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IMPACT OF DIVIDEND POLICY ON STOCK PRICES VOLATILITY FOR FIRMS LISTED ON THE NAIROBI SECURITY EXCHANGE MARKET IN KENYA

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Abstract: **Dividend policy continues to generate endless debate although several researchers have conducted both theoretical and empirical research on the topic These include the association of dividend policy and stock price risk. Different researchers have failed to reach a consensus after investigating how dividend policy and volatility of share price associate over time. This study therefore, sought to establish how dividend policy impact on stock price volatility of firms listed on the Nairobi Security Exchange market in Kenya. The main objective of this study was to find out the impact of dividend policy on stock prices volatility for firms listed on the Nairobi Security Exchange market in Kenya. The specific objective was to establish the impact of payout ratio on stock price volatility for firms listed on Nairobi securities exchange market in Kenya.**

Materials and Methods: Descriptive research design was used in this study. Secondary pooled data was obtained from audited financial records of firms listed at the Nairobi Securities Exchange Market from 2012 to 2017, (6years period) was used.The study was based on the sixty four listed companies during the period and purposive sampling was used to establish companies with complete data over the period of study. Panel data was analyzed using descriptive and inferential statistics. Inferential statistic involved testing hypothesis at 0.05 and 0.01 significance levels and it also included, simple regression analysis, multiple regression analysis and correlation analysis. Decsriptive statistics involved, minimax, mean and standard deviation. Data was presented in form of tables and charts.

Results: The findings of the study revealed that there was a statistically significant positive relationship between payout ratio and stock price volatility of firms listed on Nairobi securities exchange market in Kenya P=.000.

Conclusion: The study concluded that dividend policy influences the stock prices volatility for firms listed on the Nairobi Securities Exchange Market in Kenya. The study recommends that firms should strike a balance between the amount of money retained and money paid to shareholders as dividends. This will go a long way to strengthening their dividend policy and the level of volatility registered in their share price.

Keywords: **Dividend policy, Dividend payout ratio, listed companies, Stock price volatility.**

1. INTRODUCTION

A stock market is an institution that deals in exchange of securities issued by publicly quoted companies and the government (Kinder, 2010). It is part of the larger economy known as the stock market. (Samuelson, 2010). In fostering a saving culture, capital markets have and continue to play an important part in global economies. The simple idea that organizations exist where savers can comfortably spend their savings and earn a return acts as a motivation for borrowers to save more and consume less. The growth in the number of stock brokers from 6 to 24 and the licensing of stock dealers

and investment banks also seen expansion and diversification of the stock market. Brokers have tended to play the role of stock exchange agents. Because of the many processes involved in the NSE, market values are turbulent and keep changing from time to time.

Except for the theories related to dividend payment (such as signaling theory, clientele influence, stakeholders, bird-in-hand fallacy, and pecking order theory and agency cost theory), previous research analyzed focuses on the insignificance of dividend policy. However, the relationship between dividend payment and dividend policy remains a mystery (DeAngelo , 1996). Due to issues related to division of ownership and control and knowledge asymmetry, recent studies on dividend policy are common (Al-Malkawi, 2007; Al-Najjar & Hussainey, 2009). On the other hand, systematic risk posed by investors holding ordinary shares investment is referred to as uncertainty of stock price (Guo, 2002). Investment volatility is imperative for investors and they are averse to risk and investment volatility tests their risk level.

Volatility of asset markets refers to the amount of risk or volatility associated with shifts in the valuation of the stock market. (Mgbame & Ikhatua 2013). Security is more volatile and has the ability to exceed a broader range of values. The security price will then adjust significantly in any way within a brief span of time. In the event that the value of a security does not fluctuate dramatically and appears to be steadier, this means that the security is less unpredictable.

Stock price volatility is an indicator that is most often used by options traders to find changes in trends in the market place ((Karolyi, 2001). Investor use data on long-term stock market volatility to align their portfolios with the associated expected returns. From an investor's viewpoint, understanding stock price volatility is crucial, Stocks that move by larger margins can be more profitable on the upside, but they also carry greater risk of loss. According to the modern portfolio theory (Markowitz, 1952), investors are rational and risk averse they want to avoid risk unless they are compensated for taking such risk. Investors usually choose less risky investments as they offer more certainty in returns as opposed to investments with higher risk (Kinder, 2002). There are two main types of stock volatility in the options market which include historical volatility and implied volatility.

The increase or decrease in volatility results from changes in investors emotions in the market place. More specifically greed and fear in the market place are the two main factors that cause stock prices to change (Westerhoff, 2004). Stock price volatility tends to rise when there is new information released in the markets however the extent to which it rises is determined by the relevance of that new information as well as to the degree in which the news surprises investors Historical volatility, often referred to as actual volatility and realized volatility, is the measure of a stock's price movement based on historical prices (stock price history) and it is used to measure how active a stock price typically is over time (Chang, 2014). It measures the fluctuations in the share price, and more specifically it is measured by taking the daily percentage price changes in a stock and calculating the average over a specific time frame. It makes sense that long term investing requires the use of longer time frames to calculate the historical stock price volatility (60-day to 360-day) while short term investing requires the use of shorter time frames (5-day to 30-day)(Rehring ,2012). Implied volatility is a stock's actual volatility that is estimated from the stock's option price (Ionesco, 2011). Implied volatility is also the volatility amount that determines a market value comparable to the market price of the current choice.

Factors considered when looking at an option to determine its volatility include: risk free interest rate, the current stock price, the expiration date, the stock dividends paid by the stock and the strike price. Implied volatility and options value in the market is then calculated using options pricing model based on the factors considered when looking at an option to determine its volatility. Combination strategies which enable investors' determine cheap or expensive options are calculated by investors using implied volatility. Each option on a stock can and will most likely have different implied volatility due different expiration dates and strike prices. There are benefits that accrue to non-options trading as well due to stock price volatility. However traders should exercise care when applying stock price volatility in non-option trading and combine other technical indicators with volatility.

Stock price direction is majorly determined by implied volatility (Saikh & Padhi, 2014).A fall in a stock's value which does not reflect a change in implied volatility makes the market not to worry about the change. However a rise in implied volatility that makes the market nervous about the downward potential of the stock in an extremely volatile market precludes investor sentiments change. Data on long term stock market volatility is normally used by investors to align their portfolios with the associated expected returns. Stocks that move by a wide margin (have a high price volatility may be more lucrative on the upside but may also bear a greater risk of loss, so it is important to consider stock price fluctuations from the point of view of an investor. Investors are averse and reasonable risk and want to avoid risks not they are paid for taking certain risks (Kinder, 2002).

Statement of the Problem

Payout and dividend profits are one of the key considerations that will be taken into account by the investor when making a decision on investment. They influence an investor's decision to invest or not to invest. Dividend yield and riskiness of investments are factors that investors pay close attention to since they may affect evaluation of a firms shares in the long run. Stock prices volatility therefore may be influenced by dividend policy. Despite years of empirical and theoretical research, dividend policy has continued to generate endless debate. These include the linkage between risk and dividend policy (Hashemijoo and Ardekanani 2012). Despite dividend policy being one of the mostly researched topics in the field of finance in most developed countries (Tuigong, 2015), the question as to whether dividend policy affects the share price volatility still remains unresolved among managers, policy makers and researchers (Ouma & Murekefu, 2012; Tuigong, 2015). Most of the studies conducted on dividend policy and stock prices concentrated in developed countries (Arnott, & Asness 2003). The question of relevance of dividend policy on stock prices in developing countries remains valid. In Kenya, not many studies have been done on the stock price volatility.

Different researchers have investigated the association between dividend policy and volatility of share price at different times (Allen & Rachim, 1996; Baskin, 1989; Hussainey, Mgbame, & Chijoke-Mgbame, 2011; Kinder, 2002; Nazir, Nawaz, Anwar, & Ahmed, 2010). But their findings are not consistent. (Baskin, 1989) reported significant negative association between dividend yield and volatility of stock's price. Findings of (Hussainey, Mgbame, & Chijoke-Mgbame 2011) failed to support the study of (Baskin, 1989). Since there is no consensus between researchers on the impact of dividend policy on volatility of stock's price, this research examines the impact of dividend policy on share price in the Nairobi Securities Exchange Market.

Kenyoru, Kundu and Kibiwott (2013) investigated the effect of dividend policy on the share price volatility in Kenya where regression models were used to test the relationship between dividend yield and dividend payout ratio and stock price volatility. They found dividend payout ratio to be an important predictor of share price volatility while the dividend yield enhanced share price volatility. There is no consensus as to whether dividend policies adopted by listed firms have an impact on stock volatility. This study was therefore necessitated by the failure of previous researchers to develop a consensus on whether dividend policy has an impact on stock prices volatility for firms listed on the Nairobi Securities exchange market in Kenya. The findings of the study might help various stakeholders who include: management of the companies listed at the Nairobi Securities exchange market, the government of Kenya, financials consultants other stakeholders in the investment industry e.g the stock brokers, Stock dealers, Investment advisors/fund managers, authorized security dealers, Investment banks, credit rating agencies, collective investment schemes, custodians and venture capital funds to offer proper services to their clients e.g to giver proper advice on the available investment options. This study therefore investigated the impact of dividend policy on stock price volatility for firms listed on the Nairobi Securities Exchange Market in Kenya.

Objectives of the Study

The main objective of this study was to determine the impact of dividend policy on stock prices volatility for firms listed on the Nairobi Securities Exchange market in Kenya.

The specific objective of this study was to;

1. Establish the impact of payout ratio on stock price volatility for firms listed on Nairobi Securities Exchange market in Kenya

Hypotheses of the Study

i) $\mathbf{H_{O1}}$. Dividend Payout ratio has no significant effect on stock price volatility of firms listed on Nairobi Securities Exchange market in Kenya

2. LITERATURE REVIEW

Theoretical Framework

The study was guided by dividend irrelevance theory by Modigliani and Miller (1961), Agency cost theory by Jensen and Meckling, 1976; Easterbrook, 1984; La Porta , Lopez-de-Silanes, Shleifer et al 2000 and bird in the hand theory by Litner, 1962) and (Gordon ,1963).

Modigliani and Miller (1961) observed that the dividend policy is irrelevant". The dividend policy has no effect on the price of shares and it has no impact on a shareholder's wealth under the Perfect Capital Market (PCM) which assumes rational investors. According to them therefore, the dividend policy does not have any impact on shareholder's wealth and they further noted that all dividend policies are equivalent. This implies that firms will continue paying dividend to their shareholders. They further noted that the shareholder's wealth is affected by the income generated by the investment decisions a firm makes, and not by how it distributes that income. Modigliani and Miller went further to argue that regardless of how a firm distributes its income, its value is determined by its basic earning power and its investment decisions. This implies that when given a firm's investment policy, the dividend payout policy that the firm chooses to follow will affect neither the current share price nor the total returns to shareholders. This means that capitalized value of future earnings will be used by investors to calculate the value of the companies and capitalized value of future earnings is not affected by how firms set their dividend policies or firms pay dividends.

The assumptions include; existence of a 100% payout of dividend by management in every period, perfect capital markets, investors are rational and value securities based on the value of discounted future cash flow to investors, managers act as the best agents of shareholders and there is certainty about investment policy of the firm. It is therefore clear that from the foregoing that according to Modigliani and Miller the issue of dividend policy is irrelevant. According to Modigliani and Miller's Publications (1958, 1961 and 1963), this theory has three propositions . The first proposition is that a firm's total market value is independent of its capital structure, the second proportion is the cost of equity increases with its debt-equity ratio, and the third states that a firm's total market value is independent of its dividend.

Conceptual Review

Figure 1.0, presents the researcher's conceptualized impact of dividend policy on stock price volatility. The dimensions of dividend policy (independent variable) investigated was dividend payout ratio. Stock prices volatility (dependent variable) was measured in terms of average price of the stock/ shares.

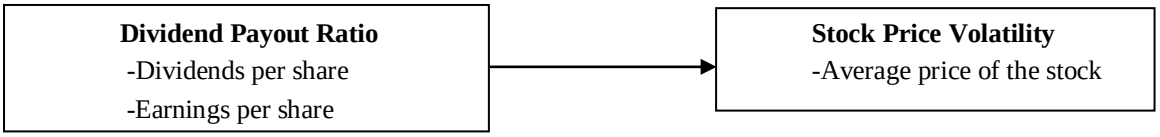


Figure 1.0: Conceptual Framework

Empirical Review

Chelimo & Kiprop, (2017) conducted a study on how dividend policy affect share price performance for insurance firms listed at NSE.He used descriptive research design and historical research design and targeted six insurance companies listed at Nairobi Securities Exchange Market. They found out that average market price was highly volatile across all the firms followed by the volatility of earnings per share. They also found out that there was a high volatility on inflation rates. They concluded that the high variability was caused by market and political forces witnessed during the period in Kenya.

Otieno, (2016) studied the effect of dividend policy on stock price volatility. He used a descriptive survey design and targeted sixty one (61) companies listed at NSE by 31st December 2015.Otieno found out that that there was a negative relationship between dividend payout ratio and stock price volatility .While establishing the relationship between payout and stock price volatility, he revealed that payout had a negative insignificant relationship with stock price volatility of quoted firms. His findings agreed with those of Khan (2012) on his study on effect of dividend announcement on the stock price of chemical and pharmaceutical industry in Pakistan.

Fawaz,.(2014) constructed a pooled panel database from the available financial data which consisted of the balance sheet, income statement and cash flow statement and the relevant information of publicly quoted companies while studying the impact of dividend policy on stock price volatility at Jordan Stock Exchange Market. He concluded that there was no statistical significance of dividend payout on stock price volatility. He also concluded that there was no significant influence between price and share price volatility. While looking at the relationship between stock dividend and stock price volatility he concluded that there is no significant statistical influence between stock dividend and stock price volatility.

3. MATERIAL AND METHODS

This paper adopted a descriptive survery research design inorder to utilize a scientific method application that objectively asses and review source materials, interpret evidence, generalize and forecast (Neeru, 2012).Descriptive survey research design involves gathering data to test theories or address questions about the study's current state or variables. It involves a declaration of affairs as the researcher doesn't possess power over the component.All the 64 listed companies were targeted for this study for a period of 6 years. The study used purposive sampling to sample firms that had complete data for the study, 49 firms which were found to have complete data were used in this study making a total of 294 elements for the target population. The research relied entirely on secondary data. Pooled data from financial statements of listed companies in Kenya which are available both at the CMA website and the NSE website were used for the study. The NSE handbook was also used to provide the data required for this study. All secondary financial data was extracted from the published financial statements of the companies under examination. The period for the study was between 2012-2017 (6years).Descriptive statistics which included Minimum, maximum, mean and standard deviation. Inferential statistics was used for the study which included testing for correlation analysis, regression analysis and hypothesis testing. Statistical tests were perfomed at 5% significance level and STATA software version 15 was used for analysis

4. RESULT AND DISCUSSION

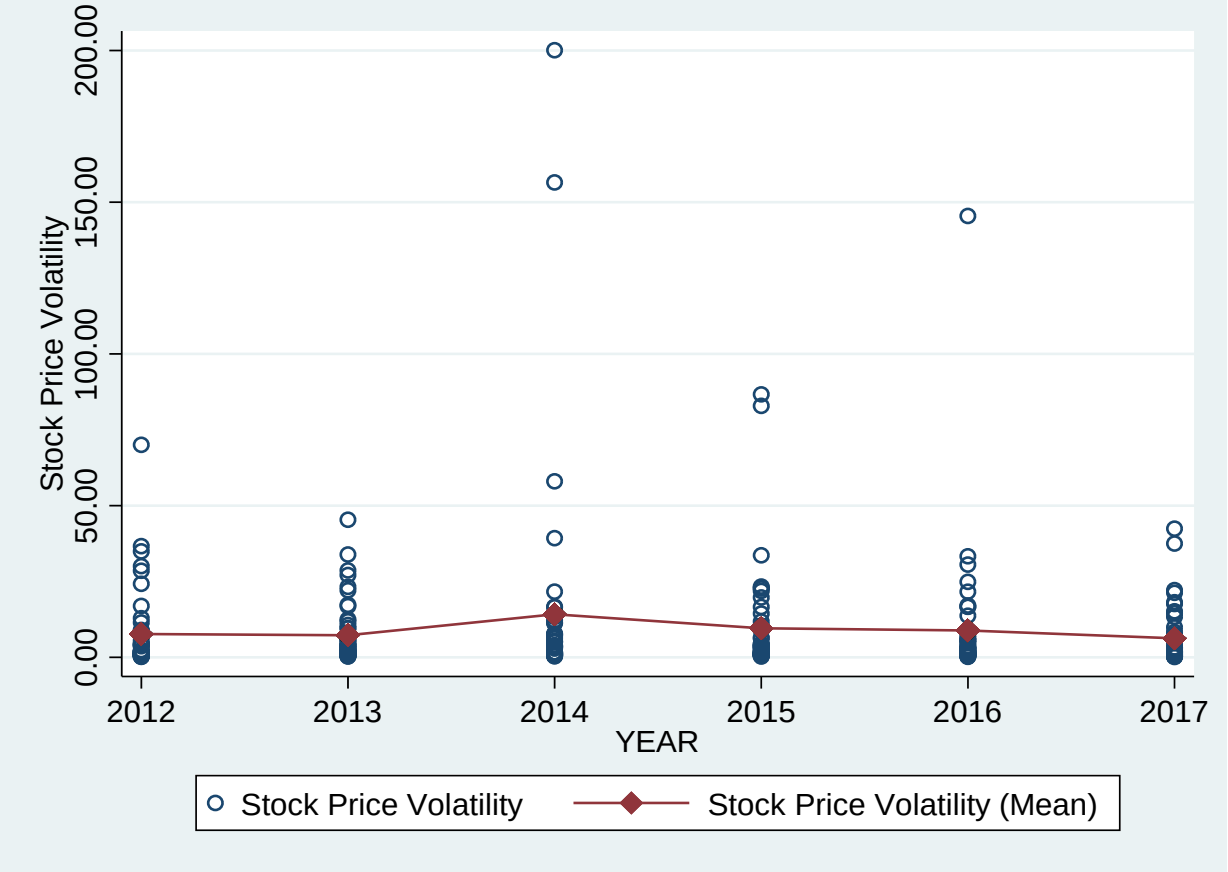
Descriptive Statistics

The descriptive statistics entailed minimum, maximum, mean and standard deviation. The results are as shown in Table 1.0.

Table 1.0: Descriptive Statistics

YEAR	Payout Ratio	Stock Price Volatility
Min	0.29	0.19
Max	150.00	70.05
Mean	10.33	7.69
Stdev	26.59	12.95
Min	0.25	0.27
Max	190.77	45.37
Mean	9.87	7.28
Stdev	30.87	9.90
Min	0.13	0.34
Max	129.23	200.09
Mean	8.70	14.20
Stdev	23.20	35.97
Min	0.09	0.29
Max	207.67	86.67
Mean	9.11	9.58
Stdev	29.53	17.51
Min	0.19	0.19
Max	139.26	145.48
Mean	8.83	8.85
Stdev	20.85	21.43
Min	0.03	0.13
Max	56.72	42.43
Mean	6.58	6.28
Stdev	10.06	9.13
Min	0.03	0.13
Max	207.67	200.09
Mean	8.90	8.98
Stdev	24.34	20.03

From Time series summary for study period, payout ratio ranged from 0.03 to 207.67 with a mean of 8.90. The distribution had a standard deviation of 24.34 while stock price volatility ranged from 0.13% to 200.09 with a mean of 8.98 and standard deviation of 20.03.A plot of a scatter graph using descriptive statistics failed to produce a straight line indicating the presence of a nonlinear relationship between dividend payout and stock prices volatility.



Inferential Statistics

The study further used correlation analysis to test the association between independent variable and dependent variable

Table 2: Correlation Analysis

		DPR(ln)	SPV(ln)
DPR=Dividend Payout Ratio	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	294	
Price Volatility	Pearson Correlation	-.056	
	Pearson Correlation	.223**	1
	Sig. (2-tailed)	.000	
	N	294	294

The findings reveal that there was no clear association between the independent variable and dependent variable. The relationship between dividend payout ratio and stock price volatility was0.223, P=0.000 which suggests that there is a positive and significant linear association between the volatility of equity prices and the dividend payout ratio. Khan (2012) revealed a strong and meaningful correlation between dividend payout and stock prices, while Onyango (2018) found that the dividend pay-out ratio had a negative but negligible share price relationship.

Linear Regression Analysis

Table 3: Correlation Analysis

Regression Results of Payout ratio on stock price volatility

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of Estimate	Change Statistics			
					R Sq Change	F Change	df1, df2	Sig. F Change
1	.223[a]	.050	.047	1.3420	.050	15.30	1	292

a. Predictors: (Constant), Payout ratio

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	27.557	1	27.557	15.30	.000[b]
	Residual	525.917	292	1.801		
	Total	553.473	293			

a. Dependent Variable: Stock price volatility

b. Predictors: (Constant), Payout ratio

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.198	.261		.757	.450
	Payout ratio	.289	.074	.223	3.912	.000

a. Dependent Variable: Stock price volatility

In order to determine the relationship between dividend payout ratio and stock price volatility for companies listed on the Nairobi securities exchange market in Kenya, a simple linear regression analysis was performed. Correlation analysis was used to test the association between the dependent variable and the independent variable.

Linear regression findings revealed that the dividend payout ratio and stock price volatility of the companies listed on the Nairobi securities exchange index in Kenya had a statistically important positive relationship. The dividend ratio accounted for fluctuations of 5.0 percent (R2 = 0.05) in the stock price volatility of companies listed in Kenya on the Nairobi securities exchange market.

Results also showed that payout ratio had a positive, linear and significant (p-value is less than 0.05) relationship with the stock price volatility of firms listed on Nairobi securities exchange market in Kenya {regression coefficient, B=0.289, t-test value, t=3.912 and P=0.000}. The results are represented in the following model:

$Y = \beta 0 + \beta_1 X_1 + \varepsilon$

Where Y= stock price volatility,

$\beta 0$=0.198(constant)

β_1= 0.289

X_1= Payout ratio

Replacing in the equation above, the model becomes: $Y=0.198+.0289X_1$

From the above equation, the constant had coefficient of 0.198, p=0.450, this implies that in the absence of payout ratio, stock price volatility will be at 0.198. This stock price volatility will be insignificant (P>0.05). On the other hand, payout ratio had regression coefficient of 0.289. This implies when everything is held constant, a unit increase in payout ratio would result to a significant increase in stock price volatility by 28.9%. This finding is in agreement with. Nishat and Irfan (2003) showed that dividend payout ratio had a positive and significant impact on the share price volatility. However, Abu and Adebayo (2019) found that dividend payout ratio has a negative insignificant effect on share prices of listed conglomerate firm in Nigeria

5. CONCLUSION

The study concluded that the payout ratio had a major positive impact on the volatility of the stock prices of companies listed on Kenya's Nairobi securities exchange market. Raising the dividend payout ratio will lead to a rise in the volatility of listed firms' stock prices. A high payout schedule on dividends suggests more existing dividends and fewer retained profits, which can result in greater fluctuations in stock values. Low distribution strategy means less existing distributions, higher retained profits and higher capital returns, hence less uncertainty in equity price. It is also possible that some investors would favor high-paying firms, while others will prefer low-paying firms.

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