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THE RELATIONSHIP BETWEEN THE DIVIDEND PAYOUT RATIO AND THE CAPITAL STRUCTURE OF LISTED COMPANIES AT NAIROBI SECURITIES EXCHANGE, KENYA IN THE INDUSTRIAL AND ALLIED SECTOR

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Abstract

The existing literature on optimal dividend policy and capital structure is voluminous and has continuously evolved over the last five decades. The objective of this study was to establish the relationship between the dividend payout ratio and capital structure of companies listed at the NSE. This study relied on secondary data. The study sampled 16 companies in the industrial and allied sector listed at the NSE. Regression analysis was used to analyze the data and find out whether there exists a relationship between dividend payout ratio and capital structure. The

study found out that there is a significant relationship between dividend payout ratio and capital structure. The findings revealed that there is a strong inverse relationship between leverage and dividend payout ratio while there is a weak inverse relationship between retained earnings and dividend payout ratio. The study concludes that retained earnings and leverage negatively affects dividend payout ratio. Based on these results, the study recommends company's management education, as they need to understand the factors that lead to increase or decrease in the company's dividend payout ratio.

Keywords: Nairobi Securities Exchange, Dividend Per Share, Pay Out Ratio, Capital Structure

INTRODUCTION

Decisions regarding the most optimal choice of financing sources and dividend policy are some of the most difficult financial decisions. Firms have a choice between internal or external sources to finance their investments. Internal sources include retained earnings and depreciation, while external sources basically refer to use of debt or equity. Thus the financing decision involves the appraisal of two choices. The first is the dividend choice; the fraction of retained earnings to be ploughed back and the fraction to be paid out as dividends. The second is the capital structure choice; the fraction of external finance to be borrowed and the fraction to be raised in the form of new equity.

According to Weston & Brigham (1981), dividend policy determines the extent of internal financing by a firm. The finance manager decides whether to release corporate earnings from the control of the enterprise. Because dividend policy may affect such areas as the financial structure, the flow of liquid funds, corporate liquidity, stock prices and investor satisfaction, it is clearly an important aspect of financial management. Franklin & Roni (1995) suggest that the reason why dividend policy questions are interesting is that, deciding on the amounts of dividends to be paid out of earnings is a major decision that firm's managers' face. In addition, proper understanding of dividend policy is crucial for other areas of corporate finance such as; capital structure, theories of asset pricing, mergers and acquisition and capital budgeting since they rely on how and why dividends are paid.

Dividend Payment/Payout Ratio

The question of how dividend policy is determined has been the subject of many studies (dividend puzzle). The debate is generally believed to have been initiated by MM (1961) irrelevancy theory. Their study showed that in a perfect capital market with rational behaviour

and perfect certainty and with investment and borrowing decisions given, dividend policy has no effect on the value of the firm. The implication of relaxing MM (1961) irrelevancy theory assumption led to introduction of market imperfections. Dividend policy under market imperfections may be categorized under two schools of thoughts; for and against. On the 'against' school of thought are theories including the transaction cost theory of dividend and the tax hypothesis that suggest that dividend payments reduce shareholder wealth. On the 'for' school of thought are theories that suggest that dividend payments increase shareholder wealth, including the bird in the hand argument, the signalling theory and the agency theory of dividend. All these theories have been extensively discussed and tested but to date there is no consensus on how firms determine their dividend policies.

Capital structure

A firm's capital structure refers to the relationship between debt and equity finance in its long term funding arrangement. Brealey and Myers (2005) defined capital structure as comprising of debt, equity or hybrid securities issued by the firm. Benito & Young (2001) describe that higher leverage is closely associated with dividend reduction and omission. When financial leverage increases, it may bring better returns to some existing shareholders but its risk also increases as it causes financial distress and agency costs (Jensen and Meckling, 1976). Over the past several decades, theories on a firm's capital structure choice have evolved along many directions. The traditional capital structure theory was based on the idea of WACC principle, which states that companies issue debt in order to reduce their WACC as debt is considered less costly than equity (Prace, 2004).

Relationship between Dividend Payout Ratio and Capital Structure

Bhaduris (2002) suggested that dividends are the signal of finance health to outsiders. A firm with a constant stream of dividends will face less asymmetric information when entering the equity market. Dividend payments decrease the amount of internal funds and increase the need for external financing. Dividend policy allows for releasing of resources when a firm has no profitable projects and conveys information about a firm's future expectations to capital markets. There is a positive relationship between payout ratio and debt (Frank and Goyal, 2004). Studies carried out by various scholars suggest that there is a notable relationship between dividend payout policy and capital structure. However, there is a conflict as to whether there is a direct or indirect relationship. Sierpinska (1999) suggests that dividend payout policy is directly connected to capital structure. This view is supported by Wandeto (2005) who in his study concluded that firms with high gearing ratio pay low amounts of dividend. Bittok (2004) pointed

out that there is a significant relationship between dividend payout ratio and the value of the firm in that dividends are relevant to the value of the common stock.

Brief Overview of Nairobi Securities Exchange

As a capital market institution, the stock exchange plays an important role in the process of economic development. It helps mobilize domestic savings thereby bringing about the reallocation of financial resources from dormant to active agents. Long-term investments are made liquid, as the transfer of securities between shareholders is facilitated. The exchange has also enabled companies to engage local participation in their equity, thereby giving Kenyans a chance to own shares (NSE, 2007).

The NSE began in the early 1920s while Kenya was considered a colony under British control. It was an informal marketplace for local stocks and shares. By 1954, a true stock exchange was created when the NSE was officially recognized by the London Stock Exchange as an overseas stock exchange. After Kenyan independence from Britain, the stock exchange continued to grow and become a major financial institution. The facilities have modernized since the original "handshake over coffee" method of trading. The NSE has recently adopted an automated trading system, to keep pace with other major world stock exchanges (NSE, 2011).

The NSE is part of the African Stock Exchanges Association. The ASEA was founded in the early 1990s to create a way for all the stock exchanges in Africa to communicate and stay organized. There are about 20 exchanges in the ASEA. NSE is Africa's fourth largest stock exchange in terms of trading volumes, and fifth in terms of market capitalization as a percentage of GDP.

THEORETICAL REVIEW

Dividend Theories

In the literature of dividend policy, there is a wide range of theories that have been developed by various scholars. These theories include; dividend irrelevance theory, information signalling theory, bird in the hand theory, clientele effect theory, agency cost and free cash flow theories and transaction cost theory. These conflicting theories are explained below;

Dividend Irrelevance Theory

According to MM (1961), under certain simplifying assumptions, a firms' dividend policy does not affect its value. The basic premise of their argument is that firm value is determined by choosing optimal investments. The net payout is the difference between earnings and investments, and simply a residual. Because the net payout comprises dividends and share

repurchases, a firm can adjust its dividends to any level with an offsetting change in share outstanding. From the perspective of investors, dividends policy is irrelevant, because any desired stream of payments can be replicated by appropriate purchases and sales of equity. Thus, investors will not pay a premium for any particular dividend policy.

MM concluded that given firms optimal investment policy, the firm's choice of dividend policy has no impact on shareholders wealth. In other words, all dividend policies are equivalent. The most important insight of MM analysis is that it identifies the situations in which dividend policy can affect the firm value. It could matter, not because dividends are "safer" than capital gains, as was traditionally argued, but because one of the assumptions underlying the result is violated. The propositions rest on the following four assumptions;

1. Information is costless and available to everyone equally.
2. No distorting taxes exist.
3. Flotation costs are non- existent.
4. Non-contracting or agency cost exists.

Trade-Off Theory

The trade-off theory model was popularized by MM (1963). When corporate tax was added to the original irrelevance proposition of MM, a benefit for debt is observed that serves to shield earnings from taxes. According to the static trade-off hypothesis, a firm's performance affects its target debt ratio, which in turn is reflected in the firm's choice of securities issued and its observed debt ratios (Hovakimian et al., 2004). This theory also states that optimal capital structure is obtained by balancing the tax advantage of debt financing and leverage related costs such as financial distress and bankruptcy, holding firm's assets and investment constant (Bradley et al., 1984).

According to Myers (1984), firms adopting this theory could be regarded as setting the target debt ratio and gradually moving towards achieving it. The static trade-off theory also suggests that higher profitable firms have higher target debt ratio. The dynamic trade-off theory which was popularized by Fischer et al. (1989) stated the negative relation of profitability with leverage. The argument is firms passively accumulate earnings and losses letting their debt ratios deviate from the target as long as the costs of adjusting the debt ratio exceed the costs of having a sub-optimal capital structure. Therefore, firms that were highly profitable in the past are likely to be have lesser gearing (Hovakimian et al., 2004). According to this theory, firms issues, sells and repurchase debt or equity to maintain its debt / equity ratio.

EMPIRICAL REVIEW

The existing literature on optimal dividend policy and capital structure is voluminous and can be traced back to seminal paper of MM (1958). Theories of dividend policy differ from theories of capital structure, since, the literature has treated dividend policy and capital structure as two distinct choices, even though there is reason to believe that there are common factors affecting both hence leaving us with many unanswered questions (Faulkender et al., 2006). According to Faulkender et al (2006), the theories of capital structure and dividend policy are jointly determined as part of a continuum of control allocations between managers and investors, and hence cross-sectional variations in both are driven by the same underlying factors. The endogenously determined allocation of control between the manager and investors is crucial not because of agency or private information problems but because of potentially divergent beliefs that can lead to disagreement about the value of the project available to the company.

The past performance is a critical factor. Better past performance reduces disagreement and thus affects the costs and benefits of different control allocations. Capital structure and dividend policy thus constitute an implicit governance mechanism that determines how much control over the company's investment decisions is exercised by the manager in relation to the shareholders, and the company's past performance impinges on this governance mechanism, (Faulkender et al 2006).

According to several authors, there are two dominant dividend policy theories. These theories are signaling supported by Bhattacharya (1979), Miller & Rock (1985), and Ofer & Thakor (1987). Then there is the free cash flow highlighted by Easterbrook (1984), Jensen (1986), and Lang & Litzenberger (1989). Faulkender (2006) suggests that if dividends signal management's proprietary information to shareholders, then an abnormal increase in stock price must accompany an unexpected dividend increase. If dividends diminish free-cash-flow inefficiencies, then an increase in dividends will increase company value by reducing excess cash. Thus, both theories predict that unexpected increases in dividends should generate positive price reactions.

However, when it comes to being able to choose which of these theories best fits the data, the picture is not so clear. The evidence that supports signaling is that stock price changes following dividend change announcements have the same signs as the dividend changes, and the magnitude of the price reaction is proportional to the magnitude of the dividend change. This contention is supported by Nissam & Ziv (2001), and Allen & Michaely (2002). Bernheim & Wantz (1995) find that the signaling impact of dividends is positively related to dividend tax rates, consistent with a key implication of dividend signaling models that the signaling value of dividends should change with changes in dividend taxation. However, Benartzi et al (1997)

present conflicting evidence. They found that the dividends are related more strongly to past earnings than future earnings.

METHODOLOGY

Research Design

This study adopted a descriptive design that aims at exploring the relationship between dividend payout ratio and capital structure of companies listed at NSE, Kenya in this sector. Descriptive designs result in a description of the data, either in words, pictures, charts, or tables, and indicate whether the data analysis shows statistical relationships or is merely descriptive. Sample survey based on the firms listed at the NSE was used to produce results that are broad, credible and conclusive. Survey is preferred as a result of financial constraints and surveys focus on data rather than theory. The research is quantitative in nature and relies on secondary data obtained from NSE and firms' financial reports.

Population

Target population can be defined as a complete set of individuals, cases/objects with some common observable characteristics of a particular nature distinct from other population. According to Mugenda and Mugenda (1999), a population is a well defined as a set of people, services, elements and events, group of things or households that are being investigated. The population consisted of 16 companies listed at the NSE from 2007 to 2011 as indicated in Appendix I. This period was considered long enough to provide sufficient variables to assist in determining a trend on the relationship between dividend payout ratio and capital structure. This is consistent with other related studies in Kenyan context e.g.Wandeto (2005).

Sample Design

The sample was made up of 16 companies listed at NSE in the industrial and allied sector. Random sampling technique was used in this study. Yearly data for the period 2007 to 2011 was used. The study was limited to the quoted companies due to lack of readily available data among the private companies.

Data Collection

The study sourced data from secondary sources. The data was obtained from annual financial statements of all the listed companies and other resourceful information available at the NSE secretariat for 5 years from 2007 to 2011. The data extracted include; DPS, EPS and debt to equity ratio from published reports of listed companies.

Data Analysis

Data analysis involved preparation of the collected data, coding, editing and cleaning of data so as to facilitate processing using SPSS package. The coded data was keyed into the SPSS program where it was developed into a database and subsequently analyzed. SPSS is preferred because it is systematic and covers a wide range of the most common statistical and graphical data analysis. Regression model was used to establish the relationship between the variables. Correlation analysis was used to explain variation between the variables.

Analytical Model

Regression analysis is a statistical technique that can be used to develop a mathematical equation showing how variables are related. Data collected was analyzed using multiple regression and correlation analysis. The significance of each independent variable was tested at a confidence level of 95%. In this study, dependent variable was dividend payout ratio and independent variables were leverage and retained earnings. The variables involved were calculated as follows;

Dividend payout ratio = DPS ÷ EPS.

Leverage was measured by Debt to Equity ratio = Total debt ÷ Shareholders Equity.

Retained Earnings was measured by EPS = EAT ÷ No. of shares.

In order to examine the relationship between dividend payout ratio and capital structure, the regression equation of the form given below was applied;

$$Y = \alpha_0 + \alpha_i X_i + \alpha_{ii} X_{ii} + \square$$

Where Y= Dividend Payout Ratio (dependent variable).

α_0= Constant (Defines value of dividend payout ratio without inclusion of predictor variables)

X1-K= Predictor variables are,

X_i = Leverage

X_{ii} = Retained Earnings

$\square$ = Error Term

α_i **-K** Regression coefficients- define the amount by which Y is changed for every unit change in predictor variables.

Coefficient of Determination (R^2)

Coefficient of determination is the ratio of the explained variation to the total variation and is used to measure the strength of linear relationship. The stronger the relationship, the closer the

ratio will be towards one. This study used Coefficient of determination ($\mathbf{R^2}$) as a measure of the degree of linear association between predictor variables and the responsive variable.

Coefficient of Determination ($\mathbf{R^2}$) = Explained Variation / Total Variation

EMPIRICAL FINDINGS

Relationship between dividend payout ratio and capital structure in 2007

This result in table 1 gives the relationship between dividend pay-out ratio and capital structure (leverage and retained earnings) where it indicates the extent to which each capital structure component under study affects dividend pay-out ratio thus giving a predictive equation.

Table 1: Model summary for year 2007

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.203[a]	.041	-.033	46.055945

a Predictors: (Constant), Retained Earnings, Leverage

The two independent variables that were studied, explain only 4.1% of the effectiveness of the relationship between dividend payout ratio and capital structure of companies listed at NSE in the year 2007 as represented by the R^2. This therefore means that other factors not studied in this research contribute 95.9% of the effectiveness of the relationship between dividend payout ratio and capital structure of companies listed at NSE. Therefore, further research should be conducted to investigate the other factors (95.9%) that affect the effectiveness of the relationship between dividend payout ratio and capital structure of companies listed at NSE.

Relationship between dividend payout ratio and capital structure in 2008

This result in table 2 gives the relationship between dividend pay-out ratio and capital structure (leverage and retained earnings) where it indicates the extent to which each capital structure component under study affects dividend pay-out ratio thus giving a predictive equation.

Table 2: Model summary for year 2008

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.317[a]	.100	.031	29.191345

a. Predictors: (Constant), Retained Earnings, Leverage

The two independent variables that were studied, explain only 10% of the effectiveness of the relationship between dividend payout ratio and capital structure of companies listed at NSE in the year 2008 as represented by the R^2. This therefore means that other factors not studied in this research contribute 90% of the effectiveness of the relationship between dividend payout ratio and capital structure of companies listed at NSE. Therefore, further research should be conducted to investigate the other factors (90%) that affect the effectiveness of the relationship between dividend payout ratio and capital structure of companies listed at NSE.

Relationship between dividend payout ratio and capital structure in 2009

This result in table 3 gives the relationship between dividend pay-out ratio and capital structure (leverage and retained earnings) where it indicates the extent to which each capital structure component under study affects dividend pay-out ratio thus giving a predictive equation.

Table 3: Model summary for year 2009

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.476[a]	.227	.167	27.375682

a. Predictors: (Constant), Retained Earnings, Leverage

The two independent variables that were studied, explain only 22.7% of the effectiveness of the relationship between dividend payout ratio and capital structure of companies listed at NSE in the year 2009 as represented by the R^2. This therefore means that other factors not studied in this research contribute 77.3% of the effectiveness of the relationship between dividend payout ratio and capital structure of companies listed at NSE. Therefore, further research should be conducted to investigate the other factors (77.3%) that affect the effectiveness of the relationship between dividend payout ratio and capital structure of companies listed at NSE.

Relationship between dividend payout ratio and capital structure in 2010

This result in table 4 gives the relationship between dividend pay-out ratio and capital structure (leverage and retained earnings) where it indicates the extent to which each capital structure component under study affects dividend pay-out ratio thus giving a predictive equation.

Table 4: Model summary for year 2010

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.128[a]	.016	-.059	161.033626

a. Predictors: (Constant), Retained Earnings, Leverage

The two independent variables that were studied, explain only 1.6% of the effectiveness of the relationship between dividend payout ratio and capital structure of companies listed at NSE in the year 2010 as represented by the R^2. This therefore means that other factors not studied in this research contribute 98.4% of the effectiveness of the relationship between dividend payout ratio and capital structure of companies listed at NSE. Therefore, further research should be conducted to investigate the other factors (98.4%) that affect the effectiveness of the relationship between dividend payout ratio and capital structure of companies listed at NSE.

Relationship between dividend payout ratio and capital structure in 2011

This result in table 5 gives the relationship between dividend pay-out ratio and capital structure (leverage and retained earnings) where it indicates the extent to which each capital structure component under study affects dividend pay-out ratio thus giving a predictive equation

Table 5: Model summary for year 2011

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.386[a]	.149	.083	57.937189

a. Predictors: (Constant), Retained Earnings, Leverage

The two independent variables that were studied, explain only 14.9% of the effectiveness of the relationship between dividend payout ratio and capital structure of companies listed at NSE in the year 2011 as represented by the R^2. This therefore means that other factors not studied in this research contribute 85.1% of the effectiveness of the relationship between dividend payout ratio and capital structure of companies listed at NSE. Therefore, further research should be conducted to investigate the other factors (85.1%) that affect the effectiveness of the relationship between dividend payout ratio and capital structure of companies listed at NSE.

Discussion

The objective of this study was to establish the relationship between dividend payout ratio and capital structure of companies in industrial and allied sector listed at the NSE using time series data covering the period 2007 to 2011. It aimed at finding the nature of relationship between dividend payout ratio and capital structure (leverage and retained earnings).

The study found out that there is a strong inverse relationship between leverage and dividend payout ratio while there is a weak inverse relationship between dividend payout ratio and retained earnings. Studies carried out by various scholars pointed out that there is a notable relationship between dividend payout policy and capital structure. However, there is a

controversy as to whether there is a direct or indirect relationship. The findings of this study are supported by Sierpinska (1999) who found out that dividend policy is directly connected to capital structure. He further suggested that if an enterprise pays dividends, it decreases the degree of financing of equity capital from internal sources, and as a consequence may require external financing.

CONCLUSIONS

The study concludes by stating that there is a weak inverse relationship between dividend payout ratio and retained earnings while there is strong inverse relationship between dividend payout ratio and leverage. The researcher also concluded that in order for a company to increase its dividend payout ratio, it should decrease factors that lead to increase in its retained earnings. The study further concludes that leverage and retained earnings of the company negatively affects dividend payout ratio of the company. In addition, the study concludes that the factors that contribute to decrease in leverage should be increased in order to increase the dividend payout ratio since there is an inverse relationship between dividend payout ratio and leverage.

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APPENDICES

Appendix I: List of quoted companies in industrial and allied sector at Nairobi securities exchange

1. Athi River Ltd
2. Bamburi Cement Ltd
3. British American Tobacco Ltd
4. Crown Barger Kenya Ltd
5. East africa Cables Ltd
6. East africa Portland Cement
7. East Africa Breweries Ltd
8. Eveready East Africa Ltd
9. Kenya Oil Company Ltd
10. BOC Kenya Ltd
11. KPLC Ltd
12. Kengen Ltd
13. Total Kenya Ltd
14. Mumias Sugar Ltd
15. Sameer Africa Ltd
16. Unga Group Ltd