VALUE VERSUS GROWTH STOCKS AT THE NAIROBI STOCK EXCHANGE

BY

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DECLARATION

THIS PROJECT IS MY ORIGINAL WORK AND HAS NOT BEEN PRESENTED FOR A DEGREE IN ANY OTHER UNIVERSITY

Signed...~~Muhoro~~... Date... *14-1-05*

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THIS PROJECT HAS BEEN SUBMITTED FOR EXAMINATION WITH MY APPROVAL AS UNIVERSITY SUPERVISOR

Signed...~~Lishenga~~... Date... *14-1-05*

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DEDICATION

TO MY FAMILY

MY HUSBAND, JAMES MUHORO, MY DAUGHTERS, GRACE WANGUI, MERCY WAIRIMU, PURITY NYAGUTHII, AND MY SONS EMMANUEL MWANGI AND ISAAC MACHARIA

I love you all

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ABSTRACT

In making investments, investors will always wish to employ strategies that will realize superior performance. One of the most important developments in equity management in the last several years is the creation of portfolio strategies based on value-oriented and growth-oriented styles, where value stocks have been defined as stocks with a higher of either earnings yield, book-to-market value, dividend yield, or cash flow to price ratio, and growth stocks as those with a low of these ratios. In markets around the world, value stocks have been shown to show superior performance than growth stocks except during the later part of the 1990s. This study sought to find out whether value stocks outperform growth stocks at the Nairobi Stock Exchange if stocks are sorted on the basis of earnings yield, book-to-market value, and dividend yield. It is indicative from the study that stocks at the Nairobi Stock Exchange may not be conveniently sorted into value and growth on the basis of the dividend yield. Further, when sorted on the basis of earnings yield and book-to-market value, there is no significant difference between the performance of the value and growth portfolios. It therefore appears that the value growth styles of investment may not be appropriately applied at the Nairobi Stock Exchange.

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND

Investment managers classify firms with high ratios of book to market equity (B/M), earnings to price (E/P), cash flow to price (C/P), and dividend yield (D/P) as value stocks and those with low B/M, E/P, C/P, and D/P as growth stocks.

> "One of the most important developments in active equity management during the last several years has been the creation of portfolio strategies based on value- and growth- oriented styles. Indeed it is now common for money management firms to define themselves as value stock managers or growth stock managers when selling their services to their clients." (Reilly and Brown, 2000 pg 908).

Value stocks are expected to have higher returns than growth stocks while growth stocks are expected to have persistently high earnings (Fama and French, 1998). In studying U.S. stocks, Fama and French (1992, 1996) and Lakonishok, Shleifer and Vishney (1994) show that for U.S., there is a strong value premium in average returns. That is, value stocks have higher average returns than growth stocks. Lakonishok (1991) document a strong value premium in Japan.

Further to their study of U.S, stocks, Fama and French in 1998 conducted a study on the twelve major markets of Europe, Australia, and Far East [EAFE] countries for the period 1975-1995. They also conducted a study for the stocks in some emerging markets for the period 1987-1995. The results of their studies showed that value stocks have higher returns than growth stocks in the major markets around the world.

Academic studies covering the period from the early 1960s to the early 1990s have found that value has been the long-term winner. And one study (Davis, 1994) that looked at the period 1940 –63 has found the same thing, as has another that has gone back to 1929 (Davis et al, 2000). So for the period of 60 plus years, value has beaten growth but recently it has not (Lofthouse, 2001). According to Lofthouse the Wilshire Large Growth Index returned 34.7% in 1999 while the Wilshire Large Value Index returned 8.3%. In 1999, the Wilshire Small Growth Index returned 52.6% versus small Values –1.4%. He argues that.

"Perhaps the academic studies are just sample dependent: they hold only for the sample of years studied. Or perhaps the recent preference for growth stocks is something that reflects a period of intense technological change that has changed the rules of the game. Or perhaps there will be a one-off adjustment, and then value will reassert itself. Or perhaps there has been a stock market bubble and a sharp underperformance by growth stocks can be expected."(Lofthouse, 2001, p215).

Chan, Louis.,and Lakonishok (2004), also reckon that the later part of the 1990s was harsh on value stocks. Growth stocks rocketed in value in those years. They state that the most plausible interpretation of the events of the late 1990s is that investor sentiment reached exaggerated levels of optimism about the prospects for technology, media, and telecommunication stocks.

All of the studies mentioned above are in developed capital markets, except the study by Fama and French on emerging markets. Emerging markets differ from developed markets in terms of size; return volatility, market concentration, risk, and technology. The emerging markets studied by Fama and French include only two in Africa; that is, Nigeria and Zimbabwe.

According to Chan, Louis, and Lakonishok (2004), value and growth are now widely recognised distinctive specialisations adopted by money managers. They state that the topic of value and growth investing is a prime example of fruitful exchange of ideas between academic research and investment practice. The results of academic studies have formed the basis for investment strategies that are widely applied in equity markets. Given this potential benefit, it would be important to know whether a value premium would be observed also in other markets in Africa such as the Nairobi Stock Exchange. Such knowledge would be handy to investors at the Nairobi Stock Exchange particularly institutional investors such as Pension schemes and Mutual funds who would wish to employ the most rewarding strategies. Hence, this study.

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1.2   STATEMENT OF THE PROBLEM

The motive of every investor is to make a good return on his/her investment. In making the investment; an investor would therefore wish to employ that strategy that will realise superior performance. It is therefore important for an investor to know the strategy that will realise superior performance in a particular stock market. Black and McMillan (2004), state that style investing incorporates strategies that help discriminate the future performance of particular types of stocks. One of the most frequently used styles is value investing, where investors purchase value stocks rather than growth stocks in order to benefit from potential long term performance of value stocks in the form of higher average returns.

A study by Asienwa (1992) sought to find out whether there is a relationship between share performance and investment ratios of companies quoted at the Nairobi Stock Exchange. It is indicative from the study that a relationship exists between investment ratios and share prices. The conclusion was that there is a strong relationship between investment ratios and share prices of companies quoted at the Nairobi Stock Exchange. However, the study focuses on performance as indicated by the share price and not returns. Returns encompass both changes in price and dividends paid. Also the above study looked at investment ratios in general while this proposed study is restricted to those ratios that are used to sort stocks into value and growth as it is meant to test the superiority of the value investing style at the Nairobi Stock Exchange. The problem was therefore that of determining whether the value investment style outperforms the growth style at the Nairobi Stock Exchange market.

1.3 OBJECTIVES OF THE STUDY

i) To determine whether a value premium exists at the Nairobi stock exchange.

ii) To determine whether the classification of stocks into value and growth on the basis of Earnings yield [E/P], Book-to-market value [B/P], and Dividends yield [D/P] will give consistent results in terms of portfolios' performances.

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1.4   HYPOTHESIS

Ho: There is no significant difference in the performance of value and growth stocks at the Nairobi Stock Exchange.

H₁: The value stocks significantly outperform growth stocks at the Nairobi Stock Exchange.

1.5   SIGNIFICANCE OF THE STUDY

This study would be of interest to various people including:-

(i)   Investment practitioners

The study will be of use to investors, investment advisors and security analysts in selecting an investment strategy.

(ii)   Academicians and Researchers.

The results of the study will add to the body of knowledge on the Kenyan Finance market and form a basis for further research in this area.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 RETURN ON INVESTMENT

When people buy common stock they give up current consumption in hope of attaining increased future consumption. They expect to collect dividends and eventually sell the stock at a profit (Van Horne, 1998). This means that investors buy stock because they expect an increase in their wealth – this increase in wealth has two components; that is, the dividend received and the increase in the value of the stock (capital gain). The percentage change in the investor's wealth from the beginning to the end of a period is known as the rate of return or simply the return.

Thus, Return = $\dfrac{\text{Dividends} + \text{Capital Gains}}{\text{Beginning Price}} \times 100$

$\qquad\qquad = \dfrac{\text{Dividends} + (\text{Ending Price} - \text{Beginning Price})}{\text{Beginning Price}} \times 100$

2.2 VALUE VERSUS GROWTH STOCKS

Sharpe, Alexander, and Bailey (2003), state that there is no hard-and-fast rule on how stocks are divided into growth stocks (sometimes called glamour stocks) and value stocks (or income stocks) and disagreements exist among investment professionals on what category certain stocks belong to. However, it is important to note that value and growth are terms applied to stocks whose E/P, B/M, D/P, and C/P are extreme. That is, extremely high or extremely low. This is evidenced in the study done by Bernstein (1995 pg 53) as quoted by Lofthouse (2001pg 205) and the one done by Fama and French (1998). While Bernstein worked with the top 50 and the bottom 50 stocks in the S&P 500, Fama and French worked with the top 30% and the bottom 30%.

Lofthouse (2001), explains that value managers are essentially managers who buy cheap stock with 'cheap' being defined as a lot of current year earnings, or assets, or immediate income (dividends) per penny paid; and growth investors are those looking for rapid or sustained growth in the future of earnings, assets, dividends etc. He defines a value investor as one who invests in shares with one or more of the following attributes:

  i) Low price earnings ratio P/E [or high earnings yield E/P]

  ii) High cash flow to price ratio [C/P]

  iii) High dividend yield [D/P]

  iv) High asset value per share

  v) Low Growth at Reasonable Price ratio.

On their part, Reilly and Brown give the following distinction between value and growth investors: -

A growth-oriented investor will

i) focus on the EPS component of the P/E ratio and its economic determinants

ii) look for companies that he or she expects to exhibit rapid EPS in the future; and

iii) often implicitly assume that the P/E ratio will remain constant over the near term, meaning that the stock price will rise as forecasted earnings growth is realised.

On the other hand, a value oriented investor will

i) focus on the price component of the P/E ratio; he or she must be convinced that the price of the stock is "cheap" by some means of comparison;

ii) not care a great deal about current earnings or the fundamental driver of growth earnings and

iii) often implicitly assume that P/E ratio is below its natural level and that the market will soon "correct" this situation by increasing the stock price, with little or no change in earnings.

In summary, a growth investor focuses on the current and future economic "story" of a company with less regard to the share valuation. On the other hand, the value investor focuses on share price in anticipation of market correction and possibly improving company fundamentals.

According to Brealey and Myers (2000) investors seem to buy growth stocks primarily for expectation of capital gains, and they are interested in the future growth of earnings rather than in the next year's dividend. On the other hand, they buy income stocks primarily for cash dividends

Fisher and Jordan (2002) describe value managers as managers seeking high yield. They tend to look for companies that have either high dividend yields, low market-to-book value ratios or low price earnings ratios. According to these authors, in times of economic uncertainty there tends to be an increasing emphasis on seeking such high yield investments. This stems from the desire to achieve high current income and can be accomplished by holding stocks that pay high current dividends.

They describe an alternative to this approach as purchasing out of favour stocks. Out of favour stocks tend to be stocks with low P/E ratios. They explain that at various times in the economic cycle, certain stock groups-that is stocks whose basic businesses are in certain sectors of the economy tend to be out of favour. This means that investors tend to shy away from owning these stocks because they feel that the economic environment is not conducive to solid business in these industries. When this occurs, there are very few buyers around and lots of sellers; the prices of these securities tend to drop; sometimes they drop way out of line with the earnings of these companies. This then causes deterioration in their P/E ratios, and when their P/E ratios become very low, these analysts jump in to buy the out of favour stocks.

2.3   THEORIES EXPLAINING THE VALUE PREMIUM

Academic studies covering a period of 60 plus years have shown that value has been the long-term winner. Value stocks have been shown to beat growth stocks in markets around the world. Various theories have been advanced to explain this:

Brealey and Myers (2000) explain that stock prices today reflect investor's expectations of future operating and investment performance. Growth stocks sell at a high price earnings ratio - P/E (low earnings yield – E/P) because investors are willing to pay now for expected superior returns on investments that have not been made.

Lakonishok, Shleifer, and Vishney, (1994) and Haugen (1995) argue that the value premium in average returns arises because the market under-values distressed stocks and over-values growth stocks. When these pricing errors are corrected, distressed (value) stocks have high returns and growth stocks have low returns.

On the other hand, Fama and French (1993, 1995, 1996) argue that the value premium is compensation for risk missed by the Capital Asset Pricing Model (CAPM) of Sharpe (1964). They argue that stocks with high Book –value-to-market-value ratios are more prone to financial distress and hence riskier than glamour stocks. However, if value strategy is fundamentally riskier then it should under perform relative to the Growth strategy during undesirable states of the world when the marginal utility of wealth is high. Lakonishok et al (1994) tested this and found no evidence to support the view that superior returns on Value stocks reflect their higher fundamental risk, Nonetheless, there are many possible proxies for risk, so the risk based explanation can not be definitely laid to rest.

Another explanation by Chan, Louis, and Karceski (2000) draws on behavioural considerations. Studies in psychology have suggested that individuals tend to use heuristics for decision-making, which opens up the possibility of judgemental biases in investment behaviour. In particular investors may extrapolate past performance too far into the future. Value stocks tend to have a history of poor performance relative to growth

stocks with respect to earnings, cash flow and sales. Therefore, in so far as investors and brokerage analysts overlook the lack of persistence in growth rates, and project past growth into the future, favourable sentiment is created for glamour stocks.

While agreeing with the above explanation, Chan, Louis, and Lakonishok, (2004) add that agency factors may play a role in the higher prices of glamour stocks. They argue that analysts have self-interest in recommending successful stocks to generate trading commissions, as well as investment banking business. Moreover, growths in stocks are typically in exciting industries and are thus easier to tout in terms of analysts' reports and media coverage. All these considerations play into career concerns of professional money managers and pension plan executives. Such individuals may feel vulnerable holding a portfolio of companies that are tainted by lacklustre past performance so they gravitate towards successful growth oriented stocks. The upshot of all these is that value stocks become under priced and glamour stocks become over priced relative to their fundamentals.

On their part, Black (1993) and McKinlay (1995) argued that the value premium in U.S. stocks is sample specific. Its appearance on U.S. stocks is a chance result unlikely to recur in future returns. This argument was tested by Davis (1994) and he showed that there was a value premium in U.S. stocks before 1963, the start date for the studies by Fama and French and others.

Hanson (2004) attributes the premium to the fact that human capital is not silent to market expectations but claims for compensation increase as market value increases. According to him, firms experiencing good times (growth stocks), are forced to share a larger portion of their proceeds (earnings) with their employees, whereas low labour compensation claims in firms experiencing hard times (value stocks) are contributing to higher than expected earnings. Accordingly, even if growth firms are consistently showing higher earnings, they will fall below market expectations as a consequence of larger rents to human capital.

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2.4 RATIOS USED TO SORT STOCK INTO VALUE AND GROWTH

2.4.1 Price earnings ratio and earnings yield

$$\text{Price earnings ratio [PE]} = \frac{\text{Market price per share}}{\text{Earnings per share}}$$

It is sometimes referred to as the "multiple" because it shows how much investors are willing to pay per shilling of earnings. It relates the earnings per share to the price the shares sell at the market. A high P/E ratio indicates strong shareholders' confidence in the company and its future. It indicates how the stock market is judging the company's earnings performance and prospects (Asienwa, 1992). The P/E ratio is widely used by security analysts to value the firm's performance as expected by investors. It indicates investors' judgement or expectations about the firm's performance (Pandey, 1999).

The greatest weakness with P/E ratio is that companies sometimes "manage" their earnings with accounting wizardly to make them look better than they really are. A crafty Chief financier can fool with a firm's tax assumptions in a given quarter and add several percentage points of earnings growth (Macharia, 2002).

$$\text{The earnings yield} = \frac{\text{Earnings per share}}{\text{Market price per share}}$$

It is the reciprocal of the P/E ratio and expresses the rate of return on an investment.

Research literature often looks at the earnings yield as opposed to the price earnings ratio. Two advantages of using the E/P ratio are:

i)   Companies with negative earnings are automatically ranked as the lowest E/P ratios, whereas they are not automatically ranked as having the highest P/E ratios.

ii) P/E ratios 'blow up' when earnings approach zero, and this can cause statistical problems. This does not happen with the E/P ratios.

To benefit from these advantages in this study, stocks will be sorted out into value and growth categories on the basis of earnings yield E/P.

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2.4.2 Book value to market value ratio [B/P]

$$\text{Book value to market value ratio} = \frac{\text{Book value per share}}{\text{Market price per share}}$$

The use of book-to-market value ratios has along tradition in finance and security analysis. Recently, this measure has received considerable attention because of its apparently important but not well-understood role in explaining patterns in stock returns. (Harris and Marston, 1994). These authors state that despite book-to-market value's role in explaining security returns, little consensus has yet developed on what it is really measuring in empirical studies.

Capaul, Rowley, and Sharpe (1993) discussed the merits of book-to-market value as a single variable to distinguish between value and growth stocks. The logic is that favourable growth prospects raise a firm's stock price and hence reduce its B/M ratio. In contrast, high B/M stocks are more likely than others to have high asset values and less growth potential.

Book value is connected to earnings.

> "In the book-keeping cycle, net income not paid out to shareholders becomes a balance sheet account called retained earnings or earned surplus. These past profits tend to be the principal component of book value ... Thus as a rule of thumb companies with large book-values relative to market prices have net worth that consist in great part of retained earnings. Such companies tend also to be selling at very low prices when compared with average long-term earnings." (Whitman and Shubik, 1979, p186).

They argue that book value is a measure of resources and the amount of resources a management has available is an indicator of future earning power. If this view is taken, buying shares on a low price relative to net assets value [or a high book-to-market value] is a value strategy.

2.4.3 Dividend yield [D/P]

$$\text{Dividend yield} = \frac{\text{Dividend per share}}{\text{Market price per share}}$$

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It is the measure of return on the owner's investment from cash dividends. This is the return dividend wise only on a share. It evaluates an investor's return in relation to the market value of the share. It gives the actual cash received by the investor as a rate of return on his investment. Put differently, it tells you what percentage of your purchase price the firm will return to you in dividends.

Not all the shares pay dividends, nor should they. If a firm is growing quickly and can best benefit shareholders by re-investing its earnings in the business that is what it should do. So, a share with no dividend or yield is not necessarily a loser. Nevertheless, many investors would like a dividend both for the income and the security it provides. If a firm's share price falters, the investor would have a dividend and it is definitely a nice sweetener for a mature share with steady but unspectacular growth.

There a number of arguments why high dividend yields might produce abnormal returns. In the context of a simple dividend model, the total return on a stock will be its initial dividend yield plus its growth rate. k = D/P + g. If we expect all stocks with the same risk to offer the same return, then low growth stocks will have to offer higher initial yields. However if investors are poor at assessing growth prospects, it is possible that the growth rate assumed for high growth rate stocks will be too high and that for low growth stocks will too low. Accordingly, high yield stocks might be expected to offer a higher total yield (Lofthouse 2001).

Another argument is related to taxation. In many countries, income is taxed at a higher rate than capital gains. Even where income and capital gains are taxed the same, capital gain is typically not paid until the gain is realised and thus the capital gains tax can be postponed in away that income taxes can not. If investors are interested in after tax income, they will presumably only purchase high yielding stocks if they offer the same after tax return as the low yielding stocks. That is, offer higher returns than low yielding stocks on a pre tax basis

2.4.4 Cash flow to price ratio [C/P].

Many investors are suspicious of the Earnings per share figures because of differences between companies in how they calculate depreciation and amortisation and differences over time in how a particular company will calculate this figures. This is the same weakness of earnings figures mentioned in the Earnings yield section; that is, the vulnerability of earnings figures to accounting wizardry. These investors will choose to use some measure of cash instead of earnings and calculate a cash flow ratio. This ratio can be calculated in a number of ways

$$\text{E.g. C/P} = \frac{\text{Cash flow per share}}{\text{Market price per share}}$$

$$\text{Where Cash flow per share} = \frac{\text{Profit after taxes +depreciation +amortisation.}}{\text{Weighted average number of ordinary shares}}$$

Since the cash flows are a result of adjusted earnings and the cash flow to price ratio may not give results that are significantly different from the Earnings yield ratio, this ratio will not be used to sort out stocks in this study.

2.4.5 Price to sales ratio [P/S].

Price to sales ratio has become increasingly popular method of valuation for a few reasons.
First, O'Shaughnessy (1998) found that shares with low price to sales ratio outperformed shares with low P/E multiples.
Secondly as mentioned earlier some investors do not trust the net earnings since they are subject to accounting manipulations. Sales are harder to 'manage' or manipulate. Proponents of the approach argue that sales are more stable and less subject to accounting manipulations than are earnings.

Finally, the explosion in Internet shares forced investors to look for ways to value companies with lots of potential but no earnings yet.

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Fisher (1984a and 1984b) claims that the reason for purchasing low price to sales ratio is essentially contrarian. He argues that profit growth often comes from margin expansion and investors then form excessive expectations. Few companies can sustain significantly above average profit margins for long. Eve fewer analysts can tell which companies will maintain profitability. A stock with low sales to price ratio will have low sales margins and will be thought to be a candidate for recovery or improvement.

However Fisher does not recommend simply buying the cheapest Price to sales ratio stocks. He notes that the technique is not applicable to every sector. For instance, the ratio is not appropriate for service companies such as banks and insurance companies that do not have traditional sales. Also, the definition of a low ratio varies with the type of sector and this makes the technique very subjective. Due to these shortcomings, this ratio will also not be included in the analysis in this study.

2.4.6 Growth at reasonable price [GARP]

GARP investors typically relate P/E ratios to growth rates

GARP = Price earnings ratio
Growth rate

Imagine four stocks with P/E ratio of 10, 20, 30 and 40 and growth rates of 8%, 20%, 20%, and 30%. The GARP ratios would be 1.25, 1, 1.5, and 1.33 respectively. The stock with P/E of 20 would be deemed the cheapest, although it has neither the lowest P/E ratio nor the highest growth rate. GARP is neither a pure value nor a pure growth tool but it lies somewhere in between. The basic assumption, however is that growth prospects can be over-rated, which has value overtones. Due to this overlap, this ratio will also be left out in the analysis in this study.

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CHAPTER THREE

3.0   RESEARCH METHODOLOGY

3.1 SCOPE OF THE STUDY

A study of common stocks quoted at the Nairobi Stock Exchange for the period 1998 to 2002 will be carried out.

3.2 POPULATION

Instead of sampling, all common stocks at the Nairobi Stock Exchange will be included in the study. This is so for various reasons. For one, the first step in the data analysis requires that all the quoted companies are included to facilitate categorisation into growth and value stocks.   Secondly, the total population is small (50 companies) and it is therefore feasible to deal with all of them. Lastly, the data required can be gotten from a central place – the Nairobi Stock Exchange.

3.3 DATA COLLECTION

Secondary data from the Nairobi Stock Exchange was used. Annual data availed by the Stock exchange includes the P/E ratio, dividend yield, the price to book value ratio, as well as the   dividend per share. Daily stock prices were also availed in electronic form.

3.4 DATA ANALYSIS

As a starting point the reciprocals of the price earnings and the price to book value ratios were calculated so as to give the earnings yield and the book to market value ratios.

The end of each of the years 1997 all through to 2001 constitutes the portfolio formation dates. At these dates all the companies were ranked according to the E/P, B/M, and D/P ratios. The rankings formed the criteria for classifying stocks into value and growth during each of the following year. However, it turned out that for some of the years, a good proportion of the companies (well above 30%) did not pay dividends. This in essence

disqualified the dividend yield as a criterion for ranking and classifying stocks at the Nairobi Stock Exchange during the period of study. The classifications were based on each of the other two variables; that is, the earnings yield and book-to-market value. The top 30% (high E/P, B/M) were classified as value stocks and the bottom 30% (low E/P, B/M,) were classified as growth stocks, such that at each formation date, there were two growth portfolios and two value portfolios each in respect of each variable. The year following each formation date was the test period. For example, the returns for 1998 were analysed using the end of 1997 classifications, the 1999 returns were analysed using the end of 1998 classifications and so on. This is the approach used by Fama and French in their 1998 study. Since the portfolios were formed annually, the composition of each portfolio kept changing and took into account any de-listings and/or enlisting.

As a starting point, the end month price for stocks classified as value or growth were calculated by getting the weighted average of the prices at which a stock was traded during the last day of trading in that month. Having worked out the end month prices, the next step in the analysis was to calculate the monthly returns for each stock classified as value or growth for the period 1998 to 2002. Since dividends are paid annually, the annual dividend was spread across all months of the year.

The following formula is used to calculate the monthly returns (R_i)

$$R_i = \frac{\text{Dividends} + (\text{Ending Price} - \text{Beginning Price})}{\text{Beginning Price}} \times 100$$

The third step was to calculate the average monthly return for each stock for each of the five years.

$$\text{Average monthly return for stock i at year t } (Rit) = 1/12 \sum_{i=1}^{12} Ri$$

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The next step was to calculate the average monthly return for each portfolio as follows:

Average monthly return for an equally weighted portfolio at

$$\text{year t} \quad (R_{pt}) = 1/n\sum_{i=1}^{n} R_{it}$$

Where n = number of stocks in a portfolio at year t

Having calculated the average monthly return for each portfolio for each of the five years, the five year average monthly return was calculated as follows:

$$\text{Five year average monthly return} = 1/5 \sum_{t=1}^{5} R_{pt}$$

Finally, a comparison of the five year average monthly returns for the two portfolios was done by performing tests of significance to determine whether there is a significant difference between the average returns of each pair. The z statistic was used and was calculated as follows:

$$Z = \frac{X_1 - X_2}{\sqrt{(S_1^2/n_1 + S_2^2/n_2)}}$$

Where X_1 = the five year average monthly return for the value portfolio

X_2 = the five year average monthly return for the growth portfolio

S_1 = the standard deviation of the value portfolio

S_2 = the standard deviation of the growth portfolio

$n_1 = n_2 = 840 = 14$ stocks x12 months x 5 years

n of 840 is used as the five year average monthly return is essentially an average of all the 840 observations in a portfolio and the standard deviation measures the variation of all these observations from this average.

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CHAPTER FOUR

4.0   RESEARCH FINDINGS

4.1 STOCKS SORTED ON THE BASIS OF EARNINGS YIELD

The following table summarises the findings

Table I

RETURNS AND z VALUE FOR PORTFOLIOS SORTED ON THE BASIS OF EARNINGS YIELD (E/P)

	AVERAGE MONTHLY RETURNS	
	VALUE STOCKS	GROWTH STOCKS
YEAR	RETURN %	RETURN %
1998	4.79	3.16
1999	0.29	-1.52
2000	-0.69	-1.10
2001	0.59	-0.68
2002	2.43	-0.29
5 Year average monthly return	1.48	-0.08
Standard deviation	26.70	30.02

Z statistic = 1.13

Each portfolio was made up of 14 stocks. The z value is based on n=840=14stocks x 12 monthsx5years.

At 0.05 level of confidence, the critical z is 1.64 (for a one tail test). Since our z value is lower than 1.64, we accept the null hypothesis that there is no significant difference between the performance of value and growth stocks at the Nairobi Stock Exchange when stocks are sorted on the basis of Earnings yield. Although value portfolios had higher returns than growth portfolios in all the five years, this could as well have been by chance and may not always be expected to be the case.

4.2 STOCKS SORTED ON THE BASIS OF BOOK-TO-MARKET VALUE RATIO

Table II

RETURNS AND z VALUE FOR PORTFOLIOS SORTED ON THE BASIS OF BOOK-TO-MARKET VALUE RATIO

	AVERAGE MONTHLY RETURNS	
	VALUE STOCKS	GROWTH STOCKS
YEAR	RETURN %	RETURN %
1998	3.07	3.72
1999	-0.79	-0.32
2000	-0.65	-0.81
2001	-0.76	-1.32
2002	1.6	1.94

5Year average monthly return	0.50	0.64
Standard deviation	28.69	26.96

Z Statistic =- 0.10

For these portfolios, the value stocks have higher average monthly returns than growth stocks only in two years, and in the other three years, growth stocks have higher returns. For the five-year period the growth portfolio has the higher returns. However, once again, the z value indicates that the difference is not statistically significant. We again accept the null hypothesis that there is no significant difference between the performance of value and growth stocks at the Nairobi Stock Exchange when stocks are sorted on the basis of book-to-market value ratio.

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4.3 STOCKS SORTED ON THE BASIS OF THE DIVIDEND YIELD

As mentioned earlier, it was not practical to classify the stocks on the basis of the earnings yield. This is because for some of the years, the proportion of those companies that did not pay dividends was well above the 30% cut-off point. (See appendix xxii-xxvi)

4.4 CONSISTENCY OF PERFORMANCE OF PORTFOLIOS BASED ON DIFFERENT VARIABLES

To the extent that there is no significant difference between the performance of value and growth stocks, the earnings yield and the book-to-market value basis of sorting stock into value and growth give consistent results. However, on the earnings yield basis, the average monthly returns of the value portfolios were higher than those of the growth portfolios while on the book-to-market value basis, the average monthly returns of the value portfolios were higher than those of the growth portfolios for only two of the five years, showing inconsistency.

An interesting observation is that there are instances where during the same year; a stock would be classified as value on one basis and as growth on the other basis.
(See appendix xxi).

These inconsistencies coupled with the fact that the difference in the performance of the two portfolios is not significant, may be an indication of the fact that there is no clear distinction between value and growth stocks at the Nairobi Stock Exchange

CHAPTER FIVE
5.0   SUMMARY AND CONCLUSION

5.1 SUMMARY

The study shows that there is no significant difference in performance between value and growth stocks at the Nairobi Stock Exchange whether stocks are sorted on the basis of earnings yield or the book-to-market value ratio. It also shows that the earnings yield and the book-to-market value bases of classifications do not give consistent results. This is contrary to findings from similar studies in other markets. Previous studies show that for 60 plus years, value has outperformed stock and in the study by Fama and French this was so whether stocks were sorted on the earnings yield basis or on the book-to-market value basis. Since there is no significant difference in the performance of the value and growth portfolios formed on the basis of the two variables coupled with the fact that one variable would classify a stock as value while the other valuable classifies the same as growth raises the question of whether the classifications are valid. It would bring us to the conclusion that the Nairobi Stock Exchange may not have developed to a level where stocks can explicitly be classified as value or growth. This is not surprising given that the basis of the classifications (the earnings yield and the book-to-market value ratios) do not seem to be very different as between the portfolios. The differences seem to be only marginal. (See appendices ii-xx)

5.2 IMPLICATIONS OF THE STUDY

Though value oriented and growth oriented investment styles are employed by investment managers in other stock markets around the world, they may not be appropriate styles to use at the Nairobi Stock Exchange given the ambiguity of the classifications and the fact that none ofd the two styles would be expected to outdo the other. Investors seeking investment styles that would yield superior performance would be better advised to employ other strategies.

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5.3 LIMITATIONS OF THE STUDY

The findings of the study should be viewed in the light of the following limitations.

(i)   The period covered by the study, that is, five years is short as compared to periods covered by other studies such as that by Fama and French (25 years).

In any study, the higher the sample size (in this case the period of study), the more reliable the findings will be. I confined myself to five years because of the limited time within which I had to do the study.

(ii)   The classification ratios were available only for the date that marks the financial year-end of each firm. Where the financial year-end was not 31st December, the ratio was assumed to apply at 31st December. This is a limitation in that the ratio at 31 December may have been quite different from the ratio at the financial year-end.

(iii)   Only stocks quoted at the Exchange for two consecutive years were included in the study. This is because classification done in one year was used to analyse performance during the following year. Exclusion of some of the stocks may have distorted the results.

(iv)   The stock prices used to calculate returns are those on the last day of trading on a particular stock during that month. This was not necessarily the month end date and in some cases, the last day of trading was very far from the month-end date. The returns in such a case would only be an approximation.

5.4   SUGGESTIONS FOR FURTHER RESEARCH

A similar study can be undertaken for a longer period of time, may be 10, 20, or 25years (given more study time). This may give more reliable and/authoritative results.

A study could also be undertaken to find out if at all Investment managers in Kenya employ the value or growth oriented investment strategies and if so to what to what extent.

APPENDIX (i)

DATA COLLECTION FORM

COMPANY NAME...

YEAR	1997	1998	1999	2000	2001	2002
PRICE-EARNINGS RATIO						
DIVIDEND YIELD						
PRICE TO BOOK VALUE RATIO						
PRICE PER SHARE (SH)						

1998 VALUE PORTFOLIO ON EARNINGS YIELD BASIS

COMPANY	1997 E/P RATIO	1998 AVERAGE MONTHLY RETURNS %
Total Kenya	0.43	1.05
Kenya Oil	0.39	2.48
Kenya Commercial Bank	0.30	-0.93
Kenya Airways	0.25	1.97
Crown Berger	0.21	-0.08
NIC Bank	0.21	-0.79
E.A. Breweries	0.19	7.43
City Trust Ltd	0.17	-1.56
BAT	0.17	5.44
National Bank	0.16	-1.14
Standard Chartered Bank	0.15	2.42
Barclays Bank	0.15	2.36
CFC Bank	0.15	48.43
Housing Finance	0.14	0.03

APPENDIX (iii)

1998 GROWTH PORTFOLIO ON EARNINGS YIELD BASIS

COMPANY	1997 E/P RATIO	1998 AVERAGE MONTHLY RETURNS %
Express Kenya Ltd	0.06	-2.62
Nation Media	0.06	1.28
Bamburi Cement	0.06	1.19
Athi River Mining	0.05	-0.95
KPLC	0.05	-1.41
Standard Newspaper	0.05	-3.61
East African Portland Cement	0.05	2.49
Sasini	0.03	-1.83
Dunlop Kenya	0.01	50.53
Unga Group	0.01	2.56
Kenya Orchards	-0.05	-5.58
A. Baumann and Co.	-0.10	1.17
Brooke Bond	-0.21	2.60
Car and General	-0.33	-1.51

APPENDIX (iv)

1999 VALUE PORTFOLIO ON EARNINGS YIELD BASIS

COMPANY	1998 E/P RATIO	1999 AVERAGE MONTHLY RETURN %
Barclays Bank	1.75	-0.80
City Trust Ltd	0.46	-0.56
Kenya Oil	0.40	3.33
Kenya Airways	0.39	0.13
Firestone (E.A.) Ltd	0.27	0.97
Kapchoria Tea	0.24	4.26
Williamson Tea	0.23	-3.32
Pan African Insurance	0.23	3.33
Egaards Ltd	0.20	-0.59
BAT	0.20	0.71
CMC Holdings	0.18	-0.53
East African Portland Cement	0.18	0.36
Standard Chartered Bank	0.17	2.04
Kenya Commercial Bank	0.16	-5.22

APPENDIX (v)

1999 GROWTH PORTFOLIO ON EARNINGS YIELD BASIS

COMPANY	1998 E/P RATIO	1999 AVERAGE MONTHLY RETURN %
Bamburi Cement	0.04	-1.88
E.A. Breweries	0.04	1.23
Sasini	0.04	-2.90
Kakuzi	0.04	-3.52
Limuru Tea	0.04	-0.75
Brooke Bond	0.03	-1.98
Dunlop Kenya	0.03	-7.14
A. Baumann and Co.	0.02	-0.42
Athi River Mining	0.01	-0.29
Car and General	-0.13	2.02
Unga Group	-0.25	-1.13
National Bank	-1.64	-4.27
Kenya Orchards	-3.57	1.67

APPENDIX (vi)

2000 VALUE PORTFOLIO ON EARNINGS YIELD BASIS

COMPANY	1999 E/P RATIO	200 AVERAGE MONTHLY RETURN %
Barclays Bank	1.47	-1.19
Kenya Oil	0.51	1.59
Kenya Airways	0.33	2.62
CMC Holdings	0.22	-4.92
Crown Berger	0.21	-0.08
BAT	0.21	-0.03
Total Kenya	0.20	1.72
A. Baumann and Co.	0.19	-2.81
Standard Chartered Bank	0.19	1.59
Carbacid Investments	0.16	-3.24
Express Kenya Ltd	0.15	-0.43
ICDC Investment	0.15	0.31
E.A. Breweries	0.15	1.53
KPLC	0.15	-6.29

APPENDIX (vii)

2000 GROWTH PORTFOLIO ON EARNINGS YIELD BASIS

COMPANY	1999 E/P RATIO	2000 AVERAGE MONTHLY RETURN %
Athi River Mining	0.05	-2.51
Brooke Bond	0.04	1.26
Kapchoria Tea	0.03	0.14
Egaards Ltd	0.03	-1.80
Kakuzi	0.02	-3.37
Sasini	0.01	-1.46
Rea Vipingo	-0.02	-3.41
Kenya Orchards	-0.05	0.OO
Unga Group	-0.14	-3.20
Kenya Commercial Bank	-0.44	-0.26
Marshalls (E.A.) Ltd	-0.56	-1.86
Standard Newspaper	-0.58	-1.96
East African Portland Cement	-0.70	1.90
National Bank	-2.44	1.95

2001 VALUE PORTFOLIO ON EARNINGS YIELD BASIS

COMPANY	2000 E/P RATIO	2001 AVERAGE MONTHLY RETURNS %
Barclays Bank	1.12	1.69
Kenya Airways	0.81	-0.09
CMC Holdings	0.32	-3.23
NIC Bank	0.21	0.40
Carbacid Investments	0.20	0.05
E.A. Breweries	0.20	0.98
Kenya Oil	0.19	0.98
Standard Chartered Bank	0.18	1.62
East African Cables	0.16	1.16
CFC Bank	0.16	-0.08
Diamond Trust Bank	0.15	6.11
Serena Hotels	0.14	1.25
City Trust Ltd	0.13	-0.14
Uchumi supermarkets	0.12	-3.21

APPENDIX (ix)

2001 GROWTH PORTFOLIO ON EARNINGS YIELD BASIS

COMPANY	2000 E/P RATIO	2001 AVERAGE MONTHLY RETURNS %
Car and General	-0.01	0.00
Kakuzi	-0.03	-3.31
Egaards Ltd	-0.05	-0.43
Express Kenya Ltd	-0.07	-6.62
Pan African Insurance	-0.12	1.63
Rea Vipingo	-0.15	0.15
Kenya Commercial Bank	-0.16	-2.03
Marshalls (E.A.) Ltd	-0.31	-0.13
East African Portland Cement	-0.38	4.16
KPLC	-0.78	-4.48
Unga Group	-0.94	-2.45
Standard Newspaper	-0.99	4.79
National Bank	-3.45	0.19
Kenya Orchards	-3.70	-0.97

APPENDIX (x)

2002 VALUE PORTFOLIO ON EARNINGS YIELD BASIS

COMPANY	2001 E/P RATIO	2002 AVERAGE MONTHLY RETURNS%
Barclays Bank	1.14	3.88
Standard Newspaper	0.89	6.09
East African Portland Cement	0.75	2.14
Kenya Oil	0.54	4.40
National Bank	0.52	2.41
CMC Holdings	0.40	9.92
Kenya Airways	0.39	0.32
Express Kenya Ltd	0.35	-0.15
Dunlop Kenya	0.32	0.07
Pan African Insurance	0.26	-4.53
Jubilee Insurance	0.22	1.11
Crown Berger	0.22	4.50
NIC Bank	0.21	3.83
Kenya Orchards	0.21	0.00

APPENDIX (xi)

2002 GROWTH PORTFOLIO ON EARNINGS YIELD BASIS

COMPANY	2001 E/P RATIO	2002 AVERAGE MONTHLY RETURNS%
Uchumi supermarkets	0.03	0.35
Rea Vipingo	0.02	1.24
Sasini	0.02	-0.82
Kapchoria Tea	0.01	0.03
Egaards Ltd	0.01	-0.49
Limuru Tea	-0.01	0.06
Car and General	-0.03	-0.29
Kakuzi	-0.06	-6.49
A. Baumann and Co.	-0.10	-2.67
Total Kenya	-0.12	4.51
Housing Finance	-0.27	3.40
Unga Group	-0.28	-0.88
Marshalls (E.A.) Ltd	-1.18	-5.07
KPLC	-1.25	2.80

APPENDIX (xii)

1998 VALUE PORTFOLIO ON BOOK-TO-MARKET VALUE BASIS

COMPANY	BOOK-TO-MARKET VALUE	1998 AVERAGE MONTHLY RETURN%
Kenya Airways	18.64	1.97
City Trust Ltd	5.80	-1.56
E.A. Packaging	4.03	-3.32
Nation Media	3.14	1.28
A. Baumann and Co.	2.65	1.17
Dunlop Kenya	2.62	50.53
Firestone (E.A.) Ltd	2.04	-0.88
KPLC	1.96	-1.41
Athi River Mining	1.94	-0.95
Standard Chartered Bank	1.75	2.42
Marshalls (E.A.) Ltd	1.71	-3.39
NIC Bank	1.33	-0.79
Kapchoria Tea	1.28	3.48
Kenya Orchards	1.26	-5.58

APPENDIX (xii)

1998 GROWTH PORTFOLIO ON BOOK-TO- MARKET VALUE BASIS

COMPANY	BOOK-TO-MARKET VALUE	1998 AVERAGE MONTHLY RETURN%
Express Kenya Ltd	0.62	-2.62
Brooke Bond	0.56	2.60
East African Portland Cement	0.56	2.49
Serena Hotels	0.55	1.51
Total Kenya	0.53	1.05
East African Cables	0.52	-1.97
Pan African Insurance	0.52	-3.55
CFC Bank	0.46	48.41
Kenya Oil	0.39	2.48
Williamson Tea	0.32	4.71
Unga Group	0.31	2.56
Barclays Bank	0.28	2.36
Standard Newspaper	0.19	-3.61
Lonrho	0.03	-4.42

APPENDIX (xiii)

1999 VALUE PORTFOLIO ON BOOK-TO-MARKET VALUE BASIS

COMPANY	BOOK-TO-MARKET VALUE	1999 AVERAGE MONTHLY RETURN %
Pan African Insurance	5.26	3.33
Jubilee Insurance	3.57	-1.54
Kenya Airways	2.86	0.13
East African Portland Cement	2.50	0.36
Express Kenya Ltd	2.50	-3.11
E.A. Breweries	2.38	1.23
Kenya Oil	2.33	3.33
Marshalls (E.A.) Ltd	2.04	-8.65
City Trust Ltd	1.96	-0.56
CMC Holdings	1.67	-0.53
Athi River Mining	1.61	-0.29
Kenya Commercial Bank	1.49	-5.22
Rea Vipingo	1.32	-1.56
Car and General	1.28	2.02

1999 GROWTH PORTFOLIO ON BOOK-TO MARKET VALUE BASIS

COMPANY	BOOK-TO-MARKET VALUE	1999 AVERAGE MONTHLY RETURN %
KPLC	0.72	-1.22
ICDC Investment	0.56	1.94
Diamond Trust Bank	0.54	1.99
Dunlop Kenya	0.53	-3.94
Standard Chartered Bank	0.48	2.04
Firestone (E.A.) Ltd	0.42	0.97
Barclays Bank	0.41	-0.80
Total Kenya	0.39	0.74
Nation Media	0.37	-2.25
Uchumi supermarkets	0.27	-0.19
Limuru Tea	0.24	-0.75
National Bank	0.24	-4.27
Kenya Orchards	0.09	1.67
A. Baumann and Co.	0.00	-0.42

APPENDIX (xv)

2000 VALUE PORTFOLIO ON BOOK-TO-MARKET VALUE BASIS

COMPANY	BOOK-TO-MARKET VALUE	2000 AVERAGE MONTHLY RETURN %
Jubilee Insurance	4.35	-0.83
East African Portland Cement	4.17	1.90
Kenya Airways	3.70	2.62
Express Kenya Ltd	3.57	-0.43
CMC Holdings	3.13	-4.92
Pan African Insurance	3.13	-6.74
Kenya Oil	2.78	1.59
Kenya Commercial Bank	2.50	-1.12
National Bank	2.13	1.95
City Trust Ltd	2.13	1.37
Serena Hotels	1.92	0.54
Rea Vipingo	1.85	-3.41
Car and General	1.85	0.95
Athi River Mining	1.85	-2.51

APPENDIX (xvi)

2000 GROWTH PORTFOLIO ON BOOK-TO-MARKET VALUE BASIS

COMPANY	1999 BOOK-TO-MARKET VALUE	2000 AVERAGE MONTHLY RETURN %
Carbacid Investments	0.89	-3.21
BOC Kenya	0.75	-1.69
Egaards Ltd	0.68	-1.80
Standard Newspaper	0.65	-1.96
Total Kenya	0.61	1.72
Diamond Trust Bank	0.55	-4.46
Nation Media	0.51	1.13
Standard Chartered Bank	0.49	1.59
Firestone (E.A.) Ltd	0.45	-1.20
Uchumi supermarkets	0.28	2.54
Limuru Tea	0.27	0.00
Kenya Orchards	0.09	0.00
A. Baumann and Co.	0.01	-2.81
Barclays Bank	-3.23	-1.19

2001 VALUE PORTFOLIO ON BOOK-TO-MARKET VALUE BASIS

COMPANY	BOOK-TO-MARKET VALUE	2001 AVERAGE MONTHLY RETURN%
East African Portland Cement	6.67	4.16
CMC Holdings	6.25	-3.23
Jubilee Insurance	5.88	-0.48
Pan African Insurance	4.55	1.63
Kenya Airways	4.35	-0.09
Express Kenya Ltd	3.85	-6.62
National Bank	3.45	0.19
Athi River Mining	3.23	0.75
Unga Group	3.23	-2.45
Kenya Commercial Bank	2.78	-2.03
Rea Vipingo	2.70	0.15
Williamson Tea	2.63	0.83
City Trust Ltd	2.50	-0.14
Kakuzi	2.44	-3.31

APPENDIX (xviii)

2001 GROWTH PORTFOLIO ON BOOK-TO-MARKET VALUE BASIS

COMPANY	BOOK-TO-MARKET VALUE	2001 AVERAGE MONTHLY RETURN%
Bamburi Cement	0.99	-5.07
Car and General	0.98	0.00
Kapchoria Tea	0.93	-0.54
Nation Media	0.91	-3.11
Standard Newspaper	0.83	4.79
BAT	0.81	-0.35
Firestone (E.A.) Ltd	0.67	-2.70
Total Kenya	0.53	-7.46
Standard Chartered Bank	0.52	1.62
Uchumi supermarkets	0.37	-3.21
Limuru Tea	0.31	-3.33
Kenya Orchards	0.12	-0.97
A. Baumann and Co.	0.01	0.13
Barclays Bank	-3.70	1.69

2002 VALUE PORTFOLIO ON BOOK-TO-MARKET VALUE BASIS

COMPANY	BOOK-TO-MARKET VALUE	2002 AVERAGE MONTHLY RETURNS %
CMC Holdings	11.11	9.92
Jubilee Insurance	6.67	1.11
East African Portland Cement	6.67	2.14
Unga Group	5.26	-0.88
Kenya Airways	4.76	0.32
Rea Vipingo	3.57	1.24
Express Kenya Ltd	3.45	-0.15
Kenya Commercial Bank	3.33	2.89
Kakuzi	3.23	-6.50
City Trust Ltd	3.03	0.41
National Bank	2.94	2.41
Athi River Mining	2.86	2.82
Kenya Oil	2.86	4.40
KPLC	2.78	2.80

APPENDIX (xx)

2002 GROWTH PORTFOLIO ON BOOK-TO-MARKET VALUE BASIS

COMPANY	BOOK-TO-MARKETVALUE	2002 AVERAGE MONTHLY RETURNS %
E.A. Breweries	1.35	5.84
Egaards Ltd	1.18	-0.49
Total Kenya	1.14	4.51
Firestone (E.A.) Ltd	1.12	3.28
ICDC Investment	1.03	-0.20
Kapchoria Tea	1.03	0.03
BAT	0.95	2.53
Kenya Orchards	0.91	0.00
Standard Newspaper	0.91	6.09
Barclays Bank	0.85	3.88
Standard Chartered Bank	0.48	3.93
Uchumi supermarkets	0.34	0.35
Limuru Tea	0.15	0.06
A. Baumann and Co.	0.02	-2.67

APPENDIX (xxi)

STOCKS VALUED AS GROWTH ON ONE BASIS AND VALUE ON THE OTHER BASIS

YEAR	STOCK	E/P BASIS	B/M BASIS
1998	Barclays bank	Value	Growth
	CFC Bank	Value	Growth
	Kenya Oil	Value	Growth
	Total Kenya	Value	Growth
	A. Baumann	Growth	Value
	Kenya Orchards	Growth	Value
	Dunlop	Growth	Value
	Athi River Mining	Growth	Value
1999	Barclays Bank	Value	Growth
	Firestone	Value	Growth
	Standard Chartered Bank	Value	Growth
	Limuru Tea	Value	Growth
	Dunlop	Growth	Value
	A. Baumann	Growth	Value
	National Bank	Growth	Value
	Kenya Orchards	Growth	Value
		Growth	Value
2000	Barclays Bank	Value	Growth
	Total Kenya	Value	Growth
	A.Baumann	Value	Growth
	Carbacid	Value	Growth
	Standard Charterd Bank	Value	Growth
	Athi River Mining	Growth	Value
	Kenya Commercial Bank	Growth	Value
	E.A. Portland Cement	Growth	Value
	National Bank	Growth	Value
2001	Standard Chartered Bank	Value	Growth
	Uchumi Supermarkets	Value	Growth
	Kakuzi	Growth	Value
	Pan African Insurance	Growth	Value
	Rea Vipingo	Growth	Value
	E.A. Portland Cement	Growth	Value
	National Bank of Kenya	Growth	Value
2002	Standard News paper	Value	Growth
	Kenya Power and Lighting	Growth	Value
	Rea Vipingo	Growth	Value
	Kakuzi	Growth	Value

COMPANY	1997 DIV YIELD
National Bank	0.64
CFC Bank	0.57
Crown Berger	0.14
BAT	0.12
Kenya Airways	0.10
Barclays Bank	0.09
E.A. Breweries	0.09
Uchumi supermarkets	0.09
Kenya Oil	0.08
Standard Chartered Bank	0.08
Firestone (E.A.) Ltd	0.07
Serena Hotels	0.07
East African Cables	0.07
Jubilee Insurance	0.07
Marshalls (E.A.) Ltd	0.07
BOC Kenya	0.05
Total Kenya	0.05
Egaards Ltd	0.05
City Trust Ltd	0.04
Express Kenya Ltd	0.04
Rea Vipingo	0.04
Housing Finance	0.04
Pan African Insurance	0.04
ICDC Investment	0.03
Kenya National Milis	0.03
East African Portland Cement	0.03
Athi River Mining	0.03
. Baumann and Co.	0.03
Bamburi Cement	0.03
Diamond Trust Bank	0.03
Carbacid Investments	0.03
NIC Bank	0.03
KPLC	0.03
Kakuzi	0.03
Kapchoria Tea	0.02
Sasini	0.02
Kenya Commercial Bank	0.02
Williamson Tea	0.02

CMC Holdings	0.02
Unga Group	0.01
Nation Media	0.01
Standard Newspaper	0.00
Dunlop Kenya	0.00
Limuru Tea	0.00
Brooke Bond	0.00
Car and General	0.00
Kenya Orchards	0.00
Lonrho Motors	0.00
E.A.Packaging	0.00

APPENDIX (xxiii)

	1998
COMPANY	DIV YIELD
Kenya Airways	13.70
Egaards Ltd	12.84
Crown Berger	12.42
Kenya Commercial Bank	9.76
Housing Finance	9.35
Kapchoria Tea	9.26
Pan African Insurance	8.17
Uchumi supermarkets	7.28
East African Cables	6.36
Jubilee Insurance	5.83
Express Kenya Ltd	5.67
BAT	5.11
BOC Kenya	4.99
CFC Bank	4.44
East African Portland Cement	4.26
KPLC	4.21
Sasini	3.85
Carbacid Investments	3.38
NIC Bank	2.67
Marshalls (E.A.) Ltd	2.38
Unga Group	2.12
Bamburi Cement	2.08
CMC Holdings	1.39
A. Baumann and Co.	1.36
Williamson Tea	1.10
National Bank	0.06
Brooke Bond	0.00
Kakuzi	0.00
Rea Vipingo	0.00
Car and General	0.00
Nation Media	0.00
Serena Hotels	0.00
Barclays Bank	0.00
Diamond Trust Bank	0.00
ICDC Investment	0.00
Standard Chartered Bank	0.00
Athi River Mining	0.00
Dunlop Kenya	0.00
E.A. Breweries	0.00
Firestone (E.A.) Ltd	0.00
Kenya Oil	0.00
Total Kenya	0.00
City Trust Ltd	0.00

APPENDIX (xxiv)

COMPANY	1999 DIV YIELD
Pan African Insurance	21.09
Crown Berger	20.00
East African Cables	12.05
A. Baumann and Co.	7.29
KPLC	7.08
Total Kenya	7.05
Carbacid Investments	6.94
Jubilee Insurance	6.80
NIC Bank	6.67
Uchumi supermarkets	6.35
Serena Hotels	6.23
BOC Kenya	5.07
CFC Bank	4.70
BAT	4.70
Dunlop Kenya	4.00
Bamburi Cement	3.81
ICDC Investment	3.13
Egaards Ltd	2.96
CMC Holdings	2.50
Kapchoria Tea	2.00
Williamson Tea	1.79
Kakuzi	1.15
Sasini	0.90
Brooke Bond	0.00
Rea Vipingo	0.00
Car and General	0.00
Kenya Airways	0.00
Marshalls (E.A.) Ltd	0.00
Nation Media	0.00
Barclays Bank	0.00
Diamond Trust Bank	0.00
Housing Finance	0.00
Kenya Commercial Bank	0.00
National Bank	0.00
Standard Chartered Bank	0.00
Athi River Mining	0.00
East African Portland Cement	0.00
E.A. Breweries	0.00
Firestone (E.A.) Ltd	0.00
Kenya Oil	0.00
Unga Group	0.00
City Trust Ltd	0.00
Express Kenya Ltd	0.00
Kenya Orchards	0.00
Limuru Tea	0.00
Standard Newspaper	0.00

APPENDIX (xxv)

COMPANY	2000 DIV YIELD
Kenya Airways	16.67
Standard Chartered Bank	13.33
BAT	13.06
NIC Bank	10.14
Barclays Bank	9.94
Jubilee Insurance	9.46
E.A. Breweries	8.56
BOC Kenya	8.26
Uchumi supermarkets	7.02
A. Baumann and Co.	6.99
Serena Hotels	6.96
Housing Finance	6.91
CFC Bank	6.67
Dunlop Kenya	6.25
Brooke Bond	6.19
East African Cables	6.16
Sasini	5.76
Carbacid Investments	5.61
Crown Berger	5.56
Kenya Oil	5.29
CMC Holdings	4.69
Limuru Tea	4.62
Firestone (E.A.) Ltd	4.35
Diamond Trust Bank	4.29
ICDC Investment	4.04
KPLC	3.88
Williamson Tea	2.87
Bamburi Cement	2.21
Nation Media	1.74
Kapchoria Tea	1.67
Kakuzi	0.00
Rea Vipingo	0.00
Car and General	0.00
Marshalls (E.A.) Ltd	0.00
Kenya Commercial Bank	0.00
National Bank	0.00
Athi River Mining	0.00
East African Portland Cement	0.00
Total Kenya	0.00
Unga Group	0.00
City Trust Ltd	0.00
Egaards Ltd	0.00
Express Kenya Ltd	0.00
Kenya Orchards	0.00
Standard Newspaper	0.00

	2001	
COMPANY		DIV YIELD
Kenya Airways		16.56
BAT		16.12
Barclays Bank		15.52
A. Baumann and Co.		14.39
City Trust Ltd		12.35
East African Cables		11.96
BOC Kenya		11.83
Jubilee Insurance		11.29
Mumias Sugar		11.18
Kenya Oil		10.95
NIC Bank		10.67
Crown Berger		10.00
East African Portland Cement		9.09
Standard Chartered Bank		9.04
E.A. Breweries		8.76
CMC Holdings		8.33
Carbacid Investments		7.86
CFC Bank		7.44
Firestone (E.A.) Ltd		7.14
Bamburi Cement		6.71
Serena Hotels		6.47
Sasini		5.05
Williamson Tea		5.00
Diamond Trust Bank		4.44
ICDC Investment		4.26
Nation Media		3.70
Uchumi supermarkets		3.52
Brooke Bond		2.78
Egaards Ltd		2.44
Kapchoria Tea		1.79
Kakuzi		0.00
Rea Vipingo		0.00
Car and General		0.00
Marshalls (E.A.) Ltd		0.00
Housing Finance		0.00
Kenya Commercial Bank		0.00
National Bank		0.00
Athi River Mining		0.00
Dunlop Kenya		0.00
KPLC		0.00
Total Kenya		0.00
Unga Group		0.00
Express Kenya Ltd		0.00
Kenya Orchards		0.00
Limuru Tea		0.00
Standard Newspaper		0.00

REFERENCES

Asienwa T.K., (1992) "Relationship between Investment ratios and the share performance of companies quoted at the Nairobi Stock Exchange" unpublished MBA project University of Nairobi

Black A. J., and McMillan O.G., (2004) "Non-linear predictability of value and growth stocks and economic activity" Journal of Business Finance Accounting Vol. 31 issue 3-4 pg 439- 474

Black ,F,. (1993) "Beta and return", Journal of Portfolio management, 20

Brealey and Myers, (2000) Principles of Corporate Finance, McGraw Hill

Capaul,C., Rowley I., and Sharpe W.F., (Jan/Feb 1993) "Intenational value and and growth stock returns" Financial analysts Journal) 27-36

Chan, Hamao and Lakonishok (1991) Fundamentals and stock returns in Japan, Journal of Finance 46, 1739-1789

Chan, Louis K.C., Jason Karceski (2000) "New paradigm or Same old Hype in equity investing?" Financial analysts Journal vol56 No. 4) 23-36

Chan, Louis K.C., and Lakonishok, J., (2004) "Value and growth investing" Financial analysts Journal, Vol. 60 Issue 1, 71-87

Davis T.L., (1994) "The cross-section of realised stock returns: the pre-COMPUSTAT evidence" Journal of Finance, 49, 1579- 93

Davis, T.L., Fama, E .F. and French, K.L.(2000) "Characteristics, covariances, and average returns: 1929 to-1997" Journal of Finance, 55, 389-406

Fisher D.E. and Jordan R.J., (2002) Security analysis and portfolio management. Prentice Hall (2002)

Fisher K.L. (1984a) "Price to sales ratio: a new tool for measuring stock popularity" AAII Journal 6, (June) 13-17

Fisher K.L. (1984b) Super stocks. Homewood: Business One Irwin

Hanson B.O.,(2004) 'Human Capital and Stock Returns: Is value an approximation for Return on Human Capital?" Journal of Business Finance Accounting 31 (3-4), 333-358
Harris, R.S., and Marston, F.C., "Value versus Growth: Book- to- market value, Growth and Beta,' Financial analysts Journal (Sep/Oct 1994) 18-25

Haugen, R., (1995) The new Finance: the case against efficient markets. Prentice Hall, Englewood Cliffs, N.J.

Lakonishok, Shleifer, and Vishney (1994) Contraruan investment, extrapolation, and risk" Journal of Finance 49, 1541-1578

Lakonishok,J., La Porta, Rafael, Shleifer and Vishney, (1997) "Good news for Value stocks. Further evidence on market efficiency." Journal of Finance Vol 52 No. 2 859-874

Loft house, S.,(2001) Investment management, John Wiley and Sons Ltd.

Macharia Gathoni, (2002) "Forecasting ability of valuation ratios (Nairobi Stock Exchange)", Unpublished MBA Project (University of Nairobi)

MacKinlay A.C., (1995) " Multifactor models do not explain deviations from the CAPM", Journal of Financial economics 38, 3-28

Moses, E.A. and Cheney J.M. ,(1996) INVESTMENTS: analysis, selection and management, West Publishing Company, N.Y.

O'Shaughnessy,(1998) What works on Wall Street, McGraw Hill

Pandey, I.M., (1999) Financial management, Vikas publishing house PVT Ltd,

Reilly, F.K., and Brown K.C., (2000) Investments analysis and portfolio management, Harcourt College publishers

Sharpe, W.F., Alexander, G.J., and Bailey, J.V.,(2003) Investments, Prentice Hall of India.

Van Horne J., (1995) Financial management and policy, Prentice Hall

Whitman M.J. and Shubik,M.(1979) The aggressive conservative investor, New York: Random House