models (Free cash flows model and earnings model) in measuring corporate performance.

1.2 Statement of the problem

Researchers in strategic management field have offered a variety of models for analyzing corporate performance. However little consensus has emerged on what constitutes a valid set of performance criteria (Cameron, 1981: Lewin and Minton, 1986). Researchers have suggested that studies on corporate performance should include multiple criteria analysis (Cameron, 1981; Hitt, 1988). This multidimensional view of performance implies that different models or patterns of corporate performance and its determinants will emerge to demonstrate the various sets of relationships between the dependent and independent variables in the different models (Ostroff and Schmitt, 1993).

In a good majority of cases investment analysts, equity investors, management and different other stakeholders have devised means, however crude, of making decisions on when to buy/sell shares besides a host of other decisions. In some instances people have used earnings per shares (EPS); price earnings ratio (P/E) and dividend yields (DY).

The question however arises as to whether these measures were the best or just what is available to such a decision maker. Would the decision arrived at be any different if we used Free Cash Flow (FCF) as opposed to the earnings measures? It is the void that exists in terms of available research, especially in the Kenyan context, on the use of Free Cash Flow (FCF) method to value performance that this project is intended to fill.

1.3 Objective of the study

The objectives of the study are:

- To compare the free cash flow and earnings measures of corporate performance.
- To ascertain differences in performance, if any, between market returns and that indicated by either free cash flow or earnings measures.

1.4 Hypotheses

For the purpose of this research proposal I put forward the following hypotheses which will be tested at various levels of significance:

Ho: There is no significant difference in corporate performance as measured by earnings or free cash flow.

Hi: Free cash flow (FCF) is a superior measure of corporate performance compared to Earning measures.

1.5 Importance of the study

This study being a first in Kenyan environment is expected to be important in the following ways:

i) It will shed light on whether the income measures currently in use are adequate or there is need to go a step further to obtain free cash flows.

ii) It is bound to open up further research in this area both for practitioners and those in the academia.

iii) Investors are likely to benefit from the simplicity of the free cash flow method as opposed to reading tones of information hidden in the financial statements.

iv) Market regulators are likely to benefit from this research in the event that free cash flow (FCF) is found to be a superior measure of financial health thus making it part of reporting requirements.

2.0 LITERATURE REVIVIEW

2.1 Evaluating corporate performance

Weiner and Mahoney (1981) have indicated that there are numerous measures of corporate performance that would serve as the dependent variables. However more important than the specific measure chosen is the use made of the multiple measures, because different criteria of performance are likely to be differentially affected by the various independent variables (Lieberson and O.Connor, 1972).

Performance is a difficult concept, in terms of both definition and measurement. It has been defined as the end result of activity, and the appropriate measure selected to asses corporate performance is considered to depend on the type of organization to be evaluated, and the objectives to be achieved through the evaluation (Hunger and Wheelen, 1997).

Indian analysts follow current international market trends in applying cash based methods of valuation and company analysis. As many as 75 per cent of financial analysts in the country use free cash flow (FCF) technique to evaluate corporate performance, finding it to be a more effective indicator of corporate value in comparison with the earnings per share (EPS) and economic value added (EVA) measures, a survey conducted by Financial Advisory Services (FAS), an arm of PricewaterhouseCoopers (Paramvir, 1999). It was reported in the above survey that Analysts also use EPS and EVA techniques as a supplement to FCF to determine the potential for investment in a company's stock, as it is easily understood, adding that institutional investors operating on a longer time horizon favour the use of the FCF method as it is more reliable and effective in interpreting factors like growth, risk and return expectations.

2.1.1 Corporate performance Vs Primary objective of the firm

Management practices have undergone many recent innovations. Organizations have been downsized, delayered, and hollowed out. Employees have been trained, empowered, and, with their new-found skills and freedoms, have implemented many innovative practices including continuous improvement, reengineering, just in time manufacturing, and total quality management (Artkinson, Waterhouse and Wells, 1999)

Despite these important changes, which have served to reduce costs, increase quality, and improve customer service, many managers and management consultants' believe that organizations are floundering because they have failed to develop performance measurement systems to guide and evaluate their organization improvement activities.

Most organizations use formal performance measurement systems that are extensions of their financial reporting systems. The justification for this practice is that the financial reporting system provides measures that participants generally regard as reliable and consistent - thereby providing a solid foundation for developing reward and accountability structures and articulate with the primary organization objective of creating profits for owners - thereby providing a performance measurement focus that is consistent with organization objectives.

However, criticisms of conventional performance measurement systems have been increasing. Critics charge that financial performance measures lack the requisite variety to provide decision-makers with the range of information they need to manage organization processes. There s a growing concern ... that financial measures are inadequate tools for strategic decision making (Artkinson et al, 1999).

The conclusion that performance measurement systems lack the focus and robustness needed for internal management and control should not be surprising. Financial performance measures were designed to communicate specific historical cost, financial information, computed in defined ways, to a broad group of unspecified people outside the organization. These accounting systems were not designed with a priority of communicating decision-relevant information to people

inside the organization. It is not surprising then that reports of practice identify complaints that financial information: ignores important issues (for example, customer satisfaction), lacks predictive power (financial performance measures are based on historical cost), and provides little or no basis to judge the effectiveness of important organization processes (for example, the organization's personnel relations systems), and fails to provide meaningful information to decision-makers.

The modern organization can be viewed as a complex web of contracts both explicit and implicit, which specify relationships between itself and its stakeholders. A stakeholder can be an individual or group, inside or outside the organization that has a stake in, or can influence, the organization's performance. While all organizations potentially can have a different set of stakeholder groups, each organization usually has five prominent stakeholder groups: *customers*, *employees*, *suppliers* (which include suppliers of goods, services, and debt), *owners*, and *the community*.

Atkinson et al (2003) divides the organization's stakeholders into two groups. The first group, which they call the environmental stakeholders, is composed of customers, owners, and the community. This group defines the organization's external environment which, in turn, defines the critical elements of the organization's competitive strategy. The second group, which they call the process stakeholders, is composed of employees and suppliers. This group works within the environment defined by the external stakeholders to plan, design, implement, and operate the processes that make and deliver the organization's products to its customers.

They take the position that, as a creation of its owners, the organization exists to serve their objectives - which become the organization's primary objectives. Stakeholders would also include researchers, academicians, corporate managers, employees, investment analysts.

Each of these stakeholder(s) is bound to benefit from this research in different ways. The equity investor would be able to informatively gauge the firm's ability to pay dividends based on its cash flow position. Also they can be able to project on the firm ability to generate future earning streams based on a better ability to project using the free cash flow model. Investment advisors

are likely beneficiaries under this category of beneficiaries. Free cash flow also gives a clearer picture to employees and suppliers of services in terms of stability of their employment and income which would otherwise be difficult to gauge using earnings based performance measures.

PWC interviewed around 30 equity analysts and fund managers of local and international companies in India for a survey. The purpose was to explore some of the approaches being adopted to assess corporate performance and valuation methodologies in vogue.

Explaining the FCF methodology, head of FAS Ashwini Puri, who carried out the survey, said cash flows of a company from all its activities including investments, as well as sale of assets are taken into account. According to the survey findings, majority of the analysts also preferred to source their information from the company balance sheets supplementing this by meetings with key executives. "In comparison to equity analysts, fund managers of international as well as local and regional companies expected more information from the companies on value drivers to assist valuation," Puri said.

"In particular, fixed capital investment efficiency was found to be an important value driver in India, primarily as cost of capital is high here and future uncertainty is more marked than in other developed markets," he added. According to the survey, there is a high correlation between change in free cash flows and share price performance, with institutional investors assessing performance of listed companies on the basis of growth, cash flow returns and risk.

The orientation of the management towards enhancing shareholder value was an important criterion among local and international analysts for selecting a company for investment, the survey observed. The survey concluded that the concept of shareholder value has become a principal issue for chief executives of listed companies due to the investor pressure for delivery of superior returns.

2.1.2 Other performance measures

There is no shortage of ways to reward talented managers when times are good. The real challenge is devising effective vehicles to attract, motivate and retain high performers when the

going gets tough. Even if there are incentive payouts, defining good performance in a down market is less than straight forward when forces outside the management's control drive results.

In most cash incentive plans performance is defined at three levels: corporate, business unit and individuals. Corporate and business unit financial goals often are tied to annual budget or based on improvement over the previous years results. But such absolute benchmarks can become obsolete and de-motivating in the face of unexpected market downturn. Three alternative designs of measuring performance may be more relevant under a range of economic conditions: peer group comparison, market index adjustment and strategic focus (Chen, 2003).

Peer Group comparison: performance can be measured effectively relative to a peer group of direct industry competitors that are about the same size with similar business characteristics. This comparison enables plan participants to recognize for above industry achievement of financial, operating or stock appreciation goals despite the negative impact on the entire sector from an economic downturn. It is necessary to establish guideline before the start of the performance period regarding the adjustments to peer company performance data, such as excluding the impact of discontinued operations or unusual charges/incomes.

Market index adjustment: adjusting performance goals based on an index maintains the integrity of the existing goal-setting process, while incorporating some flexibility to recognize overall market conditions. This method assumes that the company results are affected by market factors beyond the management's control and that management is not fully responsible for failing to anticipate or respond quickly enough to market downturn. Market indices that affect performance can include general economic factors and/or pricing for a key underlying commodity such as: changes in consumer price index for leisure industry, interest rates for mortgage banking companies, oil prices for energy companies etc.

Strategic focus: Linking incentive awards to progress towards long-term strategic goals is away to recognize the achievement of key milestones before their impact is fully reflected in financial, operating and stock price results. Strategic goals can be meaningful in a restructuring situation, when business and financial performance measures are more likely to reflect historical factors. In

such cases strategic goals could include selling under-performing business lines, closing a long term agreement with an existing customer, creating new supplier relationships, renegotiating terms of bank financing etc.

Market value added (MVA): The amount of MVA a company creates is ultimately how management should be judged. Who is the better coach? The coach that had five blue-chip basketball players on the team and won the national championship, or the one that had none and won the national championship anyway? The performance of the latter is truly the mark of a better coach. So it is with management. It is not the amount of capital you have—or amount of sales or assets, but rather how much market value you can create relative to that capital you've been given. MVA shows how well managers have performed their most important function: increasing the value of the capital that investors have entrusted to them.

MVA is an equitable metric for management performance. We know that a real star in the computer hardware industry is Hewlett-Packard. Ranked on the basis of sales or asset size, H-P falls fifth, behind Hitachi, IBM, Toshiba and Nippon Electric Corp. (NEC). Yet, when ranked on the basis of MVA, HP ranks 45th among all public corporations, which, more important, leads its industry; Digital and IBM ranked 996 and 997, respectively, in 1994. Likewise, in 1994 the only retailer near Wal-Mart, which ranked third in MVA, was not one of its general-merchandise rivals, K Mart or Sears, but Home Depot, at 14.

MVA is neither new nor a fad. Indeed, Warren Buffett, the highly regarded chairman of Berkshire Hathaway, has long believed that his own performance as a manager should be evaluated in terms of MVA, though he does not label it such: "We feel noble intentions should be checked periodically against results. We test the wisdom of retaining earnings by assessing whether retention, over time, delivers shareholders at least $1 of market share for each $1 retained," stated Buffett in his Letter to Shareholders in Berkshire's 1984 Annual Report.

MVA is an external measure of financial performance. It is a measurement at the interface of the company and the market. This measure is not useful inside the company, where divisions and

decisions have no direct market comparison or outside market impact. The next task is to determine which financial metric within the company best tracks with MVA.

2.2 Performance measurement and indicators

Accounting data is used to model corporate performance and financial ratios constructed as proxies for relationships. Several examples of this practice exist in literature such as Jones et al. (1998), Piesse and Townsend (1995) and Mong'are (1994). Khatri (2001); Claessens, Djankov, and Xu (2000) and Harvey and Ropper (1999) also used data on listed companies for a range of countries to provide a comparison of performance in Asian countries with other emerging markets, and major OECD countries.

Barnes (1987) says that the reason ratios are used as opposed to absolute values, is a mathematical one, and is basically to facilitate for comparison by adjusting for size. The use of ratios for comparisons has been questioned on the basis of diversity of firms within the same industry. However with proper interpretation ratios can provide insight both of the past and forecasts into the future.

The recent huge falls in the world's equity markets have created a schism between performance and market notions of the value that should be placed on companies. While the FTSE-100 may have lost 40% of its value over the last two years, 40% of the companies that make up the FTSE-100 have seen their shares hold steady or improve (Harrington, 2003).

Harrington (2003) reports about KPMG corporate finance partner Michael Higgins' observation, "Generalising about sectors just doesn't work. You have to look at the detail - there are always companies in each sector who are outperforming their competitors." Similarly, relying on market stereotypes of sectors is also misleading.

The telecoms sector is widely held to be dead in the water. But he points out that if one takes the performance of the FTSE-100 as a measure, for the three months ending December 2002, telecoms stocks outperformed the FTSE-100 index. "It wasn't a huge upward surge, but at least it was on the right side".

Higgins argues that if one looks at valuations based on measures such as EBITDA, these are now generally back to pre-bubble levels, matching the figures for 1998 and 1999. This suggests that some much-needed air has been let out of the market and we could be back on a sounder footing. "For me, the best predictor of performance at the moment, across all industry sectors, *is free cash flow*. A company's cash-generative capability is what drives things forward. The thing to concentrate on, when looking at company accounts, is traditional profit and the extent to which the company is capable of converting profit into cash," Higgins comments.

About Steve Russell, strategic analyst at HSBC, Harrington adds "The market has now really gone back to basics. It is now all about cash flow, the ability to pay down debt and the nature of dividend yields," he argues. Russell points out that UK plc has done rather well over the last two years as far as paying down debt is concerned; the focus has shifted to dividend yields, where the story is rather more woeful. Dividend yields today are practically the same as gilt yields, at around 3.9%, which suggests either that people expect further significant falls in the markets, or that future growth will be practically non-existent.

According to Russell, in the current market conditions, a metric such as P/E ratios does not indicate much. "The problem with P/E ratios is that the market simply does not know what to compare them with. The 1990s are no longer relevant. Ratios now are lower than they have been for 30 or 40 years. You have to go back to the 1970s to find so many single figure P/E ratios. Dividend yields are a much more meaningful metric right now," he suggests.

David Nesbit, Ernst & Young regional managing partner for Scotland and Northern Ireland according to Harrington (2003) reckons that the signs to watch for are simply a robust balance sheet and solid cash flow. However, he argues that this is a time when anyone interested in a company has to go beyond the figures to make a judgement. "It may well be, if you are looking at a weak set of figures, that what you are seeing is a management team that has taken all the brave decisions, taken present pain, and has got the company into much better shape to prosper going forward. If you are looking at dividend yield, then you need to work hard to understand the cash flow, so that you can understand why the yield is as it is, particularly if it is surprisingly high," he argues.

He says there are surprisingly few Brownie points for simply meeting analysts' forecasts. "The market swallows that and moves on. What the market really wants to know about is the long-term growth story and how credible is it? What is your potential for an upturn? This is far more important than your last earnings figure, whatever it might have been!"

2.2.1 Growth in Capital

Just because you have pumped in—or retained—more money into a company does not mean the value of the company has increased. The *book* value of the capital in the company is not the same as the *market* value of that capital. If an investor made an original investment in a stock at $50 per share (his book value), but the market value of that stock is currently $25 per share, he has a loss. If he invests more in that company, the market value of his stock doesn't increase. So it is with a company. The money ploughed back into the company may not be creating value (due to poor operating margins on the income statement, capital being too costly, or a host of other reasons). In fact, that capital may be being used unproductively by being ploughed back into a business in which the return does not cover the cost of capital.

2.2.2 Growth in Assets

One of the two linchpins of the Fortune 500 ranking is asset size. Thus, a metric that management has focused on is the growth in assets on the theory that, "The faster our assets grow, the better off—the stronger—our company will be." This focus has been disastrous from a value creation perspective.

This focus has fixated corporate management towards a wrong objective: bigness—still a disease in corporate America. The accumulation of assets, regardless of whether they are invested in business units or projects that do not provide a return high enough to cover their cost of capital, is a sin from a shareholder value perspective. The mere 7 percent correlation between growth in assets and growth in MVA proves it. General Motors ranks first in asset size, yet ranked 1,000 in MVA in 1994. Certainly, the growth rate in assets is not a measure that makes me rest easier.

2.2.3 Growth in Sales

Only 10 percent of the variability in the growth in MVA is explained by sales growth. "Increase sales," is a typical response I get when asking executives what they should do to increase the value of their business. But what if an increase in sales does not translate into a growth in earnings due to poor operating margins? Additionally, what if a significant amount of working capital was required to support the increasing sales?

The opposite can also occur: sales in a business can actually decrease and yet its MVA can increase. This often happens when a company sheds underperforming business units or non-core businesses.

2.2.4 Growth in Dividends

Dividends are a form of return to shareholders. The other is appreciation (capital gain) in the price of the stock. Thus, a common trap for investors—or company management—is believing that an increase in dividends means an increase in a company's market value. The paltry 11 percent correlation between growth in dividend and growth in MVA supports the quicksand underlying this notion.

Most companies maintain a constant dollar dividend policy: while earnings are increasing each quarter, a company will maintain a constant dollar pay out each year. Any change in the dollar payout can be illustrated by a step function, not quarterly saw-tooth movement. A decrease in the dollar dividend payout is no more a predictor that a business is deteriorating economically than is an increase in dollar dividend payout an indication that a company's performance is expected to improve.

There is much more behind this story than meets the statistics' eye. The trick is to look intuitively—what does it have to say about the "capital" that is being shifted. Study the additional capital that's being retained resulting from decreased dividends, or scrutinize the incremental chunk of capital being paid out in the form of dividends.

The low correlation between the growth in dividends and the growth in MVA is exactly because this statistic does not reveal what is truly happening within the business. A pullback in the dollar dividend payout could be because the company has more opportunities to invest the capital—it would ordinarily have spun out to shareholders—in new products or emerging markets, both which have returns that exceed their risk-adjusted cost of capital. In turn, the stock appreciates.

The reverse can also happen: An increase in a dividend payout causes the stock price to drop. These examples are counter-intuitive to what many investors expect to happen—hence the low correlation. Professors Fisher Black and Myron Scholes, who are regarded to have performed the most important studies on dividends, conclude that investors will do best by assuming that dividends don't matter. There is some correlation, but it's not a true causal relationship. A change in dividend is all about signalling to the marketplace something much more profound—about the opportunity for capital gains, or not—than can be captured in a single regression.

2.5 Growth in Earnings per Share

Earnings per share (EPS) is still probably the most popular measure of corporate performance. Many managements still feel EPS is the engine that drives share price. Yet, with all its popularity, the growth in EPS explains only 15 percent of the variability in MVA. Certainly not a level of correlation worthy of all the attention EPS receives. Why does EPS suffers from the same principal ailment that earnings do: reliance on the cash-based accounting model. The preparation of generally accepted accounting principle (GAAP)-based accounting statements makes it more difficult to determine the true cash invested in the balance sheet and the true cash generated on the income statement. The statement of cash flows is a more reasonable proxy for "true" cash flow. However, this information does not come into the EPS figure. The true cash-on-cash return generated by business for investors—the only thing that matters in the economic model of value—is unclear.

Consider a few of the accounting actions that makes calculating the cash in a business unclear. Bookkeeping provisions for reserves such as deferred taxes, warranties, bad debts, and inventory obsolescence cloud the level of cash that entered or left the business within an accounting period. For example, if the company set up a reserve for bad debts of $100, the full $100 dollars is expensed, reducing net income. If only $20 left the business, net income (less taxes) would have been understated by $80.

Switching from FIFO (first in, first out) to LIFO (last in, first out) inventory costing decreases a company's reported earnings in times of rising prices because the most recently acquired, and thus most costly inventory is expensed first. The research studies of companies making this switch have shown that they experienced on average a 5 percent increase in share price—a portion of which is in direct proportion to the present value of the taxes saved by making the switch. The present value of cash is what matters, not earnings from the accounting model.

Another problem making the EPS models unclear is the amortization of goodwill. One company buying another often has the option of treating the acquisition under the purchase or pooling method of accounting. Under the purchase method, any premium paid over the estimated fair market value of the seller's assets is assigned to goodwill and amortized into earnings over a period not to exceed 40 years. This amortization on the reported financial (not tax) books usually dilutes the buyer's post-acquisition earnings—often making the buyer's management nervous about shareholder reaction. Under the pooling method, the book value of the assets and liabilities of the merged companies are added together. Thus, no goodwill is recorded or amortized; there is no dilution of earnings.

Because of this prevailing worry, buyers often opt for the pooling method. What worries is the missed strategic opportunities that occur when managements lets the accounting tail wag the business dog. Sellers will often only take cash (they want to part with their business without any potential of liability repercussion) or buyers are unwilling to issue equity (expanding the equity base only increases the return-on-equity hurdle post acquisition), thereby ruling out pooling transactions.

Worse, the purchase method, since the buyer can often amortize goodwill over 15 years on its *tax* books, usually reduces the total effective cost of an acquisition: the present value of the tax-savings over 15 years is larger than the present value of the amortization of the goodwill over 40 years on the financial books. Reducing the effective *cash* cost of buying anything increases the likelihood of earning an attractive return on the investment.

Lastly, EPS suffers from the same illness as other income statement-based measures: there is no balance sheet adjunct with which to calibrate the earnings improvement against. If EPS increased by 15 percent in one year, that may be good. If, however, the company had to invest 30 percent more capital to do so, that may not be so good. The economic return to shareholders could have fallen.

2.2.6 Return on Equity (ROE)

Dividing net income available to common stockholders by common stockholders equity is combining the income statement with the balance sheet. Or, the way I like to refer to it, how much money can the company make for shareholders given the level of equity invested. With a correlation of 24 percent to changes in MVA, ROE has a much higher degree of symmetry to shareholder value than those financial measures that only reflect the income statement. Yet ROE itself still has two important shortcomings—financing distortions and accounting distortions—that do not allow the correlation to go higher.

Financing distortions deal with changes to ROE that are made by creative financial engineering. For example, if the financial staff in a company is able to reduce interest expense while maintaining the same level of common equity, the company's ROE will increase. Another route that achieves the same result of increasing ROE is to decapitalize through actions such as an exchange of equity for debt, or a sales-leaseback of property. (Both Marriott and Disney have, in part, increased their ROEs since the early 1980's using these techniques.) Yet, in the process, what ROE misses is that—while the finance department is improving ROE—the capital being invested by other departments (e.g., operations, marketing, new product development) may still be unproductively employed in investments that are destroying shareholder value.

Accounting distortions deal with cash vs. accrual accounting issues. Accrual accounting statements, which are the source statements to calculate ROE, do not truly reflect the level of cash within the company. For example, within accounts such as deferred taxes and warranty reserves, there can be a significant distortion between reported and actual cash. Reported accounting earnings are also distorted by, among other things, the choice of LIFO or FIFO for inventory costing, the use of purchase or pooling methods of accounting for an acquisition, and a myriad of other entries that bury a company's true cash flow within accrual reserves. Cash, after all, is what investors care most about. What is the level of true cash this company is generating on my level of cash investment? Measures such as ROE (and even return on capital or return on net assets) do not accurately account for this.

2.2.7 Return on Capital (ROC)

ROC, or return on net assets (RONA), is similar to ROE, with the exception that the capital base has expanded to include more, albeit accrual-based, of the capital employed in the business. Now, financial maneuvers, such as an exchange of equity for debt are mitigated. It's like saying to the participants in a high jump competition; we are going to raise the entry-level height from 5 feet to 5 feet 6 inches. The correlation to MVA increases to a full 35 percent.

However, while ROC corrects some financing distortions, it still suffers from the same accounting distortions that afflict ROE, such as the inability of accrual and GAAP-based accounting conventions to accurately measure the true cash-on-cash being generated by the business.

All this discussion of accounting-based measures of financial performance needs to be tempered. One of the most important myths about the stock market is that accounting numbers were never demanded, or intended for use, by shareholders for the purpose of valuing companies. Although they do provide some information to investors, accounting-based numbers are not, and should not be, the *primary* source of information for our

capital markets. It is for this reason that many of the accounting-based metrics are fast becoming archaic.

Measures of financial performance supplied from the accounting system are not the best indicators of stock value. At the same time, few should be completely abandoned. The primary function of the financial accounting system never was—and is not today—to provide information for valuation decisions. These measures were designed to provide internal measures of performance to serve as guides in running companies, and to protect outside investors from opportunistic managers. As Jerold Zimmerman, Professor of Accounting at the University of Rochester's Simon School of Business says, "It (the accounting system) is not *primarily* a system for shareholder valuation of companies as going concerns."

Then what is? After all, management in public companies are rewarded for increasing the company's stock price, not its accounting-based measures of financial performance.

2.3 Role of cash flow in performance measurement

Indian analysts follow current international market trends in applying cash based methods of valuation and company analysis. As many as 75 per cent of financial analysts in the country use free cash flow (FCF) technique to evaluate corporate performance, finding it to be a more effective indicator of corporate value in comparison with the earnings per share (EPS) and economic value added (EVA) measures, a survey conducted by Financial Advisory Services (FAS), an arm of PricewaterhouseCoopers, said. .

Explaining the FCF methodology, head of FAS Ashwini Puri, who carried out the survey, said cash flows of a company from all its activities including investments, as well as sale of assets, are taken into account.

"In particular, fixed capital investment efficiency was found to be an important value driver in India, primarily as cost of capital is high here and future uncertainty is more marked than in other developed markets," he added.

According to the survey, there is a high correlation between change in free cash flows and share price performance, with institutional investors assessing performance of listed companies on the basis of growth, cash flow returns and risk.

The role of cash flow information for predicting bankruptcy was highlighted by Beaver (1966). Beaver (1966) reported that cash flow from operations (CFFO), proxied by the net income plus depreciation, depletion and amortization, to total debt has the lowest misclassification error relative to common accrual measures of financial health.

However this univariate approach to analysing financial distress was seldom followed because while one ratio would indicate failure another would could indicate non failure Divesh (2001).

Altman (1968) overcame this problem by the use on multiple discriminant analysis (MDA) that simultaneously considers financial ratio indicators of corporate health.

Largay and Stickney (1980) recognised the limitation of using net income plus depreciation, depletion and amortization (NIDEP) as a measure of CFFO. They demonstrated based on the infamous W.T Grant Company bankruptcy that NIDEP more correctly reflected working capital from operations. To determine CFFO one had to adjust for changes in current assets and current liabilities other than cash. Largay and Stickney (1980) more refined measure of CFFO indicated that W.T Grant's cash from operations was negative in eight of the ten years prior to failure while NIDEP was relatively steady until the year immediately prior to its demise. This finding renewed interest in CFFO as an indicator of corporate failure.

Lee (1982), a strong advocate of cash reporting showed that the fall of Laker Airways was foreseeable on cash flow basis. His analysis of CFFO revealed that Laker Airways was in financial trouble three years prior to failure while profits were increasing as failure approached.

The one consistent argument by proponents of cash flow reporting is that cash flow reporting avoids the frailties associated with the allocation system that constitutes the core of our conventional accounting systems. Consequently these proponents (Thomas, 1969; Heath, 1978; Jones, 1975; Lawson, 1968 and elsewhere Lee, 1971 and elsewhere) recommended abandonment of income measurement in favour of measuring cash flows. Much of the development in cash

flow accounting is attributed to Lawson and Lee. These authors viewed the entity as a total financial system. This system represents the cash inflows an entity generated and cash outflow it makes with any residual belonging to owners or shortfall indicating borrowing.

Cash flow is a critical business solvency measure. Heath (1978) relates cash flow to financial flexibility when he states that financial flexibility is the capacity of the firm "to control cash receipts and payments to survive a period of financial adversity"

Heath and Rosenfield (1979) contended that; solvency is a money or cash phenomenon. A solvent company is one with adequate cash to pay its debts; and insolvent company is one with inadequate cash. Evaluating solvency is basically a problem of evaluating the risk that a company will not raise enough cash before the debts must be paid.

2.4 Strengths and weaknesses of using earnings and cash flow measures

Sloan (1996) identifies three shortcomings in the use of earnings. First, the periodic earnings number makes no attempt to measure the expected effects of events occurring in the present period on the free cash flow to be derived from the sales expected to take place in subsequent periods. For example expectation of sales growth from product innovations or expectations of reduction in production costs from technological innovation are not reflected. He argues that while there is little doubt that such innovations will lead to revised expectation about future cash flow and future earnings, the accountant makes no attempt to measure them in current earnings. Earning represent an attempt to measure the periodic performance of a company given the conditions present during the period, including sales volume, input and output prices and production technology. The task of predicting how these conditions will change in the future and the expected effects of the changes on future free cash flow are left to managers, security analysts and investors.

The second limitation of earnings is that the realization and matching principles cannot always be easily and objectively applied. In cases of extreme subjectivity, accountants tend to move back towards a cash based performance system. For example, if amount of cash to be collected from a sale is highly uncertain, then revenue is not recognized until cash is collected. Also, is costs cannot be matched to a saleable product, and then they are expensed in the period in which

they are incurred. Generally accepted accounting principle can be applied but introduces some arbitrariness in the matching of costs and revenues. For example, the use of FIFO and LIFO cost flow assumptions for inventory, straight line and accelerated methods of depreciating property, plant and equipment.

The third limitation of earnings is that the application of the realization and matching principles often require accountants and managers to incorporate subjective estimates into earnings. Whether by mistake or design, these subjective estimates may be incorrect (bad debts underestimate or productive life of a machine incorrectly estimated). In the eyes of critics of earnings, this limitation is most serious as it allows managers to manipulate earnings to meet their own objectives.

Blitzer, Friedman and Silverblatt (2002) in their article for Standard & Poor's report that over the last decade, intensifying pressure to meet Wall Street earnings expectations led more and more companies to introduce new and different earnings measures and reporting approaches. At the same time many members of the investing community expressed concern that earnings reports are becoming harder to understand, more difficult to compare across companies and less useful to analysts and investors. A number of high profile bankruptcies and accounting investigations have renewed the investors' concern about the reliability of corporate reporting.

This concern has arisen even at a time when the amount of information reported on corporate accounts, continue to rise as many International Financial Reporting Standards (IFRS) are put in place. More technical analysis is required which may not be within reach of an average reader or investor especially in the Kenyan context and depicts the shortcoming in the earnings measures of valuing performance.

"Analysts also use EPS and EVA techniques as a supplement to FCF to determine the potential for investment in a company's stock, as it is easily understood," Paramvir reporting on a survey said, adding that institutional investors operating on a longer time horizon favour the use of the FCF method as it is more reliable and effective in interpreting factors like growth, risk and return expectations.

"Equally important is the fact that FCF eliminates the effects of national accounting practices such as depreciation or accounting of deferred taxes, allowing easy comparison across countries and industries. This makes FCF the ideal benchmarking metric for corporate valuation," Puri said. "The shift in focus from EPS to FCF indicates that the markets are now thinking long term, though this is not to say that they may not still act short term," he added.

In many cases good old GAAP net income is a better estimate of Free Cash Flow than is so called Cash Flow due to the omissions noted above. This is particularly true in cases where depreciation is roughly equal to the capital spending that is required in an average year or quarter to replace worn out assets.

However, there are some notable situations where net income is systematically less than Free Cash Flow. In those cases a focus on Free Cash Flow could lead to identification of stocks that deserve a high P/E ratio and could lead to some bargains if the market is focusing on net income.

Certain asset intensive industries tend to have large and continuously growing amounts of deferred tax. GAAP net income treats this as an expense since it can theoretically reverse and have to be paid. In reality some companies defer these amounts indefinitely and so Free Cash Flow is systematically greater than net income for this reason.

In addition certain industries have very long lived assets that will not need to be replaced for many years. GAAP net income charges an annual depreciation expense which is often a reasonable estimate of required capital spending to replace worn out assets. But in cases where assets will not be replaced for many years, the present value of that eventual capital spending may be minimal and again annual Free Cash Flow is systematically greater than net income.

Also accounting net income always assumes the company is a going concern and that therefore capital assets will in fact be replaced as they wear out or as resources are depleted. However some companies such mines and large oil and gas deposits may be worth more as wind-down operations. In a wind-down operation Free Cash Flow tends to systematically exceed net income.

Shawn Allen (2002) concludes that Free Cash Flow is a superior performance and value indicator, but only if investors take the time to understand it and how to calculate it properly. The

so called Cash Flow that most companies and many analysts quote is flawed as a measure of the true Free Cash Flow that a company is generating because it usually omits the necessary capital spending to replace worn out assets. Investors should ignore those flawed versions of Cash Flow. In most situations investors should simply focus on net income. However, investors should calculate and focus on Free Cash Flow in those cases as identified above where Free Cash Flow tends to systematically exceed net income.

3.0 RESEARCH METHODOLOGY

3.1 Research Design

A longitudinal study design, where financial ratios for several years are to be analysed was preferred for this research. The method of ratio analysis is proposed here, especially when using earnings based measures of performance, as they allow for across firm comparison and eliminates the size effect that could arise if companies used are of different sizes.

3.2 Population

The population for this research was drawn from the companies quoted on the Nairobi Stock Exchange (NSE) as at 31st December 2003. A major consideration was the convenience in terms of both cost and availability of data from the NSE secretariat library.

3.3 Sampling

A convenient sample consisting of 40 companies has been selected. Companies with information less than 5 years have been excluded from the sample as no pattern in performance can be identified clearly. Also companies that are deregistered during this period of study are excluded from the sample. Companies that have information missing for any reason will be excluded in the sample.

3.4 Data collection

Secondary data was collected for the period 1998-2003. The year 1998 was selected because this is the time when International Financial Reporting Standards were to be first adopted in Kenya as a reporting requirement. Cash flow statement reporting was then introduced for all entities. The following data were specifically collected for each year:

i) Income after tax
ii) Depreciation, depletion and amortization

iii) Capital expenditure (maintenance)

iv) Number of shares issued and outstanding

v) Basic Earnings per share.

vi) Net income before extra ordinary items

vii) Beginning of year stock prices

viii) End of year stock prices

ix) Dividends paid/distributed

x) Preference dividends

xi) Owners equity /share capital

All these data were obtained from the financial statements of the entities studied as well as stock market information available at the NSE secretariat library.

3.5 Data analysis

Financial ratios analysis has been used in this study to measure financial performance. This is because they are a convenient way to summarise large quantities of financial data and to compare firms' performance.

I have adopted the free cash flow definition by Beaver (1966) as this approach is already tested. Beaver (1966) reported that Cash Flow From Operations (CFFO), proxied by the net income plus depreciation, depletion and amortization, to total debt has the lowest misclassification error relative to common accrual measures of financial health.

The financial health of the selected firms has been done using the two methods of performance: earnings based and Free Cash Flows (FCF).In this project following have been calculated

$$\text{Return on equity (ROE)} = \frac{\text{Income available to ordinary shareholders}}{\text{Shareholders' equity}}$$

$$\text{Earnings per share (EPS)} = \frac{\text{Income available to ordinary shareholders}}{\text{No. of shares issued and outstanding}}$$

Where, income available to shareholders is income after tax less preference dividends paid/payable.

Cash Flow From Operations (CFFO) = net income +depreciation (amortization) – capital spending

$$\text{Market return (Ri)} = \frac{Pi - Po + Di}{Po}$$

Where, Po, Pi and Di are price at beginning of year, price at end of year and dividends paid in the current year.

I have then proceed to compare the above calculated figures to see if the trends are the same or different. A tabular display and graphical has been used. A comparison in terms of the number of cases in the sample, in which the two methods agreed or disagreed is done (e.g. in 'x' cases out of 'y' evaluated free cash flow was in line with the market model).

4.0 DATA ANALYSIS AND FINDINGS

4.1 Introduction

Using the 50 companies reviewed over the periods 1998 to 2003, this project has computed the various measures of performance using both the earnings and free cash flow approaches. Three earnings based measures have been considered, namely profit after tax, earnings per share and return on equity. As mentioned elsewhere in this paper effort has been made to look at these measures as they compare with the market return model. Further the free cash flow as estimated by Cash Flow From Operations (CFFO) (Beaver, 1966) has also been computed and compared with the market return as well. The outcomes of these analyses are discussed as under.

4.2 Comparison between earnings and free cash flow measures

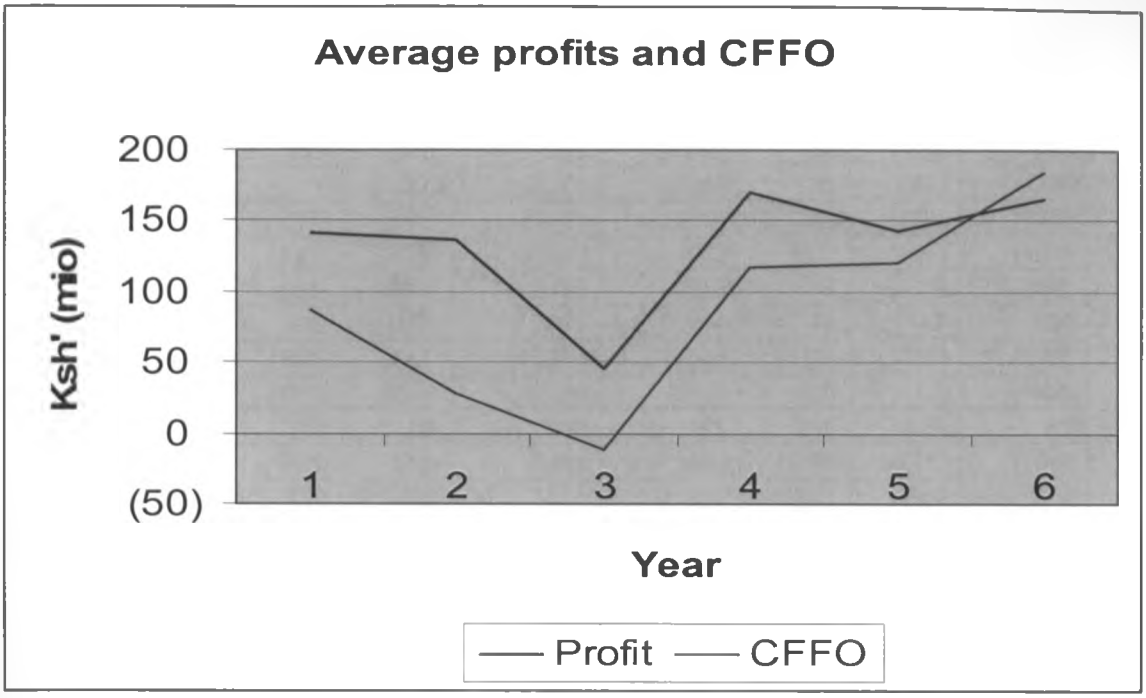
Below is a table (Table 1) of profit after tax for various companies sampled. The average for each of the year has been computed and shown at the bottom of the table. Further average profit after tax figures for each of the securities for the six years has also been computed. A single (overall) average profit after tax for the sample and year has also been obtained. A trend line has been derived from the yearly averages indicating the predictive value of the earnings based measure of performance.

Overall, the average profit for the years did not indicate any predictable trend. It showed various up and down movements reaching the lowest figure of Shs. 45 million in 2000 and a high of Shs. 170 million in 2001. The cause of the various swings in profitability could not be established from this research. I would however speculate that this may be associated to the general economic conditions that were equally unstable over the same period. The actual ups and downs in earnings may have been presumably more pronounced were the figures to be adjusted for inflationary effects. Was this to be done then the dips would be apparently more abrupt given that inflation figures have considerably been high in the Kenyan economy over the period of study.

Table 1: Profit after tax (1998-2003) and average for the period in Shs. (mio)

Security	Sec	1998	1999	2000	2001	2002	2003	Avg
Bbond	A	(234)	(123)	(210)	(106)	(79)	(52)	**(134)**
EGAADS	A	7	(9)	1	4	3	(20)	**(2)**
GWK	A	102	61	82	141	(30)	47	**67**
KAKUZI	A	108	38	(44)	(54)	8	(76)	**(3)**
KAPCHO	A	15	15	6	(14)	20	3	**8**
LTEA	A	21	9	12	(3)	2	(7)	**6**
REAV	A	44	(7)	(34)	4	25	(2)	**5**
SASINI	A	124	6	106	12	(17)	(36)	**33**
ABOUM	C	16	13	4	(3)	(48)	2	**(3)**
CarGen	C	(18)	13	(4)	(6)	7	60	**9**
CMC	C	121	161	123	87	153	177	**137**
EXPRESS	C	8	(13)	(6)	(31)	(56)	(64)	**(27)**
KENAIR	C	428	405	300	351	353	203	**340**
MARSH	C	(295)	(211)	(104)	(309)	29	22	**(145)**
NMG	C	327	250	200	263	379	319	**290**
SMG	C	5	(121)	(94)	63	(12)	13	**(24)**
SERENA	C	57	79	83	97	106	119	**90**
ATHI	I	7	20	30	34	57	64	**35**
BAMB	I	321	716	370	787	1,330	1,153	**780**
BOC	I	71	112	75	75	105	153	**98**
BAT	I	864	1,237	583	604	823	1,140	**875**
CARB	I	81	109	92	45	56	42	**71**
Cberg	I	23	46	19	23	55	46	**35**
DUN	I	6	8	2	16	14	16	**10**
PORTL	I	(868)	(879)	(419)	736	123	226	**(180)**
EABL	I	784	1,128	1,175	1,552	2,301	1,964	**1,484**
EACABLES	I	64	22	30	16	(6)	(18)	**18**
FIRE	I	439	390	292	334	231	157	**307**
KENOL	I	91	211	154	386	454	467	**294**
KPL	I	(187)	1,305	(3,192)	(2,877)	(1,880)	(1,880)	**(1,452)**
Total	I	258	551	207	(222)	360	515	**278**
Unga	I	(648)	(208)	(683)	(117)	(57)	(40)	**(292)**
Year Avg		**141**	**137**	**45**	**170**	**143**	**164**	**133**
% change			**-2.9%**	**-67.0%**	**276.48%**	**-16.1%**	**15.26%**	**16.67%**

Graph 1: Comparison between Earnings and CFFO trend lines



The graph above combines the Table 1 above and Table 2 below. The two trend lines indicate that the direction taken by both profit after tax and CFFO is the same, implying that there is no added value in obtaining the free cash flow figures for trend analysis. However the CFFO figures are considerably lower than those of profit after tax implying that at critical points while earnings could be showing a healthy position the CFFO may indicate the contrary. This is in line with existing literature in that due to accrual based accounting and other reasons mentioned elsewhere in this paper, earnings are likely to show higher figures (average of Shs.133 million) compared to free cash flow at Shs.88 million.

Table 2: Cash flow from operations (CFFO) (1998-2003)

Cash flow From Operations in Shs. (mio)

Security	Sec	1998	1999	2000	2001	2002	2003	Co.Avg.
Bbond	A	121	67	1	100	354	511	**193**
EGAADS	A	(29)	(436)	(21)	(13)	(0)	(25)	**(87)**
GWK	A	151	111	159	212	56	132	**137**
KAKUZI	A	1	(52)	(230)	(108)	20	(73)	**(74)**
KAPCHO	A	(77)	(231)	(314)	(202)	(32)	(44)	**(150)**
LTEA	A	(131)	(145)	(147)	(91)	(67)	(157)	**(123)**
REAV	A	(81)	(103)	(216)	(55)	34	5	**(69)**
SASINI	A	222	101	201	104	72	47	**124**
ABOUM	C	(137)	(142)	(239)	(124)	(118)	(79)	**(140)**
CarGen	C	(101)	(213)	(300)	(187)	(52)	3	**(142)**
CMC	C	18	59	50	81	166	110	**81**
EXPRESS	C	(98)	(124)	(189)	(84)	(59)	(71)	**(104)**
KENAIR	C	479	427	311	365	367	284	**372**
MARSH	C	(272)	(539)	(104)	(304)	49	37	**(189)**
NMG	C	327	250	200	263	379	319	**290**
SMG	C	(118)	(242)	(294)	(20)	(37)	(29)	**(123)**
SERENA	C	60	(20)	(72)	18	143	148	**46**
ATHI	I	53	72	86	91	120	130	**92**
BAMB	I	321	716	371	787	1,331	1,153	**780**
BOC	I	109	147	71	57	100	134	**103**
BAT	I	1,067	1,430	803	830	1,058	1,385	**1,095**
CARB	I	120	148	130	86	96	83	**110**
Cberg	I	(1,646)	(2,511)	(1,410)	(1,703)	(2,075)	(1,284)	**(1,772)**
DUN	I	8	10	4	19	17	20	**13**
PORTL	I	(821)	(583)	(111)	964	482	341	**45**
EABL	I	363	370	1,318	1,698	2,688	2,231	**1,445**
EACABLES	I	(170)	13	23	(143)	(52)	(341)	**(112)**
FIRE	I	580	566	487	520	424	342	**487**
KENOL	I	117	245	(1,111)	(1,120)	558	593	**(120)**
KPL	I	(1,150)	(297)	(3,589)	(3,331)	(3,729)	(1,542)	**(2,273)**
Total	I	358	665	349	(29)	574	759	**446**
Unga	I	(603)	34	(451)	(7)	133	(137)	**(172)**
Year Avg.		**87**	**28**	**(12)**	**118**	**120**	**184**	**88**
% change			**-67.6%**	**-142.3%**	**-1086%**	**1.6%**	**53.9%**	**111.2%**

4.3 Benchmarking earnings and free cash flows to market return

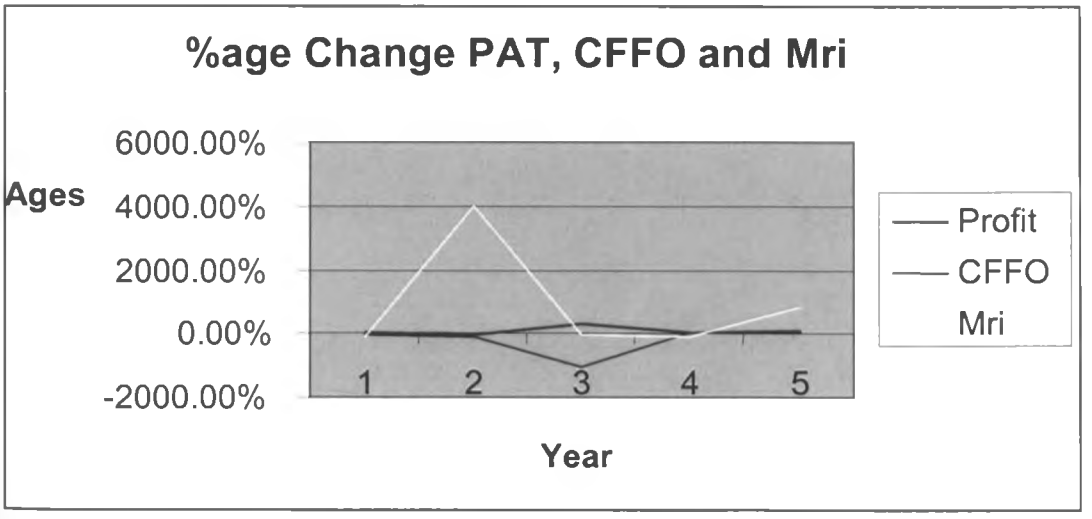
Table 3 below gives a summary of year on year percentage change of profit after tax (PAT), free cash flow (CFFO) and market returns (Mri) over the periods 1998-2003.

Table 3: Percentage change comparison PAT, CFFO and MRI

Year	1999	2000	2001	2002	2003
Profit	-2.9%	-67.0%	276.5%	-16.1%	15.3%
CFFO	-67.6%	-142.3%	-1085.6%	1.7%	53.9%
Mri	-101.7%	3999.6%	-45.8%	-144.2%	804.6%

Graphing the table above we obtain the graph below which is used to compare the earnings and free cash flow against the market returns.

Graph 2: PAT, CFFO and Market return (Mri) Comparison



From the graph 2 above we note that neither the earnings measurement nor the free cash flow approximate to the market return measure of performance. This could be attributed to the fact that the market may not have reached the strong form efficiency thus do not factor the results (profitability) in the securities valuation. This could be true given the major swings of profitability thus rendering them unreliable for estimation. Individual would thus buy heavily due to speculative reason rather than intrinsic value of the security. This was observed with the market taking sudden upward price swings just after the year 2002 elections, which had no economic fundamentals in support of the movements.

Due to the loss making streak that was experienced over the years for many companies as seen in the data above (Table 1), many companies had large and continuously growing deferred tax carried on for long periods. This is bound to bring the distortion that has been experienced above especially when free cash flow is compared to the benchmark market return.

The results used above on computation of market return have used beginning and end of year stock prices. Though this looked appropriate for benchmarking, a shortcoming would be that the seasonal fluctuations may not be captured. The return of the market therefore contains January and December effects that are bound to influence the market model. The spread of 12 months between Po and P1 also increases the error rate in the true market return.

5.0 SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY OF FINDINGS ANDCONCLUSIONS

The focus of this project was an attempt to compare the robustness of two models (Free cash flows model and earnings model) in measuring corporate performance. Two objectives towards this realization were identified.

- To compare the free cash flow and earnings measures of corporate performance.
- To ascertain differences in performance, if any, between market returns and that indicated by either free cash flow or earnings measures.

The results arrived at above, taken in light of the limitations of the study; suggest that there is no significant difference between free cash flow measure of performance and that of earnings especially when profit after tax is used to estimate earnings in absolute terms. These findings hold true to the extent that the free cash flow variable is properly defined. Convergence of results of the two methods of performance evaluation was noted to be common and which is apparently in agreement with findings in the study of Shawn (2002).

5.2 LIMITATIONS OF STUDY

Undoubtedly this study as any other encountered the following limitation which I believe could alter the conclusion arrived at above:

There was missing data especially to do with firms in the finance and investment sector. Any peculiarities to this segment of the market could thus not be adequately captured. This effectively reduced the sample size initially envisaged at the proposal stage.

The information especially on the amount on maintenance capital spending in a good number of cases was not available. Most firms had one figure for purchase of plant and machinery (extracted from their cash flow statements), which included both expenditure on maintenance

and expansion. In such cases the free cash flow calculated would be considered unreliable. I had to resort to an assumption that depreciation is the equivalent sum required for capital maintenance. This then reduces the free cash flow to the profit after tax with no difference in predictive ability from the earnings measures.

A third limitation was that associated with measures of central tendency. Since firms were of different sizes and a tool to bring an overall perspective could not be achieved by use of either EPS or ROE, average profit after tax was used. This meant that size effects could not eliminated as envisaged in the use of ratio analysis (see 3.1).

I would also suggest that the use of quoted firms as the basis of sampling frame was limiting. This is particularly so given that very few firms in Kenya are quoted. Further due to stringent listing requirements firms that are quoted have a tendency to have similarity in characteristics having met this prescribed pre listing bench marks.

5.3 SUGGESTIONS FOR FUTURE RESEARCH

Based on the outcome of this research and limitations encountered both in data and time constraints, I wish to recommend the following areas as considerations for future research:

Using specific companies' in-depth information where capital spending on maintenance can be obtained, the true free cash flow can be recomputed using the Beaver (1966) model and compared with earnings measures of performance to see whether the findings in the Kenyan environment agrees or disagrees with what is in existing literature. This would overcome the limitation where companies do not provide maintenance capital spending as there is no mandatory disclosure either by law or International Financial Reporting Standards (IFRS).

Secondly, to eliminate the size effect encountered in this research due to the use of absolute averages of free cash flow and profit after tax, the method of ratio analysis could be exploited with a view to obtaining a model that allow for a generalization of findings as this was not possible by use EPS and ROE. The use of EPS and ROE only came in handy in within firm comparison and not beyond.

A Financial Reporting Standard (FRS) exists on accounting for price level changes. Comparisons across years are thus greatly hampered when the reported results are taken at face value. I would suggest that an attempt be made to use price level adjusted figures to see whether any differences can be found to exist were such figures to be used.

APPENDIX

APPENDIX 1: LIST OF COMPANIES SAMPLED AND ABBREVIATIONS

AGRICULTURE

Brooke Bond Kenya Limited (Bbond)
Kakuzi Limited (KAKUZI)
Rea Vipingo Plantations Ltd (REAV)
Sasini Tea and Coffee Limited (SASINI)

COMMERCIAL AND SERVICES

Car and General (Kenya) Limited (CarGen)
CMC Holdings Limited (CMC)
Kenya Airways Limited (KENAIR)
Marshalls (East Africa) Limited (MARSH)
Nation Media Group Limited (NMG)
Tourism Promotion Services Limited (SERENA)

FINANCE AND INVESTMENT

CFC Bank (CFC)
ICDC Investment Company Limited (ICDC)
Jubilee Insurance Company Limited (JIC)
Kenya Commercial Bank Limited (KCB)
National Bank of Kenya Limited (NBK)
Pan Africa Insurance Company Limited (PANAFR)

INDUSTRIAL AND ALLIED

Athi-River Mining Limited (ATHI)
Bamburi Cement Company Limited (BAMB)
British American Tobacco Kenya Limited (BAT)
BOC Kenya Limited (BOC)
Carbacid Investments Limited (CARB)
Crown-Berger Kenya Limited (Cberg)
Dunlop Kenya Limited (DUN)
East African Cables Limited (EACABLES)
East African Portland Cement Company (PORTL)
East African Breweries Limited (EABL)
Firestone (E.A) Limited (FIRE)
Kenya Oil Company Limited (KENOL)
Kenya Power and Lighting Company Limited (KPL)
Total Kenya Ltd (Total)
Unga Group Limited (Unga)

ALTERNATIVE INVESTMENT MARKET SEGMENT

A. Baumann & Company Limited (ABOUM)
City Trust Limited (CITY)
Eaagads Limited (EGAADS)
Express Kenya Limited (EXPRESS)
Kapchorua Tea Company Limited (KAPCHO)
Limuru Tea Company Limited (LTEA)
Standard Newspapers Group Limited (SMG)
Williamson Tea Kenya Limited (GWK)

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