Effects of Dividend Policy on Share Price of Firms Listed at the Nairobi Securities Exchange, Kenya

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Abstract

Dividend policy is a widely researched topic in the field of corporate finance; however, it still remains a mystery as to whether dividend policy affects the share prices of quoted firms. During the period under review (2001-2011), share prices of listed firms in the Nairobi Securities Exchange severely fluctuated making it difficult for investors to make informed investment decisions. The general objective of this study was to investigate the effect of dividend policy (cash and share dividend) on the stock prices, specifically, the study sought to establish the relationship between cash dividend and the share prices and to determine the relationship between share dividend and share prices of firms listed at the Nairobi Securities Exchange. The data set consisting of volume weighted average price as dependent variable and cash dividend per share and share dividend per share as independent variables were collected using data collection schedules for 55 companies sampled for the study. Secondary data was obtained from Nairobi Securities Exchange, Capital Market Authorities, Kenya Bureau of Statistics and from sampled companies for a period between the years 2001 and 2011. Ordinary Least Square diagnostic tests were run to ascertain the suitability of the model and the results showed that the model was suitable for estimation since it did not suffer from multicollinearity, heteroscedasticity and non-normality problems. Random Generalized Least Square regression analysis was carried out with the help of STATA at five percent level of significance. The results of the market indicated that there was a statistically significant positive relationship between cash dividend and share prices while there was statistically insignificantly negative relationship between share dividend and share prices. This implied that dividend policy affects the share price and that increase in cash dividend would result in increase in share price for companies listed at the Nairobi Securities Exchange, Conversely, an increase in share dividend would result in an insignificant decrease in share price for companies listed at the Exchange. The results of the study confirmed relevance of dividend policy on firm's value. Based on the findings of the study, it was recommended that the management of Capital Markets Authority of Kenya should amend Cap 485A Laws of Kenya and other relevant laws and regulations and ensure enforcement of those laws among other measures to guarantee consistent practices by listed firms that lead to efficiency in the market for the benefit of the investors. Further, the management of listed firms should consider adoption of cash dividend policy more than share dividend as a strategy aimed at increasing the value of the firms due to its positive effect on the share price. If this is done consistently, the shareholders' wealth would be maximized in the long run. It is thus recommended that further research could be conducted to establish whether macroeconomic variables affect equity price for firms listed at the Exchange.

Keywords: Dividend policy, Share price, Securities Exchange, investment decisions, stock prices, cash dividend per share and share dividend per share,

1.1 Introduction

Modern corporation finds its origin in cooperative ventures in various parts of Europe in the medieval period (Scott, 1912; Kindleberge, 1984). Voyages in the sixteenth century both increased the demand for and the supply of capital, and these ventures led to large and long-lived entities such as the British East India Company. As business evolved into early form of corporations, dividend policies also evolved. In the sixteenth century, investors backed expectations were formed as ventures in parts. The investors owned "parts" or shares in fractions of eighth, sixteenth, and the like(Baker & Kent, 2009). These organisations more closely resembled partnerships than corporations (Masselman, 1963; Beatty, 2001). The prevailing practice was to raise new capital for each trading venture and the joint stock companies generally did not have fixed capital that persisted beyond a given venture. At that time, dividend payment followed a clear and basic policy, a liquidating dividend policy. At the end of the voyage, a mass liquidation of all assets occurred and investors received a profit in proportion to the shares they owned. Although this type of dividend policy lowered the opportunity of fraud, the practice of

total liquidation at the end of each venture was not very efficient because the investors received proceeds from both earnings and assets. They often received their dividends in form of real goods. Investor's adept in managing financial risks probably found liquidation of real assets cumbersome. Furthermore, the practice lessened the opportunity to gain from human capital built from the relationships developed in early ventures (Kindleberge, 1984; Baskin, 1988).

By the beginning of the seventeenth century, corporations had become longer-lived, and paid dividends only from earnings. Initially, investors considered dividend very important. At the end of the century, however, investors began placing less emphasis on dividend payment. A period of increased speculation followed, which culminated in a major decline in stock prices in 1720 and the passage of the Bubble Act in England. The Bubble Act placed restrictions on the formation of corporation and their activities. Corporations became important again in the early nineteenth century with an increased demand for capital from railroad and canal companies in both Britain and United States. British investors supplied much of the capital for expansion in both countries. Eventually, parliament repealed the Bubble Act in 1824. Corporations increased in numbers and the issue of dividend payment regained its importance. The nineteenth century saw innovations such as preferred stock and efforts by management to smooth dividends. As industries continued to grow in the twentieth century, the link between dividend and share value gained attention. After 1920, managers increased both dividend payments and their practices of dividend smoothing. Despite efforts to smooth dividends, the twentieth century witnessed considerable variability in dividend payouts and dividend yields. The reasons underlying past and current trends in dividend payments are the subjects of such debate and research. Today some experts question whether dividends are really necessary. The twenty-first century has seen dividend policy remain one of the most important financial policies used in financial management to achieve the objective of wealth maximization (Baker & Kent, 2009). Further, it is a requirement in Kenyan for companies that intend to be listed at the Nairobi Securities Exchange(NSE) to have a clear future dividend policy (Kenya Gazette Supplement No. 40, 2002). This makes dividend policy worthy of serious management attention. Although cash dividend is one of the most important type of dividend, particular circumstances may motivate management to use other types of dividend such as share dividends or share buyback (Broyles, 2003), or to use them simultaneously with cash dividend. According to Frankfurter & Wood (2002), a number of conflicting theoretical models, all lacking strong empirical support, define current attempts to explain corporate dividend behaviour. Moreover, both academics and corporate managers continue to disagree about whether the value of the firm is independent of its dividend policy.

1.2   Statement of the Problem

Nairobi Securities Exchange has in the recent past faced severe fluctuation in market price of shares which has significantly affected the value of many listed firms. In the period between 2001 and 2011, investors at the Exchange have been worried as the market remained turbulent with stock prices dipping to new levels (Bitok, Kiplangat, Tenai, & Rono, 2011). The share price dip at the bourse is evidenced by drop in the NSE 20 Share Index to 1097.73 points in August 2002 from 1932.85 points in February 2001. Further, the index slid significantly from 6161 points high in February 2007 to 2474.75 points in February 2009. This period saw the Institutional investors lose close to KES 80 billion of the total portfolio invested in shares at the Nairobi Securities Exchange due to the depreciation of share prices (NSE Monthly Market Statistical Bulletins, 2012). The share price of listed firms is a matter of concern not only to the management of the firm but also to other stakeholders such as investors, employees, suppliers and customers. A fall in the share price of a firm subsequently decreases its value and the demand for equity of the firm in the market fall which induces further fall in share price. When this happens, the life of the company is affected and its management may be threatened with adverse consequences such as the discontent of individual and corporate investors, rise in cost of raising new capital, undercut the confidence of employees, customers, suppliers and may handicap merger. Despite dividend policy being one of the mostly researched topics in the field of finance (Arnott, & Asness, 2003) (Farsio, Geary, & Moser (2004), the question as to whether dividend policy affects the share price still remains unresolved (Ouma & Murekefu, 2012) among managers, policy makers and researchers since half century ago (Khan, 2012). Most of the studies conducted (Arnott, & Asness, 2003); (Farsio, Geary, & Moser (2004), on dividend policy and stock prices concentrated in developed countries. The question of relevance of dividend policy on stock prices in developing countries remains valid. Panel data methodology was used to investigate this problem, a complete departure from event study methodology used by other researchers in the Kenyan context (Geofrey, 2005, Ann, 2004; Bunyasi, 2007). It is against this background that this study sought to fill this gap in literature by investigating the effect of dividend policy on share prices of firms listed at the Nairobi Securities Exchange for eleven year (2001-2011) panel. The general objective of this research was to investigate the effects of dividend policy on the share price of the firms listed at the Nairobi Securities Exchange. In order to achieve the general objective, the specific objectives that guided the study included:

i.   To establish the relationship between cash dividend and the share price of firms listed at the Nairobi Securities Exchange.

ii.   To determine the relationship between share dividend and share price of firms listed at the Nairobi Securities Exchange.

1.3   Hypotheses

To investigate the effects of dividend policy on the share price for companies listed at the Nairobi Securities Exchange; this study proposed the following hypotheses:

$H0_1$: There is no statistically significant relationship between cash dividend and the share price of the firms listed at the Nairobi Securities Exchange.

$H0_2$: There is no statistically significant relationship between share dividend and the share price of firms listed at the Nairobi Securities Exchange.

2.0 Literature Review

The first part of the chapter presents the review of theoretical literature, followed by past studies on dividend policy and stock price. Lastly, the chapter presents the conceptual framework of the study.

2.1   Theoretical Literature

Modigliani & Miller (1961) presented one of the most influential dividend theories which is still currently seen as one of the most respected theories. When the theory was presented in the article "Dividend policy, growth and the valuation of shares", it provided a new benchmark and changed the view that both practitioners and academics had towards dividends. Before the publication of Modigliani-Miller's dividend irrelevance theory, the general view was that dividends were highly correlated to the value of the stock (Baker & Kent, 2009). As the name of the theory suggests, it states that under perfect capital markets the dividend policy is independent to the price of firm and it does not matter whether the company has high or low dividend payouts. The theory (Miller & Modigliani, 1961) assumes there are no taxes, or the tax rate on cash dividends and tax rate on capital gains are equal; that there is no transactions cost for the process of selling or buying shares therefore if investor needs cash, they will sell their shares without losing commissions and fees instead of cash dividends; that the investors are absolutely rational in their decisions; and that there are no agency costs implying that company managers who distribute low cash dividends do not use company profits to achieve personal goals that may harm the company (Jensen, Solberg, & Zorn, 1992). Additionally, the theory assumes that the company operates under a full and efficient market which means that the information is available and accessible to all at the same time without any costs, and the stock prices reflect this information and is influenced by it at the moment it is provided; and that there is no information gap and the company operates in a full and efficient market. Finally, the theory assumes that the future outlook on the performance of the company is homogeneous among all investors, including information and expectations among managers and investors.

Based on the above assumptions, Miller and Modigliani have explained the irrelevance of dividend as the crux of the arbitrage argument. The arbitrage process refers to setting off or balancing two transactions which are entered into simultaneously. The two transactions are paying out dividends and raising external funds to finance additional investment programs. If the firm pays out dividend, it will have to raise capital by selling new shares for financing activities. The arbitrage process will neutralize the increase in share value (due to dividends) with the issue of new shares. This makes the investor indifferent to dividend earnings and capital gains as the share value is more dependent on the future earnings of the firm than on its current dividend policy. Modigliani and Miller also argue that the shareholders are able to construct their own homemade dividends. That is, if the company does not pay dividends but the shareholder prefers some dividend, they can sell and equivalent proportion of his stocks hence creating a homemade dividend. The opposite is of course also true, if the company pays a higher dividend than the shareholder prefers he can use the surplus dividends to buy additional stocks (Brigham & Houston, 2011). These two arguments discussed above are the underlying assumption of the irrelevance hypothesis and according to these arguments shareholders should be indifferent between capital gains and dividends. This in turn explains why the shareholders are unwilling to pay a higher price for dividend paying stocks which in turns make the question of dividends irrelevant. Therefore, the theory suggests that under perfect a market, the company's dividend payout policies do not affect the share value of a company.

The signalling theory of dividends has its origins in (Lintner, 1956) studies who revealed that the price of a company's stocks usually changes when the dividend payments changes. Even though Modigliani & Miller (1961) argued in favour of the dividend irrelevance they also stated that in the real world disregarding the perfect capital markets, dividend provides an "information content" which may affect the market price of the stock. Many researchers have thereafter been developing the signalling theory and today it is seen as one of the most

influential dividend theory. (Bhattacharya, 1979) presented one of the most acknowledged studies regarding signalling theories which states that dividends may function as a signal of expected future cash flows. An increase in the dividends indicates that the managers expect higher cash flows in the future. The research is based on the assumptions that outside investors have imperfect information regarding the company's future cash flows and capital gains. Another important assumption is that dividends are taxed at a higher rate compared to capital gains. Bhattacharya (1979) argues that under these circumstances even though there is a tax disadvantage for dividends, companies would choose to pay dividends in order to send positive signals to shareholders and outside investors.
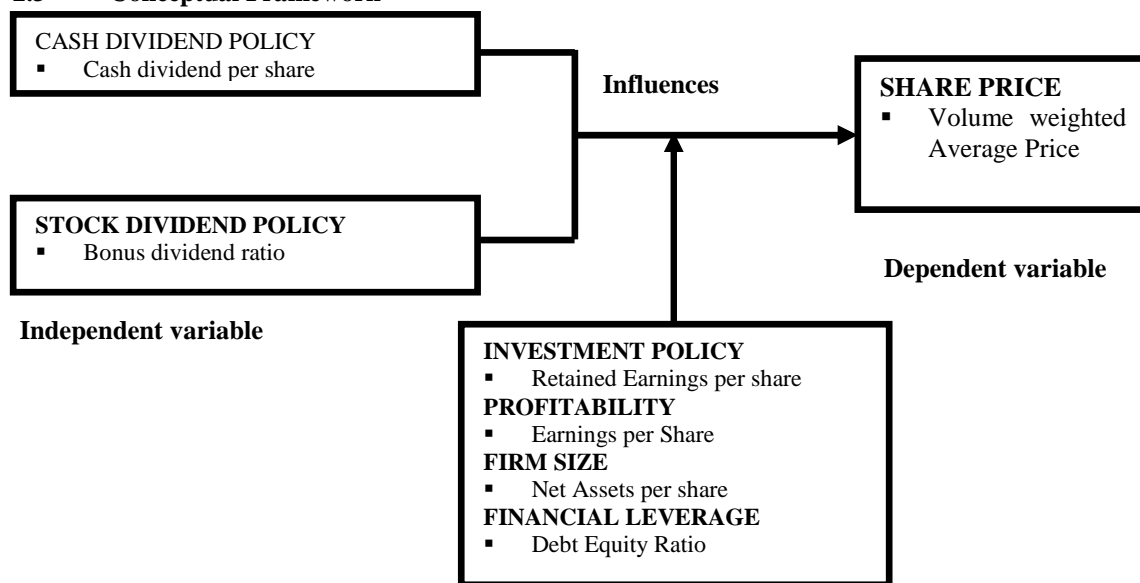
The Bird in Hand theory was first mentioned by Lintner (1956) and it has been supported by various researchers including (Gordon, 1963). Al-Malkawi (2008) asserts that in a world of uncertainty and information asymmetry, dividends are valued differently from retained earnings (capital gains). "A bird in hand; (dividend), is worth more than two in the bush; (capital gains)". Due to uncertainty of future cash flow, investors will often tend to prefer dividends to retained earnings. This is due to the high degree of uncertainty related to capital gains and dividends paid in the future. Current dividends are more predictable than capital gains, since the stock price is determined by market forces and not by the managers (Keown, Martin, Petty & Scott, 2007; Gordon, 1963). Dividend model is based on several assumptions; first, that the company is all equity financed and no external financing is used. This implies that the company finances all investment with retained earnings, secondly, internal rate of return, cost of capital and the retention ratio is constant and finally that the company has an eternal life. The underlying assumptions of Gordon's model is based on the idea of what is available today compared to what may be available in the future (Khan & Jain, 2008). It is based on the logic that the more distant the future is, the higher the uncertainty regarding capital gains and future dividends. Even though the capital gains in the future may provide a higher return than the current dividends, there is no guarantee that the investor will accumulate a higher return due to the high degree of uncertainty (Gordon, 1963). Since the length of the time and the level of risk are correlated, investors are unwilling to invest in companies where the time until the dividend payments are far away. An investor would therefore be willing to pay a higher price for firms that pay current dividends. For companies which do not pay current dividends, the investor would use a higher discount rate in order to discount the earnings and the value of these companies should therefore be lower than the companies which pay current dividends (Khan & Jain, 2008). This means that the discount rate becomes higher as the earnings retained in the company increases. The opposite is true; companies which pay current dividends have a lower level of retained earnings which contributes to lower discount rate which in turn contributes to a higher value of the firm. Lintner's (1956) main arguments towards the bird in hand theory is based on that most companies are conservative in their financing policy and the dividend payments are therefore based on an optimal payout ratio. The principal factor that contributes to deviations from the optimal payout ratio is due changes in the company's profit, and if the profit increases the dividend payout should increase in the same proportions (Myers & Bacon, 2004). But uncertainty regarding future profits also has an impact on the company's dividends. If the estimated risk in the future is higher than the current risk, the company may decrease the dividend payout ratio in order to hedge to decreasing future profits (Friend & Puckett, 1964.). The bird in hand theory has been subject to a large amount of criticism and opponents to the theory states that it excludes important factors. Keown, Martin, Petty & Scott (2007) argue against the theory and say that increases in current dividends do not decrease the riskiness of the company; it does in fact work in the opposite direction. Because if an increase in dividend payments are made the managers have to issue new stocks in order to raise the needed capital. Therefore, a dividend payment just transfers the risk from the old to the new shareholders. However, Keown, Martin, Petty & Scott (2007) argue that there are still many individual investors and financial institutions who consider that dividends are important and it is therefore of importance to include the theory even though it has some limitations.

2.2   Empirical Literature Review

Many studies have been conducted explaining the relationship between dividend policy and stock prices. Discussion of dividend policy cannot be completed without including the work of Lintner (1956). He raised the all-important question, "what choices made by managers do affect the size, shape and timing of dividend payments?" This question remains relevant to date. Thereafter, (Miller & Modigliani, 1961) introduced the concept of Dividend Irrelevance theory in which they explain that dividend policy does not affect the stock prices. Black & Scholes (1974) found no relationship between dividend policy and stock prices. Their results further explain that dividend policy does not affect the stock prices and it depends on investors' decision to keep either high or low yielding securities; return earned by them in both cases remains the same. Many researchers like, Adefila, Oladipo & Adeoti (2004), (Uddin & Chowdhury, 2005), Denis & Osobov (2008) and Adesola & Okwong (2009) provide the strong evidence in the favour of dividend irrelevance theory and does not consider it relevant to the stock prices.

Chen, Huang & Cheng (2009) analyzed the effect of Cash Dividend on Share Price for the period 2000-2004 in China. They found that Cash Dividend has significantly positive effect on the Stock Prices. When Cash Dividend increases Stock Prices also increase and when the Cash Dividend decreases, Share Prices decrease. Ali & Chowdhury (2010) analyzed the price movement of private commercial banks listed at Dhaka Stock Exchange towards the dividend announcement. They took a sample of 25 banks and their results showed that stock prices of 11 banks decreased, 6 banks' stock prices increased, while 8 banks' stock prices remained unchanged when dividends were announced. Overall results of their study showed that there is insignificant relation between stock prices and dividends. (Akbar & Baig, 2010) took the sample of 79 companies listed at Karachi Stock Exchange for the period of 2004 to2007 to study the effect of dividend announcement on stock prices. Results of their study show that announcement of dividends either Cash Dividend or Stock Dividend or both have positive effect on Stock Prices. Nazir, Nawaz, Anwar, & Ahmed (2010) also study the effect of dividend policy on stock prices. Results of their study show that dividend payout and dividend yield have significant effect on stock prices while size and leverage have negative insignificant affect and earning and growth have positive significant effect on stock prices. Khan, Aamir, Qayyum, Nasir, & Khan (2011) studied the effect of dividend payment on stock prices by taking the sample of fifty five companies listed at Karachi Stock Exchange. Results of their study show that dividend yield, earnings per share, return on equity and profit after tax are positively related to stock prices while retention ratio has negative relation with stock prices. Hussainey, Mgbame, & Chijoke-Mgbame (2011) studied the impact of dividend policy on stock prices. Results of their study show the positive relation between dividend yield and stock price changes and negative relation between dividend payout ratio and stock price changes. Their results further indicate that the firms' earnings, growth rate, level of debt and size also cause the change in Stock Price in United Kingdom. Khan (2012) attempted to explain the effects of dividend announcements on stock prices of chemical and pharmaceutical industry in Pakistan. The study applied Panel data to explain the relationship between dividends and stock prices after controlling the variables like Earnings Per Share, Retention Ratio and Return on Equity. The study indicates that Cash Dividend, Retention Ratio and Return on Equity have significant positive relation with stock market prices and significantly explains the variations in the stock prices of chemical and pharmaceutical sector in Pakistan while Earnings Per Share and Stock Dividends have negative insignificant relation with stock prices. This paper further showed that Dividend Irrelevance Theory is not applicable in the case of chemical and pharmaceutical industry of Pakistan. Baker & Powell (2012) has used survey technique to take the opinion of Indonesian managers about the factors influencing dividend policy, dividend issues, and explanations for paying dividends. Results of their survey show that Indonesian managers consider stability of earnings and level of current and expected future earnings are the most important determinants of dividend policy. Their results further indicate that dividend policy affects firm value and Indonesian managers consider different dividend theories like signalling, catering, and life cycle theories in designing their dividend policies.

2.3   Conceptual Framework

CASH DIVIDEND POLICY
- Cash dividend per share

Influences

SHARE PRICE
- Volume weighted Average Price

STOCK DIVIDEND POLICY
- Bonus dividend ratio

Dependent variable

Independent variable

INVESTMENT POLICY
- Retained Earnings per share

PROFITABILITY
- Earnings per Share

FIRM SIZE
- Net Assets per share

FINANCIAL LEVERAGE
- Debt Equity Ratio

Intervening Variables   Source: Author, (2012)

Figure 2.1: Conceptual framework

2.5 Study Design and Methodology

Descriptive research design was deemed appropriate for this study since the research intended to investigate in-depth information on the relationship between dividend policy variables and the share market prices of firms listed at NSE for the period between 2001 and 2011. The study investigated the effects of dividend policy on the share price through panel data estimation. Panel data consist of observations on the same cross-sectional, or individual, units over several time periods (Gujarati, 2003). The study undertook empirical tests with the following model framework:

$$lnVWAP_{it} = \alpha_0 + \beta_1 lnCDPS_{it} + \beta_2 lnSDPS_{it} + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{(i)}$$

Where:

VWAP	-volume weighted average price
CDPS	-cash dividend per Share
SDPS	- new share dividend per share (bonus)
$\beta_1 \dots \beta_2$	-coefficients of firm specific independent and intervening variables
α_0	-intercept for independent variables
ε_{it}	-disturbance term
i	-represents the firm
t	- time measured by a firm's year end
ln	-natural logarithm

2.6 Definition and Measurement of Variables

Table 3.1: Definition and Measurement of Variables

Type	Variable	Transformation and Measure	Variable Description
Dependent variable	Equity Market Price	$VWAP_t$	Volume weighted Average Price of the specific counters measured by yearly volume weighted average price of the indices.
Independent Variables	Cash Dividend	$CDPS_t$	Cash dividend per share declared and paid yearly
	Share Dividend	$SDPS_t$	The bonus ratio for new shares to existing shareholders per share measured yearly.

2.7 Sampling Design

Purposive sampling was the most appropriate sampling technique for this study because this technique would allow the researcher to select observations that would facilitate test of hypothesis in the most appropriate way. The eligibility criterion based on the date of listing of the counters in the Exchange was used. The study focused on firms that had been listed at the NSE by January 2009 or those firms with at least three data points. The reason for the inclusion/exclusion criteria was to ensure that adequate data was collected and subsequently analysed. Therefore, a sample of 55 companies was selected from the total population which met the eligibility criteria. This sampling procedure would earn more credence to the findings of the study (Kothari, 2004).

2.8 Data Collection Procedure

Data was collected from the KNBS, NSE and CMA and from the listed companies using data collections schedules. The study used secondary data which was obtained using data collection schedules from Kenya Bureau of Statistics, Capital Market Authorities and the NSE. The study then adopted multivariate analysis where a multiple regression model was utilized. First, Ordinary Least Square diagnostic tests for normality, homoscedasticity and multicollinearity were run were run to ascertain the suitability of the model. Further, a Hausman Specification test was conducted determine model to be adopted (Random or fixed effect). Finally, a Random Generalized Least Square regression analysis was carried out with the help of STATA for the whole market at the Nairobi Securities Exchange at five percent level of significance. The results of the study were interpreted and inferences made and presented using tables and figures in order to explain the outcome.

3.0 Empirical results and interpretation

This chapter presents stepwise regression aimed at determine the number variables to be included in the model, model test, test for regression OLS (Ordinary Least Square) assumptions and the Hausman specification test. Further, the chapter presents and discuses the results of empirical tests. The chapter therefore sought to test the null hypotheses of the study.

3.1 Descriptive Statistics

Table 3.1 shows the descriptive statistics including mean, standard deviations, minimum and maximum value of all variables and variance.

Table 3.1: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max	Variance
Volume Weighted Average Price	65.9	74.9	1.8	445.0	5602.19
Cash dividend Per Share	2.5	3.7	0.0	23.1	13.48
Share Dividend per Share	0.1	0.2	0.0	2.0	0.06

Source: table is derived from the sample data compiled for the study

The mean value of Volume Weighted Average Price variable was the highest at 65.9. The lowest mean value is 0.1 representing the mean value for share dividend per share. This was expected since the variable was a ratio. Standard Deviation shows the variation in the data with Share Dividend per Share with the least value of Standard Deviation at 0.2 implying that Share Dividend per Share causes minimum variation in the share market prices of firms listed at the NSE.

3.2 Diagnostic Tests

There are three critical assumptions for regression models: multicollinearity, normality and homoscedasticity (Gujarati, 2003, Berenson, Levine & Krehbiel, 2009). The following tests were conducted and the results highlighted below:

Collinearity test

Collinearity test for predictor variables such as cash dividend per share (CDPS), share dividend per share (SDPS) was conducted to examine the presence of multicollinearity between independent variables with a significant effect on the relationship between the predictor variables and the predicted variable. STATA programme was used to compute VIF coefficients for independent variables as tabulated below:

Table 3.3: Variance Inflation Factor

Variable	VIF	1/VIF
lncdps	2.70	0.369942
lnsdps	1.09	0.920003
Mean	**1.90**	

Based on the above results, all the VIF values for the independent variables were less than five. Therefore, it was concluded that there was no evidence of unacceptable collinearity between explanatory variables that had a significant effect on the relationship of the independent variables and the dependent variable at a 95% confidence level.

Normality Test

Regression models also assume that the variables follow a normal distribution. Shapiro & Wilk (1965) test was used for this purpose. The test was preferred due to its good power properties (Mendes & Pala, 2003). The value of W lies between zero and one. Small values of W lead to rejection of normality. A value of one indicates normality.

Table 3.4: Shapiro-Wilk Test Results

Shapiro-Wilk w test for normal data

Variable	obs	w	v	z	prob>z
lnwap	528	0.9880	4.240	3.481	0.00025
lncdps	404	0.9821	4.961	3.813	0.00007
lnsdps	47	0.9256	3.333	2.558	0.00526

On the basis of the results above, W ranges from 0.9256 and 0.98800. This showed an indication of normality, though the distribution may not have been perfectly normal.

Heteroscedasticity Test

The homoscedasticity assumption means that variance of the error terms is constant for each observation (Berenson, Levine & Krehbiel, (2009). The Breusch-Pagan/Cook-Wesberg was used to test for presence of heteroscedasticity in the study and the results were as shown in table 4.5 below:

Breusch-Pagan / Cook-Wesberg test

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 Breusch-Pagan/Cook-Weisberg test of heteroskedasticity

   H0: Constant variance

   Chi2(1)                    = 1.93

   Prob>chi2                  = 0.1646
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The results in the table 4.6 showed prob>chi2 = 0.1646> 0.05. Hence the null hypothesis was not rejected. This meant that the variables had constant variance.

Hausman Test

The Hausman test (1978) helps to determine whether to use of fixed effect model or random effect model by calculating the value of Prob>chi2. The decision rule is that if Prob>chi2 is lower than the study level of significance, then the assumptions for the random effects estimation are violated and fixed effect should be used, and vice versa.

Hausman Test

```
        Hausman fixed random

           test: HO  difference in coefficient not systematic
        chi2(5)=[(b-B)'(v-b-v_B]^(-1) (b-B)
              =0.977
        Pro>chi2=0.820
```

Table 3.7 gave calculated value of Prob>chi2 of 0.820 which is greater than 0.05. This implied that the assumption of random effects estimation is not violated and the random effect estimation would be appropriate for the study. Hence, random general least square regression was adopted in the data analysis.

3.3   Regression Analysis Results

A random effect GLS regression analysis was run for 55 companies represented in the sample in order to establish the relationship between dividend policy and share prices for listed firms in the NSE. A summary of the regression results for the whole market is indicated in table 3.7

Table 3.7: Regression results for the whole market

Random Effect GLS Regression			
Wald Chi2(5)=62.54			
R-Square: Overall=0.7754			
lnvwap	**Coefficient**	**Z calculated**	**Z critical**
lncdsp	0.45*	3.39	(-1.96 and +1.96)
lnsdps	-0.11	-1.34	(-1.96 and +1.96)
_cons	1.92	2.67	(-1.96 and +1.96)

Source: table is derived from the sample data compiled for the study
Where ln is the natural logarithm while cdps, sdps are cash dividend per share, share dividend per share respectively. R-square-overall is the adjusted R^2. * indicate the coefficient of a statistically significant variable at 5% level of significance.

3.4   Test of Hypothesis using Z test

Relationship between Cash dividend and share price
The first specific objective of the study was to establish the relationship between cash dividend and share price for firms listed in the NSE. The null hypothesis was stated as follows:

H$_0$: there is no statistically significant relationship between cash dividend and the share price of the firms listed at the Nairobi Securities Exchange. Table 4.7 shows regression coefficients of lognormal distribution for the regression which were the percentage change the dependent variable would change as a result of percentage change in independent variable. The sign of regression coefficients showed the direction of relationship between the independent variables and the dependent variable. To test whether the relationships between variables are statistically significant, the significance of coefficients of independent variables were tested by using z test. The decision criterion was that, if $Z_{calculated} > Z_{critical}$ then, reject the null hypothesis and vice versa. From table 4.7, Z-calculated coefficient cash dividend equals to 3.39 which was greater than Z-critical range of between -1.96 and +1.96, hence the coefficient was found to be statistically significant. The null hypothesis was therefore rejected. This implied that there was a significant positive relationship between cash dividend and share price for firms listed at the NSE for the period under study. The sign showed the direction of the relationship.

The coefficient of 0.45 implied that when cash dividend increase by 1%, stock prices increase by 45% and vice versa. The research findings were consistent with signalling theory propositions. Signal theory has its origins in (Lintner, 1956) studies who revealed that the price of a company's stocks usually changes when the dividend payments changes. Even though Modigliani & Miller (1961) argued in favour of the dividend irrelevance, they also stated that in the real world disregarding the perfect capital markets, dividend provides an "information content" which may affect the market price of the stock. Bhattacharya (1979) presented one of the most acknowledged studies regarding signalling theories which states that dividends may function as a signal of expected future cash flows. An increase in the dividends indicates that the managers expect higher cash flows in the future. The research is based on the assumptions that outside investors have imperfect information regarding the company's future cash flows and capital gains. Another important assumption is that dividends are taxed at a higher rate compared to capital gains. Bhattacharya, (1979) argues that under these circumstances even though there is a tax disadvantage for dividends, companies would choose to pay dividends in order to send positive signals to shareholders and outside investors. Many other researchers have been conducted in order to test if the signalling theory applies in the real world and there exist different opinions regarding the applicability of the signalling theory. Asquith & Mullins Jr (1983) provided empirical evidence in favour of the signalling theory. They argue that an increase of dividend payments tends to increase the shareholders wealth.

Relationship between Share dividend and share price
The second specific objective of the study was to establish the relationship between share dividend and share price for firms listed at the NSE. The null hypothesis was stated as follows:
H$_0$: there is no statistically significant relationship between share dividend and the share price of the firms listed at the Nairobi Securities Exchange. To test whether the relationships between variables were statistically significant, the researcher tested the significance of the individually regression coefficients by using Z test. If $Z_{calculated} > Z_{critical}$ then, reject the null hypothesis. From table 4.7 above, Z-calculated for share dividends equaled to -1.34 which was within the Z-critical range of between -1.96 and +1.96.This meant that the coefficient of share dividend was not statistically significant hence the null hypothesis was not rejected. This implied that there was no significant relationship between share dividend and share price for firms listed at the NSE in the period between years 2001 and 2011.

These results were consistent with the argument that share dividend policy is the transfer of funds between equity accounts (Levy & Sarnat, 1994) and that it does not include any outside cash flows; therefore, the shareholders do not receive anything (Broyles, 2003). The market value per share after the share dividend announcement will go down. However, the total shareholders' wealth will not be affected because the number of shares owned will be increased to cover the decline in market value per share (Moyer, Kretlow, & , McGuigan, 1995); (Pike & Neale, 2009). It is not expected that the share dividend policy would have any impact on the company's value as long as the investors understand that the replacement of cash dividends by shares is for the sake of reinvesting this money and not because of financial difficulties or to meet outstanding payments (Ross, Westerfield, & Jaffe, 1999).

4.0 Conclusion and Recommendations
4.1 Conclusion
The objective of the study was to investigate the effect of dividend policy on share price for firms listed at the NSE. In doing so, the study could contribute immensely to the scarce literature in the area of corporate finance in the Kenyan context. The sample comprised of 55 sampled companies that met the eligibility criteria. The sample covered firms from across the ten economic sectors represented at the NSE for the period between the years 2001 and 2011. Diagnostic tests were also conducted to test the suitability of the model which revealed that the model did not suffer from multicollinearity, heteroscedasticity and non-normality problems A regression analysis

was run and the findings of the analysis pointed out that there was a statistically significant coefficient of cash dividend implying a positive relationship between cash dividend and share prices for listed firms at the NSE in the whole market. Conversely, there was a statistically insignificant negative relationship between share dividend and share price for all firms listed at the NSE.

Cash dividend was found to positively affect the share price for companies listed in the NSE since there was a statistically significant coefficient of cash. The findings are consistent with signal theory as highlighted in the previous chapter. Further, from the findings of the study, it is concluded that that the NSE does not exhibit characteristics of an efficient market. Kenyan investors therefore prefer stock that pays more cash dividend than those that pay share dividend or no dividend at all. The management of listed companies should therefore seriously consider paying cash dividend since this will subsequently increase the share prices and hence increase shareholder's wealth in the long run. Many investors in Kenya do not prefer share dividend since share dividend does not involve any cash flow. Cash dividend is used by investors to meet their day to day expenses and they would thus feel inconvenience if the management of those companies proposes to diverted earnings to investment opportunities rather than paying out to shareholders in form of cash dividend. In addition, empirical studies to prove signal theory posited that payment of share dividend would send a negative signal to the investors. This would significantly reduce the demand for the counters hence negatively affecting the share prices. Thus maximization of shareholders wealth requires consideration of investor need for cash dividends.

4.2 Recommendations and Policy Implications

This study therefore demonstrates the applicability of signalling theory in a Kenyan context. Based on the results of the study, it is recommended that investors should therefore invest in companies that consistently pay cash dividend since this would increase shareholders' wealth in the long run due to its ability to send positive signals to the potential investors hence increasing the demand for those shares. Secondly, it is recommended that the Capital Markets Authority of Kenya should amend Cap 485A Laws of Kenya and issue strict guidelines that will ensure application of practices that are consistent with good corporate governance by listed firms at the NSE. Apart from ensuring efficiency in the market, these laws and guidelines would safeguard the interests of the investors. It is further recommended that the management of listed firms should consider cash dividend policy more than share dividend due to its positive effect on the share price. If this is done consistently, the shareholders' wealth would be maximized in the long run.

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