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THE IMPACT OF DIVIDEND POLICY ON THE STOCK RETURN VOLATILITY (A STUDY OF FINANCIAL FIRMS LISTED ON THE S&P 500)

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ABSTRACT

The volatility of share prices has demonstrated distinct trends in several worldwide exchange markets, such as the S&P 500 in the United States of America. There have been several attempts to identify potential causes of this volatility and strategies for mitigating it, but few studies have been conducted in this area, particularly in developing nations. Thus, the purpose of this study is to investigate how dividend policies affect the volatility of financial firms' stock returns that are listed on the S&P 500. Panel least squares regression was used in the study to investigate how dividend policies affect market value and the volatility of stock returns in financial companies that are listed on the S&P 500. A thorough assessment of the implications of dividend policy is provided by the dependent variables that were selected: price volatility, market value, and price. The study examined a sample of sixteen USA financial companies. In order to accomplish the study's goal, a random selection of the study period (2015–2022) was made for the panel data. The study discovered a weak negative association (-0.092) between PVOL and dividend per share (DPS), which suggests that as dividend payments per share rise, stock price volatility will somewhat decrease. Furthermore, there is evidence that lower stock price volatility is linked to greater dividend yields, as PVOL shows negative correlations with both dividend yield in the present period (DYtx) (-0.349) and dividend yield in the preceding period (DYtx-1) (-0.349). The study revealed that larger financial organizations would see slightly less volatility in stock prices based on the negative correlation (-0.053) between PVOL and firm size (FIRMSIZE). It has been concluded that there is a negative relationship between dividend yield and stock return volatility. The study also concludes that a higher proportion of earnings distributed as dividends may be linked to lower market values. It is suggested, in accordance with the findings that investors should choose companies with a stable payout ratio and that corporations ought to give priority to paying out. This will serve as an investment decision for stakeholders.

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INTRODUCTION

Over the years, decisions by management on dividend has become a topical issue of deliberations by companies from the corporate finance view point (Nazir, Ali & Sabir, 2014). Analytical decisions on issues on dividend has become key for management in dealing with financial decisions relating to returns of shareholders (Camilleri, Grima & Grima, 2019). Owning corporate stock is a popular investment activity (Gitman, 2006) and according to Zakaria, Muhammad and Zulkifl, (2012), stock prices are the most important indicators used by investors for decision making in owning stocks. Their main objective of investing in the stock market is to maximize the expected return at low level of risk (Baker & Kapoor, 2015). Further, dividend payments are considered a significant part of the stock return to owners (Baker *et al*., 2019). According to this definition, a dividend payment may suggest to investors whether or not the business is adhering to sound corporate governance principles (Jo and Pan, 2009). An organization can benefit from sound corporate governance practices if they can raise cash on favourable conditions from the financial market. It can draw investors and tangentially raise the price of the company's shares by paying dividends. This kind of business might readily raise capital for development by the issuance of new shares, which would boost earnings and share value. According to research by Profilet (2013), volatility is the rate at which a security's price changes over a specific period of time. As a result, higher volatility entails a higher probability of experiencing a significant gain or loss. It is more challenging to predict the future value of the shares of a company whose stock has been classified as volatile. Similarly, a lot of investors like lower-risk equities that are backed by consistent earnings. For a long time, there has been heated discussion over the possibility that dividend policy and share price volatility are related. The study will make use of the S&P (Standard and Poor) 500, an index of the stock market that monitors the stocks of 500 large-cap U.S. corporations. It is a significant growing market in the United States that serves as a barometer for investors to use when evaluating all other securities. It does this by publicizing the risks and returns linked to the biggest firms in the stock exchange. This subject has been the focus of intense investigation over the past 20 years, with a great deal of work having been done on it by other researchers. Existing studies has mostly concentrated on factors influencing dividend decisions and how those decisions affect stock returns.

Given the numerous justifications and conclusions, it is evident why the term "dividend conundrum" was coined (Charith & Davydenko, 2021). The majority of corporate entities worldwide are required to pay dividends in the form of a specified sum or proportion of the value of each share. Although this notion has been supported by a wealth of prior literature, the majority of the available data and empirical evidence relates to the stock markets of developed, sophisticated nations like the United States and the United Kingdom. Dhanani (2005), Lintner (1956), Lonie *et al*., (1996) and Pettit (1972) are a few studies from these nations that support this claim. Although a vast number of ideas and empirical research has led to a thriving number of academic literatures in this area, the impact of dividend payments on stock prices is still viewed as unresolved due to an insufficient amount of data.

The primary objective of this study is to examine the impact of dividend policy on the stock return volatility of financial firms in USA listed on S & P 500. It also assessed the relationship of dividend policy and dividend pay-out ratio of the share price on stock returns of the banks. Additionally, other factors that affect the fluctuations in the share price volatility of the chosen financial firms was discussed in this article. The study utilized a sample of 16 US financial firms that are listed in the S&P 500 from 2015 to 2022 as the case study in order to examine the relationship between share price volatility and corporate dividend payments**.** In light of this, the data set depicts trends throughout the US financial firms that reflect disparities in the advancement of the financial system and economic development. Studies by Nazir *et al* (2014) and Profilet (2013) reveals that stock prices decline as a result of dividend signalling effects. Dividend yield and pay-out ratios are inversely correlated with share price volatility due to four hypothesized mechanisms: duration, rate of return, arbitrage pricing, and information effects. The fundamental research will be important in examining the impact of pay-out ratio, dividend policy, and dividend yield on short- and long-term stock price volatility. Also, the study will help stakeholders to understand how dividend policy is influenced by a number of variables like the pay-out ratio, long-term debt, size and growth. Furthermore, the study will help to understand the correlation between dividend policy and these various variables. From the perspective of practitioners, this research will contribute to a deeper comprehension of share market volatility and dividend policy in the context of industrialized nations. In-depth research on the financial sector utilizing the S&P 500 will be beneficial for professionals to understand the banking industry's policy on dividends. On the other hand, academicians will also benefit from knowing about the relationship between stock return volatility and dividend policy. Additionally, researchers will learn about the factors that influence dividend policy and its numerous theories, such as the bird-in-hand theory, signalling theory, and dividend irrelevance theory. As academicians only have rudimentary understanding of the topic and have little experience in the real-world field, the research will really be more beneficial to them. As a result, people will discover it more useful to learn in-depth information on the present issue.

LITERATURE REVIEW

Theoretical Review: There are still numerous significant concerns unresolved: Does dividend policy matter? How does the share returns react to the dividend policy? A framework exists that compares various dividend policies with the volatility of stock return taken into consideration (Hashemijoo, Mahdavi Ardekani & Younesi, 2012). Among the most controversial subject matter is the dividend. According to Baker and Kapoor (2015), numerous investigations have been carried out on this subject matter. Below are a few theories about dividends.

Dividend Irrelevance Theory (Miller & Modigliani, 1961)*:* The originators of this idea are Merton H. Miller and Franco Modigliani. In accordance with Amankwah and Agyemang (2020) and Azhagaiah (2014), researchers contend that the dividend policy of a firm has no bearing on the cost of capital or the worth of the business. They assert that it makes no difference how profits are divided between retained earnings and dividends. The worth of a company is influenced by asset risk and earnings potential. They used several presumptions to arrive at the following assumption (Kanojia & Bhatia, 2022; Pahi & Yadav, 2019);

- Dividends and capital gains are not distinguished by investors.
- The initial public offering of stock is free of charge;
- The management and investors have access to the same information regarding potential future prospects; and the investment policy is separate from the dividend policy.

Based on these presumptions, MM asserts that a company's worth is determined by its risk category and basic earning potential (Farrukh *et al*., 2017). Mishra and Narender (1996) stated that shareholders do not give any attention about a company's dividend policy because it has no bearing on the company's worth.

Dividends Signalling Theory: The latest evidence suggests that even profitable businesses are hesitant to raise dividend payments; nonetheless, several businesses have declared steady or significantly increased dividend payments in spite of declining revenue from operations. Dividends are unimportant, as demonstrated by Miller and Modigliani (1961), assuming a perfect market with no taxes, transaction costs, and other market imperfections. The values of the companies are unaffected by keeping earnings or issuing dividends to them. In addition to using other kinds of financing to pay down their debts, companies are free to follow their core beliefs and pay as much in dividends as they consider appropriate. According to the researchers, the companies' worth is solely determined by their potential earnings and investment risk. The signalling theory, which is based on abnormalities in the information and several market players, particularly between the managers and different kinds of significant investors, provides support for the dividend significance theory's concept. There is evidence that corroborates this notion (Miller & Rock, 1985). According to this theory, management of businesses use the costly dividend payments as a weapon against the stock market and the factors at play to disclose the financial and monitoring results for their investors to the external market and the major players who are now involved in it. The second basic principle of the dividend signalling theory is that it can explain why dividend payments are preferred over repurchases of stocks, even when there may be tax benefits at a later time. According to (Lintner, 1956), managers in the majority of company organizations usually reluctant to reject the dividend pay-out given their present rate of salary.

Lintner (1956) proposed a framework that relied on stylized yield of the distinctive features of a "sticky of dividend" before Miller and Modigliani (1961) developed their dividend theory. As reducing dividends is likely to be interpreted by shareholders as poor performance, which would lower stock prices subsequently, the author discovered that companies are hesitant to do so. According to Bhattacharya (2007) and Miller and Rock (1985), who supported Lintners' (1956) model, the declarations of dividends provide information about the companies' outlook for future growth. According to the information contained in dividend declarations, shareholders interpret them as an indication of the firms' strong financial status, which would boost the stock returns, and vice versa. Dividends are a good indicator of a firm's long-term prospects for shareholders who lack comprehensive details concerning the organization. Lazo (1999) found that 87% of dividend-paying firms thought that pay-outs may provide insight into the business's future profitability in accordance with a study of S&P 500 companies. According to Brickley (1983), dividend signalling may reveal when managers give out special pay-outs (additional services, specials, or year-ends) in addition to ordinary dividends. The distinction between an ordinary and special dividend on the package may serve as a caution to investors because the special distribution is unlikely to be repeated as often as the ordinary dividend. The company's declaration of a special pay-out could be interpreted by investors as a prudent managerial indicator of future profitability.

Determinants of Stock Price Volatility: According to Allen and Rachim (1996), the arbitrage or information impact may be suggested by the link between dividend policy and share price volatility following the addition of growth as a control variable. Firm returns are greatly impacted by debt, dividends, and ownership arrangements (Alonso, *et al*., 2005). This study's findings depended on 101 publicly traded non-financial Spanish companies that were active between 1991 and 1995. Businesses that have good growth prospects have shown that debt lowers a company's worth. In companies without room for expansion, debt actively serves as a disciplinarian. When there are no prospects for expansion, the dividend has a strong and positive correlation with the firm's worth. Excessive retained earnings during a time when there are no growth prospects could lead to an ineffective investment. Rahim *et al*. (2010) identified an indicator of inadequate investments when there was a positive correlation between the business's Q (firm value) and the policy of dividends, using information from 361 non-financial Malaysian listed companies from 2002 to 2007. Lower investment, higher dividends, and a static debt ratio all helped to boost the company's net worth. They proposed that inadequate investment emerges as a result of management's careful selection of only secured investments and dividend payments to shareholders of any surplus funds.

There might be a connection between size and volatility aside from that and according to Karathanassis and Philiappas (1988), an organization's size can have a substantial impact on its share return. A smaller stock portfolio may yield a higher average return. The price of the company's shares is expected to decrease as the firm grows in size (Atiase, 1985). Benishy (1961) and Allen and Rachim (1996) assert that small businesses are less likely than large companies to engage in diversification operations, which means that investors will be less likely to scrutinize them. Small company stocks would therefore be more volatile in value, less well-informed, and more unstable when they were traded on a market. The study by Moh'd *et al*. (1995), Fama and French (2001), Truong and Heaney (2007), Adjaoud and Ben-Amar (2010), and Ramli (2010) yielded a favourable correlation between dividend pay-out and firm size. The assets of dividend-paying companies were, on average, eight times larger between 1963 and 1967 than those of non-paying companies (Fama and French, 2001). They also discovered that the assets of the non-payers' group and the previous payers are three times larger than those of the companies that have never paid dividends, according to sample data from the NYSE, AMEX, and NASDAQ. Nonetheless, the authors discovered that, on average, between 1993 and 1998, dividend payers' assets exceeded 13 times those of non-payers. Size is by far the most important factor that could affect a firm's choice to pay a dividend (Aivazian, Booth & Cleary, 2006). Dividend payments are less common in smaller, more intangible-asset businesses than in bigger, and tangible-asset businesses. Businesses that are profitable and have steady revenues have the ability to have higher free cash flows, which allows them to distribute higher dividends (Ahmed and Javid, 2009). Earlier research by Black Sholes (1973) demonstrated that the likelihood of the management changing the dividend yield would decrease with increasing earnings volatility. Skinner (2008) shown, through the application of the Lintner regression model, that the majority of corporations replace dividend payments with share repurchases because these types of payments react more swiftly to changes in earnings. Nonetheless, the correlation between profits and dividends is not strong.

Related Studies: In examining prior research by scholars such as (Aktürk, Karan and Pirgaip, 2022; Blaszke, 2021; Ali Taher and Al-Shboul, 2023; Suwanhirunkul and Masih, 2018) and others on the correlation between dividend policy and stock price volatility, it was considered essential to examine articles that examined aspects and variables that may also impact the price volatility of a particular stock. By doing this, previous perspectives on the relationship between stock price risk and other associated variables as well as the impact of dividends on stock performance were discovered. It is useful to commence with Baskin's study because it has been recognized in current research (Baskin, 1989). In addition to determining if dividend yield was a good indicator of price volatility, Baskin was keen to know if dividend yield directly affected price volatility of common stocks where other relevant variables were taken into account. In his study's conclusion, Baskin acknowledged that, among other things, dividend yield and stock price volatility showed a clear link, but he was unable to draw the conclusion that dividend yield and price volatility were causally related. The aim of a study by Hussainey, Mgbame, and Chijoke-Mgbame (2011) was to determine the correlation and effects that dividend policy had on the volatility of specific businesses in England's developed economy. Regressions relating size and leverage, two other variables that can have an impact on volatility, were also conducted during the study. They found in their investigation that there were significant negative correlations between stock volatility and both the pay-out ratio and dividend yield. Furthermore, it was shown that there was a positive correlation between leverage and volatility and a negative correlation between size and volatility. The authors reported that their research indicates a positive correlation between a company's asset size and its stock volatility. They also noted a pattern in which stock price volatility tended to rise in tandem with an increase in financial leverage, or debt included on the balance sheet. This study demonstrated that in order to obtain a valid link between dividend policy and stock price volatility, other factors would have to be taken into account.

Farroq, Saoud, and Agnaou (2012) conducted an additional investigation that expanded on the earlier notion. This study examined the effects of dividend policy in emerging markets as well as how those effects varied depending on the type of market. More precisely, throughout periods of both market expansion and stability, they studied the impact of dividend policy on stock price volatility. According to their results, dividend policy's effects can be significantly less evident during periods of economic expansion. According to their reasons, investors are less likely to worry about a comparatively little dividend pay-out during periods of high market returns because the capital gain in the stock price is much greater. Their results demonstrate that the impact of dividend policy might change depending on the size and trends of the stock market. This demonstrates that it is essential to consider the size of the market's sector and the period of the business cycle in which the study occurs when analyzing the results of various studies on the effects of dividend policy on market risk. A strong foundation and historical overview of some of the discoveries from business experts worldwide are provided by this assessment of earlier research on the topic of the relationship between dividend policy and the volatility of the stock market. It is evident that the several financial experts that have been surveyed above reflect a non-conclusive coherence. Although previous research has demonstrated that dividend policies have an impact on price volatility, the relevance of this association has to be substantiated. Furthermore, more investigation is needed to determine how the other variables relate to the volatility of stock prices. The results of these research demonstrate the necessity of gathering and analyzing a wide range of stocks in order to obtain an accurate assessment of banks within the S&P 500.

METHODOLOGY

Data and Data Collection: Panel data from the annual reports of 16 financial companies on the S&P 500 stock exchange spanning 2015-2022 constitutes the primary dataset for investigating the impact of dividend policy on stock return volatility. Complementary to this, historical stock prices have been sourced from markets. businessinsider.com. This comprehensive approach ensures a diverse representation within the sector and provides a robust foundation for analyzing the dynamic relationship between dividend policy and stock return volatility in the banking sector over the specified timeframe.

Analysis and Variables: The study employs Panel Least Squares regression to examine the impact of dividend policy on stock return volatility and market value in financial firms listed on the S&P 500. The chosen dependent variables, price volatility, and market value offer a comprehensive evaluation of the effects of dividend policy. Independent variables encompass Dividend per share, dividend

growth rate, dividend yield, and pay-out ratio, capturing key facets of dividend policy. Additionally, firm size is included as a control variable, drawing support from recent research by Gunaratne *et al*. (2015). The study reaffirms the ongoing significance of firm size as a critical factor influencing stock returns and financial dynamics. By controlling for firm size in the Panel Least Squares regression, the study aims to enhance the precision and contemporary relevance of its findings, providing a nuanced understanding of the specific impact of dividend policy on stock return volatility and market value in the selected financial firms.

Model Specification

Below are the two regression Models Adopted by the study;

$$Pvoltx = \alpha + \beta1DPStx + \beta2DYtx + \beta3DYt-1, X + \beta4PORtx + \beta5PORt-1,X + \beta6Sizetx + \beta7DGRtx + \varepsilon \quad \text{.....(1)}$$

$$lnMVtx = \alpha + \beta1DPStx + \beta2DYtx + \beta3DYt-1,X + \beta4PORtx + \beta5PORt-1,X + \beta6Sizetx + \beta7DGRtx + \varepsilon \quad \text{.....(2)}$$

Where

Pvoltx: Share price volatility of Company x in period *t*.
lnMvtx: Natural logarithm of market value of Company x.
DPStx: Dividend per share of Company x in period *t*.
DYtx: Dividend yield of Company x in period *t*.
DYt−1,*x*: Dividend yield of Company x in the previous period *t*−1.
PORt−1,*x*: Payout ratio of Company x in the previous period *t*−1.
Sizetx: Size of Company x in period *t*.
DGRtx: Dividend Growth Rate of Company x in period *t*.

RESULTS AND DISCUSSION

***Descriptive Results*:** The descriptive results unveil essential characteristics of the study variables, shedding light on their practical implications within the financial sector. The positive mean Dividend Growth Rate (DGR) of 15.14% signifies an overall upward trajectory in dividends for the sampled financial firms. However, the notable ranges from a minimum of -38.21% to a maximum of 162.50% underlines the diverse dividend growth experiences across companies, reflecting varying levels of financial performance and strategic decisions. Examining Dividend per Share (DPS), the mean value of 1.64 provides insights into the average dividend amount distributed per share. The standard deviation of 1.19 suggests a considerable dispersion around this mean, indicating differing dividend distribution strategies among the firms. Furthermore, the mean Dividend Yield (DY) of 2.29% reflects the average return on investment through dividends. The observed range in DY (0.62% to 5.00%) illustrates the spectrum of income generated for investors, showcasing the distinct dividend policies adopted by financial firms.

Firm Size (FIRMSIZE) exhibits substantial variability, emphasizing the diverse scales of operations among the sampled companies. Lastly, the mean Price Volatility (PVOL) at 0.01 and its associated standard deviation of 0.27 indicate a relatively low average volatility in stock prices, but with notable variability, highlighting divergent market reactions and risk exposures. These descriptive findings collectively provide a nuanced understanding of the financial landscape, laying the groundwork for further analysis in the subsequent regression models.

Table 1. Measurement of Variables

Variable	Measurement
Price Volatility	$PVOL = \frac{\text{Market pricetx} - \text{Market Pricet} - 1,\text{x}}{\frac{\text{Market priceHighest,tx+Market PriceLowest,tx}}{2}}$
Market Value	$LnMVtx = Ln(Market\ Pricetx * Number\ of\ Outstanding\ Sharestx)$
Dividend Yield	$DYtx = \frac{Dividend\ persharet}{Market\ Pricetx}$
	$DYt-1,x = \frac{\text{Dividend per sharet} - 1,\text{x}}{\text{Market pricet} - 1,\text{x}}$
Pay-out Ratio	$PORtx = \frac{\text{Dividend per sharetx}}{\text{Earnings per sharetx}}$
	$PORt-1x = \frac{\text{Dividend per sharet} - 1,\text{x}}{\text{Earnings per sharet} - 1,\text{x}}$
Firm Size	$FIRMSIZEtx = Total\ Assetstx$
Dividend Growth Rate	$DGRtx = \frac{DPStx - DPSt-1,x}{DPSt-1,x}$
Dividend Per Share	$DPStx = \frac{Total\ Dividends\ Paidtx}{Number\ of\ Outstanding\ Sharestx}$

Table 2. Descriptive Statistics

	DGR	DPS	DYtx	DYtx-1	FIRMSIZE	LnMV	PORtx	PORtx-1	PVOL
Mean	15.14045	1.639598	2.294464	2.133750	12205635	18.61427	35.84357	34.75982	0.010613
Median	9.265000	1.210000	2.000000	2.000000	295243.5	17.77535	31.06500	29.90500	0.093075
Maximum	162.5000	5.750000	5.000000	5.000000	2.01E+08	24.81850	95.35000	95.35000	0.395065
Minimum	-38.21000	0.270000	0.620000	0.310000	14384.00	14.49510	8.900000	3.000000	-1.193859
Std. Dev.	28.36478	1.193841	1.089980	0.985020	36012175	2.944554	18.22122	17.90762	0.269035
Skewness	3.068571	1.333307	0.586106	0.674242	3.353690	1.141131	1.492292	1.538506	-1.212174
Kurtosis	15.96747	4.162668	2.654792	3.248771	13.80145	2.923750	4.941249	5.283398	5.288097
Jarque-Bera	960.4929	39.49226	6.968489	8.774708	754.4150	24.33450	59.15554	68.51559	51.85996
Probability	0.000000	0.000000	0.030677	0.012434	0.000000	0.000005	0.000000	0.000000	0.000000
Sum	1695.730	183.6350	256.9800	238.9800	1.37E+09	2084.798	4014.480	3893.100	1.188666
Sum Sq. Dev.	89306.23	158.2035	131.8742	107.6994	1.44E+17	962.4141	36853.42	35595.81	8.034181
Observations	112	112	112	112	112	112	112	112	112

Correlation Analysis: The correlation analysis highlights the relationships between the study variables Notably, Price Volatility (PVOL) displays distinctive relationships with the independent variables. A weak negative correlation is observed between PVOL and Dividend Per Share (DPS) (-0.092), indicating a modest decrease in stock price volatility as dividend payments per share increase. Moreover, PVOL exhibits negative correlations with both Dividend Yield in the current period (DYtx) (-0.349) and Dividend Yield in the previous period (DYtx-1) (-0.349), suggesting that higher dividend yields are associated with lower stock price volatility. This implies a potential stabilizing effect of dividend policies on market dynamics. The negative correlation between PVOL and Firm Size (FIRMSIZE) (-0.053) suggests that larger financial firms may experience slightly lower stock price volatility. Overall, these findings suggest that specific dividend-related factors and firm size may influence the level of stock price volatility. Turning to Market Value (LnMV), a positive correlation is observed with Dividend per Share (DPS) (0.442), indicating that companies with higher dividend payments per share may exhibit a higher market valuation. Conversely, a negative correlation is found between LnMV and Dividend Yield in the current period (DYtx) (-0.058), suggesting that as dividend yields decrease, market valuation tends to increase. These relationships underscore the intricate connections between dividend metrics and market valuation, with higher dividends per share potentially contributing to a higher market value.

Regression Analysis

Model 1

The regression analysis for Model 1 provides valuable insights into the relationship between the dependent variable, Price Volatility (PVOL), and the set of independent variables. The coefficient for Dividend Growth Rate (DGR) is 0.001839, with a t-statistic of 2.163 and a corresponding probability of 0.0328. This suggests that a one-unit increase in Dividend Growth Rate is associated with a 0.001839-unit increase in Price Volatility, and the relationship is statistically significant at the 5% level. The negative coefficient for Dividend Yield in the current period (DYtx) is -0.192900, indicating that higher dividend yields are associated with lower Price Volatility. This coefficient is highly significant with a t-statistic of -6.518 and a probability close to zero. The adjusted R-squared of 0.308382 suggests that the model explains approximately 30.8% of the variation in Price Volatility, considering the number of independent variables. The Prob(F-statistic) is 0.000000, indicating that the overall model is statistically significant. However, some coefficients, such as those for Dividend Per Share (DPS), Payout Ratio in the current period (PORtx), Payout Ratio in the previous period (PORtx-1), and Firm Size (FIRMSIZE), do not appear statistically significant at conventional significance levels ($p > 0.05$).

Table 3. Pearson Correlation Matrix

Covariance Analysis: Ordinary
Date: 02/11/24 Time: 17:44
Sample: 2016 2022
Included observations: 112
Balanced sample (listwise missing value deletion)

Correlation t-Statistic Probability	DGR	DPS	DYtx	DYtx-1	FIRMSIZE	LnMV	PORtx	PORtx-1	PVOL
DGR	1.000								

DPS	-0.024071	1.000							
	-0.252536	-----							
	0.8011	-----							
DYTX	-0.052221	0.256608	1.000						
	-0.548447	2.784563	-----						
	0.5845	0.0063	-----						
DYTX1	-0.291478	0.210540	0.711651	1.000					
	-3.195813	2.258797	10.62419	-----					
	0.0018	0.0259	0.0000	-----					
FIRMSIZE	-0.053377	0.442146	-0.028484	-0.009214	1.000				
	-0.560621	5.170074	-0.298867	-0.096636	-----				
	0.5762	0.0000	0.7656	0.9232	-----				
MARKETVA	0.062386	-0.058070	-0.072336	-0.045411	-0.244493	1.000			
	0.655587	-0.610068	-0.760654	-0.476770	-2.644520	-----			
	0.5135	0.5431	0.4485	0.6345	0.0094	-----			
PORTX	-0.172793	0.092062	0.274449	0.241206	-0.079639	-0.304233	1.000		
	-1.839942	0.969677	2.993389	2.606753	-0.837919	-3.349607	-----		
	0.0685	0.3343	0.0034	0.0104	0.4039	0.0011	-----		
PORTX1	-0.381237	0.070866	0.181230	0.321610	-0.075851	-0.299898	0.564646	1.000	
	-4.325086	0.745120	1.932760	3.562333	-0.797835	-3.297116	7.175360	-----	
	0.0000	0.4578	0.0558	0.0005	0.4267	0.0013	0.0000	-----	
PVOL	0.034367	-0.092374	-0.349378	0.045678	0.026543	0.063883	-0.219281	-0.017748	1.000
	0.360659	-0.972988	-3.910758	0.479576	0.278482	0.671387	-2.357209	-0.186170	-----
	0.7190	0.3327	0.0002	0.6325	0.7812	0.5034	0.0202	0.8527	-----

This implies that these variables may not have a significant linear relationship with Price Volatility in this model. The overall F-statistic of 8.070470 is statistically significant, supporting the hypothesis that at least one independent variable has a significant effect on Price Volatility. In summary, the findings suggest that Dividend Growth Rate and Dividend Yield are key factors influencing Price Volatility, providing valuable insights for understanding the dynamics within the studied financial firms. Despite the significance of PORtx-1, other coefficients, such as those for Dividend Growth Rate (DGR), Payout Ratio in the current period (PORtx), Dividend Yield in the current period (DYtx), Dividend Yield in the previous period (DYtx-1), and Firm Size (FIRMSIZE), do not appear statistically significant ($p > 0.05$). The overall F-statistic is 4.071301, indicating that the model as a whole is statistically significant.

Model 2

Model 2 provides valuable insights into the factors influencing the dependent variable, Market Value (LnMV), within the context of the studied financial firms. The intercept term (C) has a coefficient of 21.10502, suggesting that when all independent variables are zero, the expected Market Value is approximately 21.10502. The coefficient for Dividend Per Share (DPS) is 0.322550, indicating that a one-unit increase in DPS is associated with a 0.322550-unit increase in Market Value. However, this coefficient is not statistically significant at conventional levels ($p = 0.2027$). Notably, Payout Ratio in the previous period (PORtx-1) has a negative coefficient of -0.042296, suggesting that higher Payout Ratios in the previous period are associated with lower Market Value.

Dependent Variable: PVOL
Method: Panel Least Squares
Date: 02/11/24 Time: 18:09
Sample (adjusted): 2016 2022
Periods included: 7
Cross-sections included: 16
Total panel (balanced) observations: 112

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.088121	0.073225	1.203418	0.2315
DPS	-0.007278	0.020887	-0.348473	0.7282
DGR	0.001839	0.000850	2.163229	0.0328
PORtx	-0.002621	0.001455	-1.800998	0.0746
PORtx-1	0.001251	0.001567	0.798318	0.4265
DYtx	-0.192900	0.029595	-6.518073	0.0000
DYtx-1	0.186128	0.033551	5.547626	0.0000
FIRMSIZE	2.04E-10	6.74E-10	0.303525	0.7621

R-squared	0.351998	Mean dependent var	0.010613
Adjusted R-squared	0.308382	S.D. dependent var	0.269035
S.E. of regression	0.223739	Akaike info criterion	-0.087921
Sum squared resid	5.206167	Schwarz criterion	0.106258
Log likelihood	12.92357	Hannan-Quinn criter.	-0.009136
F-statistic	8.070470	Durbin-Watson stat	2.589086
Prob(F-statistic)	0.000000		

Dependent Variable: LnMV (9Market Value)
Method: Panel Least Squares
Date: 02/11/24 Time: 18:14
Sample (adjusted): 2016 2022
Periods included: 7
Cross-sections included: 16
Total panel (balanced) observations: 112

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	21.10502	0.882050	23.92725	0.0000
DPS	0.322550	0.251593	1.282030	0.2027
DGR	-0.006472	0.010243	-0.631836	0.5289
PORtx	-0.033888	0.017530	-1.933184	0.0559
PORtx-1	-0.042296	0.018872	-2.241203	0.0271
DYtx	-0.232813	0.356489	-0.653073	0.5152
DYtx-1	0.300006	0.404145	0.742323	0.4596
FIRMSIZE	-2.81E-08	8.11E-09	-3.459913	0.0008

R-squared	0.215089	Mean dependent var	18.61427
Adjusted R-squared	0.162259	S.D. dependent var	2.944554
S.E. of regression	2.695098	Akaike info criterion	4.889495
Sum squared resid	755.4094	Schwarz criterion	5.083674
Log likelihood	-265.8117	Hannan-Quinn criter.	4.968280
F-statistic	4.071301	Durbin-Watson stat	0.103547
Prob(F-statistic)	0.000552		

This coefficient is statistically significant with a t-statistic of -2.241 and a probability of 0.0271. The adjusted R-squared of 0.162259 implies that the model explains approximately 16.23% of the variation in Market Value.

CONCLUSION

This study investigated impact of dividend policy on stock return volatility within the context of financial firms listed on the S&P 500. As the financial landscape continually evolves, understanding these dynamics is crucial for investors, financial analysts, and policymakers seeking to navigate and optimize investment strategies. Employing Panel Least Squares regression, the study conducted two distinct analyses, each focusing on a specific dependent variable: Price Volatility (PVOL) and Market Value (LnMV). The findings from Model 1 highlights the significance of Dividend Growth Rate (DGR) and Dividend Yield (DYtx and DYtx-1) in influencing stock return volatility, indicating that firms emphasizing higher dividend growth rates and yields may experience lower stock price volatility. Model 2, on the other hand, emphasizes the importance of Payout Ratio in the previous period (PORtx-1) in shaping Market Value (LnMV), suggesting a potential association between higher pay-out ratios in the previous period and lower market values. These findings contribute to a deeper understanding of how specific dividend-related factors impact financial performance. The negative association between dividend yield and stock return volatility aligns with the notion that firms prioritizing dividend payments may provide a more stable investment environment. Additionally, the negative coefficient for Payout Ratio in the previous period implies that a higher proportion of earnings distributed as dividends may be linked to lower market values. As investors and financial practitioners navigate the complexities of financial markets, these findings offer valuable insights for strategic decision-making and investment planning. Based on the findings, it is recommended that investors should choose financial firms with a stable pay-out ratio and that firms ought to give priority to pay out. The identified relationships between dividend policies and financial indicators contribute to the broader discourse on effective financial management and provide a foundation for future research in this evolving field.

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