

AN EMPIRICAL ANALYSIS OF SELECTED FACTORS AFFECTING DIVIDEND POLICY OF LISTED FIRMS AT THE NAIROBI SECURITIES EXCHANGE (2000-2010)

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ABSTRACT

This paper presents the results of the analysis of factors influencing dividend policy of publicly listed companies at the Nairobi Securities Exchange. The study objective was to examine how firms' dividend decisions are influenced by current earnings, dividend yield and firm size. It analysed empirical panel data of annual earnings per share, dividend yield, sales and dividend per share of 40 listed companies over a period of ten years (2000-2010) with 432 observations. This empirical analysis of data tested the validity of an extended Lintners dividend model using data from the Nairobi Stock Exchange. Regression results indicated that the three explanatory variables predicted 17% of the variation in dividend payout. Accounting earnings was the single most significant variable explaining about 87% of the changes in the dividend decisions of firms listed at the Securities exchange. Earnings were also significantly positively associated with dividend payout of companies involved in the study. The other two variables (dividend yield and size of firm) contributed marginally -less than 1%). However, dividend yield was negatively related to payout although this was insignificant. Firm size was positively significantly associated with dividend payout. Overall, the result supports Lintner hypothesis that current earnings are positively and significantly related to dividend payouts for companies at the NSE. The study recommends further study based on

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market segmentation, and use of other variables influencing dividend policy to determine if the results will be consistent.

Key words: Dividend policy, Earnings, firm size, dividend Yield. Nairobi Securities Exchange,

I. INTRODUCTION

Dividends occupy a central position in corporate finance mainly due to the relationship with capital structure. When a company's payout of dividends is high, this may lead to capital shortage needed to finance expansion and acquisition of investments. Capital shortage would ordinarily force corporation managers to arrange costly working capital, investments, and debt payment. Firm managers have also been said to consider the current and expected future income in setting the long run target dividend payout.

Finance managers believe in the direct and strong correlation among the dividend, investment and financial mix decisions. They fear loss of liquidity that may result from high dividend payout which consequently affects money for investment and working capital and eventually to reliance upon expensive external financing. A study by Dhanani, (2005) revealed that dividend policy is important in maximizing shareholder value. A firm's dividend policy can influence one or more of imperfections in the real world such as information asymmetry between managers and shareholders; agency problems between managers and shareholders; taxes and transaction costs and in turn, enhance the firm's value to shareholders.

This paper is structured as follows; section one discusses the background of the dividend controversy, along with the problem and hypotheses. Section two explores the concepts applied in this empirical analysis indicating what other authors have stated from their studies. The method of analysis is described in section three followed by a description of results in section four. Finally, section five contains conclusion and necessary recommendation made from the findings.

Statement of the Problem

Black (2000) postulated that "The harder we look at the dividend picture, the more it seems like a puzzle, with pieces that don't fit together". Dividend policy in emerging markets is often very different in its nature, characteristics, and efficiency, from that of developed markets. Particularly, it has been noted that dividend payouts for listed companies at the Nairobi

Stock Exchange in the recent past have been at varying degrees. This study examines if and how current earnings, dividend yield, and firm size affect dividend payout of firms listed at the Nairobi stock exchange. It attempts to extend Lintner's two variable dividend model to discover new insights about its applicability in the context of Kenya.

Research Hypothesis

1. H₀: Current earnings, dividend yield, and firm size do not significantly explain variation in dividend payout.
2. H₀: There is no particular variable that best explains variation in dividend policy of listed firms at the exchange.
3. H₀: Current earnings, dividend yield and firm size have no significant relationship with dividend policy of listed firms at the exchange.

II. LITERATURE REVIEW

Profitability/ Earnings

Adaoglu, (2000) indicated that, there is a significant difference between dividend policies in developed and developing countries. In addition, Malkawi, (2007) exploring factors influencing corporate dividends decisions of publicly quoted companies in Jordan, found evidences of the association between current, past, and expected earnings. The results of Tunisian firms disclosed that the firms relied more on current earnings than past dividends while fixing dividend for current year and also there has been instability of dividend policy, (Naceur, 2006). The resulting hypothesis is;

Hypothesis: Profitability/earnings have a positive and significant effect on the dividend policy.

Firm Size

In large firms, information asymmetry increases due to ownership dispersion, decreasing the shareholders' ability to monitor the internal and external activities of the firm, resulting in the inefficient control by management. Paying large dividends can be a solution for such a problem because large dividends lead to an increase in the need for external financing, and the need for external financing leads to an increase in the monitoring of large firms, because of the existence of creditors. Furthermore, reference Sawicki, (2005) illustrated that dividend payouts can help to indirectly monitor the performance of managers in large firms. This leads to the hypothesis;

Hypothesis: The Size of the company has a positive effect on the dividend policy.

Dividend Yield

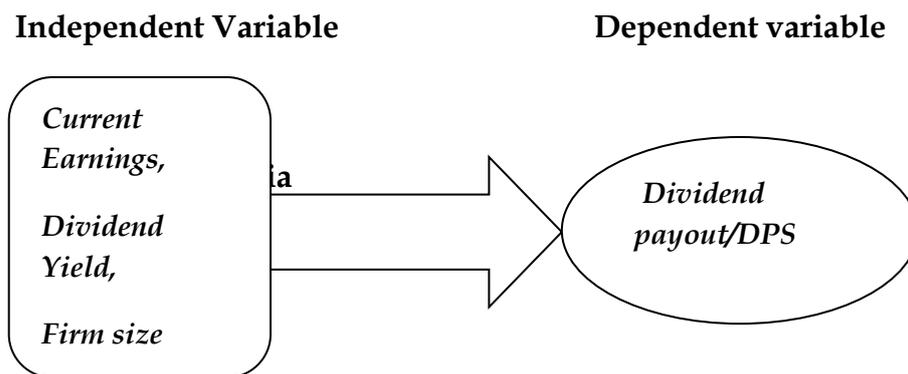
The study was an extension of Vasiliou & Eriotis (2003) work that tested the assumption that firms have set their dividend policy not only by the net distributed earnings, but also by the change from the last year’s dividend, last year’s distributed earnings and the size of the firm. Results concluded that distributed earnings and size of the firm has been significant impact on dividend payment in Greek market. Conversely, dividend yield showed a positive relationship between dividend yield and dividend per share. Thus;
Hypothesis: Dividend yield has a positive effect on dividend payout for firms at the NSE

Results from Lintners model (1956) stated that dividend policies/decisions of the companies surveyed were highly influenced by their current earnings and past year dividend. Firm size and growth prospect had no significant impact on dividend behaviour of these companies. The extended model is therefore expressed as;

$$\Delta D_{it} = \alpha + \beta_1 E_{it} + \beta_2 Div_{it-1} + \beta_3 S_{it} + \epsilon$$

Where; E_{it} -Earnings per share of firm i at time t , Div_{it} - Dividend yield for firm i at time t . S_{it} - Firm size for firm i in time t , α & β 's are parameter estimates. ϵ error term. The fig.1 below captures the conceptual framework of the study.

Figure 1: Selected factors affecting dividend payout.



III. DATA AND METHODOLOGY

Research Design

The design of study was to correlate empirical panel data of forty selected companies listed at the securities exchange obtained from the Nairobi Securities Exchange. Empirical data was for a period of eleven years (2000-2010). This data captured firm size, profitability and dividend payout of the sampled companies.

Population of Study

Population of study comprised 432 observations from 40 companies related to dividend yield, firm size, profitability and payout ratio for each selected firm over the period 2000-2010.

Sampling Techniques

Empirical data from forty companies was selected after initial screening to represent the different sectors of the market. Total number of observations used in the analysis was 432 for each variable under study over the eleven years. The selected firms were screened by each variable with values greater than zero for the selected firm over all the ten years. That means firms which had zero value (Non-Payment of Dividend) or zero ratio in any of the variables under study were removed [9]

Data Analysis.

Data was organised and analysed descriptively on SPSS 17 spread sheet. In order to use the sales figures for company size, the researcher transformed the sales figures into common log so as to match other relative measurements. Ultimately, Pearson correlation coefficients, OLS Multiple Linear Regression, and ANOVA (between measures) were derived to determine validity of model. Presentation of key findings was then made using statistical tables.

IV. EMPIRICAL RESULTS

In total, 432 observations were imputed for analysis by SPSS 17. Valid observations were noted for dividend per share (269), accounting earnings per share (432) dividend yield (319) and sales (338). Since the observations were relatively large averaging 77 percent, the data was considered adequate to continue with the analysis.

Descriptive Statistics

Table (I) shown below indicates that the mean dividend per share for the selected companies at the NSE was Kshs 1.824 with a standard deviation of 1.5 which is considered low. Earning per share (EPS) is Kshs 4.00 on average with a standard deviation of 8.79. This indicates a large variation in the accounting profits reported by companies. Dividends paid represented about 45 percent of the reported earnings for the companies during the period. In addition Dividend yield had a mean of Kshs. 0.0469 ranging from shs.0.01 to kshs.0.18.

The standard deviation for dividend yield was 0.033. The log of sales (size) on average was 9.313 representing a value of sales of about Ksh 2 billion with a standard deviation of 0.946 in sales value considered less variable.

Table 1. Descriptive statistics

	Mean	Std. Deviation	N
Dividend per share	1.8245	1.52139	269
Accounting earnings per share	4.09049	8.759285	432
Dividend yield	.04677	.033514	319
Log of sales	9.36828	.946288	338

Correlation Statistics

A Pearson correlation statistics were calculated for the data (see Table II) and the results were as follows:-A moderate positive association between dividend per share (DPS) and accounting earning per share (EPS) was noted at 0.385 which was significant (P=0.000, 2-tailed). This was the strongest association established followed by size(sales) also with a positive correlation of 0.119 with a p-value of 0.043 (significant) and lastly a negative but low correlation with dividend yield of -0.087 (insignificant, P=0.110). The statistically significant variables were accounting earnings per share and size at the 5 percent level (2- tailed test.). The correlation coefficient between accounting earnings and dividend yield was low (0.00) while with sales it was similarly low at 0.36. Tolerance and Variance inflation factor (VIF) were near 1.0 hence multi-collinearity was not a concern for the equation (orthogonal variables).

Table II. Correlation statistics

		Dividend per share	Significance (1-tailed)	N (size)
Pearson Correlation	Dividend per share	1.000		269
	Accounting earnings per share	.385	0.000	269
	Dividend yield	-.087	0.11	203
	Log of sales	.119	0.043	210

Regression Statistics

Earnings, dividend yield, and sales, according to the model summary Table (III) below explained 17 percent of the variation in dividend policy ($R^2 = 0.166$). This result compares well with the one conducted by Asif et al (2011) of listed firms at the Karachi Stock Exchange which returned an R square of 24.0. The F- value was significant at 13.163, (3,199) from Table IV (ANOVA) also below which means the model was adequate. Accounting earnings per share uniquely contribute to about 15 percent of the 17 percent variation in dividend policy representing 87%, While Size and dividend yield explained about 2 percent. These results therefore show that only accounting earnings is significant variable influencing dividend payout by listed firms at the NSE. Firm size and previous dividend paid are insignificant variables. Validity of this result is attested to by reading the variance inflation factor and tolerance. The two measures are very close to 1.0 indicating no problem with multicollinearity.

Table (III): Model Summary Table

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.407 ^a	.166	.153	1.40018	.166	13.163	3	199	.000

a. Predictors: (Constant), Log of sales, Accounting earnings per share, Dividend yield

b. Dependent Variable: Dividend per share

Table (IV): ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	77.417	3	25.806	13.163	.000 ^a
	Residual	390.139	199	1.960		
	Total	467.556	202			

a. Predictors: (Constant), Log of sales, Accounting earnings per share, Dividend yield

b. Dependent Variable: Dividend per share

Dividends are important to investors that companies pay moderately high rates at 0.45 for every shilling earned. Tabachnick & Fidell, (2001) indicated that effect size of the model calculated by eta square from the ANOVA table as “sum of squares between the groups divided by total sum of squares yields 0.1655 which is above 0.14 (a large effect) according to Cohen, J & Cohen, P (1983). Therefore the difference between the variables is actually of major practical significance.

The estimated equation for this model was as follows: (Table V)

$$\hat{Y} = 0.226 + 0.066E_{it} - 3.58 Div_{it} + 0.16Size_{it}$$

$$T = (0.225) (5.888) (1.215) (1.528)$$

$$Se = (1.002) (0.011) (2.947) (0.104)$$

$$Sig = (0.822) (0.000) (0.226) (0.128)$$

Table (V): Regression Coefficients table.

Model	Unstandardized Coefficients		Standardized Coefficients	Sig.	95.0% Confidence Interval for B	Correlations				Collinearity Statistics		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero order	Partial	Partial	Tolerance	VIF
1 (Constant)	.226	1.002		.225	.822	-1.751	2.203					
Accounting earnings per share	.066	.011	.382	5.888	.000	.044	.088	.385	.385	.381	.999	1.001
Dividend yield	-3.582	2.947	-.079	-1.215	.226	-9.394	2.230	-.087	-.086	-.079	.995	1.005
Log of sales	.160	.104	.099	1.528	.128	-.046	.366	.119	.108	.099	.993	1.007

a. Dependent Variable: Dividend per share

V. CONCLUSION

These results are consistent with Lintner's model supporting the argument that current earnings bear on the dividends to be paid from current earnings. Firms at the NSE pay dividends on outstanding shares at a rate of 45% mostly based on operating earnings per share. Findings were also consistent with those by Adaoglu (2000); Malkawi (2007); Naceur et al (2006); Vasiliou & Eriotis (2003). However, dividend yield and size was insignificant which is inconsistent with Asif et al (2011); Aivazian, (2003) and Li, & lie, (2006). They argued that firms are more likely to raise their dividends if they are large and profitable. This was not the case for companies listed at the exchange based on empirical data. Adaoglu, (2000) realised similar results in turkey and Pandey, (2001) in Malaysia. A negative relationship was returned between dividend yield and payout. This was possibly because high payout of dividends reduced yields for investors. Lastly, size does not matter when making dividend decisions by firms at the exchange.

Hypothesis one

Results from the analysis of sampled data indicate that hypothesis one is rejected. Current earnings are indeed significant in affecting dividend payout at the NSE. Dividend yield and size of firm on the other hand do not significantly affect payout of dividends at the NSE.

Hypothesis two

This hypothesis was rejected in favour of "there actually is a variable that significantly explains changes in dividend policy". This variable is profitability or current earnings per share. The variable explained 87% of the variation in dividends paid by the listed companies.

Hypothesis three

The strongest relationship among the three variables was established between current earnings and dividend payout 0.385 followed by Size 0.119 ($P=0.043$) and lastly dividend yield with an inverse relationship (-0.087 , $p=0.110$), $n=203$.

Recommendation and Further Study

Investors, both individual and corporate at the NSE desiring to earn good returns on their equity holding inform of dividends may put their money in highly profitable companies because they are likely to pay more on dividend per share irrespective of firm size or past dividend history drawing from the data used in this study.

Further Study

Further study can be conducted to separate industry and may also extend the period of study to include more recent data. It should be established if these findings would remain the same. More so, other variables that may

influence dividend policy can also be incorporated to determine if they would improve the explanatory power of the model applied here.

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