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[*1]Job Cheruiyot Aiyabei, [2]Dr. Olweny Tobias & [3]Dr. Irungu Macharia

[*1]PhD Candidate, Jomo Kenyatta University of Agriculture and Technology

[2]Lecturer, Jomo Kenyatta University of Agriculture and Technology

[3]Lecturer, Jomo Kenyatta University of Agriculture and Technology

***Email of Corresponding Author: cjaiyabei@gmail.com**

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Abstract

Idiosyncratic volatility has always been ignored in asset pricing, this is due to capital asset pricing model's suggestion that idiosyncratic volatility is diversified away since investors hold a proportion of the well diversified market portfolio. In reality however, this is not always the case. Studies have shown that investors do not always hold well diversified portfolios and idiosyncratic risk is priced to compensate investors for their inability to hold the market portfolio, therefore the main objective of the study was to establish the effect of financial statement information on idiosyncratic volatility of stocks return among listed firms in Kenya. Idiosyncratic volatility was the dependent variable while independent variable was dividend per share (DPS). Correlational and descriptive research design were used, the study also used census technique and target all 39 listed companies that existed and their shares were actively traded at the Nairobi securities exchange (NSE) from the year 1998 to 2017. Descriptive as well as inferential statistics were generated using STATA. The study employed a dynamic panel data regression model, the analysis of variance (ANOVA) was used to reveal the overall model significance, the calculated F-statistic was compared with the tabulated F-statistic and a critical p-value of 0.05 was used to determine whether the overall model is significant. The null hypotheses was rejected. Based on the findings, the study concluded that, dividend per share has a significant relationship with Idiosyncratic Volatility of stock returns among listed firms in Kenya. The study recommended for management in the listed firms to focus dividend per share on their strategic decision-making. This indicator

will further guide in expanding the interpretation of the financial dynamics in the listed firms at the NSE and other related firms.

Keywords: *Dividend per Share, Idiosyncratic Volatility, Stock Returns, NSE & Kenya*.

1.1 Introduction

Financial accounting information is the product of a reporting system that is designed on the basis of international financial reporting standard (IFRS) and international accounting standards (IAS), the system routinely measures and disclose quantitative data concerning the financial position and performance of listed firms. Audited statement of financial position, income statements, and statements of cash flow, along with supporting disclosures forms the foundation of the firm specific information set available to investors and regulators (Bushman & Smith, 2000). The value relevance of published financial statement has increased significantly over the last fifteen years; this can be attributed to the adoption and harmonization of accounting standards as from the year 2001. Studies by Zhou (2004), Sharma (2011), Halonen, Pavlovic and Persson (2013) have shown that there is correlation between accounting information and price movement in the equities market.

Volatility is as a measure of dispersion around the mean or average return of a security. It is a measure of the range of an asset price about its mean level over a fixed amount of time (Abken & Nandi, 1996). Volatility is associated with the variance of an asset price. If a stock is labeled as volatile, then it is plausible that there will be a systematic variance of its mean over time. Conversely, a less volatile stock will have a price that will deviate relatively little over time. Idiosyncratic volatility is a risk that is specific to an asset or a small group of assets and has little or no correlation with market risk (Boloorforoosh, 2014).

The use of published financial statement information in making investment decision in the stock market and its subsequent impact on firm's market price volatility has not been studied widely in Sub-Saharan Africa (SSA) studies elsewhere have resulted in mixed findings. After examining the impact of cash DPS on the share price of listed companies, Halonen, Pavlovic and Persson (2013) found that accounting data explains a high portion of stock price movement in Swedish stock market.

Abo Osba (2007) examined the impact of some accounting variables that are earning per share, book value per share and the cash DPS on the share price volatility of companies listed in Amman Stock Exchange over the years 2001 to 2005. The results of the study revealed there was a statistically significant strong relationship between earning per share, share's book value, the cash dividend in one hand and the share price movement on the other hand. Kihara (2011) study on the relationship between dividend announcements and return on investments: a case study of companies quoted at the NSE found that there is no strong evidence that stock prices react significantly on the announcement of dividend; He also noted a positive correlation between cash flows and the earnings.

1.2 Problem Statement

Idiosyncratic volatility has always been ignored in asset pricing. This is due to capital asset pricing model's suggestion that idiosyncratic volatility is diversified since investors hold a proportion of the well diversified market portfolio (Sandberg, 2005). In reality, however, this is not always the case. Studies have shown that investors do not always hold well diversified portfolios and idiosyncratic risk is priced to compensate investors for their inability to hold the market portfolio

(Fu, 2009; Eiling, 2008; Malkiel and Xu, 2006; Fazil, 2013; Boloorforoosh, 2014). With increasing number of empirical studies indicating that financial accounting information affect stock prices volatility (Yu & Huang, 2005; Sharma, 2011; Glezakos, 2012; Sibel, 2013), and with the growth of NSE over the last 10 years, especially that of active investors, equity turnover and market capitalization; which has led to increased stock price movement and market volatility (Kihara, 2011), there is need to investigate the effect of published financial statement information on equities price movement.

After examining the impact of cash DPS on the share price of listed companies, Halonen, Pavlovic and Persson (2013) found that accounting data explains a high portion of stock price movement in Swedish stock market. Abo-Osba (2007) found that there was a statistically significant strong positive relationship between accounting variables and share prices volatility. Wang and Chang (2008) noted that there was a positively significant relationship between book value and stock price as well as between earnings per share and stock price at the Taiwan SEC. Wang and Luo (2013) analyzed the relationship between accounting information and stock price reactions in Shanghai stock exchange, the results showed a positive relationship between accounting information and stock price, but the significant degree varies; earnings per share and return on equity have the most significant correlation. In his study, Gachucha (2014) found important and strong positive correlation between DPS, current ratio, return on investment and weak positive correlation between debt/equity ratio and volatility in stock returns. However, Hashemijoo and Ardekani (2012) established a significant negative relationship between share price volatility with dividend yield and dividend payout, they also found that dividend have most impact on share price volatility amongst predictor variables. Hussainey and Mgbame (2011) examined the relationship between dividend payout and the volatility of stock price where the empirical findings revealed that there is a significant negative relationship between the payout per share of a firm and the volatility of its stock price.

These mixed and contradictory results of studies done across different exchanges, located in diverse geographical places, characterized by diverse global economic and political factors form the research gap and basis of undertaking this study. Therefore, this study sought to establish the effect of DPS on idiosyncratic volatility of stocks return listed at the NSE.

1.3 Objective of the Study

To determine the influence of DPS on idiosyncratic volatility of stock returns among listed firms in Kenya.

1.4 Research Hypothesis

H_0: DPS has no significant influence on idiosyncratic volatility of stock returns among listed firms in Kenya.

2.1 Literature Review

2.1.1 Theoretical Literature: Signaling Theory

The concept of signaling was first studied in the context of job and product markets by Akerlof and Arrow and was developed into signal equilibrium theory by Spence (1973), which says a good firm can distinguish itself from a bad firm by sending a credible signal about its quality to capital markets. Ross (1977) shows how debt could be used as a costly signal to separate the good from the bad firms. Under the asymmetric information between management and investors, signals from

firms are crucial to obtain financial resources. Ross assumes that managers who are insiders know the true distribution of firm returns, but investors do not.

The other is the costless signaling equilibrium as proposed by Bhattacharya and Heinkel (1982), Rennan and Kraus (1984). A signal is costly if the production of the signal consumes resource or if the signal is associated with a loss in welfare generated by deviations from allocation or distribution of claims in perfect markets. The signaling paradigm is multivariate for financial instruments. Poitevin (1989) demonstrates that debt could be used as a signal to differentiate the potential competition of new entrant firms.

According to signaling theory, also referred to as the information content hypothesis, corporate announcements are hypothesized to have information content, for example, managers use cash dividend announcement to signal changes in their expectation about the future prospect of the company when the markets are imperfect. The investments and financing decisions of a firm are made at the management's discretion. An increase in equity issued by the company reduce the price of its shares, stock splits cause an increase in the price, while issuing more debt instruments leads to price increase actions. However, though managers use dividend to convey information, dividend changes may not be the perfect signal. According to Easterbrook (1994), dividend increase may be an ambiguous signal unless the market can distinguish between growing firms and disinvesting firms.

Signaling theory is becoming increasingly popular within strategic management research (Bergh and Gibbons, 2011). This growing popularity is not surprising, as the theory directs attention to core problems facing strategic decision makers, namely how they can use signals to reduce the uncertainty associated with making a selection among a choice set in situations that have incomplete and asymmetrically distributed information (Bergh, 2014)

In this study, the researcher hypothesized that listed company's DPS that is reported in the published financial statement will inform the decision that will be made by shareholders, and decision will have an influence on the price movement of listed companies stocks in the market. It is argued that company managers use earnings as a signaling tool to convey information about the prospects of a company, and that like dividends, if earnings convey useful information, this will be reflected in stock price changes immediately following a public announcement.

2.2 Conceptual Framework

The independent variable in this study effect of financial statement information on idiosyncratic volatility of stocks listed at the NSE is DPS, which affect the dependent variable namely; idiosyncratic volatility of listed stocks as shown in Figure 1.

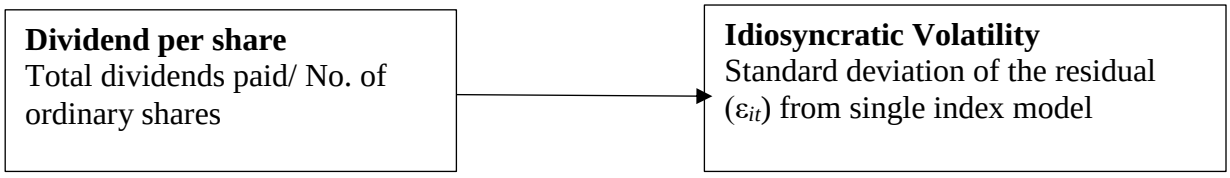

Figure 1: Conceptual Framework

2.3 Empirical Review

2.3.1 DPS and Idiosyncratic Volatility

Empirical investigations on the effect of DPS on stock price volatility have generated mixed results over time, Menike and Prabath (2014) examined the impact of DPS, earnings per share and book value per share of stock price on a sample of 100 companies listed in the Colombo Stock Exchange (CSE) from 2008 to 2012. Using a single and multiple regressions model the results reveals that all variables were positive and had a significant impact on the stock price volatility in the CSE. On the other hand, Hussainey and Mgbame (2011) examined the relationship between dividend payout and the volatility of stock price. The study was based on a sample of publicly quoted companies in the UK for a period of 10 years from 1998 to 2007. The empirical findings suggest that there is a significant negative relationship between the payout per share of a firm and the volatility of its stock price

Hashemijoo and Ardekani (2012) studied the relationship between dividend policy and share price volatility with a focus on consumer product companies listed in Malaysian stock market for a period of six years from 2005 to 2010. The empirical results of this study showed significant negative relationship between share price volatility with dividend yield and dividend payout, they also found that dividend have most impact on share price volatility amongst predictor variables. In his study, Abo Osba (2007) found that there was a statistically significant and strong relationship between cash dividend in one hand and the banks share price movement on the other hand at Amman Stock Exchange.

Al-Farah, Almeri and Shanikat (2014) studied the ability of accounting variables to explain volatility of stock's price of the industrial companies listed in Amman Stock Exchange during the years 2001 to 2010. The sample of the study consisted of 64 industrial companies. To test the hypotheses of the study, the multiple regression model was used to test the independent variables' ability in explaining the variance in the dependent variable. The study concluded that the accounting variables and more specifically DPS and dividend yield explained only 3.8% of the volatility in stock price while 96.2% of the volatility in stock price referred to other reasons. The results of the study also showed that there was an important weak correlation between ratios of dividend Payout ratio and between volatility in stock price and this relation explained 1.2% of the changes in volatility in stock price. Finally, the results indicated lack of significant correlation between the other accounting variables and the volatility in the stock prices explaining only 2.6% of the volatility in the stock.

In their study to explore the impact of cash dividend and the retained earnings on the market share price movement in the United States of America Belkaoui and Picur's (2001) depending on some models of evaluation that are based on accounting information, applied a study on a set of US multinational companies during the years 1992-1998. The sample of the study consisted of 256 company. The study concluded that market value of these companies' shares was determined greatly by relying on the retained earnings and the dividend affect with less degree of the market value of these companies.

3.1 Methodology

This study employs positivistic epistemology. Under positivist perspective, the concepts need to be operationalized in a way that enables facts to be measured quantitatively; static design categories isolated before study. This study employed correlational and descriptive research design

because it is based on the premise that if a statistically significant relationship exists between two variables, then it is possible to predict one variable using the information available on another variable. Target and accessible population for this study comprised of the 39 listed companies that existed and their shares were actively traded at the NSE from 1998 to 2017. In this study, the researcher used census study, a census study is any inquiry of the entire population of a particular set of 'objects', it is a complete enumeration of all items in the population. The researcher collected annual published financial statements for all 39 sampled listed companies for the twenty-year period under study (1998 to 2017). The financial statements were obtained from specific listed company's websites and NSE handbook. A research assistant was engaged to extract the required accounting data (DPS) for all companies in all the financial years under review. The extracted data was input to pre-structured work sheet and then converted into STATA format.

The secondary data extracted from the financial statements was used to compute the relevant ratios. The secondary data encompassed panel data which consists of time series and cross-sections. The panel data obtained was analyzed using descriptive statistics, correlation analysis, and panel regression analysis.

Autocorrelation, heteroscedasticity, and panel unit root tests were conducted to ensure proper specification. The panel methodology was supported by STATA software. Feasible Generalized Least Square estimation was performed after accounting for various violations of classical linear assumptions. The analysis of variance (ANOVA) was checked to reveal the overall model significance.

To estimate idiosyncratic volatility for sampled stocks at the NSE, the researcher employed the standard deviation of the regression residual (ε_{it}) from Single Index Model as outlined in Malkiel and Xu (2003).

$$R_{i,t} - R_{f,t} = \alpha_i + \beta_i(R_{m,t} - R_{f,t}) + \varepsilon_{i,t} \quad \ldots\ldots(3.1)$$

Where: i =Specific stock,
R_m =Return on the all ordinaries index
t = Time interval
$R_{i,t} - R_{f,t}$ = Excess return of firm i in month t
$R_{m,t} - R_{f,t}$ =Excess market return in month t
ε_{it} = regression residual.
The specific empirical model used in the study is defined as follows:

$$Y_{it} = \beta_0 + \beta X_{it} + \varepsilon_{it} \quad \ldots\ldots(3.2)$$

Where;
Y_{it} = Idiosyncratic volatility of firm i at time t;
X_{it} = DPS of firm i at time t;
β_0 = the constant term
β_s= The coefficients for the independent variable
Subscript i= Firms (cross-section dimensions) ranging from 1 to 39;
Subscript t = Years (time-series dimensions) ranging from 1998 to 2017;
ε_{it} = error term of the model.

4.1 Results and Findings

Table 1 shows the mean, minimum, and maximum values with standard deviation of various variables used in the model for period 1998-2017.

Table 1: Descriptive Statistics

Variables	Obs	Minimum	Mean	Maximum	Std. Deviation
Dividends per share	780	0.004	2.707	46.467	5.670
Idiosyncratic Volatility	780	2.044	26.000	28.890	4.251

Table 1 shows all the variables share the same sample size of 780 observations. The mean value of DPS was 2.707 with a minimum of 0.004 and maximum of 46.467. The standard deviation for DPS was 5.670.

4.2 Correlation Analysis

The study conducted correlation analysis for DPS on Idiosyncratic Volatility in order to examine the nature of the statistical relationships between the variables. Table 2 shows the correlation matrix of the variables included in the study.

Table 2: Correlation Matrix Results

Variables	Idiosyncratic Volatility	Dividends Per share
Idiosyncratic Volatility	1.000	
Dividends Per share	0.3968** 0.000	1.000

The results show that Dividends Per share (0.3968, 0.000) had a positive and significance relationship with Idiosyncratic Volatility of stock returns among listed firms in Kenya.

4.3 Diagnostics Test

4.3.1 Panel Unit Root Tests

Unit root tests was conducted using the LLC test to establish whether the variables were stationary or non-stationary. The purpose of this is to avoid spurious regression results being obtained by using non-stationary series. Results in Table 3 indicated that the variables are stationary (i.e. absence of unit roots) at 5% level of significance.

Table 3: Unit root

Variable name	Statistic(adjusted)	P-value	Comment
Idiosyncratic Volatility	6.0376	0.010	Stationary
Dividends Per share	8.7683	0.000	Stationary

The study therefore concludes that the two variables under consideration do not have unit root and are therefore used in levels. This means that the results obtained are not spurious (Gujarati, 2003).

4.3.2 Heteroskedasticity Test

Heteroscedasticity test was run in order to test whether the error terms are correlated across observation in the time series data. The error terms from a regression model must have a constant variance called Homoscedastic and to ensure whether the residuals meet this criterion of the study used the Breusch-Pagan test for Heteroscedasticity where the null hypothesis under this test is that residuals are Homoscedastic. If the p-value is >0.05, there is constant variance. The null hypothesis was therefore not rejected at a critical p value of 0.05 since the reported value was 0.889. Thus, the data did not suffer from statistically significant heteroscedasticity as shown in Table 4.

Table 4: Heteroskedasticity Test Results

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity		
Ho: Constant variance		
Variable: fitted values		**Idiosyncratic Volatility**
chi2(39)	=	59528.65
Prob > chi2	=	0.889

4.3.3 Test for autocorrelation

The study employed the Wooldridge test for autocorrelation to detect the existence of autocorrelation in the data, that is, whether or not the residual is serially correlated over time and the results are shown in Table 5. The null hypothesis of this test was that there is no first order serial/autocorrelation existed in the data. The test statistic reported is F-test with one and 38 degrees of freedom and a value of 438.94. The P-value of the F-test is 0.260 indicating that the F-test is not statistically significant at 5% level. Hence, the null hypothesis of no autocorrelation is supported and the study concludes that residuals are not auto correlated.

Table 5: Serial Correlation Tests

Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
F(1, 38) = 438.94
Prob > F = 0.260

4.3.4 Hausman Test

When performing panel data analysis, one has to determine whether to run a random effects model or a fixed effects model (Baltagi, 2005). In order to make a decision on the most suitable model to use, both random and fixed effects estimate coefficients. The study used the Hausman's specification test (1978) to choose between fixed and random effect models. Table 6 shows the results of Hausman test.

Table 6: Hausman Test for Idiosyncratic Volatility

	(b) fixed	(B) random	(b-B) Difference	Sqrt (diag(V_b-V_B)) S.E.
Dividends Per share	0.01016	0.01028	-0.00013	0.00065
chi2(4)	0.77			
Prob>chi2	0.942			

The null hypothesis of the Hausman test is that the random effects model is preferred to the fixed effects model. Hausman test reveals a chi-square of 0.77 with a p-value of 0.942 indicating that at 5 percent level, the chi-square value obtained is statistically insignificant. Thus, the researcher did not reject the null hypothesis that random effects model is preferred to fixed effect model for Idiosyncratic Volatility. Therefore, random effects model for Idiosyncratic Volatility was therefore adopted.

4.4 Regression Analysis

4.4.1 Effect of DPS on Idiosyncratic Volatility

Regression analysis was conducted to determine whether there was a significant relationship between DPS and Idiosyncratic Volatility of stock returns among listed firms in Kenya. Table 7 presents the regression model on DPS versus Idiosyncratic Volatility. As presented in the table, the coefficient of determination R Square is 0.3295. The model indicates that DPS explains 32.95% of the variation in Idiosyncratic Volatility. This means 32.95% of the Idiosyncratic Volatility is influenced by DPS.

Table 7: DPS on Idiosyncratic Volatility

Idiosyncratic Volatility	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Dividends Per share	0.0035	0.0013	2.72	0.007	0.0010	0.0059
Cons	25.940	0.026	993.5	0.000	25.889	25.990
R-sq:	0.3295					
F(1,779)	7.37					
Prob	0.007					

The fitted model from the result is

$Y = 25.94 + 0.000035X$

Where: Y = Idiosyncratic Volatility

X = DPS

The findings further confirm that the regression model of Idiosyncratic Volatility on DPS index is positive and significant with a coefficient of (r= 0.0035, p=0.007) supported by F=7.37. This is also confirmed by the t-statistic value of 2.72, which was greater than the t-critical of 1.96. This implies that there exist a positive and significant relationship between DPS and Idiosyncratic

Volatility since the coefficient value was positive and the p-values was 0.007 that is less than 0.05. This means that a unitary increase in DPS leads to an increase in Idiosyncratic Volatility by 0.0035 units holding other factors constant.

These findings agree with Abo Osba (2007) who found that there was a statistically significant and strong relationship between cash dividend in one hand and the banks share price movement on the other hand at Amman Stock Exchange. Further, they agree with Menike and Prabath (2014) who examined the impact of DPS, earnings per share and book value per share of stock price on companies listed in the Colombo Stock Exchange (CSE) and the results reveals that all variables were positive and had a significant impact on the stock price volatility in the CSE. But the results contradicted with Hussainey and Mgbame (2011) who examined the relationship between dividend payout and the volatility of stock price and the empirical findings suggest that there is a significant negative relationship between the payout per share of a firm and the volatility of its stock price.

4.5 Hypotheses Testing

The hypothesis to be tested was:

H_0: DPS has no significant effect on idiosyncratic volatility of stock returns among listed firms in Kenya.

The hypothesis was tested by using multiple linear regression and determined using p-value. The acceptance/rejection criteria was that, if the p value is less than 0.05, we reject the H_0 but if it is more than 0.05, the Ho is not rejected. There was a positive and significant relationship between Dividends Per share and Idiosyncratic Volatility of stock returns among listed firms in Kenya ($r=0.004$, $p=0.022$). This was supported by a calculated t-statistic of 2.295 that is larger than the critical t-statistic of 1.96. The null hypothesis was therefore rejected. The study therefore adopted the alternative hypothesis that DPS has a significant effect on Idiosyncratic Volatility of stock returns among listed firms in Kenya.

5.1 Conclusions

Based on the findings, the study concluded that DPS has a positive and significant effect on Idiosyncratic Volatility of listed firms in the NSE. DPS therefore affects the Idiosyncratic Volatility of listed firms in the NSE. A company's dividend policy signals the company's future prospects as investors interpret changes in dividend policy in management's expectations about the company's future prospects. An increase in dividend yield may indicate management's optimism expectations on future earnings of the company.

It is concluded that dividend policy affects firms' specific risk and that management should carefully prepare a dividend policy that is stable and predictable in order to avoid Idiosyncratic volatility and their firms being perceived as risky by current or potential investors. Fund managers and other investors also should carefully analyses and take into consideration company's dividend payment practices in deciding the risk profile of a specific target firm before they invest into it. It is concluded that the dividend policy has a notable effect on changes in stock price and that the payment of dividend increases stock price. The findings lead to the recommendation that the companies should take into consideration all the factors that affect stock price in order to ensure the best policy which satisfies the various stakeholders. In addition, companies should increase their dividend payout, so as to increase the price of its stocks and reduce idiosyncratic risk.

5.2 Recommendations

The managent should also formulate a dividend policy as the dividend ratio signals the company's future prospects as investors interpret changes in dividend policy in management's expectations about the company's future prospects. An increase in dividend yield may indicate management's optimism expectations on future earnings of the company. Market investors and analyst needs to review their investment strategies and take into consideration financial statement information in pricing firm specific risk. They need to remain innovative in technology front in order to deliver efficient as well as highly customized asset pricing tools that consider idiosyncratic volatility, this will enable them make a sound investment decision that suit customers investment preference

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