THE IMPLICATION OF AGENCY AND TRANSACTION COSTS IN THE DETERMINATION DIVIDEND POLICY: CASE OF LISTED FIRMS IN KENYA

BY

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DECLARATION

This research paper is my original work and has not been presented for a degree award in any other University.

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DEDICATION

I dedicated this research work to my late *Maayi* Nafula and *Mulamwa* Gentrix who both passed on a few months before its completion. *Maayi* Nafula's words '*Papa akhoya usome mende kamani*' are very fresh in my minds. On the other hand, *Mulamwa* Gentrix kept telling me these words, '*Mulamwa yaya okhaka*'. My prayer is that the Good Lord keeps their Souls in Eternal Peace.

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However, the views expressed in this paper are my own and do not bear the views of the named persons or institutions. I bear the responsibility for any errors and or omissions.

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AGM	Annual General Meeting
AIC	Asymmetric Information Costs
AIMS	Alternative Investment Market Segment
CMA	Capital Market Authority
EABI	East African Breweries Limited
FISMS	Fixed Income Securities Market Segment
GDP	Gross Domestic Product
GNP	Gross National Product
INSTOWN	Institutional Ownership
IPO	Initial Public Offer
LP	Legal Protection
LSE	London Stock Exchange
M&M	Modigliani and Miller
MIMS	Main Investment Segment
MLE	Maximum Likehood Estimation
NPV	Net Present Value
NSE	Nairobi Stock Exchange
RHS	Right Hand Side
UK	United Kingdom
USA	United States of America

ABSTRACT

This study investigates the implications of agency and transaction costs in the determination of the dividend policy with specific reference to listed firms in Kenya. It is based on Rozeff's (1982) Cost Minimization Model, which predicts that the optimal target dividend payout ratio is observed at the level where transaction costs associated with raising external finance and agency costs are minimized.

The study analyzes a sample of 20 listed firms using panel data for a period of 6 years (1999 – 2004). Transaction cost is proxied by four variables namely growth defined as the annual rate of change in the total net assets of the firm; risk, measured as the volatility of the firms' daily stock prices in each year; firm thinness, defined as the number of days the firm trades its shares on the stock exchange in a given year relative to the number of days trading takes place on the stock exchange in the same year and finally liquidity is measured as turnover divided by market capitalization of the firm. Agency cost is proxied by the percentage of shares owned by the public (who constitute individual Kenyan investors), Kenyan institutions (these include insurance companies, mutual funds and financial institutions) and foreigners (these include foreign nationals, institutions).

Following the diagnostic tests, the random effects model is found to be the best fitted model. The results show that firms that experience an increase in the amount of the total net assets offer lower dividend payouts as such growth rates require more funds to meet high investment expenditures. Secondly, firms whose shares are frequently traded on the stock exchange establish higher dividends since they can easily raise capital from the market at low cost resulting to higher ratio of retained earnings that can be paid as dividends. Subsequently, firms whose share prices are highly volatile establish low dividends pay out as this implies possible mis pricing and higher underwriting fees when raising external finance. Lastly, the findings show that the higher the percentage of shares owned by the public, Kenyan institutions and foreign investors, the lower the dividends payout. Generally, the findings support the fact that agency and transaction costs are key determinants of dividend pay out and that firms determine the optimal dividend pay out ratio through time by minimizing both agency and transaction costs.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Introduction

Dividends are defined as the distribution of part of a firm's earnings to shareholders. Dividend policy, involves the firm's decision to pay dividends. The original work by Miller and Modigliani (1958), otherwise known as the irrelevancy theory of dividends, declared dividends irrelevant and contented that when the investment policy of the firm is held constant, dividend payout has no consequence on shareholder wealth. Miller and Modigliani (1958)'s irrelevancy theory has attracted the attention of subsequent studies characterized by conflicting views in attempt to explain why firms pay dividends. Unlike the irrelevancy theory which deems dividends as irrelevant, subsequent studies deem dividends as increasing shareholder value and therefore firms should follow dividends policies. Generally, according to Lloyd et al (1985), there is no common explanation on why firm pay dividends despite all the substantial amount of research directed towards this field. This has resulted to what is known as the 'dividend puzzle'.

According to Hansen et al (1999) and Moh'd et al (1995), a number of issues even further widen and complicate the dividend puzzle. First, when firms issue dividends, they reduce retained earnings and hence in order to meet their investment needs, they float new securities, which are associated with costs. Easterbrook (1984) identifies these costs as investigation and monitoring by actors on the capital market. Second, dividends are taxable to many investors and hence firms can reduce these taxes by holding and reinvesting their profits instead of paying them as dividends. But in their empirical survey, these studies (Hansen et al (1999) and Moh'd et al (1995) show that payment of dividends remains a widely observed phenomenon among firms all over the world. In Kenya for example, data on dividend payment trends show that over 50 percent of listed firms pay dividends annually. More so, John and William (1985) note that firms do not only declare dividends but also increase them from time to time. They attribute this to the fact the mangers are usually sure that higher dividends mean higher prices for their shares.

Apart from the above issues that have often completed the dividend puzzle, there are other interesting observable phenomena around dividend policy. In their study, Fama and French (2001) found that the pattern of corporate dividend practice varies over time and across firms. Their empirical observation of dividend payout of publicly traded (non-financial and non-utility) firms in the US over the 25 years in 1973, 1978 and 1999 show that the proportion of firms that paid dividends was 52.8%, 66.5% and 20.8% respectively. They also found that these firms do not have a common dividend payment practice. Other studies e.g. Glen et al. (1995) and Ramcharran (2001) found that the patterns of corporate dividend payout policies also vary across countries, especially between developed and emerging capital markets. Their study found out that dividend policies in emerging markets differ from those in developed markets and that there is low dividend yields for emerging markets as compared to the developed economies.

A number of research questions arise from the above discussion. First, while dividend policy remains very common phenomenon among firms all over the world, (as urged by Hansen et al (1999) and Moh'd et al (1995), what are the determinants of dividend policy, and are these determinants common or varying across firms and over time? Second, while it is observed that when firms issue dividends, they also incur costs to float new securities to maintain their optimal investments policies, what costs are associated with dividend policy and are these costs common or varying across firms and over time?

Lastly, Manos (2002) urge that a considerable amount of existing dividend policy literature is based in developed capital market such as US. The study contents that there is need to investigate the nature and characteristics of dividend policy in developing capital markets so as to contribute to the relevant existing dividend literature. Key areas that need attention in this respect are determinants of dividend payouts and costs associated with dividends pay out in developing capital markets like Kenya

In connection with above, this study seeks to find the key determinants of dividend payouts in Kenya, a developing capital market. According to Manos (2002), there has been considerable research that seeks to identify determinants of corporate dividend policy and

that one branch of this literature has focused on an agency-related rationale for paying dividends. It is based on the idea that monitoring of the firm and its management is helpful in reducing agency conflicts (conflicts between the managers and the outside shareholders) and in convincing the market that the managers are not in a position to abuse their position.

According to Jensen and Meckling (1976), shareholders usually take measures aimed at controlling the actions of the management that are not in the interest of shareholders. By taking these measures, the shareholders incur agency costs. Some shareholders may be monitoring managers, but the problem of collective action results in too little monitoring taking place. Thus Easterbrook (1984) suggests that one way of solving this problem is by increasing the payout ratio. However, when the firm increases its dividend payment, assuming it wishes to proceed with planned investment, it is forced to go to the capital market to raise additional finance. This induces monitoring by potential investors of the firm and its management, thus reducing agency problems and creating costs known as transaction costs.

Hence from the agency-based model of dividends briefly discussed above, two types of costs come up that are key determinants of the dividend policy; the transaction costs and the agency costs. This study develops a model, by replicating and expanding the work of Rozeff (1982)'s Cost Minimization Model that tests the dividend decisions by firms using agency and transaction costs as important determinants of dividend payout ratio through time and across firms listed in Kenya. This model has only been tested in developed capital markets particularly, the US and a few developing capital market such as India. Hence through this study, we shade a fresh light on the agency rationale for dividend outside the initial testing ground.

In conclusion, this study seeks to investigate the nature and characteristics of dividend policy in Kenya, a developing capital market by investigating the key determinants of dividend payouts.

1.2 Nairobi Stock Exchange and Dividend Policy

This section presents a general dividend payment policy of NSE listed firms. We specifically analyze the dividend policy trend of NSE listed firms over a period of 8 years (1999-2004). During this period, NSE had a total of 47 listed firms during the years 1999-2000 which increased to 48 from 2001 following the listing of Mumias Sugar Company. It is also important to note that according to the Capital Market Authority Annual Report 2005, a heterogenous form of shareholders who are widely dispersed in the country and abroad characterizes the pattern of shareholding in all the firms listed on NSE. Some of these shareholders are Kenyan individual investors, Kenyan institutional investors, East African individual investors, East African institutional investors, foreign individual inventors and foreign institutional investors. In this regard, the day to day running of the firm's businesses is in the hands of directors or managers.

Close to five categories of dividends are declared in cash by firms listed on NSE These include final, interim, bonus and special dividends. Final dividends are paid at the end of the financial year. The company directors at the annual general meeting usually announce them. Shareholders have the option of voting to accept or to reduce them, but they cannot increase them. Interim dividends are the form of dividends that are declared and distributed before the company's annual earnings have been calculated, they are often distributed quarterly.

Glen et al (1995) and Ramcharran (2001) in their empirical survey found that the patterns of dividend payout policies vary across firms. This is a true reflection of the dividend policy practices of firms listed on NSE as indicated in table 1. There are firms that only pay final dividends at the end of the financial year ending. While there are others end up only paying interim dividends at the end of the financial year. Others still pay both final and interim dividends during the same year. However, it can be noted that final dividends are the most declared dividends as compared to interim dividends or both. This is because unlike final dividends, the award of other forms of dividends depends on the performance of the firm during the previous financial year (*NSE handbook 2004*).

Table 1 shows dividend policy trend of NSE listed firms over a period of 8 years (1999-2004). It can be observed that more than 50 percent of firms declared final dividends on an annual basis over this whole period. On average, 35 percent of the firms did not pay dividends every year for this same period. Along side final dividends, the figures show that less than 50 percent of firms listed on NSE paid interim dividend over this period. This validates the fact that most of the firms prioritize final dividends as compared to interim dividends or both because the declaration of interim (or both final and interim) depends on the profits margins of the firm.

Table 1: Dividend payment trend of NSE listed firms, 1999-2004

Year	No. of firms that paid final dividends	% of firms that paid final dividends	No. of firms that paid interim dividends	% of firms that paid interim dividends
1997	37	79	22	47
1998	35	74	21	45
1999	31	66	22	47
2000	29	62	15	32
2001	25	53	14	30
2002	29	60	12	25
2003	29	60	9	19
2004	31	65	16	33

Source, NSE Hand book, 2004

Additionally, there is changing dividend payment practices over time. This supports Fama and French (2001) who urge that the pattern of corporate dividend practice varies over time and across firms. From table 1, figures show that the number of firms that paid final dividends during the years 1999, 2000, 2001 and 2002 was 79, 74, 66, 62 and 53 respectively. Additionally, this trend is almost the similar in the way interim dividends were also declared. It can be observed that firms that declared interim dividends during the years 1999, 2000, 2001 and 2002 was 47, 45, 47, 32 and 30 respectively. Generally, this suggests a reducing trend in terms of the number of firms that paid final as well as interim dividends.

While there are firms that declare dividends more frequently, others do not honour this obligation. This still suggests the varying pattern of dividend policy practice across firms listed on NSE. There are various reasons that have been cited to explain why firms did not

pay dividends. Some firms, such Kenya Power and Lighting Company, accumulated unbearable deficits resulting from the losses made over the previous financial years. Those within the agricultural sector experienced problems such as adverse weather, poor trading conditions, fluctuating of prices of raw materials and highly depreciated currency against the international currency among others.

In addition to final and interim dividends, firms on NSE also pay bonus dividend. Bonuses are abnormal dividends declared out of profits. Firms on NSE that pay these dividends in cash, which are regarded as an increment to the normal dividend and are unlikely to be repeated in future periods, for example an additional dividend paid in the centenary year of a company. Table 2 shows that less than 10 firms were able offer this form of dividends over this period. This is attributed to the fact that that most of the firms listed on NSE cannot generate profits out of which bonuses can be paid.

Table: 2 Dividend payment trend of NSE listed firms, 1999-2004 (bonuses)

Year	No. of firms that paid bonus	% of firms that paid bonus
97	9	15
98	6	11
1999	4	9
2000	3	7
2001	6	11
2002	2	5
2003	3	7
2004	2	5

Source, NSE Hand book, 2004

There are also special dividends, which are typically viewed on the market as a temporary increase in a firm's payout paid to investors without their prior anticipation. Previous researches, e.g. Brickley (1983) find a significant positive stock price reaction to the announcement of special dividends and documents that the firm's. It can be noted that very few firms on NSE offer this form of dividends. In 2000, only Kenol paid this form of dividends while BOC and Bamburi followed this suit in 2002 and 2004 respectively.

In conclusion, the following two conclusions can be made out of the observable the pattern of shareholding and dividend payment trend among listed firms in Kenya. First, since the shareholders are dispersed, it therefore means that the day to day running of the firm's businesses is in the hands of directors or managers. This creates separation of ownership and control between shareholders (who owners of the firm) and the managers or directors (who are top employees of the firm). According to Shleifer and Vishny (1997) (Baumol (1959), Jensen (1986), this separation of ownership and control may lead to managers indulging in activities that are detrimental to the interests of the shareholders. They note that shareholders will have to incur costs such as monitoring and auditing costs so as to minimize the management's value decreasing behaviour, such cost are called agency costs.

Second, when looking at the dividend payment policy of the listed firms in Kenya, we observe that there is a reducing trend in terms of the number of firms that pay final as well as interim dividends over time. This draws attention as far as agency and transaction costs are related to dividend policy in Kenya. According to Easterbrook (1984) firms reduces dividend payment in order to avoid being forced to go to the capital market to raise additional finance due to reduced retained earnings. This is because raising funds from the capital market is associated with costs known as transaction costs which are identified by Easterbrook (1984) as investigation and monitoring by actors on the capital market. This means that with time most firms use their retained earnings to invest instead of externally sourcing funds to associates costs such as interests payable.

1.3 Statement of the Problem

In Kenya, owners of shares of listed firms are widely dispersed and hence the day-to-day running of firms lies in the hands of the managers. Baumol (1959), Jensen (1976) and Shleifer and Vishny (1997) urge that separation of ownership and control leads to conflicts of interests that arise between shareholders (principals) and managers (agents). This is because managers are likely to indulge in activities that are not in the interests of the shareholders.

According to Jensen and Meckling (1976), shareholders respond by taking measures that are aimed at controlling the management actions that are not within their interests. By taking

these measures. Jensen and Meckling (1976) further urge that the shareholders incur costs known as agency costs. These costs include hire of auditors, payment of huge salaries and other form of pecuniary benefits to the management to ensure that they are not attempted to divert firm's funds (boding costs) among other costs.

However, since the shareholders are widely dispersed, it is costly and not easy for them to collectively organize themselves to effectively enforce auditing and bonding measures. According to the agency theory (as proposed by Jensen and Meckling (1976) and Easterbrook (1984)), payment of dividends is similar to incurring auditing and bonding costs that can easily and be collectively employed by shareholders irrespective of their level of dispersion, to ensure that managers work in their interests. This is because, when profits are paid out to shareholders in the form of dividends, there are no funds left that can be diverted by the management for personal use or committed to unprofitable projects.

However, Easterbrook (1984) notes that if the firm increases its dividend pay out, assuming it wishes to proceed with planned investments; it is forced to go to the capital market to raise additional finance due to reduced retained earnings. Raising funds from the capital market is associated with costs known as transaction costs. Easterbrook (1984) identifies transaction costs as investigation and monitoring by investment banks, the securities exchange and capital suppliers as well as interest payable on borrowed funds.

This means that a reduction in agency costs through dividend payment induces external monitoring, which increases the transaction costs associated with raising external funds and hence in order to achieve the optimum dividend pay out, firms choose a level where both costs are minimized. There is need to develop model that empirically tests the relationship between agency costs and transaction costs, as key determinants of dividend policy. There is also need to develop a model that will estimate the optimum dividend pay out, where both costs are minimized.

Hence, this study develops a model, based on Rozeff's Cost Minimization Model, to empirically test the relationship between dividend policy and agency and transaction costs.

1.4 Objectives of the Study

The main objective of the study objective is to find out how agency and transaction costs determine dividend policy with specific reference to listed firms in Kenya. The specific objectives of the research are:

- To examine the determinants of the dividend policy of listed firms on NSE.
- To determine how agency and transaction costs affect the dividend policy of listed firms on NSE.
- To draw policy recommendations based on these findings.

1.5 Significance of the Study

Manos (2002) urge that much of the existing dividend policy literature is based on developed capital market such as US. By applying the agency-based model of dividends, namely the Cost Minimization Model, to a developing economy, Kenya, this study therefore investigates the nature and characteristics of dividend payment policies in developing capital markets and so contributes to the relevant existing dividend literature.

The findings of this study will also provide space for more research and debate on the dividend puzzle especially in the Kenyan stock market context, so as to unveil more information about the dividends policies among firms in Kenya. More research are likely to come up, building on this study by introducing more other better proxies to capture the transactions and agency costs that affect dividend pay out.

Finally, the study considers that not all Kenyans have adequate knowledge about the stock market. It acknowledges that there is need to create an informed Kenyan investor shareholder class which can be achieved through provision of mass education on issues such as the benefits of investing in shares, rights of shareholders, types of shares, nature and type of firms listed among other core issues. In this regard, we believe that through this study, the public will be informed more about the stock market. This will act to solve the problem of shareholder-management conflicts.

The rest of this paper organized as follows: Chapter 2 reviews the relevant literature on the dividend policy. Methodology adopted and the estimation procedure is in Chapter 3. Chapter 4 gives the findings of the paper and discussions. Chapter 5 gives the conclusions and the policy implications of the study.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Theoretical Literature Review

The motive behind dividend payment by corporations and why investors pay attention to dividends remains unanswered. Since Black's paper (1974), four decades up to now (2006), a lot of work has been done to explain the reasons behind dividend payment, but financial economists have not agreed on this issue. This has led to what is commonly called dividend puzzle. Lintner (1956) notes that despite the dividend puzzle, corporations follow extremely deliberate dividend payouts strategies.

Modigliani and Miller (1958) deem dividend payment irrelevant. Their theory assumes that we live in a would where perfect markets exist, meaning that there are no taxes or transaction costs and that a single buyer or seller cannot influence the market price. The theory also assumes that information access is also costless. They further content that there is usually rational behavior on the part of the market participants who value securities based on the discounted value of future cash flows accruing investors. They continue to content that there is certainly about the investment policy of the firm and complete knowledge of its cash flows and finally, that managers act as perfect agents of the shareholders

Going by Modigliani and Miller's arguments, dividends do not lead to shareholder welfare and value maximization. Particularly, when the investment policy of firm is held constant, then its dividend payout has no consequences for shareholder wealth. Dividend initiations/rises only lead to lower retained earnings and capital gains and dividend reductions only lead to lower retained earnings and capital loses, leaving total wealth of the shareholders unchanged.

Stiglz (1974), in his support for Modigliani and Miller's (1958) irrelevancy theory argues that firms that issue dividends also incur costs to float new securities so as to maintain their optimal investment policies. Taxes add more credence to the irrelevancy theory and make it

even harder to explain the firm's dividend policies because in some countries shareholders are levied a substantial amount of tax their dividend receipt, hence to avoid these taxes, firms hold and reinvest their profits. Generally the irrelevance hypothesis postulates that the value of the firm is determined solely by its earning power and investment decisions, which are independent of dividend policy. However, in the long run, the dividend irrelevance hypothesis is quite controversial, and has attracted limited empirical support.

A school of thought composed of a number of competing theories has been developed out of Modigliani and Miller's (1958) seminal work with more discussions on dividends puzzle. These theories explain the actual patterns of corporate dividend behavior and why dividend policy seems to be relevant in the real world, especially where hypothesized perfect markets do not exist. Under this view, dividends are seen as maximizing the shareholders' value and hence aligning both shareholder's and management interests. This school of taught questions the authenticity of the assumptions held by Modigliani and Miller's (1958) irrelevancy theory.

A pre-Miller-Modigliani theory called the bird-in hand theory also exists. This theory asserts that in a world of uncertainty and information asymmetry, dividends are valued differently to retained earnings. Dividends, regarded as "a bird in hand," are better than retained earnings, "a bird in the bush" because the retained earnings might never materialize as future dividends can "fly away." Further more, because of uncertainty of future cash flow, investors will often tend to prefer dividends to retained earnings. As a result, a higher payout ratio will reduce the required rate of return (cost of capital), and hence increase the value of the firm. This argument, just like the irrelevance theory has been widely criticized and has not received strong empirical support.

According to the tax-preference theory, low dividend payout ratios lower the required rate of return and increase the market valuation of a firm's stocks. According to Brennan (1970), because of the relative tax disadvantage of dividends compared to capital gains, investors require a higher before tax risk adjusted return on stocks with higher dividend yields.

There is also the clientele effects hypothesis. According to this argument, investors may be attracted to the types of stocks that match their consumption savings preferences. That is, if dividend income is taxed at a higher rate than capital gains, investors (or clienteles) will prefer re-investment their earnings in order to maximize their after tax return. Under this nature of reasoning, when the capita gain tax rate exceeds the dividend rate, then the reverse happens. Also, the presence of transaction costs may create certain clienteles. For example, to avoid the transaction costs associated with selling stocks, small investors (e.g. income-oriented) who rely on dividend income to satisfy their liquidity needs may prefer to invest in steady and high-dividend paying stocks. For the same reason, wealthy investors who are not relying on dividend income may be attracted to low-payout stocks. There are numerous empirical studies on the clientele effects hypothesis but the findings are mixed.

Despite the tax penalty on dividends relative to capital gains, firms may pay dividends to signal their future prospects. The explanation to this effect is known as the information content of dividends or signalling hypothesis. According to (Bhattacharya (1979), John and Williams (1985), and Miller and Rock (1985), the underlying argument here is based on the information asymmetry between managers (insiders) and outside shareholders, where managers have private information about the current performance and future fortunes of the firm that is not available to outside shareholders and the business community at large. The managers are thought to have the incentive to communicate this information to the market. According to signalling theory, dividends contain this private information and therefore can be used as a signalling device to influence share prices. An announcement of dividend increase is taken as good news and accordingly the share prices react favorably to dividend announcement and the opposite holds (also Lintner (1956).

Miller and Rock (1985) urge that only good quality firms can send signals to the market through dividends and poor-quality firms cannot replicate these because of the market signalling costs such as transaction costs of external financing, tax penalties on dividends and distortion of investment decisions among others. Moreover, as suggested by Lintner (1956), firms do not increase dividends unless the new level of dividends can be sustained at least in

the near future. They are also reluctant to cut dividends because managers believe that it builds the firm's reputation badly on the market.

In summary, the signalling theory explains that dividend announcement provides shareholders and the market place the missing piece of information about current earnings and market value of the firm upon which their estimation of the firm's future (expected) earnings is based. Specifically, the information content of dividends (signalling) hypothesis is based on a purported information asymmetry between insiders (managers) and outside investors.

The information asymmetry between managers and shareholders, along with the separation of ownership and control, forms the basis for another explanation why dividend policy is important; this is what is called the agency theory. According to Baumol (1959), Jensen and Meckling (1976), Shleifer and Vishny (1997) this argument is based on the assumption that managers may conduct actions in accordance with their own self-interest that may not always beneficial for shareholders. Jensen and Meckling (1976) argue that managers prefer to have greater perquisite levels such as lavish offices and lower efforts levels as long as they do not have to pay for these through lower wages or by a lower market value of their personal equity holdings.

Masulis (1988) urges that managers may prefer short term projects that produce early results and enhance their reputation quickly, rather than more profitable long term projects. Hunsaker (1999) states that managers prefer less risky investments and lower leverage to lessen the probability of bankruptcy. Managers and shareholders may also disagree over a firm's operating decisions. Harris and Raviv (1990) and Stulz (1990) observe that managers will typically wish to continue operating the firm even if liquidation is preferred by shareholders due to debt, which normally gives investors the option to liquate the firm if the cash flow is poor.

According to Easterbrook (1984), Jensen and Meckling (1976), the conflict of interest between out side shareholders and managers, induces the shareholders take measures that ensure that the management advances their interests. These measures create costs called

agency costs. They note that agency costs are mainly in public traded firms where owner-managers of firms sell off portions of their stockholding to the so-called outside shareholders who have no choice in management. Easterbrook (1984) goes further to identify two forms of agency costs, e.g. the costs of monitoring managers and risk aversion on the part of managers.

Fisher (1982) urges that when the shareholders increase, there is reduced economic incentive to monitor the management. This is because since the shareholders are widely dispersed, the problem of collective action ensures that they undertake too little monitoring of the management. Because shares are widely held, the gains from holdings are less than the individual costs incurred in monitoring. He further contents that even if a single shareholder incurred the full costs of monitoring, he only reaps gains in proportion of his holdings. When less monitoring occurs, agency costs tend to go up, necessitating greater use of dividends.

The second source of agency costs as identified by (Easterbrook (1984), Shavell (1979), Marcus (1982) and Hunsaker (1999), is risk aversion on the part of managers. Managers prefer less risky investments and lower leverage to lessen the probability of bankruptcy. If the firms do poorly or worse, go bankrupt, the managers will lose their jobs and any of their wealth tied up in the firms' stock. Managers therefore will be concerned about total risk, and their personal risk aversion will magnify this concern. The risk-averse mangers will choose projects that are safe but have lower expected return than riskier ventures. The shareholders on the other side have the opposite preference.

In literature various internal and external mechanisms exist that may control these agency costs. According to Fama (1980) higher compensation packages to the management align the interests of the managers and the shareholders reduce agency costs, and the disciplining effects of take over markets (Jensen and Ruback (1983) and Easterbrook (1984) also reduce agency costs. Generally, the mix of mechanisms actually chosen to control agency costs varies across firms, depending on the availability and relative cost-effectiveness of these costs (Crutchey and Hansen (1986).

Alongside the above mechanisms, literature identifies dividends to play a useful role in mitigating agency costs. Easterbrook (1984) says argues that when insiders pay dividends they return corporate earnings to investors and hence they are no longer capable of using these earnings to benefit themselves. Hence, unless profits are paid out to shareholders, they may be diverted by insiders for personal use or committed to unprofitable projects that provide benefits for insiders. As results, outsider shareholders have a preference for dividends over retained earnings.

Jensen (1986) in what is called free cash flow hypothesis states that when managers have excess cash at there disposal, they tend to invest in negative net present value projects rather than pay it out to shareholders. He defines free cash flow as cash flow that remains after the firm has invested in all other available positive NPV projects. Hence dividends can mitigate agency costs by reducing the management's opportunity to invest the firm's free cash flow in projects that benefits management at the shareholders expense.

However, Easterbrook (1984) develops an argument that if the firm increases its dividend payment, assuming it wishes to proceed with planned investment; it is forced to go to the capital market to raise additional finance due to reduced retained earnings. In effect, the payment of dividends causes the firm to undergo a third-party audit. In this effect, there will be investigation and monitoring by investment banks, the securities exchange and capital suppliers. The only way the managers can secure the out funds is by revealing new information about the firms profitably and growths as well as reducing agency costs such as perquisite consumption. The shareholders on the other hand, are willing to bear costs of borrowing from the capital markets to realize greater benefits associated with the reduction in both agency costs and information asymmetries.

Most evident is that when the firm raises equity capital from the capital market, it is monitored by investment banks and suppliers of new capital. Such monitoring produces a unique value because it is focused yet does not suffer from collective choice problem that normally accompanies the monitoring incentives of individual shareholders. Capital markets remain valuable in the investment structure of every firm. Firms never want to loss their

reputation by stopping dividends and expropriating shareholders entirely, this is especially when there is enough uncertainty about its future cash flows and that the option of going back to the capital market is always valuable (Bulow and Rogoff (1989).

In the signalling models of Bhattacharya (1979) and Miller and Rock (1985) it is assumed that there is a preference for internal finance and that dependency on external finance partly explains dividends policies. The former statement actually means that although the firm may wish to rely on retained earnings, it must go to the capital market and hence must signal the outside capital market of its ability to repay back the borrowed funds.

The difference between a well performing firm and a low performing firm is that the former gains from paying high dividends more than offset the associated costs. This means that for the well performing firm, the benefits of paying dividends are more than the costs of raising funds from the market. In the signalling model, there are impediments to access funds from the external market, and the costs associated with paying high dividends is the issue cost of having to resort to outside financing to meet the dividend commitment.

In this case, dependency on external funds is a function of the flotation costs of raising external funds, which actually means that firms that face lower issue costs are able to use more signalling. In Miller and Rock (1985) the cost of paying high dividends is the need to cut planned investments. Hence, depending on external finance and thus the firm's dividend policy, are partly determined by the need for funds for expansion

Hence, as it is implied in the signalling theories of Bhattacharya (1979) and Miller and the optimal dividend policy is explicitly modelled as an inverse function of dependency on external finance, such that an increase in external finance leads to reduced payout ratio. This inverse relation between dependency on external finance and the firm's dividends policy is referred to as the transaction cost theory of dividends.

From review of literature above, there is one important conclusion that can be made; that there are two costs e.g. transaction costs which can be controlled by lowering the payout ratio and agency costs that can be controlled by raising the payout ratio.

2.2 Empirical Literature Review

From the theatrical arguments in the above section, it was urged that transaction and agency costs have opposing influences on the dividend payout. Specifically, an increase in dividend payout leads to a reduction in the agency costs and an increase in the transaction costs. Since these are theatrical arguments, various studies have been carried out to empirically proof them. These studies have come up with empirical arguments that show how dividend payment is related to transaction and agency costs. The studies have presented straightforward models of the determination of the optimal dividend payout and empirically tested them using multiple regression equations to explain the cross sectional variation in dividend payout ratios. In this section, we present a chronology of the some of these studies.

Rozeff (1982) using the cost minimization model captures transaction agency costs by using the forecasted and historical firm's growth and risk while agency costs are captured by percent of stock held by insiders and natural logarithm of the numbers of shareholder. Using an Ordinary Least Squares (OLSQ) cross sectional regression using 1981 data on 1000 US firms, he finds that all transaction agency costs are negatively related to payout ratio. He also finds that while the agency cost variable, percent of stock held by insiders is negatively related to pay out, the other variable, natural logarithm of the numbers of shareholders is positively related to pay out. The results are consistent with his argument that an optimum dividend payout ratio can exist, even without the need for considerations for tax implications.

Lloyd, Jahera and Page (1985) using Rozeff's cost minimization model adapts all his independent agency costs and transactions costs variables and adds size variable which is defines as sales revenue to test whether Rozeff's agency variables are mere proxies for other omitted variables. Size variable is regressed on ownership shares to obtain residual ownership which eliminates size effects from the agency variable. Their argument is based on the Jensen and Meckling (1976) premise that agency costs increase as size of the firm

increases, and Smith's (1977) observation that the transaction costs involved with the securities are also related to the firm size since when the firm is large in size, there is the tendency for it to go more often on the capital market. An OLSQ cross sectional regression was applied to 1984 data on 957 US firms, and the results provided support for the cost minimization model and show that firm size is an important explanatory variable.

Hansen, Kumar and Shome (1994) also take a broader view of what constitutes agency costs, and apply a variant of the cost minimization model to the regulated electric utility industry. The prediction is that the agency rationale for dividend should be particularly applicable in the case of regulated firms because agency costs in these firms extend to conflicts of interests between shareholders and regulators. Results of cross sectional OLSQ regression for a sample of 81 US utilities and for the period ending 1985 support the cost minimization model and the contribution of regulation to agency conflicts in the firm.

Schooley and Barney (1994) modifies that original Rozeff's cost minimization model by adding the squared measure for insider ownership. An OLSQ cross sectional regression using 1980 data on 235 industrial US firms supports the hypothesis that the relationship between the percentage of stock owned by insiders and dividend yield is non monotonic. Insider ownership is negatively related to dividend yield over low levels of ownership, while the relation becomes positive when insider ownership is large. As the insider ownership increases, the management is given increased control of the firm via voting rights. Such increased control affords executive the opportunity to pursue their own agendas with diminished threat of being replaced through either a hostile takeover or a proxy fight. Indeed the results from, provide further support for Rozeff's model in general and for the hypothesis put forward in particular.

Another innovative approach to Rozeff's cost minimization model is offered in Rao and White (1994) who apply it to 66 private US firms. Using a limited dependent variable, Maximum Likelihood (ML) technique, the study shows that an agency rationale for dividends applies even to private firms that do not participate in the capital market. The

authors note that perhaps by paying dividends, private firms can still induce monitoring by bankers, accountants and tax authorities.

Moh'd, Perry and Rimsey (1995) gives a further refinement of the Rozeff model by redefinition and looking a wider view of what entails the independent variables in accordance with contemporary finance theories. They expand the agency costs by incorporating institutional holdings and transaction costs' risk variable is decomposed into three different segments e.g. operating and financial leverage and business risk. Firm size and industry dummies are used as control variables. The results of a Weighted Least Squares Regression, employing panel data on 341 US firms over 18 years from 1972 to 1989 shows that dividend payout is positively related to firm size, amount of institutional holding and number of shareholder. Dividends on the other side are negatively related to past and future growth, leverage measures and business risks. It also supports the view that the dividend process is of a dynamic nature. The estimated coefficient on the institutional ownership variable is positive and significant, which is in line with tax explanations but contradicts the idea about the monitoring function of institutions. (Llyod, Jahera and Page (1985) support their results for the firm size

Holder, Langrehr and Hexter (1998) extend the cost minimization model further by considering conflicts between the firm and its non-equity stakeholders and by introducing free cash flow as an additional agency variable. The study utilizes panel data on 477 US firms each with 8 years of observations, from 1983 to 1990. The results show a positive relation between the dependent variable and the free cash flow variable, which is consistent with Jensen (1986). Likewise the estimated coefficient on the stakeholder theory variable is shown to be significant and negative as predicted. The estimated coefficients on all the other explanatory variables are also shown to be statistically significant and to bear the hypothesized signs.

Manos (2002) introduce business group affiliation into the original cost minimization model. It is urged that the existence of business groups bridges the informational and other market imperfections that characters most emerging markets (Williamson 1985, Geillen 2000, and

Granovetter 1995). Results of cross sectional OLSQ regression for a sample of 661 non-financial firms listed on the Bombay Stock Exchange suggest that group affiliation has an important impact on the transactions cost structure as well as agency conflicts faced by Kenyan companies.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Conceptual Framework

The theoretical model in this study is based on Rozeff's (1982) Cost Minimization Model, which postulates that the optimal dividend payout ratio is at the level that minimizes the sum of the transaction costs and the agency costs. Agency costs (Jensen and Meckling, 1976) arise when the firm's stock are sold to the outside shareholders who do not have direct involvement in the management of the firm. To reduce agency costs, outside shareholders find it necessary to incur bonding costs, monitoring cost and auditing costs to check the management behaviour.

However bonding, monitoring and auditing measures are costly to the outside shareholders. This is because these shareholders are widely dispersed, and hence it is not easy for them to collectively organize themselves so as to effectively enforce the measures. Hence, a firm that is value maximizing chooses an optimal monitoring or audit costs, which act to reduce agency costs.

According to Jensen and Meckling (1976), payment of dividends is a device, just like auditing and bonding costs that can collectively be employed by outside shareholders to reduce agency costs. At the same time, payment of dividends is accompanied by raising capital from the capital market to finance existing and future investments due to reduced retained earnings. Further, a firm that borrows from the capital market incurs transaction costs such as interest payable on borrowed funds

Hence, for rational shareholders, it does not matter if the firm finances its investments by borrowing from the capital markets despite the associated transaction costs. This is because lenders will not simply supply funds unless they are equipped with information on the uses of the funds, which is gainful to the shareholders as they also gather new information about management intentions.

On the other side, any rational shareholder will wish the management, other things equal, to also minimize the transaction costs associated with raising funds from the capital markets. This is because when the firm derives funds from the capital market, it increases the risk of bankruptcy and forced take-over especially when it is not able to pay back the borrowed funds. This actually suggests that there is need to increase retained earnings, reduce external borrowing that is accompanied by reduced dividend payout in order to finance planned investments. But, as explained in the agency costs context, shareholders may demand increased dividend pay out to minimize agency costs.

The above gives the basis for Rozeff's cost minimization model. On one side, we have transaction costs that can be controlled by lowering the payout ratio and on the other end, we have agency costs that can be controlled by raising the payout ratio. Hence, introducing these two opposing influences on dividends generates the optimal dividend payout.

Rozeff (1982) presents a straightforward model of the determination of the optimal dividend pay out and empirically tests a multiple regression equation to explain the cross-sectional variation in dividend pay out ratios. He introduces the firm's payout ratio as the dependent variable, defined as the arithmetic mean average of a firm's seven dividend payout ratios. He introduces three variables to proxy for transactions costs e.g. forecasted five year growth rates in sales, historical five year growth rates in sales and the firm's market risk (beta) which is included to account for operating and financial leverage. He introduces two variables to proxy for agency costs, e.g. the percent of stock held by insiders and the natural logarithm of the number of shareholders.

3.2 Specification of Empirical Model

The model used in this study is a variant of cost minimisation model where an attempt is made to give more definitive proxies for agency and transaction costs structure following Rozeff's (1982). This is done in accordance with subsequent studies that have been done following Rozeff's (1982) initial work. Following above, the general model, which captures the main variables identified in the literature review, follows the form:

$$Payout_{it} = \delta_{it} + \sum_{j=1}^{4} \beta_j TC_{it} + \sum_{j=5}^{7} \beta_j AC_{it} + \sum_{j=8}^{8} \beta_j SIZE_{it} + \varepsilon_{it} \quad \text{----------} \quad (1)$$

Where β are the slope coefficients and $j = 1,2,\ldots,8$. TC_{it} represents transaction costs. AC_{it} represents agency costs. Lastly, $SIZE_{it}$ is defined as the natural logarithm of the firm's market capitalization

The transactions costs are estimated using four variables e.g. growth, risk, firm thinness and liquidity. Growth is the annual rate of change in the total net assets of the firm. Risk is the volatility rate of the firms' daily stock prices in each year. Firm thinness is defined as the number of days the firm trades on the stock exchange relative to the number of days that trading took place on the stock exchange in each year. Finally, liquidity is firm turn over relative to the firm capitalization.

The agency costs are estimated using three variables e.g. public, institutional and foreign ownership. Out of the total shares of the firm in a particular year, foreign ownership is the percentage of shares held by foreign nationals, financial institutions and non-residential Kenyans. Institutional ownership is the percentage of shares held by Kenyan institutions such as insurance companies, mutual funds and financial institutions while public ownership is the by the percentage of shares held by the public at large who constitute Kenyan individual investors. By separating agency and transaction costs into their respective proxies, equation (1) can be more specifically expressed in the form.

$$Payout_{it} = \beta_0 + \beta_1 Growth_{it} + \beta_2 Firmthinness_{it} + \beta_3 Risk_{it} + \beta_4 Liquidity_{it} + \beta_5 Foreignownership_{it} + \beta_6 Publicownership_{it} + \beta_7 Institutionalownership_{it} + \beta_8 Size_{it} + \varepsilon_{it} \quad \text{----------} \quad (2)$$

3.3 Estimation Procedure

The study adopts panel data estimation techniques in capturing the impacts of agency and transaction costs on divided pay out. This is because panel data consists of both cross sectional and time series data and hence it is expected to give unbiased estimators.

In estimating the optimal dividends, simple pooling method, fixed effects, between effects and random effects models are estimated. In the simple pooling method, dividends are estimated using pooled data, in which case there is one fixed intercept. However, in this case the dividend pay out model is not specified since a simple pooling might not result in unbiased estimates. This is because it does not allow the effects of omitted variables to be captured in the changing company intercept. Hence we proceed to test the fixed-effects model that allows us to use all the data while the intercept is allowed to vary across the firms and/or time is estimated. This allows the effects of omitted variables to be captured in the changing company intercept.

According to Hsiao (1986), in the presence of measurement error, the fixed effects model can produce more biased estimators than simple pooling, hence both the pooled and fixed effects model are also estimated

As urged above, the estimation of equation (3) can be done using a pooled data, random estimation, fixed effect estimation or between effect estimation. For pooled data, equation 3 can be generalized as:

$$P_{it} = \delta + \beta X'_{it} + \varepsilon_{it} \quad \text{----------(3)}$$

Where $\varepsilon_{it} \sim iid(0, \delta)$ for all t and i.

That is, for a given firm or individual, observations are serially uncorrelated but across firms individuals and time, the errors are homoscedastic. The assumption corresponds to the classical linear model and hence pooled data is estimated using OLS, generating **MODEL (1)**.

In order to estimate subsequent models, we expand the error structure for the disturbance term in equation 3 into two terms as follows:

$$P_{it} = \delta + \beta X'_{it} + \alpha_i + \eta_{it} \quad \text{----------(4)}$$

Where α_i is the individual effect and varies across individuals or the cross sections unit but is constant across time, and may or may not be correlated with the explanatory variables. η_{it} varies unsystematically (i.e. independently) across time and individuals and uncorrected with

λ_{it}. The assumption made about the individual effects determines whether a random or a fixed effect is used. For random effects, α is uncorrected with X_{it}, while for the fixed effects, α_i is corrected with λ.

From equation 4, we consider two estimators that are consistent but not efficient relative to GLS. The first one is quite intuitive: convert all the data into individual specific averages and perform OLS on this collapsed data set. So given that this is the case, we can present the equation 6 as follows:

$$P_{it} = \delta + \beta X_{it} + \alpha_i + \eta_{it} \quad \text{----------(5)}$$

Where P, X, *and* η are means of the respective variables with respect to time

$$(P_{it} - P_i) = (X_{it} - X_i)\beta + (\eta_{it} - \eta_i) \quad \text{----------(6)}$$

From the three equations (equations 4, 5 and 6), the fixed effects estimator (within estimator) amounts to using OLS to estimate equation (6). This generates **MODEL 2** for estimation. Between estimator amounts to using OLS to estimate equation (5). This presents **MODEL 3**

The random effect estimator is a weighted average of the estimates produced by the between and within estimators, and is equivalent to estimating equation (7) as below

$$(P_{it} - \sigma P_i) = (1-\sigma)\delta + (X_{it} - \sigma X_i)\beta + ((1 - \sigma)\alpha_i + (\eta_{it} - \eta_i)) \quad \text{----------(7)}$$

Random effect model is one way to deal with the fact theta T observations on n firms are not same as observations on Tn different individuals. This gives **MODEL 4**. The next section presents how variables will be measured and data sources.

3.4 Measurement of Variable and Data Sources

In this section, we present how variables are measured. We also make arguments of the expected signs for the various variables that are included in the empirical model

Dependent Variable:

(i)Payout

In this study, the dependent variable, payout, is a proxy for the firm's target payout ratio and is measured as dividends declared per share divided by the earnings per share presented as below:

$$Payout = (D.P.S / E.P.S)$$

where $D.P.S$ represents dividends per share and $E.P.S$ represents earnings per share.

Rozeff (1982), Rao et al (1994), Lloyd et al (1985) defined this variable (payout) as the arithmetic average of the firm's average dividends divided by the earnings ratios while Moh'd et al (1995) defined it as dollar dividend payments divided by dollar net income.

Independent Variables:

(i) Proxies for Transactions Costs

(ii) Growth

In this study the variable growth is defined as the annual rate of change in the total net assets of the firm. This can be presented using the function below:

$$\Delta TNA = (TNA_t - TNA_{t-1}) / (TNA_{t-1})$$

Where TNA_t is the value of the total net assets at (period) year (t), TNA_{t-1} is the value of the total net assets at the (previous period) previous year ($t-1$) and ΔTNA is the rate of change in the total net assets.

Baskin (1989) defined this variable as the change in the total net assets to the level of the total assets at the start of the year. Rozeff (1982), Lloyd et al (1985), Rao et al (1994), Moh'd et al (1995) split growth into average past growth in sales' revenue and value line forecasted average growth rate in sales' revenue. Holder et al (1998) and Manos (2002) measured growth as the average yearly rate of growth in sales.

If the firm experiences rapid past and future growth rates, other things constant, it means that the firm requires more funds due to high investment expenditures. In this case firms tend to

use retained earnings to finance the investments in order to avoid external financing with its associated costs. Use of retained earnings translates to reduced dividends payout. In this case, we expect growth to be negatively related to dividend pay out

(b) Firm thinness

In this study firm thinness is measured as the number of days the firm trades its shares on the stock exchange (Nairobi stock exchange) in a given year relative to the number of days trading takes place on the stock exchange in the same year. This can be presented in the function below:

$$Firmthinness = {}^{(N.D.F.T)}/_{(N.D.S.T)}$$

Where $N.D.F.T$ is the number of days the firm trades its shares on the stock exchange in a given year while $N.D.S.T$ is the number of days trading takes place on the stock exchange in the same year.

Rozeff (1982) and Manos (2002) note when a firm frequently trades on the stock exchange, it means that it is quick and easy to buy and sell its shares on the market. Second, it also means that the firm's share prices accurately reflect all the available information, which leads to low transaction costs associated with raising money from the external market and higher dividend pay out. Hence, we expect this variable to be positively related to dividend pay out

(c) Risk

The study defines risk as the volatility rate of the firms' daily stock prices in each year (1999-2004). Risk measures the movements or deviation of daily stock prices from their mean values in a given year. This can be presented in the equation below;

$$S.D = \sqrt{{}^{\Sigma(X-\bar{X})^2}/_{n}} \text{ , where } n = \Sigma f \text{ , } \bar{X} = {}^{\Sigma fX}/_{\Sigma f}$$

Where X represents the value of the daily stock prices during a particular year, $\bar{X}$ represents the mean of the total daily stock prices during that particular year and n is the number of observation (which is the number of days in a year).

Rozeff (1982) and Lloyd et al (1985) measured risk by using the firm's beta, which represents operating leverage and financial leverage of the firm. Moh'd et al (1995) uses beta to capture risk, which is decomposed into three separate components as operating leverage, financial leverage and intrinsic business risk.

Rozeff (1982), Lloyd et al (1985) and Moh'd et al (1995) urge that if the firm has a higher financing and operating leverage, other things equal, then it will choose a lower payout policy to lower its costs of external financing. Secondly, as urged by Manos (2002) volatile prices, which are reflected by the variable risk, imply possible mis pricing and higher underwriting fees when raising external finance. Hence as in both of the above cases, risk is expected to be negatively related to dividend pay out

(e) Liquidity

Liquid is measured as turnover divided by market capitalization of the firm. Turnover is measured as volume (number of transactions) of the firm multiplied by average price (in Kshs) during in a particular year presented as below.

$Turnover = (Volume)/(AVG)$ where $Volume$ is number of transactions and AVG is the average price.

Market capitalization of the firm is calculated as the total number of shares issued by the firm multiplied by share price (in Kshs) in a give year, presented as below.

$M.C.F = (T.N.S) * (S.P)$

where $M.C.F$ is market capitalization of the firm, $T.N.S$ total number of shares is issued and $S.P$ is share price (in Kshs)

Hence from above

$$Liquidity = (Turnover)/(M.C.F)$$

Specifically,

$$Liquidity = (Volume / AVG)/(T.N.S * S.P)$$

The higher the ratio of turnover relative to firm capitalization, the higher the dividend payout. This means this variable is positively related to dividend pay out

(ii) Proxies for Agency Costs

(a) Foreign ownership

The study defines foreign ownership as the percentage of shares held by foreign nationals and foreign financial institutions out of the total percentage of shares of the firm in a given year.

$$Foreignownership = (N.S.F / I.N.S) * 100$$

Where $N.S.F$ represents the total number of shares held by foreign nationals and foreign financial institutions while $I.N.S$ represents the total number of shares of the firm in a given year.

Glen, Karmokolias, Miller and Shah (1995) urge that foreigners from developed countries often hold stock of developing countries for long-run growth potential. If stock is held for growth rather than for income, then we expect a negative relation between this variable and the payout ratio. Furthermore, higher foreign shareholding increases foreign analysts' interest in the firm, resulting in more monitoring and hence less need for the dividend induced monitoring devices. This means we expect a negative relationship between this variable and the dependent variable.

However, it could be argued that the task of monitoring management is more difficult and costly for overseas investors. This suggests that the benefits of the dividend-induced capital market monitoring increase with higher percentage of foreign holdings, leading to a positive impact of this variable to payout. We expect a positive relationship between this variable and the dependent variable. In this case, following the above two parallel arguments, we expected either a positive or negative relationship between this variable and pay out ratio.

(b) Institutional ownership

The study defines variable as the percentage of shares held by Kenyan institutions such as insurance companies, mutual funds and financial institutions out of the total percentage of shares of the firm in a given year.

$$Institutionalownership = (N.S.I / T.N.S) * 100$$

where $N.S.I$ represents the total number of shares held by Kenyan institutions while $T.N.S$ represents the total number of shares of the firm in a given year.

Moh'd et al (1995) and Manos (2002) note that institutions have more incentive to spend resources on monitoring the firm and its management. They have the expertise and ability to monitor management actions at relatively low cost. They also stand to benefit more from monitoring, because their percentage holding is relatively large. This implies that the larger the percentage held by institutions, the less is the need for dividend induced monitoring. This suggests an inverse relationship between this variable and the dependent variable

However Joshi and Little (1996) points out that although institutions have acquired dominant equity holdings in developing capital markets, they have been unable to freely trade in shares and challenge insiders. This particular aspect of the developing capital market system may prevent institutions from carrying out their traditional monitoring role hence the higher is institutional ownership, the greater their ability to influence management actions, implying a positive rather than a negative relationship between institutional ownership and the dependent variable. In this regard, we expect either a positive or negative relationship between institutional ownership and dividend payout.

(c) Public ownership

This variable is measured by the percentage of shares held by the public at large that comprise Kenyan individual investors in a given year.

$$Publicownership = (N.S.P / T.N.S) * 100$$

Where $N.S.P$ represents the total number of shares owned Kenyan individual investors in a given year while $T.N.S$ represents the total number of shares of the firm in a given year

As urged as these past studies, such as Rozeff (1982), Lloyd et al (1982) and Moh'd et al (1995), the more widely spread is the ownership structure, the less collective responsibility

on their part to monitor management action, hence need to use dividends to align their interests and the management interests. Thus we expect a positive relationship between this variable and the dependent variable.

(iii) Size

In this study, size is defined as the natural logarithm of the market capitalization of the firm. Various measures have been employed to proxy for size, including those related to the firm's market capitalization (Ghosh and Woolridge (1998) and (Eddy and Seifi (1988). Other studies use the firm's asset base (Murali and Welch (1989). While (Lloyd et al (1985) and Moh'd et al (1995) used the natural log of sales. As urged by Rozeff (1982), Lloyd et al (1985), Rao et al (1994), Moh'd et al (1995) large firms are more mature and have easier access to capital markets, which results in less dependence on internally generated funds, hence higher dividends. Hence we expect a positive relationship between this variable and the dividend pay out

The hypothesized (expected) signs for the variables and their definition are shown as in the table below.

Table 3: Expected sign for the transaction variables

Expected sign	Variable	Measurement
-	Growth	Change in total net asset of the firm
	Risk	Volatility of the daily stock prices.
+	Liquidity	Turnover/Market Capitalization.
+	Firm Thinness	No. of days firm traded the no. of days NSF traded

Table 4: Expected sign for the agency variables

Expected Sign	Variable	Measurement
+ or -	Foreign ownership	% of stock held by foreigners
+ or -	Institutional ownership	% of stock held by dispersed shareholders
+	Public ownership	% of stock held by dispersed shareholders
+	Size	Natural logarithm of the firm's market capitalization

CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Summary Statistics

This section gives the summary of the main variables that have been used in estimation of the model and their correlation results. We particularly give the mean, standard deviation, the minimum, maximum, skewness and kurtosis values of the variables.

Table 5: Descriptive statistics of the Variables

Variable	Mean	Std Dev	Min	Max	Skeweness	Kurtosis
Payout	0.5646	0.3406	0.0000	1.6923	0.4580	0.2290
Growth	0.0958	0.1959	-0.5787	0.8769	1.1200	4.5860
Liquidity	0.0465	0.0403	0.0033	0.2225	1.9110	4.7060
Firm thinness	0.6836	0.2803	0.0640	1.0000	-0.5010	-1.0880
Risk	4.5095	2.9047	0.0258	11.2802	0.4590	-0.7080
Foreign ownership	0.3411	0.3016	0.0001	0.7829	0.1170	-1.7070
Public ownership	0.2233	0.1259	0.0357	0.7754	0.8280	1.7650
Institutional ownership	0.4372	0.2880	0.0387	0.9180	0.2060	-1.4620
Size	3.0703	0.0730	2.8508	3.2095	-0.5140	0.3920

NOTE: The variables are described as follows: Payout = dividend per share divided by earnings per share; Growth = annual change in total net assets; Liquidity = Firm turnover as a ratio of firm market capitalization; Firm thinness = the number of days the firm trades its shares on the stock exchange in a given year (in this case Nairobi stock exchange) relative to the number of days trading takes place on the stock exchange in the same year; Risk = the volatility rate of the firms' daily stock prices in each year; Foreign ownership = the percentage of shares held by foreign nationals and foreign financial institutions out of the total percentage of shares of the firm in a given year; Public ownership = the percentage of shares held by the public at large, that constitute Kenyan individual investors in a given year; Institutional ownership = the percentage of shares held by Kenyan institutions such as insurance companies, mutual funds and financial institutions out of the total percentage of shares of the firm in a given year.

The results show that the variable payout has a zero minimum value and a maximum value of 1.6923. Since this variable has a minimum value that is zero, it then means that that over the years there are certain number of firms that do not pay dividends. Payout is also relatively highly dispersed as shown by the standard deviation of 0.3406 and the mean value of 0.5645. This implies that there is a high variation in the dividend payout policies across NSE listed

firms, a phenomenon that is consistent with Fama and French (2001), who urge that the pattern of corporate dividend practice varies over time and across firms.

The variable growth is the only variable with a minimum negative value of -0.5787 with the mean of 0.0958 and a standard deviation of 0.1959. The negative value means that over time there are some firms that experience negative growth rates.

The variable firm thinness is characterized by a mean value of 0.6836, minimum value of 0.064 and a maximum value of 1.0000. This means that on average, the selected firms frequently trade their shares on NSE. This high trading frequency may also imply that it is quick and easy to buy or sell the shares of firms on the market. On the other hand, the variable liquidity is relatively stable as the standard deviation is relatively small e.g. 0.0403 and a mean of 0.0465 compared to other variables. Risk has a minimum value of 0.0258, a maximum value of 11.2802 and a standard deviation of 2.9047. Since the standard deviation is high, it implies that the stock prices on NSE are quite volatile on the overall. High volatility of stock prices may also mean there is a high underwriting fees associated with raising external funds.

The variables foreign ownership and institutional ownership have standard deviation of 0.2989 and 0.2818 respectively while public ownership has a lower standard deviation of 0.1459. This implies that there is a high variation in the foreign and institutional shareholding, which may be attributed to the fact that in Kenya there are barriers or restrictions to foreign and institutional investor's acquisition of shares in the name of protecting the Kenyan individual investors.

Table 5 also gives tests for normality of the variables using skewness and kurtosis. Skewness characterizes the degree of asymmetry of a distribution around its mean with positive skewness indicating a distribution with an asymmetric tail extending towards more positive values and negative skewness indicating a distribution with an asymmetric tail extending towards negative values. For data that is normally distributed, the value of skewness should

be within the range of -2 or +2. From the table, the value of skewness for all the variables ranges between -2 and +2 meaning that all these variables are normally distributed.

Kurtosis, on the other hand indicates the relative peakedness or flatness of a distribution compared with the normal distribution. Positive kurtosis indicates a relatively peaked distribution and negative kurtosis indicates a relatively flat distribution. For data that is normally distributed, the value of kurtosis is supposed to range within the range of +3 or -3.

In this regard, the results show that most of the variables e.g. payout, growth, liquidity and public ownership are relatively peaked while other variables such as firm thinness, Risk, foreign ownership and institutional ownership have a flat distribution.

Tables 3 shows the mean and standard deviation values for the variables over the years. There is consistence between the pooled data and data over the years. The variable, payout has a minimum value of zero for each year and varying maximum value. This means that for each year, a certain number of firms did not issue dividends. There is a high variation in the dividend payout during the year 2003 (shown by the standard deviation value of 0.3873) and low variations in the dividend pay out during the year 1999 (shown by the standard deviation value of 0.2529).

Liquidity maintained its stability over the years as the annual standard deviation is relatively small (e.g. ranging from 0.0203 to 0.0373). Additionally, the frequency of trading on NSE of the selected firms also increases over time. This is shown by an increasing trend in terms of the mean value of the variable firm thinness especially for the last three years. Looking at the annual trend on risk, we observe that over the years, the standard deviation of this variable has been reducing. This means that although there is a high volatility of stock prices on the overall (shown by a standard deviation of 2.9047 of the risk in Table 1), it can be urged that volatility has been reducing over time. Given the information on the mean value and standard value of the variables liquidity, firm thinness and risk, it can be noted that with time, it is

becoming quicker and easier to buy or sell the shares on the market (NSE) and more so the firm's share prices accurately reflect the available information with time.

It can also be urged that despite the restriction on foreign and institutional share ownership, over time, a large proportion of the shares are held by foreigners who include foreign collaborators/national, institutions and non-residential Kenya as well as Kenyan institutions which include insurance companies, fund managers among others.

Table 6: Means and standard deviation of the variables over the years

Year		Payout	Growth	Liquidity	Firm thinness	Risk	Foreign ownership	Public ownership	Institutional ownership	Size
1999	Mean	0.4737	0.1991	0.0408	0.6956	4.1693	0.3412	0.2230	0.4374	3.0610
	Std Dev	0.2529	0.2551	0.0300	0.2807	2.6739	0.3046	0.1111	0.2831	0.0642
2000	Mean	0.5759	0.0747	0.0314	0.6269	4.4156	0.3332	0.2526	0.4157	3.0598
	Std Dev	0.3855	0.1227	0.2218	0.3069	3.1621	0.3058	0.1663	0.2984	0.0687
2001	Mean	0.5533	0.0350	0.0305	0.5966	4.0486	0.3325	0.2171	0.4519	3.0448
	Std Dev	0.3258	0.1688	0.0209	0.2868	3.2171	0.0306	0.1198	0.2967	0.0686
2002	Mean	0.6078	0.0523	0.0377	0.5930	3.5936	0.3515	0.2207	0.4276	3.0515
	Std Dev	0.3293	0.1599	0.0346	0.2967	2.9852	0.3096	0.1139	0.2939	0.0078
2003	Mean	0.6681	0.0980	0.0605	0.7434	5.2006	0.3551	0.2175	0.4273	3.0955
	Std Dev	0.3873	0.0948	0.0373	0.2572	2.7006	0.3118	0.1232	0.2919	0.0789
2004	Mean	0.5083	0.1157	0.0782	0.8460	5.6288	0.3331	0.2088	0.4630	3.1091
	Std Dev	0.3521	0.2812	0.0622	0.1753	2.4658	0.3089	0.1246	0.2984	0.0626

NOTE The variables are described as a follows Payout = dividend per share divided by earnings per share Growth = annual change in total net assets. Liquidity = Firm turnover as a ratio of firm market capitalization Firm thinness = the number of days the firm trades its shares on the stock exchange in a given year (in this case Nairobi stock exchange) relative to the number of days trading takes place on the stock exchange in the same year Risk = the volatility rate of the firms daily stock prices in each year. Foreign ownership = the percentage of shares held by foreign nationals and foreign financial institutions out of the total percentage of shares of the firm in a given year Public Ownership = the percentage of shares held by the public at large they constitute Kenyan individual investors in a given year Insti Ownership = the percentage of shares held by Kenyan institutions such as insurance companies mutual funds and financial institutions out of the total percentage of shares of the firm in a given year

4.2 Correlation Results

Table 7 reports the correlation matrix and the associated probability values for the 120 observations of the pooled data set. High correlation of 0.7381 at 5% significance level is seen between the variables firm thinness and size. This is attributed to the fact a largely highly-capitalized firm will tend to trade more frequently on the stock exchange than a small-capitalized firm. On the other hand, the variables size and foreign ownership are positively correlated (0.5559 at 5 % significance level). As urged by Errunza, Karmokolias, Miller and Shah (1995), foreign investors especially from developed countries often hold stock of developing countries for its long-run growth potential. In this case, they develop a long-term interest in firms and offer their expertise and resource base, which improves the firm's capitalization base.

Table 7: Correlation Matrix Table.

	Payout	Growth	Liquidity	Firm thinness	Risk	Foreign ownership	Public ownership	Institutional ownership	Size
Payout	1.0000								
Growth	-0.1089 (0.0192)	1.0000							
Liquidity	-0.1696 (0.0663)	0.1455 (0.1128)	1.0000						
Firm Thinness	0.3224 (0.0003)	0.1187 (0.964	0.3242 (0.0001)	1.0000					
Risk	0.0583 (0.5270)	0.0680 (0.4555)	0.0824 (0.3710)	0.2573 (0.0046)	1.0000				
Foreign Ownership	0.1933 (0.0880)	-0.0950 (0.3021)	-0.1262 (0.1694)	0.2182 (0.0088)	0.2422 (0.0027)	1.0000			
Public ownership	-0.2520 (0.0055)	-0.1201 (0.1915)	0.3131 (0.0005)	0.0697 (0.4491)	-0.0749 (0.4168)	-0.3192 (0.0004)	1.0000		
Institutional Ownership	-0.3057 (0.0007)	0.1495 (0.1031)	0.0053 (0.9544)	0.2815 (0.0018)	-0.2217 (0.0149)	-0.9112 (0.0000)	-0.0990 (0.2982)	1.0000	
Size	0.4610 (0.0000)	0.1129 (0.2201)	0.0425 (0.6482)	0.7381 (0.0000)	0.3807 (0.0000)	0.5559 (0.0000)	-0.3396 (0.0002)	-0.4429 (0.0000)	1.0000

NOTE: The variables are described as follows: Payout = dividend per share divided by earnings per share; Growth = annual change in total net assets; Liquidity = Firm turnover as a ratio of firm market capitalization; Firm thinness = the number of days the firm trades its shares on the stock exchange in a given year (in this case Nairobi stock exchange) relative to the number of days trading takes place on the stock exchange in the same year; Risk = the volatility rate of the firms' daily stock prices in each year; Foreign ownership = the percentage of shares held by foreign nationals and foreign financial institutions out of the total percentage of shares of the firm in a given year; Public Ownership = the percentage of shares held by the public at large; they constitute Kenyan individual investors in a given year; Institutional ownership = the percentage of shares held by Kenyan institutions such as insurance companies, mutual funds and financial institutions out of the total percentage of shares of the firm in a given year; Size = the natural logarithm of the market capitalization of the firm.

Finally there is a negative correlation between foreign ownership and institutional ownership. This can be explained by the fact that: first, both foreign investors and institutions have the capacity to mobilize large amounts funds that can enable them to acquire a large amount of stock. However, in Kenya, foreign and institutional share holding is only restricted to a certain percentage and hence it is not possible to get a case where both foreign and institutional holding are both high in a given firm. In a real typical case therefore, given these restrictions, a firm will either only have large foreign ownership and low institutional ownership or vice versa and not both, hence a negative relationship between the two variables.

Most of the independent variables have the expected correlation with the dependent variable dividend payout Growth is negatively correlated with payout at 5% significance level as expected. This can be explained by the fact that when a firm experiences rapid past and future growth rates, other things held constant, it requires more funds to finance these growth prospects. In this case, as urged by Rozeff (1982), Lloyd et al (1985), Rao et al (1994) and Moh'd et al (1995), firms tend to use retained earnings, that would otherwise have been paid as dividends, to finance the growth investments in order to avoid external financing with its associated costs.

Firm thinness is positively correlated with payout at 5% significance level as expected. The positive relationship between firm thinness and payout emanates from the fact that a firm which goes to the exchange more frequently is the one whose shares can be bought and sold more quickly and easily and whose share prices accurately reflect the available information. This in turn means higher profitability, which leads to higher dividend payouts.

Foreign ownership is also positively related with payout at 5% significance level as expected According to Manos (2002), this relationship can be urged because the task of monitoring the management is more difficult and costly for overseas investors. This suggests that the benefits of the dividend-induced capital market monitoring increase

with increases in the percentage of foreign holdings, leading to a positive impact of foreign ownership on payout.

On the other hand, institutional ownership is significantly (5 percent) negatively related to payout. Moh'd et al (1995) and Manos (2002) urge that relative to other investors, institutions have more incentive to spend resources on monitoring the firm and its management. This is due to their expertise and better ability to monitor management actions at relatively low cost. They also stand to benefit more from monitoring, because their percentage holding is normally relatively large. Furthermore, institutions are in a better position, compared with individuals, to take over inefficient firms and this threat is another aspect forcing managers to become more efficient. Consequently, institutional ownership has traditionally been viewed as an answer to the free rider problem. This implies that the larger the percentage held by institutions, the less is the need for dividend induced monitoring. This, in turn, suggests an inverse relationship between this variable and the dependent variable.

Liquidity shows a negative relationship with the payout while risk shows a positive relationship with the payout, which should not be the case a priori. It can be urged that firms with a high turnover as a ratio of market capitalization tend to reduce dividend payout as they retain their earnings to be invested in potential high growth opportunities. This in turn, increases their risk profiles. For the stocks held by dispersed shareholders, the retention ratio tends to be high because of the high cost of borrowing to finance future investments. Thus firms prefer internal financing to external financing. Lastly, size is correctly related to payout as expected. According to Rozeff (1982), Lloyd et al (1985), and Rao et al (1994), large firms are more mature and have easier access to capital markets, which results in less dependence on internally generated funds, hence higher dividends.

From the table above, the variable size is highly correlated with firm thinness and foreign ownership. Therefore, to ensure that the estimations results are consistent, efficient and robust, this size is dropped and therefore is not used in the empirical estimation.

4.3 Regression Results

This section gives the estimation results of the four panel data models, e.g. Model 1(Pooled OLS), Model 2 (Fixed (within) Effects), Model 3 (Between Effects) and Model 4 (Random (overall) Effects) that were estimated. Before presenting these results, we first present the results of the Hausman (1978) specification test that was done after the estimations for the purpose of choosing the best model that has most consistent and efficient estimators.

Hausman (1978) suggests a test to check whether the individual effects α_i are correlated with the regressors X_{it}.

Under the null hypothesis e.g. *Ho*: Orthogonality, i.e., no correlation between individual effects and the explanatory variables. Both random effects and fixed effects estimators are consistent, but the random effects estimator is efficient, while fixed effects are not.

Under the alternative hypothesis e.g. *Ha*: Individual effects are correlated with the $X's$. In this case, random effects estimator is inconsistent, while fixed effects estimator is consistent and efficient.

Greene (1997) recalls that, under the null hypothesis, the estimates should not differ systematically. Thus the test is based on following equation:

$$H = (b^{RE} - B^{FE})'[(V(b^{FE}) - V(B^{RE}))^{-1}](b^{RE} - B^{FE}) \approx Chi\text{-}square(k) \quad \text{---(8)}$$

where k is the number of the regressors in X (excluding constant). The results of the estimation of equation 8 above are presented as below.

Table 8: Results of the Hausman Test

Variable	-----Coefficients----- (b) Consistent	(B) Efficient	(b – B) Difference	Sqrt(diag (V_b - V_B)) S.E
Growth	-0.1042	-0.1314	0.0272	0.0064
Firm Thinness	0.0736	0.1901	-0.1165	0.0620
Risk	-0.0702	-0.0661	-0.0041	0.0217
Foreign ownership	-0.0806	-0.0195	-0.0611	0.1324
Public ownership	-0.1642	-0.2182	0.0540	0.1625
Institutional ownership	-0.2397	0.2856	0.0459	0.1317

NOTE. The variables are described as a follows: Payout = dividend per share divided by earnings per share. Growth = annual change in total net assets. Liquidity = Firm turnover as a ratio of firm market capitalization. Firm thinness = the number of days the firm trades its shares on the stock exchange in a given year (in this case Nairobi stock exchange) relative to the number of days trading takes place on the stock exchange in the same year. Risk = the volatility rate of the firms' daily stock prices in each year. Foreign ownership = the percentage of shares held by foreign nationals and foreign financial institutions out of the total percentage of shares of the firm in a given year. Public Ownership = the percentage of shares held by the public at large, they constitute Kenyan individual investors in a given year. Institutional ownership = the percentage of shares held by Kenyan institutions such as insurance companies, mutual funds and financial institutions out of the total percentage of shares of the firm in a given year.

Where b = consistent under Ho and Ha; obtained from $xtreg$

B = inconsistent under Ha; efficient under Ho; obtained from $xtreg$

Test: Ho: difference in coefficients not systematic

Chi2 (6) = $(b - B)'(V_b - V_B)^{-1}(b - B)$

= 0.79

Prob>chi2 = 0.9778

Based on the above, we can see that the test statistic (0.79) is less than the critical value of a Chi-Squared (6df, 5%) = 12.592 (the value 12.592 has been read from the chi-square tables). Therefore, we accept the null hypothesis and given this result, the preferred model is the random effects model. The estimation results of the four panel data models are presented in table 9.

Table 9: Summary of the Model Estimations

Variable		Model 1: Pooled OLS	Model 2: Fixed Effects	Model 3: Between Effects	Model 4: Random Effect	Model 4: MLE Random Effect
Constant	COEF	-1.9690	-1.5506	-2.5519	-1.5573	-1.5363
	SIG.LEV	*0.0000*	*0.0350*	*0.0010*	*0.0000*	*0.0000*
Growth	COEF	-0.2184	-0.1042	-0.4208	-0.1314	-1.1272
	SIG.LEV	*0.0000*	*0.0020*	*0.0040*	*0.0000*	*0.0000*
Firm thinness	COEF	0.4356	0.0736	0.6101	0.1901	0.1739
	SIG.LEV	*0.0000*	*0.5470*	*0.0130*	*0.0040*	*0.1000*
Risk	COEF	-0.0369	-0.0702	-0.0190	-0.0661	-0.0670
	SIG.LEV	*0.4770*	*0.2050*	*0.8740*	*0.1007*	*0.1640*
Foreign ownership	COEF	-0.0484	-0.0806	-0.0624	-0.0195	-0.0184
	SIG.LEV	*0.0480*	*0.0700*	*0.0989*	*0.0970*	*0.7090*
Public ownership	COEF	-0.2917	-0.1642	-0.3440	-0.2182	-0.2183
	SIG.LEV	*0.0000*	*0.3990*	*0.0220*	*0.0380*	*0.0430*
Institutional ownership	COEF	-0.3410	-0.2397	-0.3214	-0.2856	-0.2812
	SIG.LEV	*0.0000*	*0.1580*	*0.0400*	*0.006*	*0.0060*
R-squared		0.5063	0.3228	0.7111	0.5283	
F- statistic		13.67	2.50	4.92		
Prob > f		0.0000	0.0313	0.0092		
F-test			6.58			
Prob > f			0.0000			
H-test: chi2					31.98	
Prob>chi2					0.0000	
LR chi2 (6)						25.72
Prob>chi2						0.0003

NOTE. The variables are described as a follows: Payout – dividend per share divided by earnings per share. Growth – annual change in total net assets. Liquidity – Firm turnover as a ratio of firm market capitalization. Firm thinness – the number of days the firm trades its shares on the stock exchange in a given year (in this case Nairobi stock exchange) relative to the number of days trading takes place on the stock exchange in the same year. Risk – the volatility rate of the firms' daily stock prices in each year. Foreign ownership – the percentage of shares held by foreign nationals and foreign financial institutions out of the total percentage of shares of the firm in a given year. Public Ownership – the percentage of shares held by the public at large that constitute Kenyan individual investors in a given year. Institutional ownership – the percentage of shares held by Kenyan institutions such as insurance companies, mutual funds and financial institutions out of the total percentage of shares of the firm in a given year.

The Hausman test results indicated that the Random Effects model is the model with most consistent and efficient estimators. Results from the Random effects model show that all the variables are significant in determining dividend pay out ratio although at different significant levels.

The variable growth is a significant at 1 percent and a coefficient of -0.1314. This implies that a percentage increase in the total assets of the firm reduces the dividend payout by 0.1314 percent. Looking at the dividend policy across the NSE listed firms and through time, this finding shows that those firms that experience high growth also experience lower dividend payouts. If the rate of growth reflects the need to invest, then the evidence in this study supports Myer's (1984) pecking order hypothesis by establishing a link between the dividends and investment policy of firms. It also suggests that the investment policy can substitute for dividend payout as a device to control agency costs.

This finding also supports the agency and transaction theories that are urged by Rozeff (1982), Lloyd et al (1985), Rao et al (1994), Hansen (1994), Moh'd et al (1995), Holder (1998) and Manos (2002). In this context, the explanation why firms that experience high growth experience lower dividend payouts is that rapid growth rates require more funds to meet high investment expenditures. Hence, in order to avoid external financing which is associated with transaction costs such as interest payable on the borrowed funds, firms tend to lower dividends and use retained earnings to finance the high investments.

Another variable, firm thinness has a coefficient of 0.1901 and is significant at five percent. This means that a percentage increase in the number of traded in a year by a firm increases dividend pay out by 0.1901 percent. This finding supports Manos (2002) who urges that a firm whose shares are frequently traded is the one whose shares can be bought or sold more easily and quickly and whose share prices accurately reflect the available information. When it is easy and quick for the firm's shares to both sell and buy and when prices accurately reflect the available information, market players such as lenders build confidence in the firm. This means that the firm can easily raise capital

from the market at low cost, both in terms of explicit costs such as underwriter fees and implicit costs such as mis-pricing. Because the firm is able to raise external capital easily, there is high ratio of retained earnings, which can be paid as dividends instead of being re-invested.

The variable risk is negatively related with the dependent variable (as expected) although at 10 percent level significance level. We noted that this variable had a minimum value of 0.0258, a maximum value of 11.2802 and a standard deviation of 2.9047. This high level of standard deviation implies that on the overall, individual firm stock prices on NSE are highly volatile. According to Rozeff (1982), Moh'd et al (1995) and Manos (2002), when the firm's share prices are highly volatile, it means that these prices do not accurately reflect the available information, which in turn may reduce the confidence that the firm derives from the market players such as lenders. This means that the firm will raise capital from the market at very high costs. Such firms operate at a higher financing and operating leverage. Hence, in order to avoid these costs, such firms will lower dividends and use retained earnings to finance the high investments.

Similarly institutional ownership, which represents the percentage of shares held by institutions such as insurance companies, mutual funds and Kenyan financial institutions, is negatively related to dividend payout. From the results, a one-percentage increase in the number of shares held by Kenyan institutions reduces dividends payout by 0.2856 percent. Moh'd et al (1995) and Manos (2002) in their studies also found this type of relationship. This means that relative to other investors, institutions that own share in Kenyan firms have more resources and expertise that enables them to effectively monitor the firm and its management at a relatively low cost. They are justified to take active role in monitoring because their percentage is relatively large. Furthermore, the fact that institutions stand a better position to take over inefficient firms makes the managers to become more efficient.

The variable foreign has a coefficient of -0.0195 and is significant at 10 percent. This means that a percentage increase in the number of shares held by foreigners reduces dividend pay out by 0.0195 percent. This finding means that foreigners from developed countries hold Kenyan shares for long-run growth potential. As urged by Glen et al (1995), when the foreigners are interested in the long-run growth rather than for income, they develop interest, which results in more monitoring. This reduces the need for the dividend induced monitoring devices.

As urged by Moh'd et al. (1995), dividends payout is expected to increase as a function of public ownership. The findings in this study however contradict these augments. We find that public ownership is significant in determining the dividend pay out and has a coefficient of -0.2182 meaning a percentage increase in the ownership dispersion reduces the payout by 0.2182 percent. We suggest the following reason for this outcome. First, most of the individual Kenyan investors are scattered all over the country. In most cases these shareholders. As urged by Jensen and Meckling (1976) and Easterbrook (1984), when shareholders are widely dispersed it means that it is not easy for them to collectively organize themselves so as to collectively bargain for a common interest. Hence in Kenya there is little collective bargaining on the part of the public to influence the decision of firms to pay dividends.

Second, since Kenya is a developing capital market; the level of information on the part of the public on issues on stock issues could be low. This suggests that there is some level of information asymmetry on the part of public about the associated benefits of investing in shares and perhaps their rights to dividends. We suggest that another reason for the negative relationship between public ownership and dividend pay out is that the management could be taking advantage of the ignorance on the part of the public shareholders by denying them dividends.

The above discussions are the results of the best model, Random effects model, which is determined by the Hausman (1978) specification test. As explained earlier, four models were tests. While the signs of the coefficients corresponding to each variable are same in

all the models their significance levels in the way they determine the dependent variable are varying. Looking at table 5, we observe that the variable growth is significant in determining dividend pay out in all the models. Firm thinness is significant in determining dividend pay out in all the models expect for the fixed and MLE random effects models. Risk was insignificant in determining the dependent variable in all the models expect for the random effects model where it is only significant at 10 percent. Foreign ownership is insignificant in determining the dependent variable in all the models expect for the fixed effects model while institutional ownership is significant in determining the depend variable in all the model expect for the fixed effects model.

The models also give different values of the R-Squared, with the between effects model giving the highest value of R-Squared of 0.7111 while the fixed effects model gave the lowest value of R-Squared 0.3228. Additionally, all the models fit data well as shown by the Prob>F falling between 0.0000 and 0.0313. Lastly, the constant term is significant and has a negative sign in all the models.

In summary, in the time series cross-sectional analysis of dividends policy the tenets of agency costs theory appear to hold not only across firms (as in Rozeff (1982)) but also within firms across time as well. Firms actually do appear to respond to proxies representing the agency/transaction costs structure as time and conditions change.

CHAPTER FIVE

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

In this study, the agency cost transaction costs argument set forth by Rozeff (1982) and Easterbrook (1984) is employed to test a model of optimal dividend payout. Unlike many prior studies that analyze only cross sectional differences between firms, this study seeks to examine the dividend paying behavior of firms through time as well. Using more definitive proxies for agency and transaction costs structure and time series cross sectional analysis, we test the hypothesis on 20 firms listed on NSE over a period of 6 years.

Using the Hausman (1978) specification test, we find out that the Random Effects model is the model with most consistent and efficient estimators. The variable growth, which is a proxy for agency cost, confirm to the prediction of a negative correlation with dividend payout ratio. This finding is consistent with past studies such as Rozeff (1982), Baskin (1989), Lloyd et al (1985), Rao et al (1994), Hansen (1994), Moh d et al (1995), Holder (1998) and Manos (2002) Firm thinness that also constitute agency costs confirm to the prediction of a positive correlation with dividend payout ratio. This finding is consistent with past studies by Rozeff (1982) and Manos (2002). Risk is found to be negatively related to dividend payout

All the agency costs are found to be negatively related to dividend pay out. While foreign and institutional ownership confirm to the negative relationship with dividend payout as expected, the impact of public ownership, the variable measuring ownership by the Kenyan investors , on the target payout ratio, is found to be in contrast to the prediction that an increase in ownership dispersion increases the collective action problem of monitoring and thus the need for the dividend induced capital market monitoring.

From above, we conclude that in Kenya, agency and transaction costs significantly determine the dividend policy of firms. More importantly this relationship appears to hold through time as well as across firms. We also conclude that firms in Kenya set their target payout ratio so as to minimize the sum of agency costs and the costs associated with raising external finance (transaction costs)

5.2 Policy Implications and recommendations.

The following policy recommendations come from the findings of this paper. We noted that that despite the restriction on foreign and institutional share ownership in Kenya, a large proportion of the shares are held by foreigners and Kenyan institutions. Following this, we recommend that the responsible institutions should put policies that will encourage more Kenyan investors, (especially those from the rural areas) to invest their resources in the stock market. We propose that the responsible institutions need to educate the public on issues about the stock market so as to attract more Kenyans who can come forwards to invest their funds in shares.

We have also found that contrarily to other countries, especially the developed capital markets, in Kenya, the more the percentage of shares owned by the public, the less the dividend payouts. We feel that this relationship is due to; first; little collective bargaining on the part of the public to influence the decision of firms to pay dividends and second, information asymmetry on the part of the public about their right for dividends. We recommend that responsible institutions need to create a class of informed Kenyan shareholders who are aware of their right for dividends and also put up policies that will ensure that the investors are paid dividends.

Since we have found out that firms whose large shares are owned by institutions and foreigners tend to be highly capitalized. We recommend that the favorable policies should be put in place to encourage more foreign and institutional investors to invest their funds in Kenyan firms. This will act to improve the efficiency and effectiveness of the stock market in Kenya

Although there is a high volatility of stock prices on the market, this study has established that volatility of stock prices has been reducing over time. Additionally, we found that over time, it's becoming quicker and easier to buy or sell the shares on the market (NSE) and that the firm's share prices accurately reflect the available information with time. In this regard, the NSE and other responsible institutions need to put up more measures to move the stock market in this direction, given that volatility of stock prices and liquidity are key determinants of dividend payout.

5.3 Limitations of the Study

The main limitation experienced in this study is lack of consistent data especially data on shareholding patterns (e.g. foreign, public, institutional shareholding pattern). The reason why we could not find data on shareholding pattern is because some firms failed to submit data on their shareholding patterns to CMA, a statutory regulation requirement for each listed firm. Others do not also show this information in their financial books. However, since the pattern of shareholding is similar across the years in all the firms, we extrapolated the available data to find the missing values.

Secondly, unlike other similar studies such as Rozell (1982), Lloyd et al (1985), Rao et al (1994), Holder et al (1998) Hansen (1994), Moh'd et al (1995) that have used a sample of more than 200 firms, our study is based on a sample of only 20 firms out of a population of 52 firms that are listed on Nairobi stock exchange. We feel that this low sample size may affect the findings of this study especially if we are to compare them with previous studies.

5.3 Areas for Further Research

Contrary to findings by as Rozell (1982), Lloyd et al (1985) and Moh'd et al (1995), this study found that public ownership is negatively related to dividend pay out. Since this contrasts theatrical arguments as regards the relationship between public ownership and dividend payout, we propose that further research should be carried out to test this relationship. Furthermore, we could not estimate the relationship between dividend

payout and the variables institutional ownership and size. This is because these variables were highly correlated with each other. We recommend that other studies need to come up to establish how institutional ownership and size variables are related with dividend payout.

Lastly, this paper did not introduce more dynamics and innovation to the original Rozeff's cost minimization model, other than defining a wider view of the main variables used by Rozeff and introducing size variables. There is need for further research that will entail introducing more dynamics into the original cost minimization model in the Kenyan context.

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