

RELATIONSHIP BETWEEN DIVIDEND POLICY AND STOCK PRICE VOLATILITY AMONG LISTED COMMERCIAL BANKS IN KENYA

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Abstract: *Investors are risk averse by nature, hence their investments volatility is imperative to them. Embarking on dividend policy decision is a sensitive area that most often investors are mindful of in recent times. The study sought to establish the relationship between dividend payout ratio and stock price volatility of listed commercial banks in Kenya while incorporating size of the firm as a control variable. The theories aligned to the study include, the signaling effect theory which postulates that it is therefore possible, even in an efficient market, that dividends could have informational value and result in share price volatility. The population of interest for this study was the listed commercial banks in Kenya within the time frame 2015-2019 with the exception of those that were listed as a result of mergers. The findings show a negative relationship between dividend payout ratio and stock price volatility; thus a unit increase in the Dividend Pay-out Ratio leads decrease in the Stock Price Volatility among the selected commercial banks in Kenya. Similarly, the relationship between the dividend yield and stock price was insignificant. When firm size is small, the dividend Pay-out Ratio tends to have a negative influence on the Stock Price Volatility among the selected commercial banks in Kenya and when the Firm size is high, the dividend Pay-out Ratio tend to have a positive influence on the Stock Price Volatility among the selected commercial banks in Kenya.*

Keywords: *Dividend Payout Ratio, Dividend Yield, Firm Size and Stock Price Volatility*

1. Introduction

Dividend Policy refers is the practice that management follows in making dividend payout decisions or, in other words, the scale and pattern of money distributions over time to shareholders (Reza et al., 2014). This decision is taken into account one among the vital financing decisions because the profit of the corporation is a very important source of financing available to the firm. Maintaining liquidity for daily operation and ensuring financial health for future capital investment of companies are expected by adjusting dividend policies (Hakeem & Bambale, 2016). Dividend policy drives the expectation of demand and supply in markets that may fluctuate the stock prices. Therefore, stock price volatility is inevitable within the market which relies on the fundamentals, information and former market practices. In view of the importance of this corporate policy, the relevance of dividend decisions on stock prices remains to be of interest to researchers since the past five decades, particularly within the context of developing markets. Hashemijoo et al., (2012) inspected the impact of the dividend policy on the stock value changes in Malaysia. The fundamental after effects of the investigation show that the value changes is related adversely with the two proxy measures of the dividend policy, and that the dividend yield and firm size have the most elevated critical impact on the stock volatility.

1.2 Statement of the Problem

Undoubtedly, stock price volatility is inevitable and has partially been attributed to uncertainties in macroeconomic factors like inflation, rate of exchange and poor economic growth rate. Since investors are risk averse by nature, their investments volatility is imperative to them as it measures the level of their risk exposure (Hussainey et al., 2011). However, positive changes in stock prices tend to occur as a result of a rise within the dividend payout ratio and the other way around. This can be explained by the very fact that when firm's increase dividends to shareholders, they are doing so after funding all projects that have positive net present values (Al-Malkawi, 2007). This implies that stock prices are important to both firms and investors. Commercial banks are predominant financial institutions and their changes in performance and structure have far reaching implications on the economy (Kennedy & Nunnally, 2006). The very nature of the banking business is so sensitive because more than 85% of their liability is deposits from depositors (Saunders & Cornett, 2015). The level of share price volatility may cause an unpredictable outcome. It is against this background this study embarked to fill the prevailing gaps by seeking to determine the relationship between dividend policy and stock price volatility among listed commercial banks in Kenya.

2. Literature

Two theories guided the study. Signaling theory which postulates that investors believe that management can convey information through the dividends that are declared by the company. Bhattacharya (1979) in their model overlooked the standard finance model which assumes that in a perfect capital market, both outside investors and inside managers have access to the same information about the firm's current earnings and future opportunities. The information content of dividends predict that dividends can be used to signal firm's future prospects and only good-quality firms can use such a device. The clientele effect theory manifests that when investors are drawn to a specific share as a result of the need of the investors. Different investor needs will attract investors to shares that declare regular dividends or shares that rather focus on capital growth (Miller & Modigliani 1961). Certain investors are reliant on regular dividend payouts in order to sustain their needs. As a result, the nature and expectation of investors need to be carefully considered by the company in its objective of creating shareholder value and determining the dividend policy.

Allen et al., (2000) present a model in which dividends attract institutional investors because they are taxed less than retail investors, which in turn imposes a better governance structure.

3. Methodology

The study used a descriptive survey research design. The population of interest for this study was listed commercial banks in Kenya within the time frame 2015-2019 with the exception of those that were listed as a result of mergers. Secondary data was extracted from published financial statements of the listed commercial banks while data on share prices was collected from handbook manuals published by the. The study used a multiple regression model that utilized the principal data analysis method of which basic assumptions must be tested before the actual analysis. The diagnostic tests included tests for multicollinearity, Hausman specification test, Breush Pagan test, Pesaran CD test, Wooldridge, Walid and Unit Root test.

4. Findings and Discussion

4.1 Diagnostic Tests for Model Choice

4.1.1 Multicollinearity

The study computed Variance Inflation Factors (VIF) for the independent variables Dividend Pay-out Ratio (DPR) and Dividend Yield (DY) and the moderator (Firm Size). Variables having VIF higher than 5 or tolerance value of less than 0.2 indicate that they experience a multicollinearity problem (Myers, 1990).

Table 1: Multicollinearity Test using Variance Inflated Factor (VIF)

Variable	Tolerance (1/VIF)	VIF
Dividend Pay-out Ratio	0.679977	1.47
Dividend Yield	0.826393	1.21
Firm Size	0.588086	1.70

The multicollinearity test results of table 1 shows that VIF for all the variables, Dividend Pay-out Ratio, Dividend yield and Firm Size are 1.47, 1.21 and 1.7 which are below minimum threshold of 5 and tolerance of 0.679977, 0.826393 and 0.588086 respectively, which are less than maximum threshold of 0.20 for declaring multicollinearity. This indicates that the independent variables and moderator are not correlated thus can be included in the same model.

4.1.2 Autocorrelation

To test for autocorrelation, Wooldridge test was applied. The null hypothesis is that, no first-order autocorrelation (serial correlation do not exist), otherwise for alternative hypothesis. The findings are as shown in table 2 below.

Table 2: Wooldridge test for autocorrelation in panel data

Statistic	Model 1	Model 2	Model 3
F (1, 9)	3.106	4.974	11.071
P-value > F	0.1118	0.0527	0.0088

The findings of Wooldridge test in table 2 shows that for Model 1, $F(1, 9) = 3.106$, $P\text{-value} = 0.1118 > 0.05$ and for model 2, $F(1, 9) = 4.974$, $P\text{-value} = 0.0527 > 0.05$. The results are insignificant and therefore the study do not reject the null hypothesis concluding that serial correlation do not exist for the Model 1 and model 2. However, for Model 3 with both moderator and interaction effects, the model was significant $F(1, 9) = 11.071$ $P\text{-value} = 0.0088 < 0.05$ indicating that serial correlation exist for the Model 3 with both moderator and interaction effects.

Table 3: Harris-Tsavalis test for unit root in the panel data

AR parameters:	Common	Number of panels =	10
Panel means:	Included	Number of periods =	5
Time trend:	Not included	Asymptotics:	N → Infinity
			T Fixed
		Cross-sectional means removed	
Variable	Statistic (Rho)	Z	P-value

Stock Price Volatility	0.0802	-2.7238	0.0032
Dividend Pay-out Ratio	-0.2987	-5.1825	0.000
Dividend Yield	0.1849	-2.0449	0.0204
Firm Size	0.4977	-0.0147	0.4941

The Harris-Tsavalis test results as shown in table 3 shows that the P-values for all the variables were significant: Stock Price Volatility, P-value $0.0032 < 0.05$, Dividend Pay-out Ratio, P-value = $0.000 < 0.05$, and Dividend Yield, P-value = $0.0204 < 0.05$. The study therefore rejected the null hypothesis and concluded that Stock Price Volatility, Dividend Pay-out Ratio, and Dividend Yield did not contain unit root for the 10 selected commercial banks in Kenya. Therefore, the panel data was good for regression analysis.

Table 4: Correlation Matrix

		Stock Price Volatility	Dividend Pay-out Ratio	Dividend Yield	Firm Size
Stock Price Volatility		1			
		50			
Dividend Pay-out Ratio	Pearson Correlation	-0.4683*	1		
	P-value	0.0006			
	N	50	50		
Dividend Yield	Pearson Correlation	0.1518	-0.0355*	1	
	P-value	0.2925	0.8065		
	N	50	50	50	
Firm Size	Pearson Correlation	-0.6593*	0.5378*	-0.3691*	1
	P-value	0.000	0.0001	0.0083	
	N	50	50	50	50

*. Correlation is significant at the 0.05 level (2-tailed).

From table 4 above, the findings reveal the correlation coefficients between the variables of the study. It is thus clear that Dividend Payout Ratio has a negative relationship with stock price volatility evident from the value of its Pearson coefficient of -0.4683.

The same variable however has a positive correlation coefficient with the introduction of the moderating variable- firm size hence the value of 0.5378. Dividend Yield has a positive relationship with the dependent variable of the study which is stock price volatility represented by the figure of 0.1518. This coefficient however changes to a negative relationship once the moderating firm size variable is introduced evidenced by the value of -0.3691. It is also important to note that the relationship between firm size and stock price volatility is represented by a negative coefficient of -0.6593.

4.1.3 Test of Hypothesis using Panel-Correlated Standard Error (PCSE) model

Since Fixed and Random Effect models are having spherical error structure such as; existence of heteroskedasticity and existence of cross-sectional dependence, Parks (1967) and Kmenta (1986) recommended that when fitting linear models to Time Series Cross-Sectional data (panel data), it is common to use this non-spherical error structure to improve inference and estimation efficiency by a Feasible Generalized Least Squares (FGLS) estimator. However, FGLS requires that the number of periods should be

greater than the number of groups (cross-sections) since the method is infeasible when the number of periods is less than the number of groups (cross-sections). Since in this study the number of years (periods) is 5 years as from 2015 to 2019 and the number of cross-sections was 10 selected commercial banks in Kenya. Therefore, the researcher adopted and relied on the pooled OLS regression with Panel Corrected Standard Errors (PCSE) econometric model as recommended by Beck and Katz (1995). The findings of the pooled OLS regression model with Panel Corrected Standard Errors (PCSE) were as shown in table 5 below.

Table 5: Panel-Correlated Standard Error (PCSE) model results

Parameters	Model 1		Model 2		Model 3	
DPR (β , SE, P-value)	-0.1960, 0.0002	0.0522,	-0.0599, 0.0450	0.0299,	-1.5093, 0.0049	0.5364,
DY (β , SE, P-value)	0.0950, 0.2733	0.0867,	-0.0555, 0.7537	0.1770,	8.0806, 0.0061	2.9456,
FS (β , SE, P-value)			-0.1040, 0.0000	0.0133,	-0.1118, 0.0000	0.0180,
Cons (β , SE, P-value)	0.3773, 0.000	0.0270,	1.1108, 0.0000	0.0960,	1.1786, 0.0000	0.1303,
Interaction Effects						
$I_{DPR}(\beta, SE, P-value)$					0.2161, 0.0034	0.0738,
$I_{DY}(\beta, SE, P-value)$					-1.2772, 0.0057	0.4618,
R-Squared	0.2376		0.4581		0.5677	
R-Square change	-		0.2205		0.1096	
Wald Statistic (df)	15.58 (2)		112.98 (3)		247.21 (5)	
P-Value	0.0004		0.0000		0.0000	

The model 1 explained 23.76% of the variation in explaining the Stock Price Volatility among the selected commercial banks in Kenya as indicated by R-Square= 0.2376. The Beta coefficient for the constant was found to be significant ($\beta = 0.3773$, P-value = 0.000); this indicates that besides the two independent variables (Dividend Pay-out Ratio and Dividend Yield), there are other variables which are not covered in this study that significantly influence Stock price Volatility among the selected commercial banks in Kenya.

The model 2 explained 45.81% of the variation in explaining the Stock Price Volatility among the selected commercial banks in Kenya as indicated by R-Square=0.4581. There was an improvement in the R-square by 22.05% as indicated by R-Square change of 0.2205. The findings also show that Firm size had a significant direct negative partial influence on the Stock price Volatility among the selected commercial banks in Kenya ($\beta = -0.104$, P-value = 0.000). The Beta coefficient for the constant was found to be significant (Beta coefficient = (0.3773, P-value = 0.000); this indicates that besides Dividend Pay-out Ratio, Dividend Yield and Firm Size, there are other variables which are not covered in this study that significantly influence Stock price Volatility among the selected commercial banks in Kenya.

For Model 3, the findings of the PCSE model results as shown in table 4.6 shows that the model is a good fit to modelling moderation effect of Firm Size on the relationship between Dividend Pay-out Ratio, Dividend Yield and Stock Price Volatility among the selected commercial banks in Kenya [Wald chi2 (5) = 247.21, P-value = 0.000]. The model explained 56.77% of the variation in explaining the Stock Price Volatility among

the selected commercial banks in Kenya as indicated by R-Square= 0.5677. There was an improvement in the R=quare by 10.96% as indicated by R-Square change of 0.1096 (see table 5).

5. Findings

The findings show a negative relationship between dividend payout ratio and stock price volatility; thus a unit increase in the Dividend Pay-out Ratio leads to decrease in the Stock Price Volatility among the selected commercial banks in Kenya. Thus it is safe to state that when the pay-out is low, the stock price volatility will be high. The study also found that Dividend Payout Ratio has a negative relationship with stock price volatility evident from the value of its Pearson coefficient of -0.4683. The findings thus can be summarized to express that whenever the ten listed companies for this study over the period of study offered a low pay-out ratio, they experienced high volatility during that particular year and the vice versa is true. The findings are in line with (Lashgari & Ahmadi, 2014) who examined 51 companies listed on Tehran stock exchange to measure impact of dividend policy on share price volatility, taking dividend payout ratio as a proxy of dividend policy and found that dividend payout ratio has a significantly negative effect on stock price volatility in Tehran.

The findings on this variable revealed that dividend yield has no significant influence on the Stock Price Volatility among the selected commercial banks in Kenya. Dividend Yield has a positive relationship with the dependent variable of the study which is stock price volatility represented by the figure of 0.1518. This coefficient however changes to a negative relationship once the moderating firm size variable is introduced evidenced by the value of -0.3691. It is also important to note that there exists a negative relationship between dividend yield and pay-out ratio depicted by the value -0.0355. The findings reported are in contrast with those of (Profilet & Bacon, 2013) who sought to examine the effect of dividend policy on stock price volatility of 599 firms in the US equity capital market from the period 2010-2012. By using an OLS regression analysis, their findings showed that dividend yield and stock price volatility have negative relationship.

The study findings show that when the Firm Size is small, the dividend Pay-out Ratio tends to have a negative influence on the Stock Price Volatility among the selected commercial banks in Kenya such that Stock Price Volatility reduces as the dividend Pay-out Ratio increases. When the Firm size is moderate, there seem to be a constant relationship between Dividend Pay-out Ratio Stock Price Volatility among the selected commercial banks in Kenya. The findings concur with those of, (Muhannad et al., 2018) whose study sought to examine the effect of dividend policy on the stock price volatility of firms listed in the Amman Stock Exchange and using the moderating effect of firm size found that size also has positive and significant relationship with stock price volatility which implies that the price volatility and share price risk of larger firms are lower than smaller firms

6. Conclusion

The study concludes that the main reason for dividend payout is to provide the benefit to shareholders of the company and to make them feel as part of the firm. Paying dividend to shareholders is an effective way to attract new investors to the stock market. At the same time, this is a tool that when properly utilized will help maintain as well as enhance the value of stocks in the securities market.

The study thus leans on the Agency Theory implementation as the dividend policy is a task charged to those in the managerial position hence those entrusted with that responsibility ought to clearly understand the listed commercial banks objectives as well as fulfill the shareholders need of wealth maximization.

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