

**RELATIONSHIP BETWEEN PRICE EARNING RATIO AND SHARE PRICES
OF COMPANIES LISTED ON THE NAIROBI STOCK EXCHANGE**

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DECLARATION

This is my original work and has not been submitted to any other college, institution or university for moderation.

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This project has been presented for moderation with my approval as the appointed supervisor.

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DEDICATION

To my family

ABSTRACT

Value strategies are largely based on selecting stocks that are cheap relative to some fundamental variable. The jury is still out as to whether low P/E ratio as an investment metric works better than a high P/E ratio. This study sought to determine the relationship between P/E ratio and share prices of companies quoted at the NSE and to establish the relationship between adjusted PE ratios and share prices of companies listed on the NSE.

This study adopted a descriptive survey design. The population of interest comprised all the firms listed on the Nairobi Stock Exchange. A sample of 50 firms was finally used in the study. Secondary data was collected on P/E ratios for the selected firms as well as share prices for a four year period beginning 2007-2010. Descriptive analysis, correlation analysis and regression analysis were carried out.

The study found that both PE and PEG ratios accounted for between 1.4% and 0.6% of the variance. None of the independent variables was significant at 5% level meaning that neither PE nor PEG ratios significantly influenced share price performance. The study concludes that both PE and PEG ratios do not significantly influence stock performance of firms listed on the Nairobi Stock Exchange. The study recommends that investors should use a combination of methods to value stocks in which to invest. One of the limitations is that the explanatory power of the models used in this study was very low.

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ABBREVIATIONS

CAPM	Capital Asset Pricing Model
EMH	Efficient Market Hypothesis
EPS	Earning Per Share
GAAP	Generally Accepted Accounting Principles
IPO	Initial Public Offer
NSE	Nairobi Stock Exchange
OMAM	Old Mutual Asset Management
P/E	Price Earning Ratio
R P/E	Relative Price Earning Ratio

CHAPTER ONE:INTRODUCTION

1.1 Background

The P/E ratio explains the relationship between the market value of a firm and its net profit (SFF, 2009). This approach is the most widely used, but also misused of all multiples. It has become an attractive method because of its simplicity and can be used for making judgments on relative value to pricing initial public offerings (Damodaran, 2002). The ratio is used by both investors and analysts to determine if individual stocks are reasonable priced (Shen, 2000). There are several different kinds of P/E ratios: (1) Current P/E ratio which uses current earnings, (2) Trailing P/E ratio which uses the trailing earnings for the last twelve months, and (3) Forward P/E ratio which uses the expected earnings (Damodaran, 2002). Ou and Penman (1989) argue that P/E-ratios comparisons have shown to be a relatively good predictor to value companies.

There could be a number of reasons why comparable firms are assigned different P/E ratios, but a low P/E ratio is normally more attractive to investors than a high P/E ratio. Investors' combined opinions concerning a firm's potential prospects and its riskiness is most likely represented by the P/E ratio. This means that investors often overprice more favorable viewed firms, which are assigned a higher P/E ratio relative to less attractive firms that receive lower P/E ratios (Goodman & Peavy, 1983; Graham, 1949). However, Nicholson (1960) means that this "overreaction" will adjust over time and those stocks with low P/E ratios tend to outperform the ones with high P/E ratios, but also to beat the market in the long run. Investors should therefore include stocks with low P/E ratio in their investment strategy in order to earn abnormal returns even if this contradicts with the efficient market hypothesis.

Stocks represent a part ownership of a company. For people living off their investment holdings, stocks provide a steady source of income through the dividends issued (Muthui, 2003). This holds more truth for aged retirees and professional money managers. The challenge for investors is how to pick stocks bearing in mind the volatility in the market especially in the long run. Price / Earning ratio (P/E), which is the current price of the stock divided by its most recent earnings, measures how much investors are willing to pay for a stock as a multiple of its earnings (Lears & Trennepolie, 1993). The market price doesn't measure a stocks value since value is a product of future expected cash flows. P/E ratio therefore measures relative value. Its use though is for a stock is not in isolation but relative to other stocks and past stock values. it should also be in context of its market sector. a high P/E ratio could be indicative of a high growth stock whose growth is expected to go high. Its also an indicator of a delayed share price drop in response to a lower than expected earnings per share in the previous financial year.

Eugene Fama (1970) argued that the markets are extremely efficient in reflecting information about stocks value on offer. He proposed three forms of market efficiency as reflected in the share prices- weak, semi strong and strong form. The weak form market has share price reflecting all historical information. The semi strong form has share prices reflecting all historical and public information, while the strong form has the historical, public and private information about a stock.

The concept of finding bargains in the stock market is important for investors in finding undervalued stocks. Graham (2000) the argument is that a lower P/E ratio shows that the

market share price is not fully reflecting the true intrinsic value of the firm relative to its earnings and the market will fully discover the true value hence raising the share price. The argument is that the market will prefer a company with higher growth and earnings prospects. Muthui (2003) asserted that an increased share price increases the wealth of the share holders. In addition, it reduces the prospect of a hostile takeover bid thus favoring existing shareholder's status quo.

There are several messages to be interpreted from low or high P/E Ratios. Big company stocks tend to have low P/E reflecting slow but stable growth for each financial year. Equally true is that a company's share price can drop suddenly sending the signal that its earnings are larger than otherwise would be. Common proposition is that the higher the P/E ratio, the riskier the impending fall of share price. Muthui (2003) states that as a rule of thumb, the higher the P/E ratio, the more precarious the share price. That if the whole market is trading on a high ratio, beware: the market is probably overrated may be ready for a correction. Graham, Buffet (2000) argue that value investing is almost solely based on identifying undervalued stock relative to their true market value using the P/E ratio. He asserts that in his entire lifetime of investing, the simple formula for P/E ratio in identifying value stock has never failed him. He wonders loudly why human beings, other fund managers included, have a penchant for making simple things complex in relation to not following the true and tested formula of using P/E ratios.

Onyango (2004) noted that share price in the market depends on information availability. The most detailed and reliable information on listed companies is found in the earnings

announcements reported in the annual reports. Morse (1981) states that information about a company's earnings is a better indicator of a company's expected future ability to generate future cash flows. Therefore any improvement in the measurement of income is paramount if we are to use income statements to predict and evaluate the earning power of a business. Fama (1969) in his efficient market hypothesis argued that EMH has two vital lessons to pass. That markets are unpredictable, and expected stock return can only be determined by rational asset pricing models i.e. Capital Asset Pricing Model and Arbitrage Pricing Theory. Systems that try to predict the future course of stock prices based on some historically derived rule of past stock prices don't beat the simple strategy of buy and hold, Mohamed (2010). Correlation between successive price changes is almost nonexistent. This phenomenon is what is referred to as random walk hypothesis. Gryson (2005) argues that in efficient market hypothesis, the information is evaluated as soon as its out and information source may not be factual. But the market expectation of participation may tilt share price values and hence the explanation is compatible with efficient market hypothesis.

The P/E ratio of a company indicates the number of dollars investors are willing to pay for a dollar of the company's EPS. Although there is no ambiguity about the numerator, there are many possibilities for the denominator. Forward-looking P/Es are estimated on the basis of expected EPS (usually for the next four quarters) and trailing P/Es on the basis of observed EPS (usually the last four quarters). Furthermore, when calculating a company's earnings, some analysts use net income, others omit one-time charges, and still others use EBITDA. Finally, when comparing the P/Es of companies in different

countries, different accounting standards add an additional obstacle to the standardization of earnings. In short, then, when dealing with P/E ratios it is important to read the small print. Estrada (2005) notes that P/E ratios suffer from two issues: it does not consider growth or risk factors of the firms. This has led to analysts using PEG ratios to adjust for growth. Recently, PERG ratio was proposed by Estrada (2005) to cater for the risk factors.

1.1.1 The Nairobi Stock Exchange

In August 2011, the Nairobi Stock Exchange (NSE) was re-classified into 12 sectors to bring them in line with various sectors of the economy (NSE, 2011). These sectors are agricultural (7 companies), commercial and services (8 companies), telecommunication and technology (2 companies), automobiles and accessories (4 companies), banking (10 companies), insurance (4 companies), investment (3 companies), manufacturing and allied (9 companies), construction and allied (5 companies), and energy and petroleum (4 companies). The other two sectors are fixed income securities market segment which lists preference shares and bonds (NSE, 2011). There are therefore 56 companies currently listed and trading on the NSE. The list of firms listed in attached as appendix A.

The Nairobi Stock Exchange was constituted in 1954 then as a stockbroker membership under the Societies Act. It wasn't until the first privatization of Kenya Commercial Bank that the NSE started a broad based inclusive activity. Much of stock securities trading takes place through the NSE platform which is classified as an emerging market platform. In March 2011, the NSE was classified as the best performing in the entire Africa. The

market from January 2011 to March 2011 has returned an average 20% (Old Mutual Asset Management, 2011). It is imperative to note that OMAM has always beaten the Nairobi 20 Share Index and much of the market competition and the reason, according to the CEO of the company, is investing in companies that P/E ratios lower than 10.

1.2 Statement of the Problem

Value investing strategies are largely based on selecting stocks that are cheap relative to some fundamental variable. P/E ratios are used to select stocks that are cheap relative to earnings per share (EPS); price-to-cash flow ratios to select stocks that are cheap relative to cash flow per share; price-to-book ratios to select stocks that are cheap relative to book value per share; and so on (Estrada, 2005). Of all the tools of relative valuation, P/E ratios are arguably the most widely used by analysts.

The jury is still out as to whether low P/E ratio as an investment metric works better than a high P/E ratio. Nicholson (1960) in his study of the P/E and price behavior found that there's a consistently higher returns for stocks with low P/E ratio than stocks with high P/E ratio. Fama & French (1992) also observed similar results proving that low stock prices which reflect returns tend to be higher for stocks with low P/E ratio and lower for stocks with higher P/E ratios. That would tend to support the views held by value investors whose major lifeline is the P/E ratio. On the contrary, Neiderhoffer and Kenner (1999) concluded that investors prefer stocks with higher P/E ratios to stock with a low P/E ratio. That conflicts with the results of Nicholson and throws in a dilemma for value investors. Jahnke (1975) argues that the developed markets operate under different legal

and accounting regimes which could explain the ease of use of P/E ratios and others while evaluating stock prices.

A number of studies in Kenya have focused on P/E ratios of companies listed at the NSE. Ndete (1999) tested whether P/E ratio is an indicator of investment performance of ordinary shares on the NSE. Muthui (2003) studied the relationship between P/E ratio and share performance at the NSE. Makara (2004) tested the P/E ratio effect at the NSE. These three studies, despite testing the relationship, neither adjusted the ratios for growth or for risk hence deviation from the present study. Nyaata (2009) recently studied the relationship between capital structure, earnings growth, and P/E ratios of firms listed at the NSE. Osano (2010) did an evaluation of price to earnings and price to book values as predictors of stock returns of firms listed at the NSE. Thus despite a number of studies on P/E ratios on the NSE, no study has tested the effect of P/E ratio on stock performance by adjusting the P/E ratio for growth (PEG ratio) or for growth (PERG ratio). Adjusting is necessary as companies differ in terms of their growth and risk. This is therefore the first study in Kenya to attempt the same. This study therefore attempted to answer the following research question: what is the relationship between P/E ratios and share prices for companies listed at the NSE?

1.3 Objectives of the Study

The objectives of this study were:

- i. To determine the relationship between P/E ratio and share prices of companies quoted at the NSE.

- ii. To establish the relationship between adjusted PE ratios and share prices of companies listed on the NSE.

1.4 Importance of the Study

This study adds on to the growing body knowledge of P/E ratio performance relationship as well as the tools which can be used by analysts while investing in stocks.

The study is also invaluable to a number of stakeholders. First, the investors will find this study useful as it will show which tools should be used for analyzing stocks for the purpose of investing in stocks that offer highest returns.

The study will be invaluable to researchers and academicians who would be interested in carrying out further research on P/E ratio effects or value investments.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents a literature review. First, a theoretical literature is made where theories related to behaviour of stocks are discussed. This is followed by an empirical literature where prior studies on P/E ratio effects are discussed. Lastly, a summary of literature wraps up the chapter by pointing out the gap in literature that the present study seeks to bridge.

2.2 Theoretical Literature

The theories that explain the behaviour of stocks are explained here. The specific theories are random walk theory, value investing theory and modern portfolio theory.

2.2.1 Random Walk Theory

Random walk theory gained popularity in 1973 when Burton Malkiel wrote "A Random Walk Down Wall Street", a book that is now regarded as an investment classic. Random walk is a stock market theory that states that the past movement or direction of the price of a stock or overall market cannot be used to predict its future movement. Originally examined by Maurice Kendall in 1953, the theory states that stock price fluctuations are independent of each other and have the same probability distribution, but that over a period of time, prices maintain an upward trend.

In short, random walk says that stocks take a random and unpredictable path. The chance of a stock's future price going up is the same as it going down. A follower of random walk believes it is impossible to outperform the market without assuming additional risk.

In his book, Malkiel preaches that both technical analysis and fundamental analysis are largely a waste of time and are still unproven in outperforming the markets.

Malkiel constantly states that a long-term buy-and-hold strategy is the best and that individuals should not attempt to time the markets. Attempts based on technical, fundamental, or any other analysis are futile. He backs this up with statistics showing that most mutual funds fail to beat benchmark averages like the S&P 500.

While many still follow the preaching of Malkiel, others believe that the investing landscape is very different than it was when Malkiel wrote his book nearly 30 years ago. Today, everyone has easy and fast access to relevant news and stock quotes. Investing is no longer a game for the privileged. Random walk has never been a popular concept with those on Wall Street, probably because it condemns the concepts on which it is based such as analysis and stock picking. It's hard to say how much truth there is to this theory; there is evidence that supports both sides of the debate.

2.2.2 Value Investing Theory

The main concept behind value investing theory entails buying securities whose shares seemed undervalued by some of its fundamentals (Graham & Dodd, 1934). According to the classic text *Security Analysis* (1934), these securities might have been traded at discounts to their respective earnings multiples, sales and book value. But what makes an investor value oriented? The features of value investing are best illustrated by the thought process of a value stock manager (Reilly & Brown, 1997).

It is worth noting that earnings per share (EPS) can either be current earnings or future earnings forecast of the firm. In general, value oriented investor tends to direct his or her attention on certain facet of the above equation in making investment decisions. In particular, he or she would: (1) concentrate on the price component of the whole equation, which is the numerator; (2) partly ignore the stock's current earnings and its subsequent growth drivers; and (3) assume the PE ratio is trading well below its mean average and the market will soon "correct" the gap by pushing the price of stock up without any changes in earnings. Simply put, a value oriented investors would converge his or her attention on the price of the stock in the hope of future market correction, and perhaps, better company's fundamentals (Reilly & Brown, 1997).

The idea behind value investing may seem simple, but categorizing individual securities, industries and even the aggregate stock markets into the value category is harder than it may seem. Most analysts and researchers depend on more easily available financial information such as PE ratios, EPS growth rate and dividend yields to evaluate a security holding position as in-depth security valuations are too time consuming to fabricate. Basically, value stocks are those that are relatively cheap, for instance having low PE ratio with high yield coupled with modest growth potentials. The challenge for value investors is then to determine which securities have fundamentally sound business that can be acquired cheaply (Reilly & Brown, 1997).

Studies have found that value oriented portfolio management is more likely to result in superior returns. In particular, a study by Capaul, Wrowley and Sharpe (1993) discovered

that global value shares had outperformed global growth stocks by an average 3.3% per year over a 10 year period ended June 1992. The research focuses on the performance of value and growth portfolios as being classified by relative PB ratios in six countries, which are Japan, France, Germany, the US, Switzerland and the United Kingdom (UK). It is also found that value stocks had outperformed its growth counterparts in each of the six countries under study. The difference between growth and value stocks is that the former is more expensive, having incorporated its better growth potentials such as tech stocks. As opposed with the value oriented camp, growth investors are more inclined to focus on the current and future earnings capabilities of the firms or markets, with less attention paid to share valuation.

2.2.3 Modern Portfolio Theory

Modern Portfolio Theory (MPT) is a theory of investment which tries to maximize return and minimize risk by carefully choosing different assets (Markowitz, 1952). MPT is a mathematical formulation of the concept of diversification in investing, with the aim of selecting a collection of investment assets that has collectively lower risk than any individual asset. This is possible, in theory, because different types of assets often change in value in opposite ways. For example, when the prices in the stock market fall, the prices in the bond market often increase, and vice versa. A collection of both types of assets can therefore have lower overall risk than either individually (Mandelbrot, and Hudson, 2004). The Primary principle upon which Modern Portfolio Theory is based (MPT) is the random walk hypothesis which states that the movement of asset prices follows an Unpredictable path: the path as a trend that is based on the long-run nominal

growth of corporate earnings per share, but fluctuations around the trend are random (Chandra, Siddharth and Shadel, 2007).

2.3 Empirical Literature

This section reviews past studies on price earnings ratio and the relationship between PE ratios and stock prices.

2.3.1 Price/Earnings Ratios

Liu et al. (2002) examined the ability of industry price multiples to approximate observed stock prices in 10 countries. The analyses suggested the following general findings. First, multiples based on earnings perform the best; those based on sales perform the worst, and dividend and cash flow multiples exhibit intermediate performance. Second, using forecasts improves performance over multiples based on reported numbers, with the greatest (smallest) improvement being observed for earnings (sales). Third, multiples based on earnings forecasts represent a reasonably accurate valuation technique, with the implied valuations for over half the firms in the different countries being within 30 percent of observed valuations.

Ramcharran (2002) empirically evaluated the importance of economic growth and credit risk as the determinants of the P/E ratio of 21 emerging markets. Annual data for the period 1992–1999 were used with seemingly unrelated regression (SUR) techniques to obtain cross-section and pooled-data estimates. The multivariate results indicated the significance of growth and the univariate results, the significance of both growth and credit risk. These results are consistent with those of studies of developed equity markets.

Tests for structural differences in the equations for the 8-year period were not significant. The findings are supportive of growth (earnings potential) as a determinant of cross-country variation of the P/E ratios in emerging markets. Growth-oriented policies are important for emerging equity markets (EEM) to function as profitable financial centers and a source of domestic capital.

Tse (2002) examined the extent to which changes in real estate returns, reflected in changes of property value and dividend yields, can have great effects on P/E ratios. The study was confined to four major real estate stocks in Hong Kong. It showed that a low dividend yield appears to be associated with a relatively high price-to-earnings ratio. Variance of dividend yields tended to increase relative to the variance of earnings yield, with a rapid dividend adjustment at higher dividend payout ratios.

Demirako et al. (2004) adopted a structured positive approach to explaining the valuation practices of financial analysts by studying the valuation methodologies contained in 104 analysts' reports from international investment banks for 26 large U.K. listed companies drawn from the beverages, electronics, and Pharmaceuticals sectors. The study provided a descriptive analysis of the use of alternative valuation models focusing on the value-relevant attributes that analysts seek to forecast and the methodologies analysts use to convert the forecasts into estimates of firm value. The study postulated and tested a number of hypotheses relating to how the valuation practices of analysts vary systematically across industrial sectors. The study found, among other things, that

analysts typically choose either a PE model or an explicit multi-period DCF valuation model as their dominant valuation model.

Estrada (2005) compared the performance of a low-P/E strategy relative to that of two alternative value strategies, one based on the PEG ratio and another on the PERG ratio. The data used consisted of a sample of 100 US companies between January 1975 and September 2002. Portfolios are formed on the basis of different valuation ratios, and their performance is compared in order to determine the best-performing strategy. The study found that portfolios sorted by PERG ratios outperform, on a risk-adjusted basis, those sorted by both P/E ratios and PEG ratios. Surprisingly, P/E ratio outperformed PEG ratio. The major limitation of the study is that the sample of stocks was not large. The study was only based on US and covered a shorter time period hence need to carry out more international studies in the area to test the valuation method proposed. This study is very important as it proposed a formula that included risk in the analysis (PERG).

Anderson and Brooks (2006) studied the long term price earnings ratio in the UK. They noted that by the existing research almost exclusively calculated it on the basis of the previous year's earnings, the power of the effect had been seriously underestimated due to taking too short-term a view of earnings. Looking at all UK companies since 1975, using the traditional P/E ratio the study found the difference in average annual returns between the value and glamour deciles to be 6%. They noted that they were able to almost double the value premium by calculating the P/E ratio using earnings averaged over the previous eight years.

Huang et al. (2007) decomposed P/E ratios into a fundamental component and a residual component that cannot be explained by the firm or economic fundamentals. Purging the fundamental component from observed P/E ratios the study found that portfolios based on residual P/E ratios exhibit performance reversal only in overbid glamour stocks; hence over-optimism is more prevalent than over-pessimism.

Lundberg and Kulling (2007) sought to find out which variables influence the P/E ratio on the Swedish stock market. It also aims to specify how a change in these variables affects the P/E ratio. Quantitative approach was chosen and the regression was divided into two parts. In the first part the study only included four macro variables and the second part containing all variables. The secondary data that was used was primarily based on international articles and book. The theoretical review included theories about the P/E ratio and the variables that were used in the study. It also included theories about the regression analysis. The study found and concluded that the P/E ratio for the nine different sectors had different forces that drove them. These variables are: dividend yield, interest rate, market to book, market value and debt to equity. The different variables had different influences on the P/E ration, where the dividend yield, market value and debt to equity had a negative effect. The sectors in which the P/E ratio were negatively affected of the dividend yield were; media, financial and industrials.

Lo and Wang (2008) noted that existing studies use market beta as the risk-adjustment measure to modify PE strategies. In their study, they used financial and operating leverage ratios to control risks when forming low PE strategies. The results showed that,

when compared to the market and traditional low PE firms, the less leveraged low PE firms yield higher returns and greatly reduce the portfolio risk. Further investigation indicated that the outperformance was mainly contributed by the bearish market returns, a finding that helps explain the contradiction to the expected risk-reward relationship.

Debasish and Das (2008) employed several statistical and econometric tools for rigorously assessing the usefulness of spread in explaining stock market return in India. The database included the weekly and monthly closing values of NSE Nifty index over 11 years. The two measures of interest rate considered were Bank rate and call money rate. Empirical results revealed that spread seems to have reasonably strong causal influence on return and the causal model helps achieving forecasts slightly better than the random walk model.

Schnabel (2009) in a study on benchmarking the PEG ratio argued that, to properly employed the PEG ratio criterion for the determination of under/overvalued shares, the traditional benchmark of 1 is not appropriate and the benchmark employed must be customized to the share, i.e., it must reflect that share's specific EPS growth rate and cost of equity. Invoking the constant growth model of share valuation, a formula for the suitable benchmark was developed.

Nel (2009) investigated the accuracy of the five most popular multiples, including the P/E ratio, in valuing the equity of South African companies listed on the JSE Securities Exchange, for the period 1988 to 2007. The research results revealed that the P/E ratio

does not perform the most accurate valuations across all sectors and that different multiples should be used for different sectors. The study concluded that there is an opportunity to enhance the accuracy of equity valuations based on multiples by employing multiples other than the P/E ratio.

2.3.2 PE Ratios and Share Prices

Hammel and Hodes (1967) carried out a study on the factors influencing P/E ratios and showed that there's a relationship between stock prices and the P/E ratios. A similar study by Bower and Bower (1969) which used earnings growth and payout as variables but divided risk as a function for small variables as stock marketability, its price variability and conformity with the market yielded positive effects of earnings growth payout and price growth. They discovered also that higher P/E yielded higher earnings growth and prices and that lower P/E equally yielded low earnings growth as well as lower price growth and higher price volatility.

Basu (1977) was the first researcher to conduct a comprehensive study on value and growth strategies of stock investments. He found that the annual holding period return of a low PE portfolio was higher than that of a high PE portfolio during the period of August 1956 to September 1971.

Senshack and Martin (1987) carried out a research to find out the relationship between low price to sales ratio using a random sample of 500 firms at the New York Stock Exchange (NYSE). The study excluded insurance companies and banks whose sales are

not generated in the normal sense. The findings were that low price to sales ratio produced abnormal returns than high price to sales ratio though they were prone to high risks. the issue of dividend policy and its bearing on share prices comes into play.

Neiderhoffer and Kanner (1999) studied a group of Nasdaq 100 stock with a high P/E ratio from 1997-99. They calculated price appreciation in the coming year relative to earning price ratio at the beginning of the year. The observation was that the stock with higher P/E ratios still gained at least 100% the following year relative to companies with lower P/E ratio. Specifically, 44 companies which had low the lowest P/E returned at least 47% while 183 companies with average P/E ratio gained at least 72%.

Shen (2000) examined the historical relationship between price-earnings ratios and subsequent stock market performance. The study found strong historical evidence that high price-earnings ratios have been followed by disappointing stock market performance in the short and long term. Specifically, high price-earnings ratios have been followed by slow long-run growth in stock prices. Moreover, when high price-earnings ratios have reduced the earnings yield on stocks relative to returns on other investments, short-run stock market performance has suffered as well. Despite this evidence, however, the study concludes that the possibility that these historical relationships are of little relevance today due to fundamental changes in the economy cannot be ruled out.

Harney and Tower (2003) predicted equity returns using Tobin's q and P/E ratios. The study was based on the fact that two books had predicted a substantial fall in the S&P500

Index. Robert Shiller's Irrational Exuberance found that, historically, a high price earnings ratio, with real earnings averaged over 10 years, accurately predicts a low real rate of return from investing in the S&P500 Index. Smithers and Wright's Valuing Wall Street found that a high Tobin's q for the non-financial equities in the S&P500 does the same. The study discovered that q beats all variants of the PE ratio for predicting real rates of return over alternative horizons.

Kelly et al. (2008) examined the relationship between the investment performance of Australian Industrial common stock and their P/E ratios in an attempt to uncover potential for a P/E based trading strategy. The excess and differential returns of P/E ranked portfolios containing 1310 Industrial firms over a 9 year period were examined. The results showed the existence of a low P/E effect in the Australian capital market. Furthermore, the superior returns of low P/E stocks increased when a consensus of two business failure prediction models were applied to the portfolio of low P/E stocks. The statistically significant risk-adjusted returns afforded to hypothetical investors over the sample period (up to 12½% per annum), not only provided support for a P/E based trading strategy, but also suggested a violation of the semi-strong form of the Efficient Market Hypothesis.

Sun (2001) found that PEG ratios and stock returns were negatively related during the period July 1983-June 2000, though the significance of the relationship largely stems from the first half of the sample. He also finds a hump-shaped relationship between PEG-sorted portfolios and returns, with low-PEG portfolios and high-PEG portfolios earning

lower returns than medium-PEG portfolios. These results are not very supportive of the PEG as a valuation tool and cast doubt on a low-PEG value strategy.

Easton (2002), in contrast, reports more optimistic results. He proposes a method to simultaneously estimate expected returns and earnings growth (thus refining PEG-based rankings), and finds that expected return estimates based on the PEG are highly correlated with those based on the refined methodology. He concludes from these results that PEG ratios are a reasonable first-order approximation to a ranking on expected returns.

Bhadu and Warne (2009) did a study on parametric determinants of P/E ratio in Indian capital markets. The study found that the results of multiple regression model based on standardized variables indicated that 'variability in market price' and 'size of the company' were the most important determinants industry-wise as well as in aggregate analysis.

Truong (2009) studying the practice of value investing using P/E ratio in New Zealand. The study found that a consistently superior return can be achieved from value investing in low Price-to-Earnings stocks. This value premium may represent a mispricing phenomenon in the New Zealand equity market as it cannot be attributed to conventional risk measures. The mispricing of low PE stocks over high PE stocks may be explained, although not solely, by investors' incorrect extrapolation of their past performance, and the market corrects itself when new information sheds light on erroneous expectations.

Ong et al. (2010) explored the capability of value investing strategy on the prediction of stock performance, but with regards to the fall in stock prices in Malaysia. The methodology employed was based mostly on fundamental analysis and financial markets theory. This study explored whether this approach could be regressed and worked as an indicator for forecasting of future stock market lows. To testify the hypothesis, a regression and correlation analysis was used. This study observed the development of the Malaysian stock market index, the Kuala Lumpur Composite Index (KLCI) and its PE ratio between 1994 and 2010, a time period that involved notable financial crisis such as the 1997/98 Asian financial crisis and the global financial crisis of late. Although the notions that high levels of PE Ratio could have resulted in the fall of stock market returns in the Malaysia context was rejected in this study, the results showed that PE ratio is still a useful predictor of the performance of KLCI. Lastly, this research suggested the other way around, which is high level of PE ratio may precede a rise in future stock performance in the KLCI.

Sezgin (2010) sought to identify relationship among market stock return, dividend yields and price to earnings ratio affect in the period 2000-2009 at the Istanbul Stock Exchange. Therefore, to determine long-run and short-run relationship, Johansen cointegration tests, error-correction models and Granger causality tests were used. The study used quantitative data. The purpose of the study was to put forward the long run and short-run relation among P/E , RE and DY variable which are one of the most important financial indicators. The study found that when taking a look at the descriptive statistical values of series, volatility of P/E variable appeared higher. PE carried a serie character showing

more variation than RE and DY in the handled period for Turkey. As a result of cointegration test and error-correction models (ECM), there was relationship among variables long-run and short-run. RE negatively affected PE in long-run and DY ratio positively affected PE in long-run.

A number of studies have also been done on P/E ratio at the NSE. For instance, Ndeti (1999) studied thirty companies in the Nairobi Stock Exchange to see if the P/E ratio is a pointer to performance. The study used multiple regression analysis to establish the nature and type of relationships between the P/E ratio and growth of earnings, and dividend payout ratio. The result was that there's a weak relationship between P/E ratio and growth in earnings growth and dividend payout ratios.

Other studies on P/E ratio at the NSE include Muthui (2003) on the relationship between P/E ratio and share performance at the NSE, Makara (2004) on P/E ratio effect at the NSE, Nyaata (2009) on the relationship between capital structure, earnings growth, and P/E ratios of firms listed at the NSE, and Osano (2010) on evaluation of price to earnings and price to book values as predictors of stock returns of firms listed at the NSE.

2.4 Summary of Literature

It is evident from the literature review that much of the studies carried out concern the developed world. There is however much consistency in the studies that stock prices is affected by a varying list of factors and not the P/E ratio in isolation. Further the local studies have not adequately addressed whether PE ratios are better predictors of stock returns at the Nairobi Stock Exchange. Further, these studies have not incorporated the

risk and growth factors into the PE ratio models. This study therefore seeks to bridge this gap in literature by using PE ratios that incorporate growth prospects and risk factors in the analysis. This way, the study will address what method best shows a significant relationship between PE ratios and share prices. The researcher intention is to study the effect of price to earnings ratio on the stock prices in an effort to contribute to filling the gap in knowledge in the NSE.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter outlines the research design, the population and a sample of the study. It also outlines the method of data collection and data analysis.

3.2 Research Design

This study adopted a descriptive survey design. A descriptive survey is present-oriented research that seeks to accurately describe the situation as it is. Descriptive research is defined as a process of data collection to test the hypothesis or answer questions concerning the current status of the subject study (Mugenda and Mugenda, 2003). This method was selected because it enabled the researcher to meet the objectives of the study.

3.3 Population

The population of interest comprised all the firms listed on the Nairobi Stock Exchange. According to NSE website, there were 56 firms listed as at 31st August 2011.

3.4 Sample

The sample was firms listed on the NSE which had been listed at the NSE by 2006. The sample size was therefore 51 firms since the other 5 firms were listed after 2006. The reason this period had been selected was because the firms that formed the final sample must have traded for at least five years. Uchumi Supermarket Ltd was also left out of the final sample since it was suspended for some time from the NSE and had recently re-listed at the NSE. The final sample was therefore be 50 firms.

3.5 Data Collection

The data collected was of secondary nature. Secondary data was collected on P/E ratios for the selected firms as well as share prices for a four year period beginning 2007-2010. The data was collected from the NSE offices, NSE Handbook, and the financial statements of the respective companies.

3.6 Data Analysis

The Statistical Package for Social Sciences (SPSS) version 19 aided in the analysis. Descriptive analysis was used where descriptive statistics such as mean, and standard deviations were used. Correlation tests for the independent variables were made to test for any multicollinearity among the variables.

Regression analysis was used. Linear regression was assumed and the Ordinary Least Squares (OLS) method used to test the regressions. The results were interpreted based on the Pearson correlation, R-squared, adjusted R-squared, significance of F statistic through the Analysis of Variance (ANOVA), coefficients of the independent variables and their p-values.

The following models were used:

$$\text{PRICE} = \alpha + \beta_1\text{PE_RATIO} + \beta_2\text{SIZE} + \beta_3\text{AGE} + \beta_4\text{INDUSTRY} + \epsilon \quad \dots (1)$$

$$\text{PRICE} = \alpha + \beta_1\text{PEG_RATIO} + \beta_2\text{SIZE} + \beta_3\text{AGE} + \beta_4\text{INDUSTRY} + \epsilon \quad \dots (2)$$

Where

PRICE is the share price measured as the yearly average share prices for each of the firms. It is the dependent variable.

PE_RATIO	is the price-to-earnings ratio measured using the ratio of current price to EPS of each company
PEG_RATIO	is the price-to-earnings ratio adjusted for growth rates for each of the companies. The growth will be adjusted using the past 5 year PE ratios to determine a growth rate in PE ratios.
SIZE	is a control variable for size of the firm measured by the natural logarithm of total assets.
AGE	is a control variable for the age of the firm measured by the natural logarithm of the difference between the study year and the year the company was listed.
INDUSTRY	is a control variable for industry measured by dummy variables for the industry.

The strength of the relationship was tested using R squared and the significance of F-Statistic.

CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS OF FINDINGS

4.1 Introduction

This chapter presents the results of the data analysis performed on the companies listed at the Nairobi Stock Exchange in a bid to determine the effect of PE ratio on stock prices. Section 4.2 presents the descriptive results. Section 4.3 presents the correlation analysis results. Section 4.4 shows the regression analysis results and section 4.5 presents a discussion of findings.

4.2 Descriptive Analysis

The results from table 1 shows that share prices ranged from a minimum of 4 to a maximum of 321 with a mean of 69.86 and a standard deviation of 69.08. PE ratio ranged from a minimum of -117 to a maximum of 99 with a mean of 9.22 and a standard deviation of 28.33. PEG ratio ranged from a minimum of -85 to a maximum of 133 with a mean of 5.16 and a standard deviation of 28.46. The age of the firms ranged from a minimum of 2 years to a maximum of 61 years with a mean of 30.36 and a standard deviation of 17.05. The 50 firms were in 10 different industries.

Table 1: Descriptive results

	N	Minimum	Maximum	Mean	Std. Deviation
Price	50	4.00	321.00	69.8600	69.07967
PE Ratio	50	-117.00	99.00	9.2200	28.33134
PEG ratio	50	-85.00	133.00	5.1600	28.45574
Age	50	2.00	61.00	30.3600	17.04587
Industry	50	1.00	10.00	5.4400	2.87963
Size	50	11.00	19.00	16.0400	1.82902

4.3 Correlation Analysis

The correlation results are shown in table 2. As shown, size of the firm was significantly correlated with age and industry but the effect was very low at 5% level. On the other hand, industry had a low positive and significant influence on PE ratio at 5% level. As much as these results might point to evidence of multicollinearity within independent variables, this correlation was very low. Therefore, a decision is made to include all the variables in the multiple regression analysis.

Table 2: Correlation matrix

		Price	PE Ratio	PEG ratio	Age	Industry	Size
Price	Pearson	1					
	Correlation						
	Sig. (2-tailed)						
PE Ratio	N	50					
	Pearson	.116	1				
	Correlation						
PEG ratio	Sig. (2-tailed)	.423					
	N	50	50				
	Pearson	-.100	.042	1			
Age	Correlation						
	Sig. (2-tailed)	.492	.770				
	N	50	50	50			
Industry	Pearson	.254	-.041	-.106	1		
	Correlation						
	Sig. (2-tailed)	.075	.775	.465			
Size	N	50	50	50	50		
	Pearson	.107	.299*	-.157	-.128	1	
	Correlation						
Size	Sig. (2-tailed)	.460	.035	.278	.374		
	N	50	50	50	50	50	
	Pearson	-.079	.243	.144	-	.295*	1
Size	Correlation				.353*		
	Sig. (2-tailed)	.585	.089	.318	.012	.038	
	N	50	50	50	50	50	50

*. Correlation is significant at the 0.05 level (2-tailed).

4.4 Regression Analysis

Regression results are shown in table 3 and table 4. Table 3 shows the results on the influence of PE ratio on share prices. From table 3, the regression of PE ratio explained 1.4%, measured by adjusted R^2 with an F ratio of 1.171 which was not significant at 5% level. The regression model accounted for 9.4% of the variance in share prices. None of the independent variables was significant at 5% level meaning that PE ratio did not significantly influence share price performance.

Table 3: Influence of PE ratio on share prices

R	R²	Adjusted R²	SE of estimate		R² change	F change	Sig. F
.307	.094	.014	68.60		.094	1.171	.336
Coefficients	B	Std. Error	Beta	t-value	Sig.	Tolerance	VIF
Constants	49.964	102.551		.487	.628		
PE ratio	.247	.368	.101	.672	.505	.882	1.134
Age	1.041	.616	.257	1.690	.098	.872	1.147
Industry	2.981	3.677	.124	.811	.422	.857	1.167
Size	-1.883	6.043	-.050	-.312	.757	.786	1.272

From table 4, the regression of PEG ratio explained 0.6%, measured by adjusted R^2 with an F ratio of 1.075 which was not significant at 5% level. The regression model accounted for 8.7% of the variance in share prices. None of the independent variables was significant at 5% level meaning that PE ratio did not significantly influence share price performance.

Table 4: Influence of PEG ratio on share prices

R	R²	Adjusted R²	SE of estimate	R² change	F change	Sig. F	
.295	.087	.006	68.87	.087	1.075	.380	
Coefficients	B	Std. Error	Beta	t-value	Sig.	Tolerance	VIF
Constants	33.649	101.401		.332	.742		
PEG ratio	-.114	.358	-.047	-.319	.751	.932	1.073
Age	1.051	.618	.259	1.700	.096	.871	1.148
Industry	3.342	3.661	.139	.913	.366	.871	1.148
Size	-.829	6.056	-.022	-.137	.892	.789	1.268

4.5 Summary and Interpretation of Findings

This study notes that Price / earnings ratio does not have a significant influence on share prices. This model was insignificant at 5% level. The results are consistent with those of Nel (2009) in South Africa who found that PE ratio does not perform the most accurate valuation. The results are inconsistent with Hammel and Hodes (1967) who showed that there's a relationship between stock prices and the P/E ratios.

The relationship envisaged in this study was a positive relationship and this is inconsistent with Shen (2000) who examined the historical relationship between price-earnings ratios and subsequent stock market performance and found strong historical evidence that high price-earnings ratios have been followed by disappointing stock market performance in the short and long term.

The study has also found that PEG ratio does not significantly affect share prices. The model was also insignificant at 5% level. This is consistent with the findings of Estrada

(2005) who found that the model was outperformed by other models in the market such as PE ratio and proposed the use of PERG for stock valuations.

The present study envisaged a negative relationship of PEG and stock prices. This means that PEG ratios are inversely related with stock prices. This is consistent with the findings of Sun (2001) that PEG ratios and stock returns were negatively related during the period July 1983-June 2000. Thus, higher PEG ratios are attributed to lower share prices while lower PEG ratios are attributed to higher share prices.

The study also found that despite the insignificance of both models, PE ratio was a better estimator of stock prices than the PEG ratio. This is consistent with the findings of Estrada (2005) who also noted that PE ratio stocks outperformed PEG ratio stocks. These results are also consistent with those of Sun (2001) who found a hump-shaped relationship between PEG-sorted portfolios and returns, with low-PEG portfolios and high-PEG portfolios earning lower returns than medium-PEG portfolios. These results are not very supportive of the PEG as a valuation tool and cast doubt on a low-PEG value strategy.

These valuation ratios deserve a special place among forecasting variables because we have such a long time series of data on these ratios, and because they relate stock prices to careful evaluations of the fundamental value of corporations. Earnings have been calculated and reported by companies for many years for the express purpose of allowing us to judge intrinsic value.

The results also suggest that age of a firm does not significantly influence the share prices. This is inconsistent with Baker et al (2002) who noted that sensitivity of stock prices varies with the age of the firm. Thus older firms were found to lead to higher stock prices while younger firms were related to lower stock prices.

The results also suggest that industry of a firm does not significantly influence the share prices. This is inconsistent with the findings of Montgomery and Wernerfelt (2007) who noted that the success of a firm depends critically on specific industry conditions. Specifically, in the absence of fundamental shifts in the relative resource positions of individual firms, share gains may come at too high a price. Intra-industry correlations in returns may result from excessive competition rather than collusion.

The results also suggest that size of a firm does not significantly influence the share prices. This is inconsistent with the findings of Jeff et al (1989), Goodman and Peavey (1986), and Dreman and Lufkin (1998). Thus the size effect does not show on the PE effect on stocks as was the case in these earlier studies.

CHAPTER FIVE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Summary of Findings

The study intended to determine the relationship between P/E ratio and share prices of companies quoted at the NSE and to establish the relationship between adjusted PE ratios and share prices of companies listed on the NSE. The analysis was performed on 50 stocks which had complete data for the period under review. This was done using descriptive, correlation and multiple regression analysis.

The results showed that the share prices ranged from a minimum of 4 to a maximum of 321 with a mean of 69.86 and a standard deviation of 69.08. This means that some share prices performed way better than the others as shown by the standard deviation. Thus, share price performance was highly varied across the firms studied.

PE ratio ranged from a minimum of -117 to a maximum of 99 with a mean of 9.22 and a standard deviation of 28.33. The high negative average PE ratios point to the fact that some stocks were selling at a price way lower than they should have been selling at. These were mostly the stocks of those firms which had negative earnings over the period of study.

PEG ratio ranged from a minimum of -85 to a maximum of 133 with a mean of 5.16 and a standard deviation of 28.46. Thus when adjusted the growth in EPS, the PE ratios still performed at an average of the unadjusted PE ratios. Thus there were no major differences in the ratios.

The age of the firms ranged from a minimum of 2 years to a maximum of 61 years with a mean of 30.36 and a standard deviation of 17.05. This means that most of these firms had been listed for an average of 30 years on the Nairobi Stock Exchange thus had traded well enough for their stock cycles to be mastered by investors and stock analysts.

The multiple regression results showed that the PE ratio explained 1.4%, measured by adjusted R^2 with an F ratio of 1.171 which was not significant at 5% level. The regression model accounted for 9.4% of the variance in share prices. None of the independent variables was significant at 5% level meaning that PE ratio did not significantly influence share price performance.

The regression also showed that PEG ratio explained 0.6%, measured by adjusted R^2 with an F ratio of 1.075 which was not significant at 5% level. The regression model accounted for 8.7% of the variance in share prices. None of the independent variables was significant at 5% level meaning that PE ratio did not significantly influence share price performance.

5.2 Conclusion

The study concludes that the firms listed on the NSE have an average share price of Ksh. 69.86 which points to a good price for the stocks and the investors alike. Some stocks are performing way better at double the market mean while others are performing at a double price lower than the market mean.

The price-earnings ratio for most stocks was Ksh. 9.22 leading to the conclusion that the stocks are selling at nine times the prices they should ordinarily be selling at. This shows that there is high demand for the stocks which have led to the higher prices. The high investor demand for some shares has pushed the prices to the levels they currently are.

The PEG ratio results lead to the conclusion that on average most stocks are selling at a price 5 times higher than the normal prices. This can also be attributed to the high demand from investors especially on those companies which have high growth potentials.

On the age of the companies listed on the NSE, the study concludes that most of the companies are very old at the bourse having been listed for more than 30 years. Most of these old stocks are also performing better than their younger counterparts on the NSE.

The study concludes that PE ratio does not significantly influence stock performance of firms listed on the Nairobi Stock Exchange. This therefore raises the question on the wisdom of using PE ratios to make decisions on which stocks to buy and which ones not to. The PE model does not also significantly explain the variance in stock performance for companies listed on the NSE.

The study found and concludes that PE ratios adjusted for growth of companies does not significantly influence the stock market performance. As this method has been suggested by market analysts and scholars for stock valuations for purposes of value investing, it

raises the question of validity of such wisdom. This model does not significantly explain the variance in stock performance.

The study further concludes that the PE ratio outperforms the PEG ratio in valuing stocks. This therefore means that an investor would be at least to use PE ratios as reported in the annual reports or just calculate the current PE ratio based on the current stock prices and the reported EPS in the annual reports.

5.3 Policy Recommendations

The study recommends that investors should use a combination of methods to value stocks in which to invest. This is because evidence suggests a lack of one single method to value stocks for purposes of value investing. A number of factors need to be taken into place and basis investment decisions only on PE ratios or its adjustments may not be a good idea.

The study also recommends the need for the regulatory authorities especially the Capital Markets Authority to keep complete data for all companies listed on the NSE. Complete annual reports of such companies should be kept as it is sometimes impossible to get all the information needed on companies listed on the NSE.

The study also recommends the need for the Nairobi Stock Exchange to keep complete data for all companies listed on the NSE in terms of their share price performance and investor relations data. This is because sometimes it is to get all the information needed on companies listed on the NSE.

The study further recommends that if a choice is to be made between PE ratio and PEG ratio on what method to rely on in terms of investment decisions, then the PE ratio should be used. Given that this can be easily calculated from the financial reports and stock prices of companies, investors do not have to struggle much with the computations.

5.4 Limitations of the study

One of the limitations is that the explanatory power of the models used in this study was very low. There are therefore variables which were not part of the model and which when used could improve the explanatory power of the models.

Secondly, a longer period data was not available for some of the firms listed on the NSE and this was a challenge in estimating the EPS growth rates. This led to settlement on four year averages where it would be good if the period was longer than four years.

Thirdly, the study relied on secondary data whose reliability depends on the sources themselves. An inclusion of primary data would have improved the quality of this study by providing answers which could not be captured by secondary data.

5.5 Suggestions for Further Research

The study suggests that scholars should replicate this study in other countries especially the East African countries. This would provide a wider sample size and therefore show whether the results in this study are consistent or not.

Further research could also be done on stock analysts to establish what valuation methods they prefer for purposes of information investors on where to invest. Such should be done using primary data collection methods.

Lastly, there is need to perform a longitudinal survey on the same in order to show stock market performance differences based on the stock valuation methods available. This would provide tools necessary for investors.

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APPENDICES

Appendix A: Companies Listed at the Nairobi Stock Exchange

AGRICULTURAL

1. Eaagads Ltd Ord 1.25 AIM
2. Kakuzi Ord.5.00
3. Kapchorua Tea Co. Ltd Ord Ord 5.00 AIM
4. Limuru Tea Co. Ltd Ord 20.00 AIM
5. Rea Vipingo Plantations Ltd Ord 5.00
6. Sasini Ltd Ord 1.00
7. Williamson Tea Kenya Ltd Ord 5.00 AIM

COMMERCIAL AND SERVICES

8. Express Ltd Ord 5.00 AIM
9. Hutchings Biemer Ltd Ord 5.00
10. Kenya Airways Ltd Ord 5.00
11. Nation Media Group Ord. 2.50
12. Scangroup Ltd Ord 1.00
13. Standard Group Ltd Ord 5.00
14. TPS Eastern Africa (Serena) Ltd Ord 1.00
15. Uchumi Supermarket Ltd Ord 5.00

TELECOMMUNICATION & TECHNOLOGY

16. AccessKenya Group Ltd Ord. 1.00
17. Safaricom Ltd Ord 0.05

AUTOMOBILES & ACCESSORIES

18. Car & General (K) Ltd Ord 5.00
19. CMC Holdings Ltd Ord 0.50
20. Marshalls (E.A.) Ltd Ord 5.00
21. Sameer Africa Ltd Ord 5.00

BANKING

- 22. Barclays Bank Ltd Ord 2.00
- 23. CFC Stanbic Holdings Ltd ord.5.00
- 24. Diamond Trust Bank Kenya Ltd Ord 4.00
- 25. Equity Bank Ltd Ord 0.50
- 26. Kenya Commercial Bank Ltd Ord 1.00
- 27. Housing Finance Co Ltd Ord 5.00
- 28. National Bank of Kenya Ltd Ord 5.00
- 29. NIC Bank Ltd Ord 5.00
- 30. Standard Chartered Bank Ltd Ord 5.00
- 31. The Co-operative Bank of Kenya Ltd Ord 1.00

INSURANCE

- 32. Kenya Re-Insurance Corporation Ltd Ord 2.50
- 33. CFC Insurance Holdings Ltd ord.1.00
- 34. Jubilee Holdings Ltd Ord 5.00
- 35. Pan Africa Insurance Holdings Ltd Ord 5.00

INVESTMENT

- 36. Centum Investment Co Ltd Ord 0.50
- 37. City Trust Ltd Ord 5.00 AIM
- 38. Olympia Capital Holdings ltd Ord 5.00

MANUFACTURING & ALLIED

- 39. A.Baumann & Co Ltd Ord 5.00 AIM
- 40. B.O.C Kenya Ltd Ord 5.00
- 41. British American Tobacco Kenya Ltd Ord 10.00
- 42. Carbacid Investments Ltd Ord 5.00
- 43. East African Breweries Ltd Ord 2.00
- 44. Eveready East Africa Ltd Ord.1.00

- 45. Kenya Orchards Ltd Ord 5.00 AIM
- 46. Mumias Sugar Co. Ltd Ord 2.00
- 47. Unga Group Ltd Ord 5.00

CONSTRUCTION & ALLIED

- 48. Athi River Mining Ord 5.00
- 49. Bamburi Cement Ltd Ord 5.00
- 50. Crown Berger Ltd Ord 5.00
- 51. E.A.Cables Ltd Ord 0.50
- 52. E.A.Portland Cement Ltd Ord 5.00

ENERGY & PETROLEUM

- 53. KenGen Ltd Ord. 2.50
- 54. KenolKobil Ltd Ord 0.05
- 55. Kenya Power & Lighting Co Ltd Ord 2.50
- 56. Total Kenya Ltd Ord 5.00