'RETAIL AND INSTITUTIONAL INVESTOR CLIENTELE EFFECT' ON STOCK PRICE ADJUSTMENTS TO DIVIDEND ANNOUNCEMENT: EMPIRICAL ANALYSIS OF NAIROBI STOCK EXCHANGE (NSE) FIRMS.
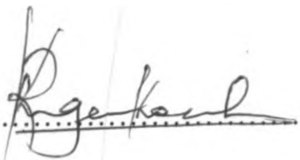
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DECLARATION

I declare that this Research Project is my original work and has not been presented for award of a degree in any other university.

Signed...[signature]............... Date...15th Nov. 2010

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This Research Project has been submitted for examination with my approval as the University Supervisor.

Signed....[signature]........... Date....15 - 11 - 2010

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DEDICATION

To my wife,

Hellen

for your exceptional patience and understanding during the period of my studies. You were understanding during my absence from important family functions and patient when I turned our home to a library. May this degree be a reward for your patience.

To my mother,

Kabon

for sowing in me the seed of hard work and persistence. Despite your illiteracy, you not only provided my school fees but also insisted that I work for good grades. Mum, may you live long to see the fruits of your endurance.

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This project was realized as a result of contributions of many people.

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Second, Dominic and Godfrey both of Nairobi Stock Exchange (NSE) for ensuring that I got all the data I needed for this project. Gentlemen, sorry for bothering you during times when my flask disk failed to open the many folders you gave me.

Third, all MBA students of 2008 (Kisumu Campus) for being a good team that inspired me to realize that all was possible with determination. May you keep the unity.

Finally, all the many others who contributed towards the success of this project. Ladies and gentlemen, kindly accept my honest appreciation for your role in this project.

ABSTRACT

This is an event study that aimed at establishing whether there is a significant difference in the abnormal adjustment in stock prices for retail and institutional investor firms as a result of dividend announcement. Studies already carried out on the subject of dividends conclude that stock prices react to dividend announcement. This implies that dividend announcement carry information to investors. This study not only looks at the price reaction to dividends announcement but also the role played by the different clienteles. Ten firms listed at the Nairobi stock exchange were studied for a period of five years (2009 to 2005). The companies were divided into two categories, the first category contained firms with retail investors while the second category contained those firms with institutional investors. The dividend dates were noted, and then prices observed over an event window of twenty days, ten before the announcement of the dividends and ten after the announcement of dividends.

The research heavily relied on secondary data obtained from the Nairobi stock exchange as well as old newspapers, and internet. The study determined that there is no significance difference in abnormal adjustment in stock prices for retail and institutional investor firms as a result of dividends announcement. This implies that the effect of retail and institutional investors on stock price adjustments to dividends announcement is not significantly different.

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CHAPTER 1

INTRODUCTION

1.0 Background

Dividend policy remains 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 risk (Allen and Rachim, 1996). Paying large dividends reduces risk and thus influence stock price (Gordon, 1963) and is a proxy for the future earnings (Baskin, 1989).

1.1 Dividend Clienteles

Dividend clientele refer to a group of shareholders with a preference regarding how much a company will pay out in dividends, often for tax reasons. Dividend clientele usually make decisions regarding distributions based on which is most advantageous to them.

According to the dividend clientele hypothesis (Miller and Modigliani (1961)), 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 policy of a firm and the dividend preferences of its stockholders.

Investors will buy and hold shares of a company depending on the goals of their investment. Some investors require a steady and reasonable stream of income flows from

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their investments, thus preferring high-payout firms compared to low-payout ones. Other investors, however, prefer capital gains to current dividends. This group would be attracted to low-payout firms.

Clientele groups are often dictated by age as well as income level. Older or retired investors tend to prefer higher dividend income than younger shareholders, who may prefer that the company use free cash flows to fund growth rather that distribute dividends. Ultimately, dividend clienteles tend to be growth-versus-income parties. The effects of dividend clientele on a company's stock price are somewhat controversial.

The clientele effect assumes that investors are attracted to different company policies, and that when a company's policy changes, investors will adjust their stock holdings accordingly. As a result of this adjustment, the stock price will move.

Consider a company that currently pays a high dividend and has attracted clientele whose investment goal is to obtain stock with a high dividend payout. Assuming an efficient market, if the company decides to decrease its dividend, these investors will sell their stock and move to another company that pays a higher dividend. As a result, the company's share price will decline.

From the tax point of view, a shareholder in high tax bracket should prefer capital gains over current dividends for two reasons: (*i*) the capital gains tax is less than the tax on dividends, and (*ii*) the capital gains tax is payable only when the shares are actually sold. The effect of the favourable tax differential in case of capital gains will result in tax

savings. Thus, the tax advantage of capital gains over dividends strongly favours a low-dividend yield shares. Tax differential should attract tax clienteles. Investors in high-tax brackets should own low-payout shares, and those in low-tax brackets should own high-payout shares.

A key criticism of the idea of dividend clienteles is that investors do not need to rely upon the firm to provide the pattern of cash flows that they desire. An investor who would like to receive some cash from their investment always has the option of selling a portion of their holding. This argument is even more cogent in recent times, with the advent of very low-cost discount stockbrokers. It remains possible that there are taxation-based clienteles for certain types of dividend policies.

1.1.1 Retail and Institutional Investors as Dividend Clienteles

Earlier studies on this area have concluded that retail and institutional investors belong to different dividend clienteles. Graham and Kumar (2004) by studying stock holding and trading behavior of more than 60,000 households found evidence consistent with dividend clientele. They observe that retail investor stock holdings indicate a preference for dividend yield that increases with risk aversion and age (the latter is consistent with life-cycle or consumption preferences) and decreases with income (consistent with low-tax investors holding high-yield stocks). Retail investor stock trades provide reinforcing evidence of these dividend preferences – older, low-income investors disproportionally purchase stocks before the ex-dividend day.

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The direct evidence about the dividend preferences of retail investors is less conclusive. Blume, Crockett, and Friend (1974) document an inverse relation between income (a proxy for marginal tax rates) and portfolio dividend yield. In another instance, using data on the stock holdings of individual investors from a retail brokerage house, Pettit (1977) provides evidence of a tax-induced dividend clientele – investors in high tax brackets have a stronger preference for low DY stocks. However, using the same dataset as Pettit (1977) but a different methodology, Lewellen, Stanley, Lease, and Schlarbaum (1978) conclude that they are not able to "find in the data much evidence to support the notion that an important dividend-tax-clientele effect is in fact present" (p. 1395).

Other studies (e.g., Brav and Heaton (1997), Dhaliwal, Erickson, and Trezevant (1999), Grinstein and Michaely (2002)) provide direct evidence on the dividend preferences of institutional investors. For instance, Grinstein and Michaely (2002) find 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 (Dhaliwal, Erickson, and Trezevant (1999), Binay (2001)). Overall, these results suggest that institutional dividend clienteles may exist.

1.1.2 Dividend Clienteles: Evidence from Nairobi Stock Exchange (NSE)
Several studies have been carried out on the information content of dividends announcement on the NSE (e.g. Karanja (1987), Iminza (1997), Muriithi (2001), Mbugua

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(2003), Onyangoh (2004) and Kiio (2006)). However, none of these studies has considered the role of dividend clientele on stock prices are a result of dividend announcement.

Studies conducted elsewhere (mostly in developed markets) show that retail and institutional investors belong to different categories of dividend clienteles. Although evidence on the level of preference of dividends to capital gains by these two groups of investors is not conclusive, there are reasonable grounds to believe that retail and institutional investors have different goals of investment.

First, retail and institutional investors are different in their planning horizon. While retail investors have short-term planning horizon, institutional are mostly long-term oriented in their investment decisions. This orientation is perhaps as a result of other factors such as level of risk aversion as well as preference for current consumption to future consumption. Compared to retail investors, institutional investors are expected to prefer capital gains than dividends because of these reasons.

Second, taxation of dividends and capital gains affect investors' preference. In Kenya, individual (retail) investors pay withholding tax at the rate of 5% on dividends. However, dividends received by a resident company from another resident company of which it controls 12.5% or more of the voting power are not subject to tax.

The purpose of this study is to analyze the role, if any, of retail and institutional investors on stock price reactions to dividend announcement. That is, is the change in stock prices as a result of a dividend announcement affected by the type (retail or institutional) of a firm's investors?

1.2   Information Content of Dividend Announcement

Changes in dividend and capital structure policies (through dividend announcement) convey information to the stock market about the future performance of a firm. This information, however, is received differently by different investors of a firm. It has been observed that firms attract and retain investors whose goals match the firm's policies: dividend, taxation and other policy changes affecting the company. Many event studies find that dividend and pure leverage changes are associated with abnormal stock returns. However, the economic rationale for this market information effect has not been entirely resolved.

Initial forays into theorizing corporate dividend policy are divided as to their prediction of the dividend payment's effect on share prices. Over the last century, three schools of thought have emerged. One faction sees dividends as attractive and as a positive influence on stock price. A second bloc believes that stock prices are negatively correlated with dividend payout levels. The third group of theories maintains that firm dividend policy is irrelevant in stock price valuation.

Pandey (2003), states that theoretical views differ on this issue. He says, on the one hand, there are views that dividends increase the value of the share. On the other hand, there is the view that dividends are bad as they result into payment of higher taxes, and thus, they reduce the shareholders' wealth. He further observes that there are those with the moderate view who assert that because of the information value of dividends, some dividends should be always paid to maintain the value of the share.

1.3   Forms of Dividends

Cash dividends (most common) are those paid out in the form of a cheque or cash. Such dividends are a form of investment income and are usually taxable to the recipient in the year they are paid. This is the most common method of sharing corporate profits with the shareholders of the company. For each share owned, a declared amount of money is distributed. Thus, if a person owns 1000 shares and the cash dividend is Sh. 0.50 per share, the person will be issued a cheque for Sh.500.

Stock or scrip dividends are those paid out in form of additional stock shares of the issuing corporation, or other corporation (such as its subsidiary corporation). They are usually issued in proportion to shares owned (for example, for every 100 shares of stock owned, 5% stock dividend will yield 5 extra shares). If this payment involves the issue of new shares, this is very similar to a stock split in that it increases the total number of shares while lowering the price of each share and does not change the market capitalization or the total value of the shares held.

Property dividends or dividends *in specie* (Latin for "in kind") are those paid out in the form of assets from the issuing corporation or another corporation, such as a subsidiary corporation. They are relatively rare and most frequently are securities of other companies owned by the issuer, however they can take other forms, such as products and services. For example, Wrigley's Gum sends around a box of chewing gum and Dundee Crematoria offers shareholders discounted cremations.

Other dividends can be used in structured finance. Financial assets with a known market value can be distributed as dividends; warrants are sometimes distributed in this way. For large companies with subsidiaries, dividends can take the form of shares in a subsidiary company. A common technique for "spinning off" a company from its parent is to distribute shares in the new company to the old company's shareholders. The new shares can then be traded independently.

1.4   Factors Affecting Dividend Policy/Payment

Kuhlemeyer (2004) holds that many factors affect a firm's dividend policy among them, the following:

1.4.1. Legal Rules

Legal rules are provisions a law limiting payment of dividends. These rules include:

- **Capital Impairment Rule:** The laws of many countries prohibit the payment of dividends if these dividends impair "capital" (usually either par value of common stock or par plus additional paid-in capital).

- **Insolvency Rule:** This rule prohibit the payment of cash dividends if the company is insolvent under either a "fair market valuation" or "equitable" sense.

- **Undue Retention of Earnings Rule:** This rule prohibits the undue retention of earnings in excess of the present and future investment needs of the firm.

1.4.2. Funding Needs of the Firm

Dividend payment decision of a firm is also affected by the firm's need for funds. Dividends often involve a cash outflow which reduces the firm's available funds for investment needs. It should be remembered that internal sources of funds are cheaper than external sources. This explains the reason why some firms prefer to adopt a residual dividend policy in which the firm only pays dividend after satisfying all its investment requirements. However, in making this decision, the firm should consider the investors' ability to make homemade dividends.

1.4.3. Liquidity

As already stated, dividends payment often involve cash outflow (cash dividends are popular) which in turn affects the firm's liquidity position. Some firms may not be adequately liquid to enable payment of cash dividends. If such firms do not wish to issue stock dividends or pay dividends in another form, then dividend payment may be sacrificed due to lack of enough cash.

1.4.4 Ability to Borrow

Since dividend payment affects the financing decisions of a firm, the firm's dividend decision will be largely influenced by the ability of the firm to raise additional funds through borrowing. Firms which have access to cheap loans with no restrictions are able to pay more in form of dividends.

1.4.5 Restrictive Loan Contracts

Some loan contracts may not only restrict acquisition of new loans but also payment of dividends to shareholders. When a company has entered into such restrictive contracts, it will have little or no flexibility in dividend payment.

1.4.6. Control

Stock or scrip dividends have the effect of increasing the firm's share capital and consequently results in the dilution of the shareholders control over the firm.

1.5 Dividend Policy

Dividend policies are the regulations and guidelines that companies develop and implement as the means of arranging to make dividend payments to shareholders. Establishing a specific dividend policy is to the advantage of both the company and the shareholder. In order to make sure the policy is workable, a company should develop a viable policy and then run this policy through a number of test scenarios in order to determine what impact the dividend policy would have on the operation of the business.

In many cases, companies choose to explicitly state the provisions within the dividend policy. This is definitely to the advantage of the shareholder, as a well defined policy makes it much easier to project the amount of payout profits generated for the period under consideration and thus be able to determine the size of the dividends that will be issued. When the dividend policy is well defined and documented, it is easy for the shareholder to obtain a written copy and thus be fully informed as to how the policy works.

However, there are cases where the dividend policy is not so well documented. When this is the case, investors sometimes base their assumptions on upcoming dividend payments on what has occurred in the past. While less systematic, it is still possible to project a more or less accurate estimate of what the dividend payout will actually be.

In cases where the dividend policy is not specifically defined, investors often look at the history to spot any trends that emerged in the past. If the dividend payments have been more or less constant for the last several years, and there has been no loss in business volume, it is reasonable to assume the payments will still be in the same general range as before. However, if the dividend history is more volatile, the shareholder may attempt to identify what factors led to the up and down movement of the dividends and determine if any of those factors are relevant to the current dividend period.

In both expressed and implied dividend policy procedures, it is less common for the dividends to be increased. Part of the reason for that is companies tend to look closely at retained earnings and want to make sure the increased level of earnings will be sustained

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over the long term. Once this upward trend is deemed to be more or less permanent, the company may choose to increase dividends.

1.6   Payout Ratio

One of the factors to consider when investing in stocks is whether a company you invest in pays a dividend or not. A dividend is when a part of the company's earnings are given back to the shareholders, depending on how many shares they own. Usually, not all the earnings are given back, but rather just a percentage of them. This percentage is what the payout ratio consists of. Also called a dividend payout ratio, it is calculated as the yearly dividend paid per share, divided by the earnings per share during the same year.

A payout ratio can be anywhere between zero and 100%. If the payout ratio is zero, this means there is no dividend paid to the shareholders. Many stocks do not pay yearly dividends, so a ratio of zero is not uncommon. A 100% payout ratio means that all the company's earnings are given to the shareholders, who are technically the company's owners. A relatively high payout ratio may indicate that little or no expansion is to be expected from the company in the near future.

There is nothing wrong with a high payout ratio. It may mean nothing more than that a higher return would be gained from shareholders investing dividends on their own, rather than the company investing more of their earnings. In some cases, a payout ratio may exceed 100%. While this can be a profitable situation in the short term for investors, it is not a sustainable condition.

One time when this high of a ratio might be seen is in an environment of economic pessimism or slowdown. A company may temporarily increase its dividend and payout ratio to keep the stock attractive -- and its price stable -- because any other course might prove damaging to the price of the stock. A dividend that stays above 100% of the company's earnings is generally not seen as a good long-term sign for the company.

1.7   Procedure for Payment of Cash Dividend
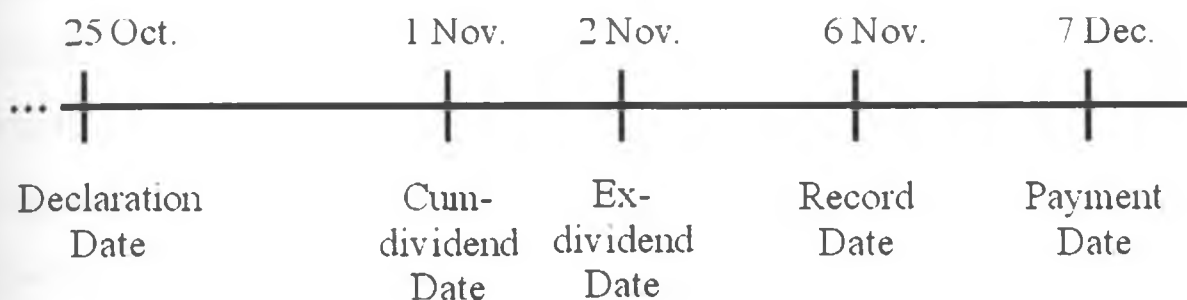
Declaration Date: The Board of Directors declares a payment of dividends. For example; the Board of Directors may declare dividends in 25th October.

Cum-Dividend Date: The last day that the buyer of a share is entitled to the dividend. This may be say, 1st November.

Ex-Dividend Date: The first day that the seller of a share is entitled to the dividend e.g. 2nd November.

Record Date: The Corporation prepares a list of all individuals believed to be shareholders as of the record date, say, 6 November.

Payment Date: The day dividends are actually paid out to the shareholders e.g. 7th December may be the payment date.

1.8   Statement of the Problem

Dividend policy remains 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 risk (Allen and Rachim, 1996). Paying large dividends reduces risk and thus influence stock price (Gordon, 1963) and is a proxy for the future earnings (Baskin, 1989).

Prior empirical research which have largely been carried out on firms listed in developed stock markets, suggests that the announcement of dividend, either in cash or stock, is associated with significantly positive stock market excess returns. In the case of cash dividends, this evidence is attributed to information-signaling and agency cost effects; in the case of stock dividends it is attributed to information-signalling and "optimal" trading price-range effects.

Locally, studies on the NSE reinforce findings of these studies. Iminza (1997) concludes that dividend payment has a significant impact on share prices. She observes that the impact is much greater when there is a reduction in dividend payout than when there is an increase. A more recent study by Kiio (2006) supports Iminza's observation. Kiio concludes that the NSE is not efficient at the semi-strong form since share prices do react to cash dividend announcement.

1.8.1 Research Gap

It may be observed that the studies already carried out on this subject conclude that stock prices react to dividend announcement. This implies that dividend announcement carry information to investors. However, none of the local (Kenyan) studies has considered the role of dividend clienteles on stock price reactions as a result of dividend announcement.

Dividend announcement may communicate a change in the firm's dividend payout which is not in favour of the current clientele of investors. This may cause a negative reaction to the announcement and as a result investors may sell their shareholding and leave the firm or at least reduce their shareholding. On the other hand, dividend announcement may contain information favouring current and potential investors. This will lead to a positive reaction to dividend announcement since these investors will buy and hold more of the firm's shares resulting in high demand for the shares and increased prices. These reactions occur because firms rarely stick to a single payout or dividend policy.

It is not enough just to conclude that stock prices react to dividend announcement or rather that dividend announcement carry information content. This research goes further to analyze what role investor clientele play in stock price reactions to dividend announcement.

The purpose of this study is to analyze the role of retail and institutional investor clienteles on stock price reactions to dividend announcement. The research will endeavor

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to isolate the effect, if any, of investor goals and preferences as far as their shareholding in firms is concerned.

1.9 Hypothesis

The research study will seek to test the following hypotheses:

Ho: $\mu=0$:   There is no significant difference in stock price reactions to dividend announcement of retail and institutional investor firms as a result of dividend announcement.

1.10 Objective of the Study

The objective of the study is:

- To establish whether there is a significant difference in the abnormal adjustment in stock prices for retail and institutional investor firms as a result of dividend announcement.

1.11 Importance of the Study

This study, a typical event study, attempts to measure the effects of an economic event (dividend announcement) on the value of firms. The study has many applications to various users, including the following:

Investors/Investment Advisors: Investors are interested in the stock price movements and the value of the firms in which they hold investments. Price fluctuations are not only a measure of risk in an investment but also affect the capital gains of investors on the shares. Investment advisors make use of both public and private information to advise

their clients on what stocks to buy, hold or sell. This study will play an important role in exposing the impact of dividends announcement on stock prices and hopefully help these users in understanding the potential effect of firms' dividend decisions.

Firms' Management: Understanding whether dividend clienteles exist is important to the management of a firm for several reasons. First, if clienteles exist, they could affect optimal corporate financial decisions (Hamada and Scholes (1985)). For example, P´erez-Gonz´alez (2003) argues that tax preferences of influential shareholders influence dividend payout policies.

Second, dividend clienteles can affect stock returns (Allen and Michaely (2003)), especially if the characteristics of a particular clientele are impounded into asset prices (e.g., Elton and Gruber (1970)). Hotchkiss and Lawrence (2002) find that stock returns are more positive following a dividend increase when there is a clientele of dividend-preferring institutional investors. Moreover, if clienteles affect stock prices, this could have a feedback effect on managerial decisions. For example, Brav, Graham, Harvey, and Michaely (2003) document that financial executives believe that if they alter payout policy, this will alter their investor base and adversely affect their stock price.

Academia: The study is expected to add to the body of knowledge specifically in the area of dividend policy and generally in event studies and market efficiency hypothesis. In addition, the study will give other researchers an opportunity to carry out studies in related areas.

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LITERATURE REVIEW

2.0 Literature Review

Miller and Modigliani (1961) admit the possibility of clientele effects linked to dividends distributions, but they state that if the distribution of the firms' payout ratios corresponds exactly to the distribution of the investors' preferences, then the situation is not different from the case of perfect markets, where it is irrelevant for investors to receive dividends or capital gains. Each firm will tend to attract its own clientele, constituted by the investors that prefer its payout ratio. Even if there is shortage of offer of a specific payout ratio in the market, the investors nevertheless can build their desired portfolios without having to pay a premium for those stocks, by acquiring a combination of stocks with different payout ratios, each one with the appropriate weight. In fact, given the existence in the market of a great diversity of payout ratios, this process will only fail to eliminate permanent premiums or discounts in stocks if the distribution of the investors' preferences is strongly concentrated in any of the extremities of the scale of payout ratios. The authors state that this imperfection is only relevant if it results in investors having systematic preferences for dividends or for capital gains.

Several studies provide indirect evidence of tax-induced dividend clienteles by examining the price and volume reactions around dividend events. For instance, Elton and Gruber (1970) find that implied marginal tax rates (as reflected in the ex-day premium) are higher (lower) for low (high) dividend yield stocks. Eades, Hess, and Kim (1984), Green and Rydqvist (1999) and Graham, Michaely, and Roberts (2003) provide corroborating

indirect evidence in favor of tax clienteles. Note that interpreting this indirect evidence in terms of tax clienteles is premised on investor characteristics (i.e., tax rates) being impounded into ex-dividend day stock returns.

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. This evidence is consistent with the clientele hypothesis. Numerous studies (e.g., Michaely, Thaler, and Womack (1995), Seida (2001)) examine volume reactions around dividend events (dividend changes, initiations, and omissions) and provide mixed evidence about whether clienteles exist. Finally, Brav, Graham, Harvey, and Michaely (2003) survey financial executives and provide indirect evidence of dividend clienteles. There is a strong belief among financial executives that retail investors' prefer dividend paying stocks.

Other studies (e.g., Brav and Heaton (1997), Dhaliwal, Erickson, and Trezevant (1999), Grinstein and Michaely (2002)) provide direct evidence on the dividend preferences of institutional investors. For instance, Grinstein and Michaely (2002) find 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 (Dhaliwal, Erickson, and Trezevant (1999), Binay (2001)). Overall, these results suggest that institutional dividend clienteles may exist.

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The direct evidence about the dividend preferences of retail investors is less conclusive. Blume, Crockett, and Friend (1974) document an inverse relation between income (a proxy for marginal tax rates) and portfolio dividend yield. In another instance, using data on the stock holdings of individual investors from a retail brokerage house, Pettit (1977) provides evidence of a tax-induced dividend clientele – investors in high tax brackets have a stronger preference for low DY stocks. However, using the same dataset as Pettit (1977) but a different methodology, Lewellen, Stanley, Lease, and Schlarbaum (1978) conclude that they are not able to "find in the data much evidence to support the notion that an important dividend-tax-clientele effect is in fact present" (p. 1395).

2.1   Empirical Studies

Following the work of Miller and Modigliani, the clientele effects were also suggested by Elton and Gruber (1970). These authors tried to detect the existence of a empirical relationship between the dividend policy of the firm and the tax supported by the marginal investor. The evidence of this relationship is essential for the demonstration of a clientele effect, because a change in the dividend policy should lead to a change of the stockholders structure. A specific dividend policy will attract investors with specific income tax brackets.

The authors, extending the reasoning of Campbell and Beranek (1955), began by establishing a relationship between the stock price behavior on the distribution day and the tax of the marginal stockholder. A stockholder that sells its stocks before the

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distribution of dividends loses the right to receive them. If he sells the stocks after the distribution, it receives the dividend, but he should expect to receive a lower price. In a market with rational arbitrage, the price reduction should reflect the relative value of dividends and capital gains for the marginal stockholder. As the taxes on dividends and on capital gains are different, the different fiscality on these two types of returns affects the decision. In a symmetric perspective, we can infer the marginal investor's tax, just by observing the reduction of the price following the dividend distribution.

The equilibrium condition that makes the marginal investors indifferent between selling the stocks before or after the dividend distribution, is the following:

$$P_B - t_c(P_B - P_C) = P_A - t_c(P_A - P_C) + D(1 - t_o) \qquad (2)$$

Where;

P_B = stock price before the dividend distribution;

P_A = stock price after the dividend distribution;

P_C = stock price when bought;

D = dividend received by the investor;

t_o = dividend tax;

t_c = capital gains tax

that is, the net return obtained by the stockholder if he sells the stocks before the dividend distribution is equal the net return obtained if he sells after the dividends.

Developing the equality above, we have:

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$$\frac{P_B - P_A}{D} = \frac{1 - t_o}{1 - t_c}$$ (3)

To determine the value of the left-hand side, Elton and Gruber (E & G) used the closing price on the ex-dividend date but adjusted for the market movements between open and close. To achieve this, they computed an equally weighted daily return index for similar close-end funds that didn't go ex-dividend that day.

For taxable distributions, the E&G measure as shown in equation (3) depends on the relationship between capital gains and ordinary income tax rates. When capital gains and ordinary income tax rates are the same, this measure should be equal to one. When capital gains are less than ordinary rates, the E&G measure is less than one and the greater the difference in rates, the greater the difference from one.

Elton and Gruber found that, on average, the stock price reduction was less than the amount of the dividend. This is consistent with the tax on dividends being higher than the tax on capital gains.

To test for the existence of a clientele effect, Elton and Gruber tried to detect a relationship between the dividend policy and the marginal stockholder's tax, inferred from (3). They used two variables that could influence the desire of the stockholder in investing in the firm, which were the dividend yield and the payout ratio.

The empiric results obtained by these two authors revealed a statistically significant positive relationship between $(PB-PA)/D$ and the dividend yield, which suggests that the tax bracket of the marginal stockholder is lower, when the dividend yield of the stock is higher, and it also goes down with the increase of the payout ratio. These results are coherent with the following statements:

- The lower the dividend yield, the lower the percentage of the total return that the stockholder will receive in the form of dividends and higher will be the percentage that he will receive in the form of capital gains. Thus, investors that choose stocks with high dividend yields should be located in lower income tax brackets relatively to the stockholders that prefer stocks with low dividend yields.

- Applying the same logic, firms with high payout ratios will attract stockholders in relatively lower income tax brackets, than the firms with low payout ratios.

A different view was stated by McConnell and Lewellen (1976), who showed that the consideration of transaction costs could explain the empiric results obtained by Elton and Gruber.

Kalay (1982) also argued that transaction costs should be taken into consideration and that, when doing this, the $(PB-PA)/D$ ratio would no longer be constrained to be equal to 1. The author presents the following equation:

$$1 - \frac{\alpha \overline{P}}{D} \leq \frac{\overline{P}_B - P_A}{D} \leq 1 + \frac{\alpha \overline{P}}{D} \qquad (4)$$

Where;

$$\overline{P} = \left(\overline{P}_A + P_B \right) / 2 \; ;$$

$\alpha \overline{P} =$ expected cost of a round trip, that is, buying and selling the stock;

Kalay argues that only within the limits defined in (4) would be possible to infer the marginal investors' tax, since outside those limits the price variation would be affected by arbitrage from investors trying to take advantage of the opportunity to get excessive returns. Only within the bounds defined by (4) there are no arbitrage opportunities.

A similar argument was presented by Miller and Scholes (1982), who criticized Elton and Gruber for ignoring the short term transactions carried out by traders and tax exempt investors. These authors argue that the detected relationship between the dividend yield and the price change after a dividend distribution can also be explained by short term trading as an alternative to the clientele effect explanation.

A very interesting study was performed more recently by Barclay (1987), applying the analysis of Elton and Gruber (1970), with the corrections proposed by Kalay (1982) and Eades, Hess and Kim (1984), to test the differential tax hypothesis. The approach is different, in the fact that the author uses two samples of stock prices. The first sample, designated pre-tax, refers to a time period before the introduction of income tax (1900 to

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1910). The second sample refers to the period between 1962 and 1985 (post-tax sample). In the pre-tax sample, because there are no taxes, the investors should be indifferent between dividends and capital gains. Thus, the statistic of Elton and Gruber should not be statistically different from 1. In the post-tax sample, because there is heavier taxation on dividends than on capital gains, the statistic should be statistically smaller than 1. Both hypotheses are confirmed by the data. The results reached by Barclay are consistent with: one, in the pre-tax period, the investors see dividends and capital gains as perfect substitutes, and two, the tax differential in the post-tax period, leads the investors to place a higher discount on dividends, than on capital gains.

The author also tests the correlation between the excessive returns in the day-after and the dividend yield. To test this relationship, in each of the samples the data is ordered by dividend yields and partitioned in quintiles. For each of these quintiles, the ΔP D ratio was calculated using adjusted closing prices.

In contrast with the negative relationship observed between the excessive returns and the dividend yields, in the post-tax sample, in the pre-tax sample no evidence was detected of a relationship between the two variables. This evidence is consistent with the hypothesis that the different taxation of dividends and capital gains has a significant impact in the portfolio choice of individual investors.

To test the clientele effect of retail investors, Graham and Kumar (2004) by studying stock holding and trading behavior of more than 60,000 households found evidence

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consistent with dividend clientele. They observe that retail investor stock holdings indicate a preference for dividend yield that increases with risk aversion and age (the latter is consistent with life-cycle or consumption preferences) and decreases with income (consistent with low-tax investors holding high-yield stocks). Retail investor stock trades provide reinforcing evidence of these dividend preferences – older, low-income investors disproportionally purchase stocks before the ex-dividend day.

Furthermore, the authors find that among small stocks, the ex-day premium increases with age and decreases with income, which is consistent with tax explanations of the ex-day premium. They also find evidence that older, low-income investors purchase stocks after they initiate dividends. Finally, consistent with the behavioral "attention" hypothesis, Graham and Kumar (2004) document that older and low-income investors purchase stocks following dividend announcements. Their results indicate that while wealthy investors likely benefited from the recent reduction in dividend taxes because of their large stock holdings and the large tax rate decrease, the income streams of older and less wealthy investors also benefited because these investors tilt their portfolios towards high dividend stocks.

In short, the empirical evidence is consistent with the existence of clientele effects related to the different taxation of dividends and capital gains. After the U.S. tax reform of 1986, the differential taxation almost disappears and the interest of economists with this issue was reduced. However, the issue is still relevant in all the markets where dividends and capital gains are taxed differently, as is the case of the Kenyan market.

2.1.1 Empirical Studies on the NSE

A number of studies on the information content of dividend announcement and related areas have been carried out on the NSE. However, no single study came to the attention of this researcher on the clientele effect of dividend announcement.

Iminza (1997) investigated whether dividend payments do affect stock prices. She concluded that indeed dividend payment has significant impact on share prices. She also deduced the impact is much greater when there is a reduction in dividend paid than in the case of an increase.

In another study, Karanja (1987) asserts that the dividend policy does not only involve the decisions whether or not to pay dividends but also how much to pay, and the mode of payment. He also points out that the firm's cash flows and cash position do influence the changes in dividend policy.

Muriithi (2001) carried out a study to establish whether interim dividends could be used in predicting final earnings in the NSE. He sued regression analysis and his findings revealed that there is no relationship between interim earnings and the eventual year-end earnings.

Mbugua (2003) who studied the impact of stock dividend announcement on share prices on the NSE concluded that though a cosmetic corporate event, it does have a significant impact on stock returns.

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A more recent study by Kiio (2006) sought to investigate market efficiency and effects of cash dividend announcements on shares of companies listed on the NSE. On the latter, she observes that cash dividend announcements caused increased volatility in the stock market through an event window of five years, as shown by the significance in variation of adjusted market returns after the dividend announcement.

In another study, Onyangoh (2004) sought to investigate the responses of stock prices to earnings announcements as evidenced in the NSE. He sampled 16 out of a population of 48 listed companies at the NSE, covering the period 1998-2003. By use of cumulative average residuals, weekly share price indices are computed over the 17 week window period. Regression statistics were generated including graphical presentation to capture the stock price adjustments to successive annual earnings announcements.

The results of the study showed that the earning announcements contain relevant information to investors which are fully impounded in stock prices prior to or almost instantaneously at the time of announcement. He observed that the 2003 was an outlier which evidenced existence of momentum stock returns.

CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

The researcher carried out an event study of the clientele effect on stock price movements.

3.1 Event Studies

Event studies have been widely used in Economics and Finance to measure the effects of an event on the value of firms. Mackinlay (1997) holds that using financial market data, an event study measures the impact of a specific event on the value of the firm. He posits that the usefulness of such a study comes from the fact that, given rationality in the marketplace, the effects of an event will be reflected immediately in security prices.

3.2 General Steps of an Event Study

The following are the general steps followed in an event study.

- Identify Event and the relevant Event Period

- Determine expected impact

- Identify firms impacted by event

- Eliminate or adjust sample

- Compute Cumulative Abnormal Return (CAR)

- Analyze Results

- Report data in appendix

3.2.1 Event and Event Period

The event of interest in this study is dividend announcement. It was expected that this event will have an impact on the firm's stock prices. The researcher studied this event for 10 firms listed at the Nairobi stock exchange for a period of 5 years. Stock prices during each year were studied for a period (event window) of 20 days.

$$
\left(\begin{array}{c}\text{estimation}\\ \text{window}\end{array}\right] \qquad \left(\begin{array}{c}\text{event}\\ \text{window}\end{array}\right] \qquad \left(\begin{array}{c}\text{post-event}\\ \text{window}\end{array}\right]
$$

$$
\begin{array}{ccccccc} T_0 & & T_1 & 0 & T_2 & & T_3 \\ & & & \tau & & & \end{array}
$$
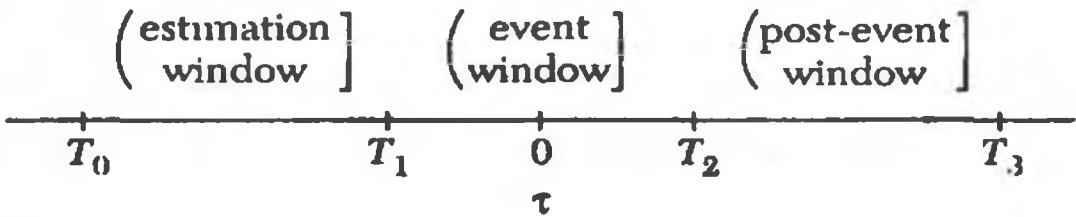
3.2.2 Expected Impact of Event

An efficient capital markets was assumed, and the effect of the event was reflected immediately in asset prices. Thus the event's economic impact was measured using asset prices observed over a relatively short time period.

Consider any return forecasting equation:

$R_{t+1} = a + bX_t + \epsilon_{t+1}$

where X_t is a vector of any variables known at time t

Efficient market hypothesis (rational expectations hypothesis) says that the forecasting error, ϵ_{t+1}, is not forecastable using any time t information. In particular, efficient markets hypothesis does not say that $b \equiv 0$, or future stock returns are not predictable!

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The researcher used the market model to estimate the expected returns. This model helped in estimating the important parameters such as the alpha (y-intercept) and beta (slope) of the prices during the event window.

3.2.2 Firms Impacted by the Event

The researcher expected that stock prices of all firms making a dividend announcement decision will be affected by the event (dividend announcement). However, the researcher categorized the firms based on their clientele profile in order to measure the clientele effect to stock price reactions.

3.2.3 Cumulative Abnormal Returns

The abnormal returns on each day of the event window were added over the entire period of time to get the cumulative abnormal return (CAR):

$$CAR_i(T_1, T_2) = \sum_{t=T_1}^{T_2} AR_{it}$$

3.3 Research Variables

The research variables depended on the model employed to calculate the normal return of a given security. This research used the market model to calculate the normal returns of firms' securities. The market model is a statistical model which relates the return of any given security to the return of the market portfolio.

3.3.1 Security/Stock Returns

The returns on an investment measured in shillings represent all the cash flows including capital gains and losses from that investment. However, returns of an investment are often measured as percentage returns. The percentage return of an investment is the cum-dividend price at the end of a given period minus the beginning of period price divided by the beginning of period price. That is, it measures the percentage change in price over a given period.

Percentage return is given as:

Percentage return = $(D_{t+1} + P_{t+1} - P_t)/P_t$

Where $D_{t+1} + P_{t+1}$ is the end-of-period cum-dividend price of the security and P_t is the beginning of period stock price.

3.3.2 Normal Returns

For any security i the normal returns using the market model are calculated as

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

Where R_{it} and R_{mt} are the period-t returns on security i and market portfolio, respectively, and ε_{it} is the zero mean disturbance term. Alpha (α) and beta (β) are the parameters of the market model.

3.3.3 Abnormal Returns

The abnormal return is the ex-post return of the security over the event window minus the normal return of the firm, which is the return that would be expected if the event did not take place:

ARit = Rit − E[Rit |Xt]

- ARit : Abnormal returns

- Rit : Actual returns

- E[Rit |Xt]: the expected returns

- Xt : Conditioning information, excluding the event in question

Another method we can use to estimate abnormal returns to further check the sensitivity of our results is simply to subtract the market return (using the equally-weighted market index), Rm,t, from the corresponding firm return over a given period t. That is,

$$AR_{it} = R_{it} - \alpha_i - \beta_i R_{mt}$$

This approach makes the assumption that the beta for all firms is 1 (and $\alpha_i = 0$), thus providing an extreme test of the sensitivity of the results to beta estimation or shifts.

3.3.4 Market Returns

The researcher used the NSE 20-share index as a proxy for the market returns. Percentage change of the index over the period of the study (event window) was calculated to obtain the market returns.

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3.4   Research Design

A survey study of companies listed on the NSE that have made regular dividend payments was carried out. The researcher used a survey because the clientele effect can only be observed across firms. Different firms have different shareholder composition. In addition, a survey study eliminated individual firm biases or unique characteristics specific to a firm.

3.5   Population

The population of interest for this survey study consisted of all firm listed in the NSE with a history of payment of dividends regularly. The population, however, was divided into two; firms with a majority of institutional investors and firms whose retail (individual) shareholders are the majority. To achieve this, the researcher analyzed the investor profiles of NSE firms at the end year 2009 (February 2010) as shown in Appendix I. A given investor clientele (individual or institutional) was considered a majority when their shareholding was at least 50 percent. However, it was assumed that this profile existed for the entire five-year period over which the study was carried.

3.6   Sampling Plan

The researcher sampled 5 firms in each category with due consideration of industry (market segment) representation so as to achieve a total sample size of 10 firms. Table 1 and Table 2 below contain firms that were picked as the sample for empirical analysis. In determining firms with institutional investor clientele, only local corporate investors were used provided that their total shareholding is strong (at least 60 per cent).

Table 3.6 (a): Firms with Retail (Individual) Clientele

Company	Local Individual Investors (%)	Foreign Individual Investors (%)	Total
Jubilee Holdings	38.24	14.98	53.22
Carbacid Investments	49.71	5.62	55.09
Mumias Sugar	47.65	2.6	50.25
Access Kenya	50.23	*	50.23
Centum Investment	47.10	*	47.10

*The percentage of foreign individual investors could not be obtained.

Table 3.6 (b): Firms with Institutional Clientele

Company	Local Institution Investors (%)	Foreign Institution Investors (%)	Total
Sasini Ltd	70.56	*	70.56
Kenya Commercial Bank	62.64	*	62.64
Athi River Mining	65.70	*	65.70
E.A Portland Cement	69.03	*	69.03
Kengen Ltd	81.03	*	81.03

3.7   Period of Study

The research covered a period of 5 years (2004 – 2009) with an event window of 20 days in each year. The researcher considered a 5-year period as long enough to eliminate seasonal factors that affect stock prices. The period from 2004 to 2009 was used because of the ease to obtain data and also due to the fact that this period experienced significance awareness and robust activity in the exchange.

3.8   Data Collection

The researcher relied purely on secondary data obtained from the NSE, the Capital Markets Authority, published financial statements for specific company profile, and online sources (e.g. www.hisanetafrica.com).

3.9   Data Analysis

The research falls under event studies, an area of study with a long history. Dolley (1933), Myers and Bakay 1948, Baker 1956, 1957, 1958, Ashley 1962, Ball and Brown 1968), Brown andWarner (1980), and Fama, Fisher, Jensen, and Roll (1969) are considered the papers that introduced the event study methodology as it is in use and known today.

In the recent past and locally, event studies have also featured a number of times. Kiio (2006), Iminza (1997), Onyangoh (2004), Barasa (2008), Njogu (2003), Nura (2000), Wairimu (2002), Bitok (2004) Kalui (2004), Wandeto (2005) are some of the event studies carried out on the NSE.

Because of its long history and the interest it has continued to elicit, event studies have evolved a number of methodologies. Fama et al. (1969) introduced the traditional event study methodology. Besides the traditional event methodology, the regression based event methodology has been suggested by Jaffe (1974), Brown and Warner (1980, 1985), and is widely used event studies with contemporaneous events (e.g. O'Hara and Shaw 1990, Chandra and Balachandran 1990).

3.9.1 Hypothesis testing using t-distribution tests of the difference between means

This research study applied the event study methodology suggested by Barasa (2008) but used the t-distribution tests of the difference between two means as outlined below.

1. **Compute the stock returns for each firm during the period of the study.**

   The returns were computed as the daily change in security prices as a ratio of the beginning-of-day price of the security. Thus,

   $$R_{it} = (P_t - P_{t-1})/ P_{t-1}$$

   Where;

   P_t is stock price at day t

   P_{t-1} is the stock price at day t - 1

2. **Compute the return for the market portfolio.**

   The NSE 20 index was used as proxy for the market portfolio to calculate the market returns as follows:

$$R_{mt} = (M_t - M_{t-1})/ M_{t-1}$$

Where: - M_t is the index at day t.

M_{t-1} is the index at day t - 1.

3. **Compute the expected returns for the security**

The expected returns (normal returns) were calculated using the following market model.

$$E (R_{it}) = \alpha_i + \beta_i R_{mt}$$

Where;

$E (R_{it})$ is the expected (normal) returns of security i.

$\alpha_{i \text{ and }} \beta_i$ are the intercept and slope respectively of the linear relationship between security returns and market portfolio. These values will be calculated during the estimation window

R_{mt} is the return on the market portfolio

For this study, the market-adjusted abnormal return model was used as suggested by Mackinlay (1997). Under the market-adjusted abnormal return model the α_i is restricted to zero while the value of β_i is pre-specified as 1 (one). The market-adjusted return model makes the market returns equal to expected returns of the security.

4. **Compute the abnormal return of the security over the event window.**

This was computed by subtracting the expected returns from the actual returns during the event window. For this study the abnormal returns were computed as the difference between the stock returns and the market (in accordance with the market-adjusted returns model).

5. **Compute the cumulative and average abnormal returns.**

The daily abnormal returns during the event window were added cumulatively to derive the cumulative returns over the five-year period and aggregated across firms in each category of investor clientele.

6. **Compute the standard deviation of the returns of the securities.**

The standard deviation of each security was computed as follows:

$$S_1 = \sqrt{\left[R_{it} - E(R_{it})\right]^2}$$

The average standard deviation was calculated for each category of firms. The standard deviations were denoted as S_1 and S_2 for retail investor and institutional clientele firms respectively.

7. **Define the t – distribution variables as follows;**

n_1, n_2 is the number of sampled firms in each category

$\overline{X}_1$ and $\overline{X}_2$ is the average abnormal returns for each category of firms

S_1 and S_2 the average standard deviation for each category of firms

S_p is the pooled standard deviation for both populations

8. Perform t-distribution test of the difference between means.

The following procedure was used to carry out the t-distribution test.

$$S_P = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

The standard error for each sample mean can be calculated, thus:

$$S_{\overline{X}_1} = \frac{S_P}{\sqrt{n_1}} \qquad S_{\overline{X}_2} = \frac{S_P}{\sqrt{n_2}}$$

and the sampling error of the distribution of differences in sample mean is

$$S(\overline{X}_1 - \overline{X}_2) = \sqrt{S_{\overline{X}_1}^2 + S_{\overline{X}_2}^2} \qquad t = \frac{\overline{X}_1 - \overline{X}_2}{S(\overline{X}_1 - \overline{X}_2)}$$

The t-distribution was tested at 5% level of significance and with $n_1 + n_2 - 2$ degrees of freedom.

3.10 Ethical Issues

The researcher was aware of unethical or research misconduct and endeavor to guard against the same while carrying out the research. Notable examples of research misconduct included:

3.10.1 Plagiarism/Respect for Intellectual Property

Plagiarism occurs when a researcher or author uses another person's work without acknowledging their contributions. These researches always and appropriately acknowledge all sources of information and contributions of others. The researcher strived to honor patents, copyrights and other forms of intellectual property.

3.10.2 Fabrication and Falsification

A researcher fabricates and falsifies information by making up things when they did not really occur, e.g. changing data, including personal biases (especially in qualitative studies), misinterpreting literature (misquoting authors). To guard against this, the researcher obtained and retained authentic (from original source) data and analyzed all data as they are. No alteration of data whatsoever was intended.

3.10.3 Faulty Data Gathering Procedures

Data gathering tools and personnel (research assistants) were prepared in such a way that accuracy and integrity of data collected is ensured. Sources of data were also evaluated to enhance the integrity of collected data.

3.10.4 Poor Data Storage and Retention

Data collected is not only retained in its original form throughout the period of research but also over a fairly long period of time after the research. These data will be available for review by academic supervisors as well as other readers of this work.

3.10.5 **Misleading Authorship**

In this research people named and appreciated were only those who actually offered contributions worth of mention in the success of the research project. This means that no person should earn credit for what they did not do!

3.10.6 **Confidentiality**

All confidential communications will be protected such as company specific information and all other information not publicly available but obtained for the purpose of this research.

3.10.7 **Objectivity**

The researcher strived to avoid bias in research design, data collection, data analysis, data interpretation, and other aspects where objectivity is expected or required. The researcher undertook to ensure that the outcome of this research faithfully represent what it ought to represent.

CHAPTER FOUR

DATA ANNALYSIS AND PRESENTATION

4.1 Introduction

This chapter presents the findings of the research carried out to establish whether there is a significant difference in the abnormal adjustment in stock prices for retail and institutional investor firms as a result of dividend announcement. The study analyzed ten firms listed at the Nairobi stock exchange. Among the ten firms under study, five were those that had retail (individual) investor clientele while the remaining five had institutional investor clientele. The researcher observed price changes ten days before the announcement of the dividends and ten days after the dividends and this generated quantitative data for the study. The various computations were made and the data summarized in tables and appendices.

4.2   Event Period

The event period for each security over the period of the study was determined relative to the dividend announcement date. This period was defined in event days from day -10 to day 10, that is, a period of 10 days before and after the dividend announcement. This makes the event period to be a total of 21 days including the dividend announcement date, designated event day 0. For the purpose of defining the event period during the period of the study, the dividends announcement dates were established and recorded in Appendix II.

4.3 Stock returns and Market returns

As stated in the methodology, the stock returns (R_{it}) and market returns (R_{mt}) during the event period were computed as follows:

$$R_{it} = (P_t - P_{t-1})/ P_{t-1}$$

$$R_{mt} = (M_t - M_{t-1})/ M_{t-1}$$

These returns were useful in the computation of abnormal returns.

4.4 Abnormal returns (AR)

Applying the market-adjusted return mode, the abnormal returns (AR) were computed as follows:

$$AR = R_{it} - R_{mt}$$

First, the abnormal returns for each stock are aggregated over the five-year period and the results of this computation have been presented in Appendix III.

Next, the total abnormal returns for all securities over the period of study were aggregated across firms in each category (retail and institutional investor firms are aggregated separately). The results of the aggregate abnormal returns for the two categories of firms are presented in Appendix IV.

4.5 Cumulative Abnormal Returns (CAR)

The aggregate abnormal returns (AR) for all firms in each category were used to compute the cumulative abnormal returns (CAR) across the period of study. The CAR at the end of the period of study represents the average CAR for all firms in each category. The

results of this computation are included in Appendix IV. The average CAR for retail and institutional investor firms were determined and denoted as $\overline{X}_1$ and $\overline{X}_2$ respectively as follows.

$\overline{X}_1 = 1.8123$

$\overline{X}_2 = 0.4203$

These results show that the CAR for retail investor firms are significantly more that those of institutional investor firms.

4.6 Standard Deviation of the stock returns

The standard deviation for the stock returns was computed as follows:

Std dev. $(\delta) = \sqrt{\overline{(Rit - R_{mt})^2}}$

The standard deviations for each event period during the period of the study were aggregated before and average standard deviation was computed for each stock and category of firms. The values of the average standard deviation, S_1 and S_2, for retail and institutional investor firms were computed and results determined as follows.

$S_1 = 1.22$

$S_2 = 0.66$

4.7   t-distribution test of the difference between means and testing of hypothesis

A test of the hypothesis was carried out by computing the t-value of the difference between the mean of the cumulative returns for each category of firms. This was done as follows:

$$S_p = \sqrt{\frac{(5-1)1.22^2 + (5-1)0.66^2}{5+5-2}}$$

$$= \sqrt{\frac{4 \times 1.49 + 4 \times 0.44}{8}}$$

$$= 0.965$$

$$S_{\overline{x}_1} = \frac{0.965}{\sqrt{5}}$$

$$= 0.43$$

$$S_{\overline{x}_2} = \frac{0.965}{\sqrt{5}}$$

$$= 0.43$$

$$S(\overline{x}_1 - \overline{x}_2) = \sqrt{0.43^2 + 0.43^2}$$

$$= 0.61$$

$$t = \frac{1.81 - 0.42}{0.61}$$

$$= 2.2787$$

The computed value of t of 2.279 when compared to the standard t-value at 95% confidence level or 5% level of significance with 8 (5 + 5 – 2) degrees of freedom of

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2.306 implies that there is no significant difference between the abnormal cumulative abnormal returns of these two categories of firms.

Following this observation the null hypothesis is accepted and we conclude that there is no significant difference in stock price reactions of retail and institutional firms as a result of dividend announcement.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.1 Introduction

The study sought to establish whether there is a significant difference in the abnormal adjustment in stock prices for retail and institutional investor firms as a result of dividend announcement.

The firms were categorized into retail and institutional investor firms based on the majority percentage shareholding of retail and institutional investors in those firms respectively. Studies conducted elsewhere (mostly in developed markets) show that retail and institutional investors belong to different categories of dividend clienteles. Although evidence on the level of preference of dividends to capital gains by these two groups of investors is not conclusive, there are reasonable grounds to believe that retail and institutional investors have different goals of investment.

First, retail and institutional investors are different in their planning horizon. While retail investors have short-term planning horizon, institutional are mostly long-term oriented in their investment decisions. This orientation is perhaps as a result of other factors such as level of risk aversion as well as preference for current consumption to future consumption. Compared to retail investors, institutional investors are expected to prefer capital gains than dividends because of these reasons.

Second, taxation of dividends and capital gains affect investors' preference. In Kenya, individual (retail) investors pay withholding tax at the rate of 5% on dividends. However, dividends received by a resident company from another resident company of which it controls 12.5% or more of the voting power are not subject to tax.

This study sought to establish if price adjustments as a result of dividend announcement were significantly different for retail investor firms on the one hand and institutional investors on the other.

5.2 Cumulative Abnormal Returns and t-distribution test of the difference of means

In order to test the null hypothesis, first, the abnormal returns for each security were aggregated over the period of the study. Next the aggregate abnormal returns were aggregated across firms in each category separately. The aggregate abnormal returns for each category were then cumulated over the event window of 21 days. This resulted in the average abnormal returns for each category of firms.

The results showed that retail investor firms posted cumulative abnormal returns of 1.82 while institutional investor firms' cumulative abnormal returns were 0.42.

The t-value computed for the means of the two samples is 2.279. A comparison of the t-value computed with the standard t-value at 5% level of significance and 8 degrees of freedom of 2.306 shows that there is no significant difference between the means of the two samples.

From the analysis it was concluded that there is no significant difference in price adjustment for retail and institutional investor firms due to a dividend announcement.

5.3 Practical Application and Implications of the Findings

The findings of this study will find several applications to various users. Some of the parties that may find this study of great importance include the following:

First, the management of firms will now appreciate that the investors' profile in their firms does not play a significant role in the stock price adjustments as a result of dividend announcement. This implies that management may make the decision to announce dividend without fear that this would cause undesired reaction in stock prices due to the profile of their current investors.

Second, this information will be equally useful to investors and their advisors. Without this information investors could be tempted to take a particular decision such as the buy, sell or hold securities when they have information about management intention to announce dividends. Their actions would often be guided by the perception of how stock prices will adjust due to dividend announcement and the investor composition in those firms. The findings of this study imply that investors do not have to buy stocks of a firm with majority retail investors or dispose those of firms with majority of institutional investors because of the believe that prices of these securities would adjust differently when a dividend announcement is made.

Investment advisors make use of both public and private information to advise their clients on what stocks to buy, hold or sell. This study will play an important role in exposing the impact of dividends announcement on stock prices and hopefully help these users in understanding the potential effect of firms' dividend decisions.

Finally, the finding of this study is expected to add to the body of knowledge specifically in the area of dividend policy and generally in event studies and market efficiency hypothesis. In addition, the study will give other researchers an opportunity to carry out studies in related areas.

5.4 Recommendations

From the findings of this study, it is recommended that investors and management of firms should revise their perception that dividend clientele effect exists in the NSE. The conclusion of this study may cause a paradigm shift in stockholding since the tendency of investors crowding in certain firms because of their dividend policy may be discouraged.

5.5 Areas of Further Studies

From the study, it is recommended that more studies should be carried out to determine the effects of investors' expectations, share prices indices, adjustment of capital gains to taxes for inflation, portfolio performance revision and impacts of inflation on the stock market. There is also need to establish if there are dividend tax clienteles in the NSE.

5. 6 Conclusions

From the study, it can be concluded that announcement of dividends affect the prices of shares at the stock exchange. If payout ratio reduces, announcement of dividends will result into reduction in prices resulting. On the other hand, if announcement of dividends is associated with increase in the payout ratio, then prices of such shares are likely to go south leading to a greater return on securities. However, it is not automatic that the announcement of dividends will affect security prices. Whether a firms security prices will go up or down depends on the kind of clientele the firm hold. If the firm has clientele who prefer dividend to capital gain, then announcement of dividends will greatly affect prices. On the other hand, if a firm has a large number of clientele who prefer capital gain to dividends, announcement of dividends is unlikely to affect the firm security prices or even if it will affect, not to a great extend.

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	SHARES	FOREIGN INVESTOR		LOCAL INDIVIDUAL		LOCAL INSTITUTIONS	
	ISSUED	HOLDING	%	HOLDING	%	HOLDING	%
MAIN INVESTMENT MARKET SEGMENT							
AGRICULTURAL SECTOR							
KAKUZI	19,599,999	50,095,593	34.70	5,188,472	26.47	7,608,956	38.82
REAVIPINGO PLANTATIO	60,000,000	35,108,451	58.51	18,559,906	30.93	6,331,643	10.55
SASINI LTD	8,397	758,970	0.33	66,481,037	29.15	160,815,493	70.56
COMMERCIAL & SERVICES SECTOR							
ACCESS KENYA LTD	207,655,708	28,110,222	13.53	104,316,749	50.23	75,228,737	36.22
CAR & GENERAL (K) LTD							
CMC HOLDINGS LTD	582,709,440	10,594,048	1.82	254,986,078	43.76	317,129,314	54.42
KENYA AIRWAYS LTD	461,615,483	169,322,550	36.68	106,762,956	23.13	185,529,977	40.19
MARSHALLS (E.A) LTD	14,393,106	567,291	3.96	1,989,556	13.84	11,836,259	82.24
NATION MEDIA GROUP LT	142,610,520	65,678,346	46.05	41,994,352	29.45	34,937,822	24.50
SAFARICOM LTD	40,000,000,000	2,263,759,389	5.70	3,616,198,183	9.00	34,120,042,428	85.30
SCANGROUP LTD	220,689,655	109,560,885	49.65	67,518,263	30.59	43,610,507	19.76
STANDARD GROUP LTD *	73,275,029	51,039,147	69.65	5,321,846	7.26	16,914,036	23.08
TPS EASTERN AFRICA LTD	105,864,742	59,306,790	56.02	14,618,805	13.81	31,939,147	30.17
UCHUMI SUPERMARKET LTD							
FINANCE & INVESTMENT SECTOR							
BARCLAYS BANK LTD	1,357,884,000	945,295,223	69.61	220,940,588	16.27	191,648,189	14.11
CFC BANK LTD	273,684,211	172,251,970	62.94	12,833,514	4.69	88,598,727	32.38
DIAMOND TRUST BANK L	163,037,108	81,714,286	50.12	42,025,363	25.78	39,297,459	24.10
EQUITY BANK LTD	3,702,777,020	1,302,620,384	35.18	1,233,497,005	33.31	1,166,659,631	31.51
HOUSING FINANCE CO LT	230,000,000	672,054	0.29	77,090,219	33.51	152,237,727	66.19
CENTUM INVESTMENT CO	549,951,830	4,699,018	0.85	259,002,583	47.10	286,250,229	52.05
JUBILLEE HOLDINGS LTD	45,000,000	23,820,942	52.93	17,211,535	38.24	3,967,523	8.81
KENYA COMMERCIAL BA	2,217,777,777	88,177,537	3.98	740,429,625	33.39	1,389,170,615	62.64
KENYE REINSURANCE CO	600,000,000	5,360,863	0.89	118,836,667	19.81	475,802,470	79.30
NATIONAL BANK OF KEN	200,000,000	1,033,545	0.51	54,743,692	27.37	144,222,763	72.11
NIC BANK LTD	326,361,622	3,901,319	1.20	88,404,458	27.09	234,055,845	71.72
OLYMPIA CAPITAL HOLD	40,000,000	84,300	0.21	16,599,457	41.50	23,316,243	58.29
PAN AFICAN INSURANCE							
STANDARD CHARTERED B	271,967,810	203,222,940	74.73	34,668,948	12.75	34,075,922	12.53
THE CO-OPERATIVE BANK	3,492,369,900	6,565,000	0.19	817,337,400	23.40	2,668,467,500	76.41

INDUSTRIAL & ALLIED SECTOR							
ATHI RIVER MINING	99,055,000	16,523,208	16.68	17,540,621	17.71	65,083,173	65.70
BOC KENYA LTD	19,525,446	12,937,688	66.26	1,898,391	9.71	4,689,367	24.02
BAMBURI CEMENT LTD	362,959,275	260,003,507	71.64	12,659,325	3.49	90,296,325	24.88
BAT KENYA LTD	100,000,000	68,275,941	68.28	8,085,689	8.09	23,638,370	23.64
CARBACID INVESTMENTS	33,980,265	1,907,302	5.59	16,895,619	49.71	15,177,344	44.67
CROWN BERGER LTD	23,727,000	3,321,475	14.00	6,771,742	28.54	13,633,783	57.46
E A CABLES LTD	202,500,000	5,831,754	2.88	39,317,887	19.42	157,350,359	77.70
E A PORTLAND CEMENT I	90,000,000	26,553,482	29.50	1,321,169	1.47	62,125,349	69.03
EAST AFRICAN BREWERII	790,774,356	162,192,761	20.51	130,074,354	16.45	151,695,000	19.18
EVEREADY EAST AFRICA	210,000,000	2,261,543	10.77	54,513,031	25.96	132,871,726	63.27
KENYA OIL CO LTD							
KPLC ORDINARY							
KPLC 4% PREF							
KPLC 7% PREF							
KENGEN LTD	2,198,361,456	26,564,223	1.21	390,383,985	17.76	1,781,413,248	81.03
MUMIAS SUGAR COMPAN	1,530,000,000	42,314,080	2.77	729,007,119	47.65	758,678,801	49.59
SAMEER AFRICA LTD	278,342,393	50,095,593	18.00	46,055,113	16.55	47,402,586	17.03
TOTAL KENYA LTD	298,543,094	261,305,963	87.53	29,614,810	9.92	7,622,321	2.55
UNGA GROUP LTD	75,708,873	1,271,289	1.68	9,753,970	12.89	64,683,614	85.44
ALTERNATIVE INVESTMENT MARKET SEGMENT							
A.BAUMANN & CO LTD							
CITY TRUST LTD	5,728,001	121,822	2.13	2,331,483	40.70	3,274,696	57.17
EAAGADS LTD	16,078,500	3,857,100	23.99	1,887,802	11.74	10,333,598	64.27
EXPRESS LTD	35,403,790	238,377	0.67	10,688,252	30.19	24,477,161	69.14
WILLIAMSON TEA KENYA	8,756,320	4,963,179	56.68	2,214,511	25.29	1,578,630	18.03
KAPCHORUA TEA CO LTD	3,912,000	1,082,314	27.67	633,546	16.19	2,196,140	56.14
KENYA ORCHARDS LTD	12,868,124	4,343	0.03	6,381,128	49.59	6,482,653	50.38
LIMURU TEA CO LTD	1,200,000	4,112	0.34	487,416	40.62	708,472	59.04

Source: Nairobi Stock Exchange (NSE)

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Appendix II: Dividend Announcement Dates

Retail Investor Firms

Company	2009	2008	2007	2006	2005
Jubilee Holdings	4th Apr.	26th Mar.	26th Apr.	10th Apr.	14th Apr.
Carbacid	22nd Oct.	28th Oct.	26th Oct.	17th Oct.	22nd Mar.
Mumias Sugar	28th Aug.	28th Aug.	31st Aug.	7th Sep.	31st Mar.
Access Kenya	16th Mar.	20th Feb.	*	*	
Centum Investment	*	26th Jun.	*	*	
Institutional Investor Firms					
Sasini	12th Sep.	*	*	3rd Oct.	
KCB	27th Feb.	28th Feb.	5th Mar.	27th Feb.	25th Feb.
Athi-River Mining	31st Mar.	31st Mar.	27th Mar.	14th Mar.	
E.A. Portland	30th Sep.	*	17th Sep.	18th Sep.	24th Aug.
Kengen	16th Oct.	15th Oct.	18th Sep.	27th Sep.	

Note: Where both the interim and final diviends were paid, only the announcement of the final dividends was considered for the event study.

* Company did not announce dividend during that year.

Appendix IV: Aggregate Abnormal and Cumulative Abnormal Returns
Retail Investor Clientele Firms

Event Day	Carbacid	Jubilee	Mumias	Access	Centum	Aggregate	CAR
-10	0.0100	(0.0408)	0.1625	(0.0519)	0.0337	0.1135	0.1135
-9	0.0015	(0.0211)	0.0408	(0.0073)	0.0443	0.0582	0.1716
-8	0.0029	0.0028	(0.1360)	0.0296	(0.0059)	(0.1066)	0.0651
-7	0.0109	(0.0367)	0.0531	(0.0505)	0.0374	0.0142	0.0793
-6	(0.0060)	0.1092	(0.0101)	(0.0324)	0.0343	0.0951	0.1744
-5	0.0076	(0.0267)	0.0078	0.0047	0.0406	0.0341	0.2084
-4	(0.0092)	(0.0503)	0.0265	0.0257	0.0374	0.0301	0.2385
-3	(0.0101)	0.0408	(0.0468)	(0.0753)	0.0412	(0.0502)	0.1883
-2	(0.0054)	(0.0195)	0.0666	0.0327	0.0440	0.1185	0.3068
-1	(0.0017)	0.0939	0.0363	0.0227	0.0430	0.1941	0.5009
0	0.0046	0.1694	0.0803	0.1136	0.0411	0.4089	0.9098
1	(0.0036)	0.0653	0.0547	(0.0108)	0.0382	0.1438	1.0536
2	0.0042	(0.0666)	(0.1024)	0.0160	0.0302	(0.1187)	0.9349
3	0.0051	(0.0752)	0.0152	(0.0490)	0.0376	(0.0663)	0.8686
4	(0.2093)	0.0781	(0.1057)	(0.0355)	0.0417	(0.2306)	0.6380
5	(0.0023)	0.0371	(0.0057)	0.0013	0.0401	0.0705	0.7085
6	(0.0267)	0.1431	(0.0461)	(0.0134)	0.0372	0.0940	0.8025
7	0.0242	(0.0380)	0.0745	(0.0397)	0.0463	0.0672	0.8698
8	(0.0502)	0.0027	0.0172	0.0286	0.0395	0.0378	0.9076
9	0.7478	(0.0820)	0.0676	0.0887	0.0219	0.8441	1.7517
10	0.1048	(0.0572)	0.0433	(0.0658)	0.0355	0.0606	1.8123

Institutional Investor Clientele Firms

Event Day	Sasini	KCB	ARM	E.A Portlan	Kengen	Aggregate	CAR
-10	(0.0297)	0.0603	0.0459	(0.1466)	0.0243	(0.0457)	(0.0457)
-9	0.0125	(0.0623)	(0.0100)	0.0375	0.0211	(0.0013)	(0.0470)
-8	0.0115	(0.0363)	0.1098	0.1009	0.0543	0.2401	0.1931
-7	0.0289	(0.0454)	(0.0370)	0.0022	(0.0290)	(0.0804)	0.1128
-6	0.0233	(0.0272)	(0.0706)	(0.0731)	0.0339	(0.1138)	(0.0010)
-5	0.0070	0.0051	0.0441	(0.0143)	0.0061	0.0480	0.0470
-4	0.0074	0.0295	0.0878	0.0130	(0.0161)	0.1216	0.1686
-3	0.0142	(0.0803)	(0.0292)	0.0043	(0.0742)	(0.1652)	0.0034
-2	0.0298	0.1004	0.0098	(0.0465)	(0.0584)	0.0352	0.0385
-1	0.0220	0.0834	0.0243	0.0150	0.0817	0.2263	0.2649
0	(0.0408)	0.0576	(0.1161)	0.3360	(0.0520)	0.1848	0.4496
1	(0.0748)	(0.0169)	(0.0105)	(0.0185)	(0.0438)	(0.1646)	0.2851
2	(0.0888)	0.0145	0.0280	0.0858	(0.1059)	(0.0664)	0.2186
3	0.0160	(0.0180)	(0.0241)	(0.0094)	(0.0295)	(0.0649)	0.1538
4	0.0089	0.0454	(0.0275)	(0.0411)	0.0155	0.0012	0.1550
5	0.0108	(0.0133)	(0.0374)	(0.0525)	0.0056	(0.0869)	0.0681
6	0.0240	0.0225	(0.0172)	(0.0044)	0.0513	0.0761	0.1443
7	0.0313	0.0116	0.0339	(0.0008)	(0.0293)	0.0466	0.1909
8	(0.0164)	(0.0065)	0.0897	0.0273	(0.0039)	0.0902	0.2811

Appendix IV: Standard Deviations

Retail Investor Firms

	2009	2008	2007	2006	2005	Total	Average
Carbacid	0.7311	-	-	-	0.2184	0.9494	0.4747
Juilee	0.1304	0.1954	0.2818	0.0856	0.1072	0.8004	0.1601
Mumias	0.1229	0.0938	0.1231	0.1658	0.1496	0.6552	0.1310
Access	0.1708	0.0989	-	-	-	0.2698	0.1349
Centum	-	0.3146	-	-	-	0.3146	0.3146
Total							1.2153

Institutional Investor Firms

Sasini	0.1492	-	-	-	-	0.1492	0.1492
KCB	0.0883	0.0894	0.1693	-	0.0973	0.4444	0.1111
ARM	0.0982	0.1080	0.1302	0.1756	-	0.5119	0.1280
E.A Portland	0.0982	-	0.1016	0.1590	0.3193	0.6781	0.1695
Kengen	0.0553	0.1039	0.1239	0.1440	-	0.4271	0.1068
Total							0.6646

Note: Companies either did not declare dividends or were not trading in period when standard deviation has not been calculated.