

**EFFECTS OF OWNERSHIP STRUCTURE ON FIRM'S DIVIDEND
POLICY: EVIDENCE FROM NAIROBI SECURITIES EXCHANGE**

BY

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DECLARATION

This research project report is my original work and has never been presented for an award of diploma or a degree in this or any other university.

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This research project report has been submitted for examination with my approval as the University supervisor.

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DEDICATION

To my late father Mr Moses Obiero who instilled a lot of discipline in me from and early stage.

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My Foremost gratitude goes to God Almighty who renewed my strength at every single stage of doing this project. Thank you Lord for the gifts of life, health and wellbeing. Without your grace, I would not have come this far.

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LIST OF ABBREVIATIONS

CMA	Capital Markets Authority
DPS	Dividend per Share
MM	Modgilliani and Miller
NSE	Nairobi Securities Exchange
POR	Payout Ratio
UK	United Kingdom
US	United States of America

ABSTRACT

This study sought to investigate the effects of ownership structure (local and foreign) on the dividend policies of firm's listed at the Nairobi Securities Exchange. The study is causal in nature. The population of this study comprised of all the listed firms at the NSE from January 2008 to December 2012. A census of the population was conducted. Analysis was conducted through the use of a regression analysis. The findings generated two key results. First, the results indicated that ownership structure only influenced a paltry 0.8% of variations in payout as indicated by the adjusted R square. This meant that the model used explained very little of the firms' variability in dividend payout. The study therefore concluded that the firms' ownership structure does not significantly influence dividend policy. Secondly, Coefficient of changes in foreign ownership structure at 5% level of significance yielded a p-value which was not significant and was negative. Coefficients of changes in local ownership likewise yielded a p-value which was not significant either, but on the contrary had a positive sign. The study thus concluded that changes in ownership structure do not influence changes in dividend policy for companies listed in the Nairobi Securities Exchange. The study also concluded that though to an inconsequential extent, changes in local ownership were positively associated to changes in dividend policy while changes in foreign ownership were negatively associated to changes in dividend policy. The study recommends that further research be done to establish: the effect of other forms of ownership structures on firms' dividend policy; and why local ownership exhibited a positive relationship with payout while foreign ownership exhibited negative association with payout.

CHAPTER ONE: INTRODUCTION

1.1 Background

Dividend policy is one of the major decisions that companies normally make. Dividend policy regards to the division of earnings between payments to shareholders and re-investment in the firm and payout may be constant, decreasing, increasing or non-existence over time. McMenemy (1999) defined dividend policy as a firm's plan of action adopted by its directors whenever the dividend decision has to be made. A firm's ownership structure meanwhile refers to distribution of equity not only in terms of capital and votes (control) but also by the identity of equity owners (Ghabri and Sioud, 2011). Jensen and Meckling (1976) defined ownership structure in terms of capital contributions.

The debate as to whether dividend policy matters has become a major issue of interest in the financial literature for a period spanning more than half a century. The seminal work by Miller and Modigliani (1958, 1961) established that, under restrictive conditions, when investment policy is held constant, a firm's dividend policy does not affect shareholder wealth because higher dividend payouts lead to lower retained earnings and capital gains, leaving the wealth of shareholders unchanged. Motivated by Lintner's (1956) finding that firm follows well-considered payout strategies; financial theory has offered a range of explanations for dividend policies. The main theories of dividend policy are; the residual theory, the Miller and Modigliani irrelevance theory, the bird in the hand theory, dividend signaling theory, the dividend clientele effect, and agency cost (McMenemy, 1999). However, the signaling theory and agency cost theory have emerged

as the most popular theories on dividend payouts. The signaling theory argues that firms can convey information about future profitability and cash flows to the market by paying dividends (Miller and Rock, 1985). Dividend payout guarantees equal payout for both inside and outsider equity holders.

Incorporated in 1954, the Nairobi Securities Exchange (NSE) is the leading securities exchange in East and Central Africa. The products traded at the NSE are shares (equity) and bonds (debt/leverage instruments) which are financial instruments that are jointly referred to as securities. NSE facilitates investments and savings by bringing together borrowers and lenders. Currently, a total of 60 firms categorized into 8 sectors are listed (NSE, 2013). The NSE plays an important role in economic development in Kenya, by providing a medium for the transfer of funds from surplus spending units to deficit spending units.

1.1.1 Ownership structure effects

The literature is replete with different forms of ownership structures: Jensen and Meckling (1976) defined ownership structure in terms of capital contributions. They described ownership structure to comprise of inside equity (managers), outside equity and debt, thus proposing an extension of the form of ownership structure beyond the debt-holder and equity-holder view. Zheka (2005) unlike the above authors constructed ownership structure using variables including proportions of foreign share ownership, managerial ownership, institutional shareholder ownership, individual ownership, and

government share ownership. Morck et al. (1988) argued a case for family ownership as well; among others.

The payout policy in UK is significantly related to ownership of companies. However, the presence of strong block holder or block holder coalitions (in particular, executive directors, financial institutions and other industrial firms) weakened the relationship between corporate earnings and the payout dynamics (Bob, 2004). In China the higher the state ownership, the higher cash dividends rates and the higher the public ownership, the higher stock dividends rates. In particular, the relation between dividends policy and ownership structure is non-linear (Wei, 2003). In a study in India ownership structure is one of the important variables that influence, though not uniformly the dividend payout policies. Whereas ownership by the corporate and directors was positively related with dividends payout level, no evidence was established in support of association between foreign ownership and dividend payout growth (Kumar, 2003).

1.1.2 Dividend Policy

According to Pandey (2010) dividend policy is the practice that management follows in making dividend payout decisions out of a firms earnings by determining how much dividend to pay to shareholders and how much to reinvest. He argued that a perfect dividend policy is the one that strikes a balance between current dividends and future growth. Ross (1977) on the other hand defined dividend payment as the distribution of company profits to shareholders. Baskin (1989) measured dividend policy of a firm by considering to measures of dividends dividend payout and dividend yield. Brealey et al.

(2013) defined dividend payout ratio as the percentage of earnings paid to shareholders in dividends while dividend as the return on investments for stock in the absence of capital gain.

There are three schools of thoughts that have emerged with regards to dividend payout. The first is the conservatives which see dividend payment as attractive hence a positive impact on the share prices the second believes that stock prices are negatively correlated with dividend payouts and the third group maintains that dividend payout is irrelevant and does not have any influences on stock prices. Brealey et al. (2013); Lintner (1956) argued that stock holders prefer stable dividends and the market puts a premium on such stability. According to Fama (1997) dividend policy is relevant to the value as well as the marketability of common stock.

1.1.3 Effect of Ownership structure on dividend Policy

Manos (2002) investigated the agency theory of dividend policy in the context of an emerging economy, India. He modified the Rozeff's cost minimization model by introducing a business group affiliation namely foreign ownership, institutional ownership, insider ownership and ownership dispersion as a proxy for agency cost theory. The results revealed a positive impact of all business group affiliation to payout decisions. The positive relationship between foreign and payout indicated that the greater the percentage held by foreign institutions, the greater the need to induce capital market monitoring. Besides that, capital market monitoring is also important when the dispersion of ownership increases since the more widely the ownership spread, the more acute the

free rider problem, hence, the greater need for outside monitoring. Further, the evidence of a positive relationship between institutional and the payout ratio is consistent with the preference for dividends related prediction.

Short et al. (2002) investigated dividend payout models to examine the potential association between ownership structures and dividend policy. They modified the Full Adjustment Model; the Partial Adjustment Model (Lintner, 1956); the Waud Model (Waud, 1966); and the Earnings Trend Model. The result from the four dividends models consistently showed positive and statistically significant associations between institutional ownership and dividend payout ratios and thus suggested a link between institutional ownership and dividend policy.

Cook and Jeon (2006) investigated the determinants of foreign and domestic ownership and a firm's payout policy. The results supported the agency model and showed that higher foreign ownership is associated with a greater dividend payout. Domestic institutional investors, however, did not play a prominent role in a firm's payout policy. Thus, they concluded that foreign investors are more active monitors of corporate by reducing agency problems and leading firms to increase the level of payouts.

1.1.4 Nairobi Securities Exchange

A stock market is a place where securities are traded. These securities are issued by listed companies and by the government, with the aim of raising funds for different purposes such as to fund expansion for the former, and the development and finance budget

deficits for the latter. Common securities traded on stock exchange include company shares, corporate bonds, and government debt in the form of treasury bonds. The Nairobi Securities Exchange was formed in 1954 as a voluntary organization of stock brokers is now one of the most active stock markets in Africa. Subsequent development of the market has seen an increase in the number of stock brokers, introduction of investment banks, establishment of custodial institutions and credit rating agencies and the number of listed companies have increased over time. As a capital market institution, the stock market exchange plays an important role in the process of economic development. It helps mobilize domestic savings thereby bringing about reallocation of financial resources from dormant to active agents. Long-term investments are made liquid, as the transfer of securities between shareholders is facilitated. The exchange has also enabled companies to engage local participation in their equity thereby giving Kenyans a chance to own shares (Nairobi Securities Exchange, 2013).

Companies can also raise extra finance essential for expansion and development. To raise funds a new issuer publishes a prospectus which gives all pertinent particulars about the operations and future prospects and states the price of the issue. A stock market also enhances the inflow of international capital. They are also used as tools for privatization programs. The Nairobi securities exchange deals in both variable income securities and fixed income securities. Variable income securities are the ordinary shares which have no fixed rate of dividend payable as the dividend is dependent on the profitability of the company and what the board decides. The fixed income securities include treasury and corporate bonds, preference shares, debenture stocks – these have a fixed rate of

interest/dividend, which is not dependent on profitability. Most of the business in the exchange is in the financial or industrial sectors though agriculture and other commercial services are also represented (Nairobi Securities Exchange, 2013).

1.2 Research Problem

Dividend policy has been explained and justified by different theoretical frameworks: Dividend irrelevance theory (Miller and Modigliani, 1961); Bird-in-the hand theory (Lintner , 1962; Gordon, 1963); Clientele effect theory (Pettit, 1977; Scholz, 1992); Agency theory (Jensen and Meckling, 1986); pecking order theory (Myers, 1984; Myers and Majluf, 1984); among others. The relationship between control structures and payout is a focus of several empirical studies internationally.

The Nairobi Securities Exchange is the most dynamic and largest securities exchange in East and Central Africa (NSE, 2013). It currently has 60 listed companies which span 8 different sectors. All the companies in the NSE have varied ownership structures. Naturally, being listed companies, all the companies pay some dividend on the stock. As a result they must all have a dividend payout policy (NSE, 2013).

Several empirical studies have been conducted to establish the effect of ownership structure on payout policy: Bob (2004) established that the payout policy in UK was significantly related to ownership of companies; Zeckhauser and Pound (1990) did not find significant differences in payout ratios between firms with and without large block holders; Gugler and Yurtoglu (2003) found that the power of the largest equity holder reduces the dividend payout ratio whereas the power of the second largest shareholder increases the payout; Moh'd et al. (1995) found that larger managerial ownership

translates into lower dividend payout ratios, while larger institutional stakes are associated with higher payout; among other international studies. Locally, Ochola (2005); Nyumba (2011); Karanja (1987); among others have studied dividend payout before, however, relatively little attention has been made on ownership structure effects on dividend policy.

Karanja (1987) attempted to establish whether changes in ownership structure affects payout but under a very different context; less foreign and institutional ownership; less listed companies; different regulatory frameworks; among others have all transformed. Given the contextual changes in the NSE operating environment, it is useful to establish the effect of NSE listed firm ownership structures on their respective dividend payout policies. How does ownership structure affect dividend policy of firms listed in the NSE in the prevailing operating environment?

1.3 Objectives of the Study

- I. To establish the effects of ownership structure on dividend policy of firms listed at the Nairobi Securities Exchange.
- II. To determine how changes in ownership structure are associated with corresponding changes in dividend payout

1.4 Value of the Study

The study will be of great value to investors in determining the investments to hold depending on the dividend payouts they prefer; it will also enable financial consultants to offer more enlightened services to their clients in coming up with portfolios that suit the needs of investors.

It will add to the scant local literature on effects of ownership structures on dividend payout policies. Additionally, the relationship between payout and ownership structure is also put to the test under the prevailing environmental context.

It will assist regulators prescribe and formulate more enlightened dividend and ownership related policies and best practices. It will also furnish policy makers with information on the likely direction of dividend payout given a certain ownership structure configuration.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter focused on a review literature on effects of ownership structure on dividend policies. Theories that explain dividend policies were first discussed. Determinants of dividend policy were then discussed. Empirical evidence of the effects of ownership on dividend policies was then given. Finally, a summary of the literature was discussed.

2.2 Theoretical review

Various theoretical frameworks have attempted to explain the concept of dividend policy. Six have stood out: Dividend irrelevance theory; Bird-in-the-hand theory; Tax differential theory; Information signaling theory; Agency theory; Clientele effect theory (Lintner, 1956; Miller and Modigliani, 1961; Krishman, 1933; Solomon, 1963; Jensen and Meckling, 1976; Pettit, 1977).

The first empirical study of dividend policy was conducted by Lintner (1956), who investigated corporate managers to understand how they arrived at the dividend policy. Lintner found that a prevailing dividend rate formed a bench mark for the management. Companies' management would thus progressively increase dividends in pursuit of the target payout ratio. While Lintner (1956) provided the stylistic description of dividends, the watershed in the theoretical modeling of dividends was almost certainly the classic paper of Miller and Modigliani (1961), which first proposed dividend irrelevance.

2.2.1 Dividend irrelevance theory

Miller and Modigliani (1961) argued that dividend policy has no effect on either the price of a firm's stock or on its cost of capital. Since a firm's value is determined by its investment policy and the manner in which the earnings stream is split between retained earnings and dividends does not affect this value. MM demonstrates that under a particular set of assumptions that if a firm pays higher dividends, then it must sell more stock to new investors and the share of the value of the company given up to the new investors is exactly equal to the dividend paid out. The main assumption is that there is 100 per cent payout by management in every period. Other assumptions are: that there exist perfect capital markets; that is, no taxes or transactional cost, the market price cannot be influenced by a single buyer or seller, and free and costless access to information about the market; that investors are rational and that they value securities based on the value of discounted future cash flow to investors; that managers act as the best agents of shareholders; and that there is certainty about the investment policy of the firm, with full knowledge of future cash flows.

They argued that investors are able to replicate any dividend streams that corporations might be able to pay. Such that if dividends are lower than desired, investors can sell some of their shares to obtain their desired dividends and if the dividends are higher than desired, investors can use the dividends to purchase additional shares in the company (home-made dividends). Because investors are able to manufacture homemade dividends, which are perfect substitutes to corporate dividends, then dividend policy is irrelevant. Given that a firm is not able to increase its value by simply altering the mix of dividends

and retained earnings, investors' concerns are about total returns that they receive, not whether they receive those returns in form of dividends or capital gains. However, MM's (1961) theory has heavily been criticized for being unrealistic in the real world, as we know it, investors pay taxes, firms incur floatation costs and investors incur transaction costs. This implies that payments of dividends and substituting with new issues are not the same.

2.2.2 Bird-in-the-hand theory

Krishman (1933) and Gordon (1963) argued that investors prefer to receive dividends 'today' because current dividends are more certain than future capital gains that might result from investing retained earnings in growth opportunities. In a world of uncertainty and information asymmetry, dividends are valued differently from retained earnings (capital gains): "A bird in hand (dividend) is worth more than two in the bush (capital gains)". Owing to the uncertainty of future cash flow, investors will often tend to prefer to retained earnings. Krishman (1933) argued that the cost of capital should decrease as the payout ratio increases.

The main assumptions of the model are: that investors have imperfect information about the profitability of a firm; that cash dividends are taxed at a higher rate than when capital gain is realized on the sale of a share; and that dividends function as a signal of expected cash flows. Despite the tax disadvantage of paying dividends, management continues to pay dividends in order to send a positive signal about the firm's future prospects. The cost of this signaling is that cash dividends are taxed higher than capital gains. While

some investors would rather have capital gains to cut down on tax impact, others may prefer dividends because they prefer immediate cash in hand (Hussey et al., 2011).

2.2.3 Tax differential theory

Litzenberger and Ramaswamy (1979) propositioned that investors prefer one dividend policy to another because of the tax effect on dividend receipts. Investors must pay taxes at the time dividend and capital gains are received. Taxes on dividends must be paid in the same year when dividends are received whereas capital gains (where taxed) are not until investments are sold. Depending on an investor's tax position; he may prefer either payout of current earnings as dividends or capital gains associated with the stock value.

2.2.4 Information signaling effect theory

In their revolutionary paper of 1961, argued that dividends did not convey any useful information to the investors and hence was a rejection of the "information content of dividends hypothesis". MM invoked the assumption of perfect capital market where "all traders in the stock market" have equal access to information about the ruling price and about all other relevant characteristics of shares. Though Miller and Modigliani (1961) assumed that investors and management have perfect knowledge about a firm, this has been countered by many researchers, as management who look after the firm tend to have more precise and timely information about the firm than outside investors. This, therefore, creates a gap between managers and investors; to bridge this gap, management use dividends as a tool to convey private information to shareholders (Al-Malkawi, 2007).

Solomon (1963) and Ross (1977) observe that increase in dividends is often accompanied by increases in the prices of stocks while a decline in dividends generally leads to a stock price decline. The payment of dividend is seen to convey to shareholders that the company is profitable and financially strong. Ross (1977) observed that in an inefficient market, management can use dividend policy to signal important information to the market, which is only known to them. For instance, if management pays high dividends, it signals high-expected profits in future to maintain the high dividend level (Solomon, 1963).

Petit (1972) equally concurred that the amount of dividends paid seems to carry great information about the prospects of a firm; this can be evidenced by the movement of share price. An increase in dividends may be interpreted as good news and brighter prospects, and vice versa. However, Lintner (1956) observed that management are reluctant to reduce dividends even when there is a need to do so, and only increase dividends when it is believed that earnings have permanently increased. Kumar (2003), however, observed that shareholders with majority ownership normally exercise control over key decisions, which may include dividend payments and such action may not be associated with existence of any material information.

2.2.5 Agency theory

Agency cost is the implicit cost of the conflict of interest that exists between shareholders and management (Ross et al., 2008). This arises when management acts in their own interest rather than on behalf of the shareholders who own the firm. This could be direct

or indirect. This is contrary to the assumptions of Miller and Modigliani (1961), who assumed that managers are perfect agents for shareholders and no conflict of interest exists between them. Managers are bound to conduct some activities, which could be costly to shareholders, such as undertaking unprofitable investments that would yield excessive returns to them, and unnecessarily high management compensation (Al-Malkawi, 2007).

These costs are borne by shareholders; therefore, shareholders of firms with excess free cash flow would require high dividend payments instead. The payment of dividend reduces the agency problem between managers and shareholders by reducing the discretionary funds available to managers (Jensen and Meckling, 1976; Rozeff, 1982; Easterbrook, (1984). Easterbrook (1984) also identified two agency costs: the cost of monitoring managers and the cost of risk aversion on the part of managers. Jensen (1986) documents further that if firms have free cash flows then the firms pay dividends or retire debts to reduce the agency cost of free cash flow. Further, a similar type of conflict exists between shareholders and bondholders because shareholders can expropriate wealth from bondholders by paying themselves dividends. Moreover, bondholders try to contain this problem through restrictions in dividend payments in the bond indenture (Kalay, 1982).

Easterbrook (1984) observed that firms payout dividends in order to reduce agency costs, because payments of dividends reduce the discretionary funds available to managers. The motivation behind the Easterbrook's (1984) agency explanation of payout is that capital market participants have better skills and/or incentives to monitor management, than

incumbent shareholders do. By demanding a high payout, the incumbent forces the firm to seek refinancing and, consequently, delegate the monitoring task to new fund providers.

2.2.6 Clientele effect theory

This theory was advanced by Pettit (1977). It states that different groups or clienteles of stakeholders prefer different dividend payout policies depending on their level of income from other sources of income. Low-income earners prefer high dividends to meet their daily consumption while high-income earners prefer low dividends to avoid payment of more taxes. Therefore when a firm sets a dividend policy, there will be shifting of investors into and out of the firm until equilibrium is achieved. He argued that stocks with low dividend yields will be preferred by investors with high income; by younger investors; by investors' whose ordinary and capital gains tax rates differ substantially; and investors whose portfolios have high systematic risk.

The retired individuals and university endowment funds generally prefer current incomes, so they may want the firm to pay out a high percentage of earnings. Such investors (and also pension funds) are often in a low or even zero tax brackets, so taxes are of no concern. On the other hand, stockholders in the peak earning years might prefer reinvestment, because they have less need for current investment income and would simply reinvest any dividends received after first paying income taxes on the dividend income. Evidence from several studies suggests that there is in fact a clientele effect. MM (1961) argued that one clientele is as good as another, so the existence of clientele effect

does not necessarily imply that one dividend policy is better than any other may be wrong, though, no one has offered proof that the aggregate makeup of investors permits firms to disregard clientele effects, as this issue, like most others in the dividend arena, is still up in the air (Brigham and Gapenski, 1997).

2.3 Determinants of dividend policy

Profits have long been regarded as the primary indicator of a firm's capacity to pay dividends. Pruitt and Gitman (1991), in their study found that, current and past years' profits were important factors in influencing dividend payments. Baker (1985) equally found that a major determinant of dividend payment was the anticipated level of future earnings.

Pruitt and Gitman (1991) found that risk (year-to-year variability of earnings) also determined firms' dividend policy. A firm that has relatively stable earnings is often able to predict approximately what its future earnings will be. Such a firm is therefore more likely to pay out a higher percentage of its earnings than a firm with fluctuating earnings. In other studies, Rozeff (1982); Lloyd et al (1985), and Collins et al (1996) used beta value of a firm as an indicator of its market risk. They found statistically significant and negative relationship between beta and the dividend payout. Their findings suggested that firms having a higher level of market risk will pay out dividends at lower rate. D'Souza (1999) also found statistically significant and negative relationship between beta and dividend payout.

The liquidity or cash-flow position is also an important determinant of dividend payouts. A poor liquidity position means less generous dividend due to shortage of cash. Alli et al. (1993) demonstrated that dividend payments depended more on cash flows, which reflected the company's ability to pay dividends, than on current earnings, which are less heavily influenced by accounting practices. They claimed that current earnings do not really reflect the firm's ability to pay dividends.

Both residual theory and agency cost theory have different explanation towards growth opportunities. Under residual theory, companies with high growth opportunities tend to pay lower dividends because they may use the available funds to finance the investments with positive net present value. This implies that, given investment opportunities, a firm with higher cash flow or earnings tends to pay higher dividends (Deshmukh, 2005). Collins et al.(1996);Gul(1999);Zeng (2003) and Amidu and Abor (2006) established a significant negative relationship between firm growth and dividend payout. Gul(1999) and Deshmukh (2005) also found a significant negative relationship between growth opportunities and dividend yields implying that high growth firms have low dividend yields compared to low growth firms.

Myers and Majluf (1984) found that the asymmetric information situation between managers and external investors led to underinvestment problems. Based on that, Deshmukh (2003) asserted that with respect to the change in the dividend, other things held constant, the higher the level of asymmetric information due to small firm size, the

higher probability of underinvestment; consequently the lower the dividends paid to stockholders.

2.4 Empirical review

A number of empirical studies have been conducted both locally and internationally on ownership structure and dividend policy. Abdelsalam et al. (2008) sought to examine dividend policies in an emerging capital market, in a country undergoing a transitional period. Using pooled cross-sectional observations from the top 50 listed Egyptian firms between 2003 and 2005, they examined the effect of board of directors' composition and ownership structure on dividend policies in Egypt. They found that there was a significant positive association between institutional ownership and firm performance, and both dividend decision and payout ratio. The results confirmed that firms with a higher return on equity and a higher institutional ownership distributed higher levels of dividend. No significant association was found between board composition and dividend decisions or ratios.

Renneboog and Trojanowski (2007) sought to examine whether or not dividend policy is influenced by the firm's corporate control structure by investigating the relationship between the dynamics of earnings payout and the voting power enjoyed by different types of shareholders. They analyzed a large panel of UK firms whose payout policy is significantly related to control concentration in the 1990s. They employed the traditional framework proposed by Linter and an econometrically sound approach to modeling the dynamics of the total payout suggested. They found that profitability is a crucial determinant of payout decisions, but the presence of strong block holders or block holder

coalitions weakened the relationship between the corporate earnings and the payout dynamics. Block holders appeared to realize that an overly generous payout may render the company liquidity constrained, and, consequently, result in suboptimal investment.

Harada and Nguyen (2011) sought to test two agency-based hypotheses regarding the effect of ownership concentration on dividend policy using a large sample of Japanese firms. They run level regressions associating payout rates to ownership concentration. Different measures of payout were used to ensure the robustness of results. How ownership concentration affects the propensity to increase dividends following changes in variables correlated with free cash flows was also examined. They found that the results were consistent with rent extraction by large shareholders. Ownership concentration was associated with significantly lower dividends in proportion to earnings as well as relative to book equity. An endogenous relation between ownership concentration and dividend payout was established, but the results were not statistically different. Firms with concentrated ownership were also less likely to increase dividends when earnings increased or when debt decreased.

Seita-Atmaja (2010) sought to examine whether board independence influences debt and dividend policies of family controlled firms. He examined panel data on a sample of Australian publicly-listed firms over the period 2000-2005 using panel (random effects) regression. The empirical test demonstrated that family controlled firms appear to have higher levels of leverage and dividend payout ratios than their non-family counterparts. More importantly, the result indicated that the positive impact of family control on

dividend policy was due to the higher proportion of independent directors on family boards. This underlined the significant role that independent directors play in influencing firm's dividend policies, especially for family controlled firms. The result also supported the notion that independent directors and dividends are complementary government mechanisms.

Mulinge (2009) sought to establish the effect of Block holders on dividend policy of listed firms. The study used descriptive secondary data from Nairobi Stock Exchange data base and the individual financial statements of the firms. The dividends payments, earnings per share and ownership structures were used. The dividend declared and the dividend payout ratios were calculated and analyzed using regression and correlation analysis. The results indicated that firms with block holders tend to give higher dividends compared to firms with higher state ownership, foreign ownership and individual ownership. She concluded that there was a positive relationship between the block holders and dividend policy since firms with higher block holder ownership had been observed to have higher dividend payout ratios.

Odero (2012) sought to investigate the relationship between types of ownership structure and dividend payments of Nairobi Securities Exchange (NSE) listed companies. A cross-sectional analysis of 33 sample firms for the years 2009 to 2011 was utilized. The study examined the explanatory power of three alternative models of dividend policy, the full adjustment model, the partial adjustment model and the Waud model which are moderated by the possible effects of four types of ownership structure, namely ownership

concentration, institutional ownership, managerial ownership and foreign ownership. Ownership concentration is measured by the summation of the percentage of shares controlled by ten major shareholders. Institutional ownership is measured by a percentage of equity owned by institutional investors, while, managerial ownership is measured by adding the total percentage of shares directly held by directors in the company, and foreign ownership is measured by the sum of all shares in the hands of foreign shareholders in the list of ten largest shareholders, either held through nominee companies or other corporate foreign share holdings (Odero, 2007).

The study found that the partial adjustment model had the highest explanatory power. It was also found that ownership concentration was the only variable that was positively and statistically significant in influencing dividends in every type of dividend model, a finding that is consistent with agency theory. This finding has policy implication since high dividend payments can be used for mitigating agency conflict as dividends can be substituted for shareholder monitoring. Hence, large shareholders have strong incentives to require higher dividend payments in order to reduce monitoring costs. Nevertheless, this study showed that dividend decisions of Kenyan companies are not influenced by the Structure of ownership (Odero, 2007).

Karanja (1987) studied the dividend practices of publicly quoted companies in Kenya. He found that there are three important factors that determine dividend policy in Kenya, i.e. cash and liquidity, current and prospective profitability and company's level of

distributable resources. He also noted that foreign controlled companies have more liberal dividend policies than locally controlled firms.

2.5 Summary to the Literature

Various theoretical frameworks have attempted to explain the concept of dividend policy. Six have stood out: Dividend irrelevance theory; Bird-in-the-hand theory; Tax differential theory; Information signaling theory; Agency theory; Clientele effect theory. Some of the key determinants of dividend payout include: Profits; Risk; Cash flow position; Information asymmetry; among others. Several empirical studies have been conducted internationally to establish the effect of ownership structure on payout policy. Locally, a handful of studies have been conducted on dividend payout before, however, relatively little attention has been focused on ownership structure effects on dividend policy. A similar study has been conducted before in 1978 (over thirty years ago) but under a very different context; less foreign and institutional ownership; less listed companies; different regulatory frameworks; among others have all transformed. The change of contextual environment therefore necessitates an investigation as to whether ownership structure influences payout policy under a different context.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter described the methods that were used in the collection of data pertinent in answering the research question. It was divided into research design, population and sampling design, Data collection methods and data analysis methods.

3.2 Research Design

This research enquiry was a causal study of the relationship between Ownership and dividend policy of the companies listed on the NSE as at December 2012. Mugenda (2003) explained that causal studies explore the relationships between variables and this is consistent with this study which sought to establish the nature of relationship between the variables. The research analyzed data on all the selected firms listed on the NSE within the specified period of time. This was consistent with other studies that have successfully used causal design such as Ryan (2008), Mwangi (2010) and Ouma (2011).

3.3 Population of the study

The population consisted of all the companies listed at the NSE over the period (2005-2012). The Study was conducted on companies that had continually been quoted during the study period. There were 60 quoted companies at the NSE during the study period (Appendix1). Listed firms were suitable for this study due to the credibility and authenticity of such data. A census was conducted.

3.4 Data Collection

Data used in this study was secondary data; specifically the company's consolidated financial statements for the periods 2008 - 2012 on dividend payout ratios. The annual reports of listed companies were obtained from the CMA and NSE libraries. The data on ownership composition/structure was obtained from CMA and NSE, as listed companies are required by the CMA rules and regulations to send on monthly basis summary of shareholding structure in terms of foreign investors, east African investors, local institutional investors and individual investors. This study focused on Foreign Investors and Local Investors.

3.5 Data Analysis

To carry out the study a regression model was used to assess the relationship between change in the payout ratio and changes in foreign ownership and local ownership. The model was successfully used by Ouma (2011).

The model was in the form;

$$\Delta P = \alpha + \beta_1 \Delta F + \beta_2 \Delta L + \varepsilon$$

Where;

α is the regression intercept

ΔP is the change of payout ratio

ΔF is the change in foreign ownership

ΔL is the change in local ownership

ε is the error term

To check whether one or more of the independent variables significantly predicted the dependent variable at the selected probability level, a t-test was used (Mugenda, 2003).

3.5.1 Operationalization of the Variables

Dividend payout ratio is that proportion of earnings that is distributed to shareholders.

Change of payout ratio was obtained by using the prevailing year and the preceding year.

$$\Delta\text{Payout} = \text{Payout}_t - \text{Payout}_{t-1}$$

Foreign Ownership was obtained by taking the proportion of all shares held by foreigners both individual and institutional to total shares declared in published financial statements.

The change in foreign ownership was computed as follows:

$$\Delta\text{Foreign ownership} = \text{percentage of foreign investors}_t - \text{percentage of foreign investors}_{t-1}$$

Local ownership was the proportion of shares held by local investors both individual and institutional to total shares declared. The Change was computed using the prevailing year and the preceding year.

$$\Delta\text{Local ownership} = \text{percentage of local investors}_t - \text{percentage of local investors}_{t-1}$$

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND FINDINGS

4.1 Introduction

This chapter described and interpreted the analysis of data. Analysis results and findings were also indicated.

4.2 Regression analysis

A regression analysis was conducted on the changes in payout (Y) against changes in foreign and local ownership structure (X_1, X_2). The regression equation was as follows:

$$\Delta P = \alpha + \beta_1 \Delta F + \beta_2 \Delta L + \varepsilon$$

ΔP , ΔF and ΔL data was generated for 36 companies listed in the NSE that spanned the years 2008 through to 2012 (Refer appendix iv). The data was subjected to a regression analysis, the findings (output) of which are indicated below:

Table 4.1: Model summary of change in ownership structure on change of payout

Regression Statistics	
Multiple R	0.081027276
R Square	0.00656542
Adjusted R Square	-0.007525851
Standard Error	0.486436685
Observations	144

Source: Computations from raw data obtained from NSE (Refer to appendix 3).

Table 4.1 shows that ownership structure only influenced a paltry 0.8% of variations in payout (Y) by the independent variables (X_1, X_2) as indicated by the adjusted R square.

The model thus only explained 0.8 % of the variations in payout. This meant that the model used explains very little of the firms' variability in dividend payout.

Table 4.2: Anova for change in payout and change in ownership structure

ANOVA					
	Df	SS	MS	F	Significance F
Regression	2	0.220493078	0.110246539	0.465921042	0.628519516
Residual	141	33.36351141	0.236620648		
Total	143	33.58400449			

Source: Computations from raw data obtained from NSE (Refer to appendix 3).

Significance F on table 4.2 demonstrates the usefulness of the overall regression model at a 5% level of significance. Since the p-value of the F test is larger than alpha ($0.6285 > .05$) it was concluded that the regression model was not fit to explain changes in payout in the firms under study. Table 4.2 also clearly indicates that the regression only accounted for an insignificant number of variations in payout changes; 0.22 (0.66%) out of 33.584; the rest of the variations being accounted for by other factors external to the model (Residual) as indicates by the sum of the squares (SS). Residual (or error) represents unexplained (or residual) variation after fitting a regression model. It is the difference (or left over) between the observed value of the variable and the value suggested by the regression model.

Table 4.3: Coefficients of the model

	Coefficients	Standard Error	t Stat	P-value
Intercept	0.458719032	0.043522226	10.53987986	1.63E-19
Foreign	-0.014411923	0.015300532	-0.94192298	0.347843098
Local	-0.000443409	0.001461083	-0.30347926	0.76197199

Source: Computations from raw data obtained from NSE (Refer to appendix 3).

Table 4.3 depicts the numerical relationship between the independent variable and the independent variables in the following resultant equation

$$Y = 0.4587 - 0.0144\Delta F + 0.00044\Delta L$$

The coefficients and their signs are of particular importance. As shown, change in foreign ownership has a negative but insignificant effect on payout at 0.014%. An increase in foreign ownership thus led to a decrease in payout. On the other hand, local ownership has a positive but marginally larger effect on payout at 0.044%. An increase in local ownership would thus result in an inconsequential but positive increase in payout.

A t-test was finally conducted to ascertain whether one or more of the independent variables significantly predict the dependent variable at the 5% significance level. Testing whether the coefficient of changes in foreign ownership structure is equal to zero at 5% level of significance yields a p-value of (0.3478 > 0.05), which is not significant. Changes in local ownership likewise yields a p-value of (0.7620 > 0.05), which is not significant either. Therefore, none of the explanatory variables are useful predictors of explaining changes in payout.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter gave a summary of the analysis in chapter four and highlights the key findings. It also drew conclusions and implications from the finding. Limitations of the study were also discussed. Recommendations for further studies were finally given.

5.2 Summary of findings

This study was conducted with the primary aim of establishing the effect of ownership structure on firms' dividend policy. The study also aimed at establishing the association between changes in ownership structure and corresponding changes in payout. The study focused on firms listed in the Nairobi Securities Exchange. To achieve the above objectives, a regression analysis was conducted whereby changes in firms' payout was regressed against the two explanatory variables; changes in foreign ownership and changes in local ownership for a period of 5 years (2008-2012). Data on changes in payout ratio (Y) for the study firms' was obtained from the NSE; corresponding data for the changes in foreign and local ownership respectively (X_1 , X_2) was also obtained from the same source. The two sets of data were then subjected to a regression analysis.

5.2.1 Effect of changes in ownership structure on payout

The study found that changes in ownership structure of firms' (X_1 , X_2) only influenced a paltry 0.8% of variations in payout (Y) is explained by the independent variables (X_1 , X_2) as indicated by the adjusted R square statistic of -0.007525851 (refer to table 4.1). Table 4.2 indicated that the regression model was also found to account for only 0.22 (0.66%)

out of 33.584 variation; with the bulk of the variation in (Y) being accounted for by residuals (99.34%).

5.2.2 Association between changes in ownership structure and changes in payout

It was also found that change in foreign ownership has a negative but insignificant effect on payout at 0.014% (refer to table 4.3). On the other hand, local ownership has a positive but marginally larger effect on payout at 0.044%. Finally, a t-test was conducted to ascertain whether one or more of the independent variables significantly predict the dependent variable at the 5% significance level. Coefficient of changes in foreign ownership structure at 5% level of significance yielded a p-value of (0.3478 > 0.05), which is not significant. Changes in local ownership likewise yielded a p-value of (0.7620 > 0.05), which is not significant either (refer to table 4.3).

5.3 Conclusions

Two major conclusions can be drawn from the findings of this study. The results indicated that the firms' ownership structure does not significantly influence dividend policy. The study concluded that other factors other than local and foreign ownership changes were responsible for changes in dividend policy of NSE listed firms. The study also concluded that though to an insignificant extent, changes in local ownership were positively associated to changes in dividend policy while changes in foreign ownership were negatively associated to changes in dividend policy.

5.4 Limitations of the study

Census data from NSE had gaps on some firms. Out of a population of 60 listed firms, this study was only able to access data for 36 firms. This study also only used two forms of ownership namely foreign and local; however, there exists other forms of ownership that the study did not factor in. Finally, this study is based on 2008-2012 payouts, foreign and local ownership data and thus interpretations deviating from the findings of this research may occur if period is outside the study period or ownership variables are not study variables.

5.5 Recommendations

This study found that changes in ownership structure barely explained dividend payout decisions. The study therefore recommends that changes in ownership structure of firms in the NSE should not be used as a basis for projecting dividend payout variations of listed firms. The study also found that change in foreign ownership had a negative but inconsequential effect on payout, whereas changes in local ownership had a positive but equally marginal effect on variations in payout. The study consequently recommends that on the basis of the findings, a change in foreign or local ownership respectively may give a remote indication as to what direction dividend payout may take in a given listed firm.

5.6 Suggestions for further studies

Further investigation may be done to establish the effect of other forms of ownership structures on firms' dividend policy. In addition, further inquiry may be done into why local ownership exhibited a positive relationship with payout while foreign ownership

exhibited a negative association with payout. Finally, an investigation may be done to establish the key factors that influence dividend policy in locally listed firms.

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APPENDICES

APPENDIX I: FIRMS LISTED AT THE NSE AS AT 2012

	AGRICULTURAL
1	<i>Eaagads Ltd</i>
2	<i>Kapchorua tea Co. Ltd</i>
3	<i>kakuzi Ltd.</i>
4	<i>Limuru tea Co. Ltd.</i>
5	<i>Rea Vipingo plantations Ltd.</i>
6	<i>Sasisni Ltd.</i>
7	<i>Williamson tea Kenya Ltd.</i>
	COMMERCIAL AND SERVICES
8	<i>Express Ltd.</i>
9	<i>Kenya Airways Ltd.</i>
10	<i>Nation Media Group</i>
11	<i>TPS Eastern Africa (Serena) Ltd.</i>
12	<i>Scangroup Ltd.</i>
13	<i>Hutchings Biemer Ltd.</i>
14	<i>Uchumi supermarket Ltd.</i>
15	<i>Longhorn Kenya Ltd.</i>
16	<i>Standard Group Ltd.</i>
	TELECOMMUNICATIONS & TECHNOLOGY
17	<i>AccessKenya Group Ltd.</i>
18	<i>Safaricom Ltd.</i>
	AUTOMOBILES & ACCESSORIES
19	<i>Car and General (K) Ltd.</i>
20	<i>CMC Holdings Ltd.</i>
21	<i>Sameer Africa Ltd.</i>
22	<i>Marshalls (EA) Ltd.</i>
	BANKING
23	<i>Barclays Bank Ltd.</i>
24	<i>CFC Stanbic Holdings Ltd.</i>
25	<i>Housing Finance Co. Ltd.</i>
26	<i>I & M Holdings Ltd</i>
27	<i>Kenya Comercial Bank Ltd.</i>
28	<i>National Bank of Kenya Ltd.</i>
29	<i>NIC Bank Ltd.</i>
30	<i>Standard Chartered Bank Ltd.</i>
31	<i>Equity Bank Ltd.</i>
32	<i>The Cooperative Bank of Kenya Ltd.</i>
	INSURANCE

34	<i>Jubilee Holdings Ltd.</i>
35	<i>Pan African Insurance Holdings Lotd.</i>
36	<i>Kenya Re-Insurance Corporation Ltd.</i>
37	<i>CFC Insurance Holdings</i>
38	<i>British-American Investments Company (Kenya) Ltd.</i>
39	<i>CIC Insurance Group</i>
	INVESTMENTS
39	<i>City Trust Ltd.</i>
40	<i>Olympia Capital Holdings Ltd.</i>
41	<i>Centum Investment Co. Ltd.</i>
42	<i>Trans-Century Ltd.</i>
	MANUFACTURING & ALLIED
43	<i>BOC Kenya Ltd.</i>
44	<i>British American Tobacco Kenya Ltd.</i>
45	<i>Carbacid Investments Ltd.</i>
46	<i>East African Breweries Ltd.</i>
47	<i>Mumias Sugar Co. Ltd.</i>
48	<i>Unga Group Ltd.</i>
49	<i>Eveready East Africa Ltd.</i>
50	<i>Kenya Orchards Ltd.</i>
51	<i>A. Baumann CO Ltd.</i>
	CONTRUCTION & ALLIED
52	<i>Athi River Mining</i>
53	<i>Bamburi Cement Ltd.</i>
54	<i>Crown Berger Ltd.</i>
55	<i>E.A. Cables Ltd.</i>
56	<i>E. A. Portland Cement Ltd.</i>
	ENERGY & PETROLEUM
57	<i>KenolKobil</i>
58	<i>Total Kenya Ltd.</i>
59	<i>Kenya Power & Lighting Co. Ltd.</i>
60	<i>Kengen Ltd.</i>

APPENDIX II: INTRODUCTION LETTER



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20th August, 2013



TO WHOM IT MAY CONCERN

The bearer of this letter, **Obed Obiero Bogonko** of Registration number **D61/61046/2011** is a Master of Business Administration (MBA) student of the University of Nairobi, Mombasa Campus.

He is required to submit as part of his coursework assessment a research project report. We would like the student to do his project on **"Effects of Ownership Structure on Firm's Dividend Policy: Evidence from Nairobi Securities Exchange"**. We would therefore, appreciate if you assist him by allowing her to collect data within your organization for the research.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organization on request.

Thank you.



MR. JOB MWANYOTA
ASSISTANT CO-ORDINATOR, MOMBASA CAMPUS

JM/maa

APPENDIX III: DATA COLLECTION FORM

1.Name of firm.....

2.Industry of firm.....

3.Dividend payout of firm

Year	2008	2009	2010	2011	2012
Amount in Kshs.					
DPR					

1. Ownership of firm

Year	2008	2009	2010	2011	2012
Local in Kshs.					
Foreign in Kshs.					
Total in Kshs.					

**APPENDIX IV: CHANGES IN PAYOUT, FOREIGN OWNERSHIP
AND LOCAL OWNERSHIP**

2009	NSE Listed Firm	Δ Payout	Δ Foreign	Δ Local
1	<i>Kakuzi Ltd</i>	0.144175	0.66	0.00
2	<i>Limuru tea co. Ltd</i>	0.333333	-0.48	-0.66
3	<i>Rea vipingo plantations Ltd</i>	0.201613	-0.10	0.10
4	<i>Kenya Airways Ltd</i>	-0.11312	0.41	-0.04
5	<i>Nation Media Group</i>	0.710594	0.10	0.00
6	<i>Scangroup Ltd</i>	0.276243	14.63	0.00
7	<i>TPS Eastern Africa (Serena) Ltd</i>	0.376506	0.25	1.87
8	<i>Safaricom Ltd</i>	0.377358	0.95	0.01
9	<i>Barclays Bank Ltd</i>	2.232143	0.42	1.00
10	<i>Diamond Trust Bank Kenya Ltd</i>	0.201939	-0.83	30.17
11	<i>Equity Bank Ltd</i>	0.350877	2.50	-42.40
12	<i>Housing Finance Co Ltd</i>	0.490196	0.07	41.60
13	<i>Kenya Commercial Bank Ltd</i>	0.543478	0.61	-0.95
14	<i>NIC Bank Ltd</i>	0.181818	-0.04	-14.63
15	<i>Standard Chartered Bank Ltd</i>	0.729483	-0.49	-0.02
16	<i>The Co-operative Bank of Kenya Ltd</i>	0.235294	0.09	-0.25
17	<i>Jubilee Holdings Ltd</i>	0.245499	0.17	0.00
18	<i>Kenya Re-Insurance Corporation Ltd</i>	0.226244	-1.19	0.00
19	<i>B.O.C Kenya Ltd</i>	0.609137	0.02	0.00
20	<i>British American Tobacco Kenya Ltd</i>	0.947368	-0.55	-0.42
21	<i>Carbacid Investments Ltd</i>	0.662837	0.00	62.16
22	<i>East African Breweries Ltd</i>	0.924225	2.15	-12.01
23	<i>Mumias Sugar Co. Ltd</i>	0.380952	-0.55	-19.11
24	<i>Bamburi Cement Ltd</i>	0.600437	0.03	-33.14
25	<i>Crown Berger Ltd</i>	0.194704	-0.12	0.55
26	<i>E.A.Cables Ltd</i>	0.819672	-0.03	-0.17
27	<i>Kengen Ltd</i>	0.531915	0.15	-0.61
28	<i>Kenya Power & Lighting Co Ltd</i>	0.196271	-0.14	1.19
29	<i>Kapchorua tea Co Ltd</i>	0.363738	-0.13	0.83
30	<i>Williamson tea Kenya Ltd</i>	0.318725	-0.15	0.04
31	<i>Express Ltd</i>	0.767442	-0.53	0.19
32	<i>Cfc Stanbic Holdings Ltd</i>	3.076923	-1.03	0.39
33	<i>Pan Africa Insurance Holdings Ltd</i>	0.588235	-1.50	0.49
34	<i>Everready East Africa</i>	0	-0.09	0.10
35	<i>Sameer Africa</i>	0.877193	0.01	0.82
36	<i>Centum Investments</i>	0.789474	0.04	0.00

2010	NSE Listed Firm	Δ Payout	Δ Foreign	Δ Local
1	<i>Kakuzi Ltd</i>	0.15753	-0.11	0.00
2	<i>Limuru tea co. ltd</i>	0.120192	-0.15	0.11
3	<i>Rea vipingo plantations ltd</i>	0.714286	0.03	-0.03
4	<i>Kenya Airways Ltd</i>	0.227273	3.80	0.01
5	<i>Nation Media Group</i>	0.818833	-0.35	0.00
6	<i>Scangroup Ltd</i>	0.331754	-0.16	0.00
7	<i>TPS Eastern Africa (Serena) Ltd</i>	0.284738	-2.18	-0.63
8	<i>Safaricom Ltd</i>	0.526316	1.12	-0.01
9	<i>Barclays Bank Ltd</i>	0.697436	0.03	0.02
10	<i>Diamond Trust Bank Kenya Ltd</i>	0.114058	0.14	-34.39
11	<i>Equity Bank Ltd</i>	0.414508	2.60	41.90
12	<i>Housing Finance Co Ltd</i>	0.424242	-0.11	-41.57
13	<i>Kenya Commercial Bank Ltd</i>	0.452899	2.01	-1.13
14	<i>NIC Bank Ltd</i>	0.108696	-0.04	0.15
15	<i>Standard Chartered Bank Ltd</i>	0.726588	0.00	-0.03
16	<i>The Co-operative Bank of Kenya Ltd</i>	0.305344	0.58	2.18
17	<i>Jubilee Holdings Ltd</i>	0.171875	-1.47	0.00
18	<i>Kenya Re-Insurance Corporation Ltd</i>	0.136187	0.35	0.00
19	<i>B.O.C Kenya Ltd</i>	2.315271	-0.63	0.00
20	<i>British American Tobacco Kenya Ltd</i>	0.990379	4.62	-0.03
21	<i>Carbacid Investments Ltd</i>	0.552486	-0.02	-62.44
22	<i>East African Breweries Ltd</i>	0.963656	0.45	12.70
23	<i>Mumias Sugar Co. Ltd</i>	0.38835	0.21	14.01
24	<i>Bamburi Cement Ltd</i>	0.606277	-1.08	33.18
25	<i>Crown Berger Ltd</i>	0.199681	0.02	-0.71
26	<i>E.A.Cables Ltd</i>	1.123596	0.02	1.47
27	<i>Kengen Ltd</i>	0.561798	0.43	-2.01
28	<i>Kenya Power & Lighting Co Ltd</i>	0.170321	0.51	-0.35
29	<i>Kapchorua tea Co Ltd</i>	0.175562	0.03	-0.03
30	<i>Williamson tea Kenya Ltd</i>	0.062469	-0.35	0.28
31	<i>Express Ltd</i>	-0.68354	0.50	-0.04
32	<i>Cfc Stanbic Holdings Ltd</i>	0.122511	1.31	3.40
33	<i>Pan Africa Insurance Holdings Ltd</i>	0.2443	1.22	0.00
34	<i>Everready East Africa</i>	0	-0.06	-0.39
35	<i>Sameer Africa</i>	2.65	0.14	-0.62
36	<i>Centum Investments</i>	0.281407	-0.21	0.00

2011	NSE Listed Firm	Δ Payout	Δ Foreign	Δ Local
1	<i>Kakuzi Ltd</i>	0.115823	1.68	0.00
2	<i>Limuru tea co. ltd</i>	0.222552	0.67	-24.63
3	<i>Rea vipingo plantations ltd</i>	0.141207	0.76	-0.76
4	<i>Kenya Airways Ltd</i>	0.196078	0.66	0.04
5	<i>Nation Media Group</i>	0.629426	0.87	0.00
6	<i>Scangroup Ltd</i>	0.27451	4.61	0.00
7	<i>TPS Eastern Africa (Serena) Ltd</i>	0.288889	-1.72	-3.82
8	<i>Safaricom Ltd</i>	0.666667	3.47	0.01
9	<i>Barclays Bank Ltd</i>	1.04698	0.39	0.11
10	<i>Diamond Trust Bank Kenya Ltd</i>	0.125475	1.83	33.05
11	<i>Equity Bank Ltd</i>	0.358423	3.88	-42.43
12	<i>Housing Finance Co Ltd</i>	0.444444	0.26	36.98
13	<i>Kenya Commercial Bank Ltd</i>	0.497312	10.24	-48.43
14	<i>NIC Bank Ltd</i>	0.090253	0.38	-29.98
15	<i>Standard Chartered Bank Ltd</i>	0.570539	0.15	16.52
16	<i>The Co-operative Bank of Kenya Ltd</i>	0.25974	1.58	-45.13
17	<i>Jubilee Holdings Ltd</i>	0.183333	0.56	0.00
18	<i>Kenya Re-Insurance Corporation Ltd</i>	0.127737	0.44	0.00
19	<i>B.O.C Kenya Ltd</i>	0.622568	0.01	29.99
20	<i>British American Tobacco Kenya Ltd</i>	0.984506	0.42	11.12
21	<i>Carbacid Investments Ltd</i>	0.56243	3.01	-2.53
22	<i>East African Breweries Ltd</i>	0.94086	3.53	-1.83
23	<i>Mumias Sugar Co. Ltd</i>	0.396825	0.79	-3.88
24	<i>Bamburi Cement Ltd</i>	0.692521	-7.94	-0.26
25	<i>Crown Berger Ltd</i>	0.173853	0.12	-0.77
26	<i>E.A.Cables Ltd</i>	0.695652	-1.19	-0.57
27	<i>Kengen Ltd</i>	0.531915	-0.22	-10.24
28	<i>Kenya Power & Lighting Co Ltd</i>	0.208333	2.92	-0.43
29	<i>Kapchorua tea Co Ltd</i>	0.156904	-0.03	0.12
30	<i>Williamson tea Kenya Ltd</i>	0.153909	-0.10	-0.62
31	<i>Express Ltd</i>	-0.98485	-0.04	-0.32
32	<i>Cfc Stanbic Holdings Ltd</i>	0.13544	2.53	6.27
33	<i>Pan Africa Insurance Holdings Ltd</i>	0.262136	0.11	-0.15
34	<i>Everready East Africa</i>	0	0.00	-1.58
35	<i>Sameer Africa</i>	0.970149	0.78	-0.10
36	<i>Centum Investments</i>	0.331897	0.05	0.00

2012	NSE Listed Firm	Δ Payout	Δ Foreign	Δ Local
1	<i>Kakuzi Ltd</i>	0.193798	-0.18	76.01
2	<i>Limuru tea co. Ltd</i>	0.088339	0	0.00
3	<i>Rea vipingo plantations Ltd</i>	0.173502	1.75	-1.75
4	<i>Kenya Airways Ltd</i>	0.226257	5.79	-74.73
5	<i>Nation Media Group</i>	0.627353	0.37	97.53
6	<i>Scangroup Ltd</i>	0.271493	5.91	97.53
7	<i>TPS Eastern Africa (Serena) Ltd</i>	0.361111	1.13	0.00
8	<i>Safaricom Ltd</i>	0.96875	2.81	-5.16
9	<i>Barclays Bank Ltd</i>	0.621118	1.46	-59.38
10	<i>Diamond Trust Bank Kenya Ltd</i>	0.108945	1.51	4.03
11	<i>Equity Bank Ltd</i>	0.383436	6.51	-9.36
12	<i>Housing Finance Co Ltd</i>	0.434783	1.14	0.00
13	<i>Kenya Commercial Bank Ltd</i>	0.462287	5.31	-2.02
14	<i>NIC Bank Ltd</i>	0.165837	17.08	23.35
15	<i>Standard Chartered Bank Ltd</i>	0.469925	0.17	52.07
16	<i>The Co-operative Bank of Kenya Ltd</i>	0.271739	0.22	43.93
17	<i>Jubilee Holdings Ltd</i>	0.2	0.11	98.84
18	<i>Kenya Re-Insurance Corporation Ltd</i>	0.1	0.6	98.84
19	<i>B.O.C Kenya Ltd</i>	0.499505	0.71	-24.11
20	<i>British American Tobacco Kenya Ltd</i>	0.99358	3.72	-35.62
21	<i>Carbacid Investments Ltd</i>	0.52356	0.33	-34.16
22	<i>East African Breweries Ltd</i>	0.650074	4.67	44.19
23	<i>Mumias Sugar Co. Ltd</i>	0.378788	2.85	-60.03
24	<i>Bamburi Cement Ltd</i>	0.862777	1.56	-1.91
25	<i>Crown Berger Ltd</i>	0.170999	4.39	-73.25
26	<i>E.A.Cables Ltd</i>	0.574713	-0.77	51.06
27	<i>Kengen Ltd</i>	0.46875	0.01	14.66
28	<i>Kenya Power & Lighting Co Ltd</i>	0.211864	0.91	0.78
29	<i>Kapchorua tea Co Ltd</i>	0.376317	-0.01	0.13
30	<i>Williamson tea Kenya Ltd</i>	0.613399	0.03	0.99
31	<i>Express Ltd</i>	-0.75556	0.43	-0.56
32	<i>Cfc Stanbic Holdings Ltd</i>	0.138889	9.01	0.43
33	<i>Pan Africa Insurance Holdings Ltd</i>	0.356589	0.24	-0.53
34	<i>Everready East Africa</i>	0	0.02	-0.27
35	<i>Sameer Africa</i>	0.483333	0.73	-8.00
36	<i>Centum Investments</i>	0.254167	-0.51	71.24

APPENDIX V: RESIDUAL OUTPUTS

<i>Observation</i>	<i>Predicted Payout</i>	<i>Residuals</i>	<i>Standard Residuals</i>
1	0.449153265	-0.304977948	-0.631394188
2	0.465899837	-0.132566504	-0.274451713
3	0.460159396	-0.258546492	-0.535267398
4	0.452834253	-0.565956425	-1.171696512
5	0.457211824	0.253382491	0.524576395
6	0.247854946	0.028388148	0.058771828
7	0.45435565	-0.077849626	-0.161171658
8	0.445057672	-0.067699182	-0.140157248
9	0.452172516	1.779970341	3.685062927
10	0.457246094	-0.255307483	-0.528561695
11	0.441434934	-0.090557741	-0.187481199
12	0.439284137	0.050911941	0.105402715
13	0.450327689	0.093150572	0.192849123
14	0.465818547	-0.284000366	-0.587964414
15	0.465818769	0.263664514	0.545863211
16	0.457477095	-0.222182977	-0.459984211
17	0.456235345	-0.210736164	-0.436285935
18	0.475814926	-0.249570582	-0.51668462
19	0.458453313	0.150683743	0.311959735
20	0.466815068	0.480553353	0.994886996
21	0.431156308	0.231680635	0.479647159
22	0.433079643	0.491145385	1.016815623
23	0.475055958	-0.094103577	-0.194822124
24	0.472950832	0.12748585	0.263933262
25	0.460218047	-0.265513997	-0.549692185
26	0.459258764	0.360413367	0.746161836
27	0.45682428	0.075090614	0.15545969
28	0.460162975	-0.263892121	-0.546334424
29	0.46022806	-0.096489951	-0.199762622
30	0.460905696	-0.142180596	-0.294355716
31	0.466343996	0.301097864	0.623361272
32	0.473391003	2.603532074	5.390078308
33	0.480118141	0.108117153	0.223834354
34	0.460024961	-0.460024961	-0.952387177
35	0.458172211	0.419020771	0.867496427
36	0.458201255	0.331272429	0.68583151
37	0.460268413	-0.302738482	-0.626757835
38	0.46087264	-0.340680333	-0.705308642
39	0.458352637	0.255933078	0.52985686

40	0.403953099	-0.176680372	-0.365780414
41	0.463727338	0.355105825	0.73517366
42	0.460980436	-0.129226881	-0.26753771
43	0.490433536	-0.205695495	-0.425850267
44	0.442524447	0.083791343	0.173472762
45	0.458252623	0.239183275	0.495179834
46	0.472018429	-0.357960073	-0.741082795
47	0.402643598	0.011864174	0.024562334
48	0.478736407	-0.054493983	-0.112818596
49	0.430274099	0.022624451	0.046839279
50	0.459295577	-0.350599925	-0.72584512
51	0.458698666	0.267889063	0.554609272
52	0.449448472	-0.144104961	-0.298339718
53	0.479839161	-0.307964161	-0.637576529
54	0.453654205	-0.317467434	-0.657251104
55	0.467812408	1.847458528	3.824783353
56	0.392163426	0.598215747	1.238482812
57	0.48666722	0.065818968	0.136264652
58	0.446649823	0.517006565	1.070355882
59	0.449508011	-0.061158496	-0.126616102
60	0.459605584	0.146671163	0.303652513
61	0.458746811	-0.2590663	-0.536343552
62	0.457768202	0.665827304	1.378458649
63	0.453356763	0.108440989	0.224504791
64	0.451493867	-0.281172385	-0.582109661
65	0.45831338	-0.282751583	-0.585379065
66	0.463626679	-0.401157913	-0.830515048
67	0.451529034	-1.135073337	-2.349936164
68	0.438331824	-0.315820339	-0.653841132
69	0.441138179	-0.196838505	-0.407513688
70	0.459761843	-0.459761843	-0.951842447
71	0.456977496	2.193022504	4.540202576
72	0.461727666	-0.180320631	-0.373316822
73	0.434507002	-0.318683766	-0.659769269
74	0.45998558	-0.237433651	-0.491557597
75	0.448101389	-0.306894713	-0.635362458
76	0.449188858	-0.253110426	-0.52401314
77	0.446180659	0.18324499	0.379371107
78	0.392280068	-0.117770264	-0.243819138
79	0.485201194	-0.196312305	-0.406424298
80	0.408705226	0.257961441	0.53405617
81	0.453051778	0.593928088	1.229606094
82	0.417689403	-0.292214117	-0.6049693

83	0.421613592	-0.063190653	-0.130823265
84	0.438575206	0.005869238	0.012151052
85	0.33261467	0.164697158	0.340971632
86	0.466535763	-0.376283056	-0.779016766
87	0.449233385	0.121306035	0.251139224
88	0.455957279	-0.196217019	-0.406227028
89	0.450648355	-0.267315022	-0.553420838
90	0.452377786	-0.32464056	-0.672101587
91	0.445276542	0.177291552	0.367045736
92	0.447736831	0.536769302	1.11127057
93	0.416460446	0.14596925	0.302199345
94	0.408657296	0.532202919	1.101816812
95	0.449054327	-0.05222893	-0.108129269
96	0.573264607	0.119256169	0.246895398
97	0.457333209	-0.283480636	-0.586888421
98	0.476120582	0.219531592	0.454495063
99	0.466429696	0.065485197	0.135573648
100	0.416828961	-0.208495628	-0.431647365
101	0.459099056	-0.302195291	-0.625633268
102	0.460433184	-0.306523888	-0.63459474
103	0.459438508	-1.444286993	-2.990099516
104	0.419476598	-0.284036417	-0.588039052
105	0.457198644	-0.195062721	-0.403837292
106	0.459417598	-0.459417598	-0.951129758
107	0.447522073	0.52262718	1.081992212
108	0.457998436	-0.126101884	-0.261068046
109	0.427609608	-0.233811158	-0.48405797
110	0.458721025	-0.370381803	-0.766799434
111	0.434274655	-0.260773078	-0.539877087
112	0.408411865	-0.182154882	-0.377114263
113	0.410142133	0.217210439	0.449689591
114	0.330300081	-0.058806868	-0.12174754
115	0.442435359	-0.081324248	-0.168365149
116	0.420508165	0.548241835	1.135022093
117	0.464007825	0.157110188	0.325264368
118	0.435167942	-0.326222988	-0.67537768
119	0.369045714	0.014389869	0.029791268
120	0.442291083	-0.007508474	-0.015544753
121	0.38308928	0.079197825	0.163962827
122	0.202211311	-0.036373831	-0.075304545
123	0.433182845	0.036741967	0.076066696
124	0.436068209	-0.164329078	-0.340209598
125	0.413308163	-0.213308163	-0.441610732

126	0.406246321	-0.306246321	-0.634020095
127	0.459175377	0.040330064	0.083495112
128	0.42089914	0.572680805	1.18561796
129	0.469112011	0.054448199	0.11272381
130	0.371819511	0.278254784	0.576069367
131	0.444262658	-0.065474779	-0.13555208
132	0.437081773	0.425695548	0.881315181
133	0.427931221	-0.256932589	-0.531926143
134	0.447175658	0.127536986	0.26403913
135	0.452076298	0.016673702	0.034519475
136	0.445257845	-0.233393438	-0.483193168
137	0.458807488	-0.082490378	-0.170779382
138	0.457849048	0.155549715	0.32203373
139	0.452772099	-1.208327654	-2.501594178
140	0.328674742	-0.189785853	-0.392912621
141	0.455496107	-0.098906959	-0.20476654
142	0.458550722	-0.458550722	-0.949335068
143	0.451745934	0.031587399	0.065395221
144	0.434481394	-0.180314727	-0.3733046