# THE SIGNALING EFFECT OF DIVIDEND CUTS AND OMISSIONS: EVIDENCE FROM THE NAIROBI SECURITIES EXCHANGE

#### **MOMBASA**

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# A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF BUSINESS ADMINISTRATION DEGREE, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

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# **DECLARATION**

I hereby declare that this management research proposal is my original work and has not been

presented to any other University.	
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# **DEDICATION**

To my daughter Clare, May this study be an inspiration to you to strive to greater heights, and to my beloved husband Silvance for the unconditional support you have given me during this study.

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To all I say thank you and God bless.

# LIST OF ABREVIATIONS

DY Dividend Yield

DPS Dividend Per Share

EPS Earnings per Share

MM Modigliani and Miller

MPS Market Price Per Share

NSE Nairobi Securities Exchange

NPV Net Present Value

UK United Kingdom

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#### **ABSTRACT**

The study set out to establish the signaling effect of dividend cuts and omissions for firms listed at the Nairobi Securities Exchange. It intended to establish if there exist a relationship between the dividend cuts/omissions, EPS, earnings for the listed firms at the NSE in light of operational activities and if this could reliably test the signaling effect of dividends, which has been a puzzle. Studies have been done in developed world in testing the reliability of signaling effect of dividend cuts/omissions, but not much has been known about using operational activities to test the reliability of the signaling effect of dividend cuts and omissions in developing countries. This therefore motivated my study in a developing market

This study used continuously listed companies from 2007 to 2011, which comprised of 41 firms that formed my population. After screening, the final sample contained 13 firms, eight being action firms and five non action firms. The information gathered was summarized and their correlation determined. Regression analysis was used to estimate the degree of relationship. The study established a positive correlation of 58.3% at 0.151 level of significance for 1-tailed test, with a coefficient of determination, R square of 78.5%, this is statistically significant relationship between dividend cuts/omissions and changes in earnings for the action firms for the period of 2007 – 2011 for the sampled firms. There was a strong negative correlation of -84.8% at a significance level of 0.0035 1-tailed test at an adjusted R square of 62.6% for non action firms The performance of the action firms was better in the second year than first year while worse for non-action firms in the second year than first year.

This study therefore has added value to the body of corporate financial management discipline by bringing a new perspective in testing the reliability of signaling theory of dividends by incorporating proactive operational activities before the dividend cuts such that future cash flows remain certain. The findings of this study will be of interest to academicians since it will shed some light on an existing debate in the literature by trying to solve the complexity of testing the reliability of signaling theory of dividends which has been a puzzle. The findings of this study will also help in the understanding how signaling effect determine a firm's dividend policy, which is a tradeoff between retained earnings on one hand and distributing cash or securities on the other, hence help to understand the reliability of the signaling effect on dividend policy adopted by a firm.

#### **CHAPTER ONE: INTRODUCTION**

## 1.1 Background of the Study

The signaling effect of dividend announcement has resulted in considerable debate due to the complexity of testing the reliability of the signaling theory. This is because some studies found a correlation between the dividend announcements with future firm performance while other studies did not. Dividends announcements were therefore perceived to be bad news by some researchers and good news by other set of researchers. There is abundance evidence from the literature associating announcements of changes in dividends with abnormal stock price performance. This evidence indicates that the announcement of increases in dividends are associated with significant positive abnormal/excess returns and vice versa while the announcement of no-changes in dividends produce only normal returns for shareholders.

Dividend is the portion of the company's income paid out to shareholders as a return on their investments. The primary purpose of any business is to create profit to its owners, and dividends are the most important way the business fulfills this mission. The amount is distributed out of the company's profits in proportion to their shareholdings. Dividends on preferred shares is a fixed amount while for common shares, it varies with the wealth of the firm and the amount of cash available since dividends are no paid out of capital. The directors may withhold dividends if the firm is not performing well or when there is a viable project to invest in. Most closely held companies do not pay dividends but determine the dividend paying capacity of the firm by the use of dividend valuators. Dividend paying capacity based on average net income and average cash flow is used (DeAngelo, DeAngelo and Skinner, 2004).

#### 1.1.1 Signaling Effect

In perfect markets, all information is accessible to all at zero costs and simultaneously but markets in reality manifests a deviation from perfect information called asymmetric information. Some market participants have different access to information pertinent to their decision making. One party has more or better information than the other and this inequality of information access disrupts normal market behavior. Two parties with different exposure

to needed information could overcome this problem of asymmetry by having one party send a signal to the other, revealing some pertinent information. The receiver of the information therefore should carefully interpret the signal to avoid erroneous inferences (Spence, 1973).

The signaling theory of dividends states that Managers use dividend policy to send signals about the firm's future earnings (Bhattacharya, 1979; Miller and Rock, 1985; and John and Williams, 1985).

Signaling is essentially a unique strategic communication tool used by the firms to bridge an undesirable communication gap. Firms will signal only if there is an economic advantage to be gained from signaling and if information asymmetry in the market negatively impacts on their value. There are three important conditions necessary for signaling which are: Information asymmetry, the benefits of signaling must outweigh the cost of signaling and there must be a signaling equilibrium which prevents signals from being mimicked by perceived bad firms (Spence, 1973).

#### 1.1.2 Informational Content and the Signaling Effect of Dividends

Some studies have stressed the importance of information content of dividends. Miller and Rock (1985) for instance, suggested that dividend announcements provide a piece of missing information about the firm and allows the market to estimate the firm's current earnings. Investors therefore may have greater confidence that reported earnings reflect economic profits when announcements are accompanied by ample dividends. Dividend payments do serve as a signal to market participants; however, evidence has increased the uncertainty regarding the information conveyed when the firm drops its dividends, (Jensen and Johnson, 1995).

Dividend omission occurs when managers fail to declare dividend in the financial accounts for the period (100% dividend cut) while dividend cuts refers to a reduction in a firm's regular cash dividends per share in a particular year. It is a situation when the company changes its dividend policy to reduce the dividend amount to be paid.

#### 1.1.3 Nairobi Securities Exchange.

Trading in shares and securities in Kenya started in 1920's when Kenya was a British colony. There were however no formal market and no rules and regulations to govern stock broking activities. The Nairobi securities exchange (NSE) was established in 1954 to deal with securities issued by publicly quoted companies and the Government. The major role the securities exchange has played and continues to play in the Kenya's economy is the promotion of culture of thrift, or savings. The fact that institutions exist where savers can safely invest their money and in addition earn a return, is an incentive to people to consume less and save more (Ombajo, 2006). The Nairobi securities exchange deals with variable income securities such as the ordinary shares with no fixed rate of dividends (dividends depends on the profitability of the firm and the decision of the board of directors) and the fixed income securities such as the preference shares, the treasury and corporate bonds, as well as the debenture stock, which have a fixed rate of interest/dividends, that are not dependant on profitability. The market consist of both primary securities market, where securities are first issued to investors and secondary securities markets, where existing shares are traded among investors (Ngugi, 2003).

#### 1.2 Research Problem

Evidence suggests that market reacts to most corporate event announcements. Although Fama (1998) argues that overreaction and under reaction are split equally in literature and attribute them simply to chance, these patterns do not support market efficiency. Some overreactions could be attributed to managers timing the announcement and manipulating financial data. Firms are more likely to manage earnings upward when their earnings would otherwise fall short of expected dividend levels. This earnings management behavior appears to significantly impact the likelihood of a dividend cut. Firms whose discretionary accruals cause reported earnings to exceed expected dividend levels are significantly less likely to cut dividends than are firms who have reported earnings fall short of expected dividend levels (Daniel, Denis and Naveen, 2007).

Some studies find a positive correlation between dividend payments and future earnings (Nissim and Ziv, 2001) but a substantial body of research fails to find such a relationship (Grullon and Michaely, 2002). Allen and Michaely (2002) observed that dividend increases

may be perceived to be bad news with the asymmetry of information. This is because firms that pay dividends are the ones that have no positive Net present value (NPV) projects in which to invest in, but Black (1976) argued that corporations that pay no dividends are demonstrating confidence that it has attractive investment opportunities that might be missed if it paid dividends.

Iqbal and Habibur (2002) conducted an investigation of earnings anomaly following dividend cuts and omissions and found out that a cut in dividends in conjunction with other operational measures is associated with an increase in firm earnings. Oluoch (2002) tested the timing effect of earnings announcements on stock returns of companies quoted at the Nairobi Securities Exchange. He investigated if the delay in earnings announcements could be attributed to the kind of news reported and the effects of the reporting lag on share prices but found no relationship between the firm's earnings and the timing of the release of the annual report. Studies have been done in developed countries, and mixed results obtained as stated above. This study therefore attempts to address the research question; does dividend cuts and omission have a signaling effect on future performance of a firm?

# 1.3 The Objective of the Study.

To investigate the signaling effect of dividend cuts and omissions at the NSE.

#### 1.4 Value of the Study.

The study will offer valuable contribution to theory and practice. First the study will add value to the body of corporate financial management discipline by bringing a new perspective in testing the reliability of signaling theory of dividends by incorporating proactive operational activities before the dividend cuts such that future cash flows remain certain. There is a mixed empirical conclusion regarding signaling effect of dividend payments and this study would therefore help create an understanding of the relationship between dividends and firm value which is a complex area.

To practice, the findings of this study will be of interest to academicians that will be interested in the results since it will shed some light on an existing debate in the literature by trying to solve the complexity of testing the reliability of signaling theory of dividends. The

study will be of value to stock brokerage firms who would acquire an understanding of investors' reaction to earnings disclosure in the capital markets, especially in emerging markets like Kenya.

To policy, the findings of this study will help in the understanding how signaling effect determine a firm's dividend policy, which is a tradeoff between retained earnings on one hand and distributing cash or securities on the other. For example, most growth firms will adopt a residual dividend policy. Different studies testing the signaling effect of dividend announcements have resulted in different findings, in that there is no unanimity among researchers. This study will therefore help to understand the reliability of the signaling effect on dividend policy adopted by a firm.

#### **CHAPTER TWO: LITERATURE REVIEW**

#### 2.1 Introduction

This chapter provides a discussion of the various theories of dividends; studies that have been done that are relevant to this study and a conclusion regarding the theories and models used. The chapter is organized in such a way that it begins with a discussion of the relevant theories followed by the empirical review, and finally a conclusion.

#### 2.2 Theoretical Review

#### 2.2.1 Dividend Irrelevance Theory

Modigliani and Miller (1961) developed the dividend irrelevance theory that states that a firm's dividend theory is irrelevant because it neither has effect on the stock price nor on the cost of capital. The theory was formed under the assumption of: No taxes, both personal and corporate: No costs, both floatation and transaction: Dividend policy has no effect on the firms cost of equity: Firm's investment policy is independent of its dividend policy: Investors and managers have same set of information regarding future investment opportunities (Jensen and Meckling, 1976). Based on the above assumptions, if a firm pays more dividends, then it must sell more new shares to new investors as the portion of the value of the firm given up to new investors is exactly equal to the dividends paid out, thus this leaves the value of the firm unchanged.

The value of the firm is therefore determined by its basic earnings power and its risk class. It's the assets investments policy, rather than the way earnings are split between dividends and retained profits that determine the value of the firm. MM's conclusion on the dividend irrelevance theory does not hold in real world situations due to the existence of the imperfections such as investors and firm paying taxes, firms incurring floatation costs whenever they sell additional shares, investors paying brokerage/transaction costs whenever they sell/buy shares.

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#### 2.2.2 Signaling Theory of Dividends

Ross (1977) was the first to apply signaling theory to finance in his work. Managers as insiders have monopolistic access to pertinent information about a firm's prospects and expected cash flow, for example, if management pays high dividends, it signals high expected profits in future to maintain the high dividend level. Therefore, when it is in their strategic interest, they can use project financing or dividend policy to send a signal to investors about their firm's future.

Researchers with similar arguments are Bhattacharya (1979), Miller and Rock (1985), John and Williams (1985), among others. Their argument is based on the idea of information asymmetries between the different participants in the market and in particular between managers and investors. Under such conditions, the costly payment of dividend is used by managers, to signal information about the firm's prospects to the market. For example, in John and Williams' (1985) model the firm may be temporarily under-valued when investors have to meet their liquidity needs. If investors sell their holdings when the firm is undervalued, then there is a wealth transfer from old to new shareholders.

However, the firm can save losses to existing shareholders by paying dividends. Although investors pay taxes on the dividends, the benefits from holding on to the undervalued firm more than offset these extra tax costs. A poor quality firm would not mimic the dividend behavior of an undervalued firm because holding-on to over-valued shares does not increase wealth.

An announcements of increases in regular dividends signal permanent improvements in performance, and should be interpreted as confidence in the firm on behalf of managers thus triggering a price rise. Conversely, announcements of dividend decreases should be interpreted as signaling poor performance and lack of managerial confidence and should therefore trigger drops in prices. If changes in the levels of dividend release information to the market, then firms can reduce price volatility and influence share prices by paying dividends. However, it is only unexpected changes which have an informative value and which can thus impact prices.

Therefore, the value of the signal depends on the level of information asymmetries in the market. For example, in developing countries where capital markets are typically less efficient and where information is not as reliable as in more sophisticated markets, the signaling function of dividend may be more important.

#### 2.2.3 Dividend Clientele Theory

The dividend clientele hypothesis suggests that, 'ceteris paribus',( all things held constant), the stock price response to an unexpected dividend change announcement will be related to the dividend preferences of the marginal investor in that firm (Denis, Denis and Sarin, 1994). Researchers partially attribute the magnitude of abnormal return generated during the dividend announcement period to the nature of dividend clientele of the firm.

Dividend clientele theory according to Miller and Modigliani (1961), stipulates that firms attract investor clienteles based on their dividend payout policy. Firms that pay lower (higher) dividends attract investors who dislike (like) dividend income, and this creates the potential for an optimal match between the dividend policy of a firm and the dividend preferences of its stockholders. For instance, tax-exempt institutional investors such as pension funds and retail investors with low marginal tax rates are likely to prefer high dividend yield (DY) stocks. When there exists a positive differential between the tax rates on dividends and capital gains, higher dividends are likely to attract groups of investors that have lower marginal tax rates.

Several studies provide indirect evidence of tax-induced dividend clienteles by examining the price and volume reactions around dividend events. Bajaj and Vijh (1990) and Denis, Denis, and Sarin (1994) show that price reactions to dividend changes are stronger for high dividend yield stocks, perhaps because high yield stocks attract investors that prefer dividends. Seida (2001) in his study examine volume reactions around dividend events (dividend changes, initiations, and omissions) and provide mixed evidence about whether clienteles exist. Brav, Graham, Harvey, and Michaely (2003) survey financial executives and provide indirect evidence of dividend clienteles. A study by Grinstein and Michaely (2002) provide direct evidence on the dividend preferences of institutional investors they argued that institutions prefer dividend-paying stocks over non-dividend-paying stocks and also prefer firms that

repurchase shares. However, institutions do not exhibit a strong preference for high yield stocks. Dividend initiations lead to higher institutional ownership while dividend omissions result in lower institutional ownership, (Binay, 2001).

#### 2.3 Signaling Effect of Dividends

Why should firms signal? Firms will signal only if there is an economic advantage to be gained from signaling and if information asymmetry in the market negatively impacts on their value. Signaling is essentially a unique strategic communication tool used by the firms to bridge an undesirable communication gap. Spence (1973) revealed three important conditions necessary for signaling which are: Information asymmetry, the benefits of signaling must outweigh the cost of signaling and there must be a signaling equilibrium which prevents signals from being mimicked by perceived bad firms.

In their seminal paper, Miller and Modigliani (1961) acknowledged that dividend changes influenced stock prices and attributed this phenomenon to the information content of dividends. They assert that dividend payments reflected management's assessment of future earnings. Under the asymmetric information environment, a firm's dividend policy is important because it conveys information about future earnings. An increase (a decrease) in current dividends indicates that firm's future earnings are likely to rise (fall).

Lintner (1956) in his study of dividend policy suggest that dividends are changed when there is a permanent change in firm earnings. Fama, Fisher, Jensen & Roll (1969) argued that when stock splits are accompanied by dividend announcements, there is an increase in adjusted share price for the group that anounced dividend increase and a decline in share price for the group that decreased dividend.

#### 2.4 Empirical Review

Bhattacharya (1979), Kalay (1980), Miller and Rock (1992) each assumed that information asymmetry exists between Managers and investors developed models of cash dividend signaling. In each model, security price adjust to new equilibrium level in response to the information, which Managers convey to the investors in their individual dividend decisions. Dielman and Oppenheimer (1984), consider the longer-term returns of firms undergoing

major revisions in dividend policy, with special emphasis given to those omitting their dividend payments. They suggest that firms omitting dividend payments within four years of a prior omission experience an insignificant two day market response, while those paying dividends continuously for ten years since a prior omission decline in value by more than 13 percent. They concluded that the more stable the dividend history, the greater the market response to large changes in dividend policy.

Leland and Pyle (1977) assumed that owners have better information about the expected value of their firm's future investment projects than outsiders have. If a firm increases its dividend payout, it is perceived as a positive signal about expected future cash inflows. The market interprets this increase as a sign that the firm will be able to generate enough cash inflows to cover all its debt payments and its dividend payments without increasing the probability of bankruptcy (Fama, Fisher, Jensen, and Roll, 1969).

Kose and Mishra (1990) gathered evidence of insider trading around corporate announcements of dividends, capital expenditures, equity issues and repurchases, and other capital structure changes. Signaling models developed to explain the price reaction of the announcements assumed that insiders cannot trade to gain from such announcements.

Gunasekarage and Power (2002) examined the long-run financial and return performance of United Kingdom (UK) firms which are grouped according to whether or not they have changed their dividends and earnings. Their study aimed at addressing the stock market based study of share price performance and a detailed analysis of company performance based on financial ratios. Their analysis was five years before to five years after the announcement of dividend/earnings news. They found out that at the time of the announcements, share returns tended to be positive (negative) where companies had increased decreased the dividend, and earnings. There was also evidence to suggest that the stock market had anticipated some of the news in the preceding 12 months. However, the dividend/earnings news did not appear to act as a signal of long-term future company performance; companies which cut the dividend and reported.

Iqbal and Habibur (2002) contend that signaling theory of dividends provides no information on dividend cuts and omissions by firms that undertake operational actions to improve performance. They investigated if managers reduce dividends to signal a decrease in future earnings and if that could explain the anomalous findings in prior studies that earnings rose

following dividend cuts and omissions. They sampled 203 firms and found out that a cut in dividends in conjunction with other operational measures was associated with an increase in earnings. They contend that a dividend cut could be viewed as a way to conserve cash and improve the firm's earnings. Their findings also indicated that firms without operational measures showed no earnings increase following a dividend cut furthermore, a dividend cut was a reliable signal of poor future earnings for profitable firms than for firms that did not perform any operational measure. Lower earnings achieved the largest excess returns over the next five years. A similar mean-revealing pattern existed in the financial ratios. They concluded that most of the future long-term share performance was attributable to the earnings rather than to the dividend news.

Empirical evidence documents a strong reluctance of managers to cut their regular cash dividend (DeAngelo, DeAngelo and Skinner, 2008). In a survey of chief financial officers (CFOs), Brav, Graham, Harvey and Michaely (2005) find that firm payout policy remains very conservative: managers seek to maintain the existing level of dividends and avoid having to cut dividends except in extreme circumstances. This reluctance to cut the dividend is driven, in part, by the significant negative market reaction to dividend cuts. Daniel, Denis and Naveen (2010) has shown that dividend cuts occur infrequently and when they do occur, they are generally preceded by a period of poor operating performance (Grullon, Michaely, and Swaminathan, 2002; Lie, 2005).

Mbugua (2004) examined the impact of stock dividend size on stock returns on 24 companies which issued stock dividends/stock split bonus. The results indicated that the stock dividend announcements have an impact on stock returns. The results also indicated that the size of stock dividends had an effect on stock returns. Siero (2006) did an exploratory study at the NSE on determining the probability of a company paying dividends. He observed that dividend payout ratio, dividend yield, price earnings ratio and price to book value are the most significant factors in discriminating the dividends paying firms from the non payers at the NSE. He concluded that the financial ratios are useful in estimating the likelihood of firms paying dividends. In another study, Muriuki (2010) in his study determined the relationship between dividend policy and the share prices for the companies listed at the NSE. His conclusion revealed that firms listed at the NSE had a defined dividend policy and majority of these firms used this defined dividend policy.

#### 2.5 Conclusion

This study examined the incidence of dividend omission and dividend cuts among quoted firms at the NSE. Dividend policy has remained a source of controversy despite years of theoretical and empirical research, including one aspect of dividend policy; the linkage between dividend policy and stock price. Paying large dividends reduces risk and thus influences stock price and is a proxy for the future earnings. A similar study was conducted by Iqbal and Habibur (2002), but despite several studies done on the signaling theory of dividends in Kenya, no known researcher has investigated on what happens when operational actions are carried out, and this has motivated my study. A research gap therefore exists on testing the signaling effect of dividend cuts and omissions for companies listed at the NSE when operational actions are carried out.

#### **CHAPTER THREE: METHODOLOGY**

#### 3.1 Introduction

This chapter discusses the research design, the population, the sample, and the type of data needed and the source of the data. This chapter also explains how the data was analyzed and conclusions arrived at.

#### 3.2 Research Design

The design was a correlation study. A correlation research is used to explore the relationship between variables (Mugenda and Mugenda, 2003). The variables were regressed to determine whether there exist a relationship between dividend announcements (cuts and omissions) and the firm's performance.

#### 3.3 Population of the Study

The population of interest comprised of all firms continuously listed on the NSE as at 31<sup>st</sup> December, 2011. There were 58 firms listed at the NSE as at 31<sup>st</sup> December, 2011 (Refer appendix 1). The study was limited to the quoted companies due to lack of readily available data among the private companies. Only those firms which had been continuously listed were sampled and this formed my population of study. This comprise of 41 firms from different sectors of the economy.

# 3.4 Sample and Sampling Technique

To arrive at the required sample, the population was screened following a criterion to arrive at a final sample of firms as follows. All the 58 listed firms were sampled, thereafter; those that had been continuously listed from the year 2007 to 2011 were selected. 17 firms were dropped at this stage. Secondly firms with dividend cut or omission were sampled and the dividend cuts and omission had been reported in the NSE during the period 2007 to 2011. 10 firms with stable dividends were screened and dropped. Thirdly, to ensure that the dividends

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are reduced following a period of stable dividend payments, firms with no decrease in dividends in eight consecutive quarters prior to the dividend cut or omission were included and firms that failed to meet this criterion were dropped. 18 firms were dropped at this stage. Fourthly data on stock prices was required and was for last two years during a five-year period surrounding the dividend cut or omission. Firms that failed to meet this selection criterion were dropped. Out of the 13 firms, 8 firms were classified as action firms that implemented operational actions surrounding the dividend cuts and omissions, while 5 were classified as non-action firms. Evidence of the operational actions were obtained from the directors report contained in the annual financial statements, and included employee layoffs, Investment in plant and machinery, aggressive promotion, Acquisition of more investments, re-branding and internal reorganization.

#### 3.5 Data Collection Method

Secondary data used in the research and was collected from the Nairobi securities exchange (NSE) data base, and was obtained from the annual financial statements of the listed companies and other resourceful information available at the NSE secretariat for the samples period. The data comprised of names of the companies listed in the NSE, stock prices, earning per share, dividend per share, dividend yield and operational measures taken.

#### 3.6 Data Analysis

The correlation analysis was used for the analysis of the movement in stock prices. The SPSS software program was used for this purpose. Subsequently, in order to investigate the signaling effect, the correlation coefficient was calculated based on the linear association between the two main variables for each of the selected 13 companies, this revealed the magnitude and direction of relationship between earnings, EPS (dependent variable) and dividend cuts/omission and operational activities (independent variable). A stronger dependent variable, which was the change in earnings, was therefore used for the analysis.

The analytical model was of the form

$$Y = \alpha + \beta 1 X 1 + \epsilon$$

$$Y = \alpha + \beta 2X2 + \epsilon$$

Where

 $\alpha$  = Constant

 $\beta 1$  = Beta of earnings

X1 = Earnings

 $\beta$ 2 = Beta of EPS

X2 = EPS

 $\varepsilon$  = the error term

The coefficient of determination (R square) was used to explain the variation in the dependent variable brought about by the independent variable, which is the linear association between predictor and response variables.

#### CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSIONS

#### 4.1 Introduction

This chapter shows the analysis of data collected. It also presents and discusses the findings of the study. Using the continuously listed companies over a period of five years (2007-2011), the research was set to test the signaling effect of dividend cuts and omissions in light of operational actions of firms at the NSE.

#### 4.2 Findings of the Study

Correlation analysis was used to explore the relationship between the variables. Variables that are held constant cannot be correlated, therefore, for the action and non-action firms, code 1 and 0 respectively, these codes 1 and 0 was constants in the respective years hence no correlation of the operational activities. The years 2007 and 2008 were years of stable dividend payments, hence were basically a criterion used for screening purposes for companies to be included in the sample. The year 2009 was the year of dividend cuts/omissions and was considered the base year for the study.

The year 2009, which was a base year had the dividend cuts /omissions and no operational activities hence did not show any correlation of the earnings with the operational activities, and this was depicted in the model for all firms, with X1 being dividend cuts/omissions and X2 operational activities

 $Y=0.04+0.097X_{1}-0.343X_{2}$ 

The year 2009 was the year of the dividend cuts /omissions and therefore considered as the base year for the study.

Table 1: Descriptive Statistics for all firms with change in earnings in 2009

	Mean	Std. Deviation	N
Change in earnings 2009	.0256	.02998	13
Dividend cuts / omissions 2009	-1.3731	2.14890	13
Operational activities 2009	.6154	.50637	13

Source: Research findings

We present the statistics for the year 2009 since it's our base year. The average change in earnings for the firms under this study in the year 2009 was 0.0256 and standard deviation of 0.02998, average for dividend cuts was -1.3731 with a standard deviation of 2.1489 while the operational activities at 0.6154 with a standard deviation of 0.5637.

## **4.2.1 Correlation Analysis**

Correlation analysis was used to explore the relationship between the variables. The years 2007 and 2008 were years of stable dividend payments, hence were excluded from the correlation analysis. The year 2009 was the year of dividend cuts/omissions and was considered the base year for the study. In the study, dividend cuts and omissions and operational activities are the independent variables while the earnings per share and changes in earnings are the dependent variables.

Table 2: Correlation of Action Firms with EPS in 2009

			Dividend cuts / omissions
		Earnings per share 2009	2009
Pearson Correlation	Earnings per share	1.000	009
	Dividend cuts / omissions	009	1.000
Sig. (1-tailed)	Earnings per share		.491
	Dividend cuts / omissions	.491	

**Source: Research findings** 

From the above table, the correlation between EPS and dividend cuts and omissions for firms that had operational actions in the year 2009 is -0.9%, this is a very weak negative correlation at a significance level of 0.491 for 1 tailed test and hence not significant for the study.

Table 3: Correlation of Action Firms with Change in Earnings in 2009

		Change in	earnings	Dividend cuts / omissions
		2009		2009
Pearson Correlation	Change in earnings	1.000		626
	Dividend cuts / omissions	626		1.000
Sig. (1-tailed)	Change in earnings			.048
	Dividend cuts / omissions	.048		

**Source: Research findings** 

The correlation between dividend cuts and omissions with change in earnings is -62.6%, this is a strong negative correlation at a significance level of 0.048 1 tailed test.

Table 4: Correlation of Non Action firms with EPS in 2009

		Earnings per share 2009	Dividend cuts / omissions 2009
Pearson Correlation	Earnings per share 2009 Dividend cuts / omissions 2009	1.000 .161	.161 1.000
Sig. (1-tailed)	Earnings per share 2009 Dividend cuts / omissions 2009	.398	.398

**Source: Research findings** 

The correlation between dividend cuts and omissions with EPS is 16.1%; this is a weak positive correlation at a significance level of 0.398 1-tailed tests.

Table 5: Correlation of Non Action firms with Change in Earnings in 2009

			Change	in	earnings	Dividend cuts / omissions
			2009			2009
Pearson Correlation	Change in earnings				1.000	.928
	Dividend cuts omissions	/			.928	1.000
Sig. (1-tailed)	Change in earnings					.011
	Dividend cuts omissions	/			.011	

**Source: Research findings** 

There is a strong positive correlation for the non-action firms between dividend cuts/omissions with change in earnings of 92.8% at a significance level of 0.011 for 1 tailed test. Since both EPS and change in earnings can be used to measure performance, the study will only correlate the variables with changes in earnings since it demonstrates stronger correlation with the variables

Table 6: Correlation of All firms with Change in Earnings in 2009

		Change in earnings 2009	Dividend cuts / omissions 2009	Operational activities 2009
Pearson Correlation	Change in earnings 2009	1.000	.100	343
	Dividend cuts / omissions 2009	.100	1.000	009
	Operational activities 2009	343	009	1.000
Sig. (1-tailed)	Change in earnings 2009		.372	.125
	Dividend cuts / omissions 2009	.372		.489
	Operational activities 2009	.125	.489	

**Source: Research findings** 

Being the base year with dividend cuts and omissions, the correlation for all firms is weak at 10% with dividend cuts and omissions and -34.3% with the operational activities, with R

square of 12.5%, i.e., only 12.5% of the variations in earnings can be explained by the operational activities and while 87.5% can be explained by other factors.

The analytical model is of the form

 $Y=0.04+0.097X_{1}-0.343X_{2}$ 

Where

Y is the depend (Change in earnings);

 $X_1$  is the independent (div cuts and omissions);

 $X_2$  is the independent variable (action non action).

Table 7: Correlation Coefficients <sup>a</sup> of All Firms 2009

		dardized cients	Standardized Coefficients			Collinearity	/ Statistics	
М	odel	В	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.040	.015		2.701	.022		
	Dividend cuts / omissions 2009	.001	.004	.097	.330	.749	1.000	1.000
	Operational activities 2009	020	.017	343	-1.160	.273	1.000	1.000

a) Dependent Variable: Change in earnings 2009

**Source: Research findings** 

**Table 8: Correlation of Action Firms with Change in Earnings in 2010** 

			Dividend cuts /	
		Change in	omissions	Operational
		earnings 2010	2010	activities 2010
Pearson Correlation	Change in earnings 2010	1.000	.611	
	Dividend cuts / omissions 2010	.611	1.000	
	Operational activities 2010			1.000
Sig. (1-tailed)	Change in earnings 2010		.054	.000
	Dividend cuts / omissions 2010	.054		.000
	Operational activities 2010	.000	.000	

**Source: Research findings** 

From the study, when dividend cuts are accompanied with operational activities, the earnings will increase, with a strong correlation of 61.1% at 0.054 level of significance for the 1-tailed test, with an adjusted R square of 26.9% one year after the cuts/omissions

Table 9: Correlation of Non Action Firms with Change in Earnings in 2010

	-	Change in	Dividend cuts /	Operational
		earnings 2010	omissions 2010	activities 2010
Pearson Correlation	Change in earnings 2010	1.000	.500	
	Dividend cuts / omissions 2010	.500	1.000	
	Operational activities 2010			1.000
Sig. (1-tailed)	Change in earnings 2010		.195	.000
	Dividend cuts / omissions 2010	.195		.000
	Operational activities 2010	.000	.000	

**Source: Research findings** 

For the non-action firms, the correlation between earnings and dividend cuts is 50% one year after the dividend cut at a significance level of 0.195 1-tailed tests. This is a low correlation compared to 0.611 for the action firms.

Table 10: Correlation of Action Firms with Change in Earnings in 2011

		Change in earnings 2011	Dividend cuts / omissions 2011	Operational activities 2011
Pearson Correlation	Change in earnings 2011	1.000	.750	
	Dividend cuts / omissions 2011	.750	1.000	
	Operational activities 2011			1.000
Sig. (1-tailed)	Change in earnings 2011		.016	.000
	Dividend cuts / omissions 2011	.016		.000
	Operational activities 2011	.000	.000	

**Source: Research findings** 

In the second year after dividend cuts, the action firms will see their earnings increase, with a strong correlation of 75% at 0.016 level of significance for the 1-tailed test, with an adjusted

R square of 49% two years after the cuts/omissions. This shows that 49% of the variations in earnings can be explained by the operational activities.

**Table 11: Correlation of Non Action Firms with Change in Earnings in 2011** 

		Change in earnings 2011	Dividend cuts / omissions 2011	Operational activities 2011
Pearson Correlation	Change in earnings 2011	1.000	.033	
	Dividend cuts / omissions 2011	.033	1.000	
	Operational activities 2011			1.000
Sig. (1-tailed)	Change in earnings 2011		.479	.000
	Dividend cuts / omissions 2011	.479		.000
	Operational activities 2011	.000	.000	

**Source: Research findings** 

For the second year after the dividend cuts/omissions, non-action firms experienced a low correlation between the dividend cuts/omissions and the change in earnings at 3.3%, with an R square of -3.32.

**Table 12: Correlation of Action Firms with Change in Earning for the year 2007-2011** 

		Change in earnings	Dividend cuts/omissions	Operational activities
Pearson Correlation	Change in earnings	1.000	.583	
	Dividend cuts/omissions	.583	1.000	
	Operational activities			1.000
Sig. (1-tailed)	Change in earnings		.151	.000
	Dividend cuts/omissions	.151		.000
	Operational activities	.000	.000	

**Source: Research findings** 

The correlation of change in earnings with the dividend cuts/omissions is 58.3%. This is also a relatively high correlation at 0.151significance level for 1-tailed tests and coefficient of determination R square of 78.5%. This is an average correlation for all the years.

Table 13: Correlation of Non Action Firms with Change in Earning for the year 2007-2011

		Change in earnings	Dividend cuts/omissions	Operational activities
Pearson Correlation	Change in earnings	1.000	848	
	Dividend cuts/omissions	848	1.000	
	Operational activities			1.000
Sig. (1-tailed)	Change in earnings		.035	.000
	Dividend cuts/omissions	.035		.000
	Operational activities	.000	.000	

**Source: Research findings** 

There is a strong negative correlation between change in earnings and the dividend cuts and omissions of -84.8% at a significance level of 0.035 1-tailed tests and adjusted R square of 62.6.

Table 14: Correlation of All Firms with Change in Earning for the year 2007-2011

		Change in earnings	Dividend cuts/omissions	Operational activities
Pearson Correlation	Change in earnings	1.000	.008	
	Dividend cuts/omissions	.008	1.000	
	Operational activities			1.000
Sig. (1-tailed)	Change in earnings		.495	.000
	Dividend cuts/omissions	.495		.000
	Operational activities	.000	.000	

**Source: Research findings** 

The correlation between dividend cuts/omissions and change in earnings is very weak at 0.8% at a significance level of 0.495 and R square of -0.333. These are extremely weak findings due to compensation between the action firms and non-action firms operational and non-operational activities respectively.

## 4.3 Interpretation of the Findings

Coefficient of correlation is relatively direct measures of relation. If no relation exists between the independent and dependent variables, then it is as though we have random numbers and consequently random means, in which case, the difference between means would only be chance fluctuations.

#### 4.3.1 Regression model

R square measures the degree of variability of the dependent variable due to the changes in the independent variable. R square of more than 50% implies that the relationship between the two variables is very strong and therefore any small change on the dependent variable will have an effect on the independent variables.

The data fitting results for the base year 2009 when dividends were cut/omitted can be described as not good in that the model has low predictive ability with the two variables under study. R square = -0.048% implies that very low variations in earnings is explained by the two variables tested using the regression model. This is because being the base year; no action is carried out in the same year but in subsequent years. The regression models was as follows

 $Y=0.04+0.097X_{1}-0.343X_{2}$ 

Where

Y is the dependent variable (Change in earnings);

 $X_1$  is the independent variable (div cuts and omissions);

 $X_2$  is the independent variable (action non action)

For the subsequent years, 2010 and 2011, the correlations for the action firms were so significant at 61.1% and 75% respectively with R square of 26.9 and 49% respectively. This clearly shows that the operational activities indeed caused the changes in earnings for the subsequent years after the dividend cuts.

For the non-action firms, the correlation a year after the dividend cuts/omissions was 50% and 3.3% two years later in 2011, with coefficient of determination R square of 19.5% and 47.90% respectively.

#### 4.3.2 Analysis of variances (ANOVA)

ANOVA is used to test the overall statistical significance of the regression equation. It is used to test whether all the true regression coefficients in the equation equals to zero. The F test is used to confirm the existence of relationship between the dependent variable and all the independent variables considered collectively.

From the analysis of simple regression model, the value of adjusted R square for all firms in the base year was -0.048%, which is a very weak negative correlation since no operational activities were carried out in the year. For the action firms R square was 26.9% and 49% in 2010 and 2011 respectively. This clearly shows that the operational activities indeed caused the changes in earnings for the subsequent years after the dividend cuts, while for the non-action firms, the correlation was 50% in 2010 and 3.3% in 2011 R square was 19.5% and -47.9% in 2010 and 2011 respectively, and this signals poor future performance for the non-action firms.

#### CHAPTER FIVE: SUMMARY CONCLUSION AND RECOMENDATIONS

#### 5.1 Introduction.

This chapter presents the summary of the findings of the study. The main focus of this study was to test the reliability of the signaling effect of dividend cuts and omissions.

#### **5.2 Summary**

According to the signaling theory of dividends, a dividend cut signifies less than expected earnings in the future. Some prior empirical findings, however, observe increase in earnings following dividend cuts. The paper examine whether operational actions that are often implemented in conjunction with the dividend cut explain such anomalous findings.

The data used in this analysis covered a period of five years from 2007 – 2011 and was obtained from the NSE. Only continuously listed companies within the period were selected. The research involved the use of correlation analysis. Correlation coefficients of determination were obtained to establish the nature and magnitude of the relationship between the variables Dividend cuts/omissions, Operational activities and changes in earnings.

Time and financial constraints were a major factor and this led the researcher to concentrate on firms listed at the NSE. The period covered for the study is only 5 years. A longer period could possibly have yielded much stronger results.

#### **5.3 Conclusions**

The findings indicated that earnings subsequent to a dividend cut are positively related to the operational actions. Firms that initiated measures to improve performance saw their earnings rise after dividends are reduced / cut, while firms without any actions did not. The findings of this study suggest that a dividend cut may not be an effective signal of poor future performance under all circumstances hence the conclusion that the future performance of firms is most sensitive to the operational actions taken by the firms.

From the findings therefore, if a firm is experiencing poor performance and is forced to cut on its dividends payout, it is more prudent for it to initiate proactive operational activities that will reliably ensure that future profitability and cash flows are improved and predicted with certainty as operational activities after dividend cuts have proved, from the research findings to be a more reliably test for signaling effect of dividend cuts and omissions.

#### **5.4 Recommendations for policy**

From study, the performance of action firms measured in terms of change in earnings is highly correlated to the dividend cuts and omissions in the subsequent years after the cuts/omissions i.e. 61.1% and 75% in the first and second year after the dividend cut/omission respectively. For the non-action firms, the correlation of the earning gradually reduces in the first year and drastically in the second year, hence a signal of poor performance in future, See appendix 4

I therefore support the alternative theory that after the dividend cuts, firms will experience improved performance when followed by operational activities and poor performance when no operational activities are undertaken. This will make the market players to make informed decisions.

#### 5.5 Limitations of the Study

Considering that it is difficult to have a perfect research situation, it is then expected that that it may have some limitations.

The study focused on the companies listed at the NSE, however, there were only 58 firms listed as at 31<sup>st</sup> December 2011 and only 41 firms continuously listed for the period. Many private firms could have been used in order to strengthen the results. These findings may therefore not be generalized to private companies.

There was lack of readily available data for the period under review and when found was in a very raw form. This was time consuming to enable the researcher get the required data in the form required.

#### **5.6** Areas of further Studies

A study can be carried out to incorporate a larger sample firms especially in the private firms sector and not just the listed companies. This may even be done per different sectors of the economy.

The period under research can be extended so as to be in a position to establish the long run relationship between the operational activities, dividend cuts/omissions, and future performance. A similar study can therefore be replicated for a 10 year period.

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#### **APPEDINCIES**

#### APPENDIX 1: LIST OF 58 COMPANIES AT THE NSE PER SECTOR

#### **AGRICULTURAL**

- 1. Eaagads Ltd
- 2. Kapchorua Tea Co. Ltd\*\*
- 3. Kakuzi \*\*
- 4. Limuru Tea Co.Ltd\*\*
- 5. Rea Vipingo Plantations Ltd
- 6. Sasini Ltd\*\*
- 7. Williamson Tea Kenya Ltd\*\*

#### **COMMERCIAL AND SERVICES**

- 8. Express Ltd
- 9. Kenya Airways Ltd
- 10. Nation Media Group\*\*
- 11. Standard Group Ltd
- 12. TPS Eastern Africa (Serena) Ltd
- 13. Scan group Ltd
- 14. Uchumi Supermarket Ltd
- 15. Hutchings Biemer Ltd

#### TELECOMMUNICATIONS AND

#### **TECHNOLOGY**

- 16. Access Kenya Group Ltd
- 17. Safaricom Ltd

#### **AUTOMOBILES AND ACCESSORIES**

- 18. Car and General (K) Ltd
- 19. CMC Holdings Ltd
- 20. Sameer Africa Ltd
- 21. Marshalls (E.A.)Ltd\*\*

#### **BANKING**

- 22. Barclays Bank Ltd
- 23. CFC Stanbic Holdings Ltd
- 24. Diamond Trust Bank Kenya Ltd
- 25. Housing Finance Co Ltd
- 26. Kenya Commercial Bank Ltd
- 27. National Bank of Kenya Ltd\*\*
- 28. NIC Bank Ltd
- 29. Standard Chartered Bank Ltd
- 30. Equity Bank Ltd

#### Source: NSE, 2012

\*\* - Companies forming the final sample.

31. The Co-operative Bank of Kenya Ltd

#### **INSURANCE**

- 32. Jubilee Holdings Ltd
- 33. Pan Africa Insurance Holdings Ltd
- 34. Kenya Re- Insurance Corporation Ltd
- 35. CFC Insurance Holdings
- 36. British-American Investment Company (Kenya) Ltd

#### **INVESTMENT**

- 37. City Trust Ltd\*\*
- 38. Olympia Capital Holdings Ltd\*\*
- 39. Centum Investment Co Ltd
- 40. Trans-Century Ltd

#### **MANUFACTURING**

- 41. B.O.C Kenya Lltd
- 42. British American Tobacco Kenya Ltd
- 43. Carbacid Investments Ltd
- 44. East African Breweries Ltd
- 45. Mumias Sugar Co.Ltd
- 46. Unga Group Ltd\*\*
- 47. Eveready East Africa Ltd\*\*
- 48. Kenya Orchads Ltd
- 49. A.Baumann Co Ltd

#### **CONSTRUCTION AND ALLIED**

- 50. Athi River Mining
- 51. Bamburi Cement Ltd
- 52. Crown Berger Ltd\*\*
- 53. E.A. Cables Ltd
- 54. E.A. Portland Cement Ltd

#### **ENERGY AND PETROLEUM**

- 55. Kenol Kobil Ltd
- 56. Total Kenya Ltd
- 57. Ken Gen Ltd
- 58. Kenya Power & Lightning Co.Ltd

# APPENDIX 2: FINAL SAMPLE OF FIRMS

This includes all the firms included in the final sample, operational measures to be performed, year of operation, sectors and categorization of the firms as shown below:-

	FINAL SAMPLE OF FIRM						
	FIRMS	Operation Year	Operation Type	Sector	CATEGORY		
1	Sasini	2007	Machinery gradation, re branding, scaling up the value chain.	Agricultural	Action		
2	Marshalls	2010	HR rationalization & internal re organization	Automobile & Accessories	Action		
3	Crown Berger	2009	Aggressive promotion & re designing HR plan	Construction & Allied	Action		
4	Eveready East Africa Ltd	2009	Re-investment of profits & aggressive promotion	Manufacturing	Action		
5	Olympia Capital Holdings	2007/2009	Acquisition of investment & additional plant.	Investment	Action		
6	Unga	2008	Rolled out Kaizen lean system, reward recognition.	Manufacturing	Action		
7	Williamson Tea	2009	Investment in plant & machinery	Agricultural	Action		
8	Kapchorua	2009	Investment in plant & machinery	Agricultural	Action		
9	Kakuzi	NA		Agricultural	Non Action		
10	Nation Media Group.	NA		Commercial & Services	Non Action		
11	National Bank	NA		Banking	Non Action		
12	City Trust	NA		Investment	Non Action		
13	Limuru Tea	NA		Agricultural	Non Action		

# **APPENDIX 3: DATA COLLECTION FORM**

	YEAR 2007 VARIABLE AVERAGES							
	2007	EPS	EARNINGS	DIVIDEND CUTS				
1	Sasini	2.3118	-0.0049	0				
2	Marshalls	3.1269	0.0353	0				
3	Crown Berger	2.5033	0.0416	0				
4	Eveready East Africa Ltd	0.79	0.0641	0				
5	Olympia Capital Holdings	1.3667	-0.0051	0				
6	Unga	0.7792	-0.0004	0				
7	Williamson Tea	5.4841	0.0257	0				
8	Kapchorua	3.0118	0.0541	0				
9	Kakuzi	3.2575	0.0247	0				
10	Nation Media Group.	10.7906	0.0459	0				
11	National Bank	1.3449	0.0127	0				
12	City Trust	4.5739	0.0284	0				
13	Limuru Tea	5.96006	0.00502	0				
	AVERAGES 2007	3.4847	0.0252	-				

	YEAR 2008 VARIABLE AVERAGES						
	2008	EPS	EARNINGS	DIVIDEND CUTS			
1	Sasini	0.1023	-0.0091	0			
2	Marshalls	-0.3028	0.0166	0			
3	Crown Berger	4.2348	0.018	0			
4	Eveready East Africa Ltd	0.5783	0.0774	0			
5	Olympia Capital Holdings	1.0774	-0.0053	0			
6	Unga	1.9334	-0.0017	0			
7	Williamson Tea	2.5028	0.0218	4.5			
8	Kapchorua	-9.8702	0.03	0			
9	Kakuzi	7.424	0.0066	0			
10	Nation Media Group.	14.3384	0.0346	6			
11	National Bank	3.5275	0.0064	0			
12	City Trust	7.8457	0.0208	1			
13	Limuru Tea	4.1672	0.0106	5			
	AVERAGES 2008	2.8891	0.0174	1.2692			

YEAR 2009 VARIABLE AVERAGES						
	2009	EPS	EARNINGS	DIVIDEND CUTS		
1	Sasini	3.8092	0.0040	0		
2	Marshalls	-11.8	0.0040	-1		
3	Crown Berger	2.7628	0.0540	-0.5		
4	Eveready East Africa Ltd	0.086	0.0014	-0.6		
5	Olympia Capital Holdings	-0.2564	0.0030	0		
6	Unga	3.1612	0.0078	0		
7	Williamson Tea	1.8056	0.0658	-4.5		
8	Kapchorua	0.7292	0.0262	-4.5		
9	Kakuzi	0.82	0.0700	0		
10	Nation Media Group.	6.7	0.0644	1.5		
11	National Bank	0	0.0470	0		
12	City Trust	0.57	0.0046	-3.25		
13	Limuru Tea	5	0.0048	-5		
	AVERAGES 2009	1.0298	0.0256	- 1.3731		

YEAR 2010 VARIABLE AVERAGES						
	2010	EPS	EARNINGS	DIVIDEND CUTS	OPERATIONS	CATEGORY
1	Sasini	2.42	0.0440	4.0000	1	Action firm
2	Marshalls	-11.8	0.0098	-	1	Action firm
3	Crown Berger	2.929	0.0455	-	1	Action firm
4	Eveready East Africa Ltd	0.1275	0.0057	-	1	Action firm
5	Olympia Capital Holdings	-0.585	0.0182	0.1000	1	Action firm
6	Unga	1.6175	0.0149	-	1	Action firm
7	Williamson Tea	56.196	0.0328	3.5000	1	Action firm
8	Kapchorua	27.0896	0.0456	2.0000	1	Action firm
9	Kakuzi	16.5804	0.0502	1.0000	0	Non Action firm
10	Nation Media Group.	7.678	0.0468	-	0	Non Action firm
11	National Bank	4.4653	0.0027	-	0	Non Action firm
12	City Trust	5.2364	0.0232	0.5000	0	Non Action firm
13	Limuru Tea	20.6882	0.0253	-	0	Non Action firm
	AVERAGES 2010	10.2033	0.0281	0.8538	0.6154	-

	YEAR 2011 VARIABLE AVERAGES						
	2011	EPS	EARNINGS	DIVIDEND CUTS			
1	Sasini	4.2494	0.0461	0.1			
2	Marshalls	-11.8	0.0168	0			
3	Crown Berger	5.2018	0.0382	0.25			
4	Eveready East Africa Ltd	0.04	0.0071	0			
5	Olympia Capital Holdings	1.6904	0.0112	0			
6	Unga	2.2586	0.0543	0.5			
7	Williamson Tea	96.9855	0.061	2.25			
8	Kapchorua	42.298	0.0678	4			
9	Kakuzi	16.1582	0.0316	1.5			
10	Nation Media Group.	9.1412	0.0453	0			
11	National Bank	4.1467	0.0096	0			
12	City Trust	5.9486	0.0276	3			
13	Limuru Tea	46.44	0.029	2.5			
	AVERAGES 2011	17.1353	0.0343	1.0846			

#### **APPENDIX 4 : YEARLY AVERAGES**

# **ALL FIRMS AVERAGES**

	2007	2008	2009	2010	2011
EPS	3.4847	2.8891	1.0298	10.2033	17.1353
EARNINGS CHANGE	0.0252	0.0174	0.0256	0.0281	0.0343
DIVIDEND CUTS	0	1.2692	- 1.3731	0.8538	1.0846
OPERATIONAL ACTIVITIES	0.6154	0.6154	0.6154	0.6154	0.6154

#### **ACTION FIRMS AVERAGES**

	2007	2008	2009	2010	2011
EPS	2.4217	0.0320	0.0372	9.7493	17.6155
LIJ	2.7217	0.0320	0.0372	7.1473	17.0133
EARNINGS CHANGE	0.0263	0.0185	0.0178	0.0271	0.0378
DIVIDEND CUTS	0	0.5625	1.3875	1.3125	0.8875
OPERATIONAL ACTIVITIES	1.0000	1.0000	1.0000	1.0000	1.0000

# **NON ACTION FIRMS AVERAGES**

	2007	2008	2009	2010	2011
EPS	5.18539	7.45932	2.61800	10.92966	16.36694
EARNINGS CHANGE	0.02334	0.01580	0.03816	0.02964	0.02862
			-		
DIVIDEND CUTS	0	2.40000	1.95000	0.30000	1.40000
OPERATIONAL ACTIVITIES	0	0	0	0	0