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Volume and Frequency of Transactions that Influence Share Prices are Mediated by Financial Performance and Moderated by Dividend Policy

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ABSTRACT

Purposes, In this study, the researcher tried to include financial performance as well as a moderating variable which is proxied by dividend policy which is thought to influence stock prices. **Methodology/approach,** this research uses time series and cross section data by taking the LQ 45 Index stock population which is the object of research, namely 29 issuers which are used as research samples (purposive). The data is panel data processed using Eviews. **Findings and conclusions**,the results of research model 1 show an R-squared value of 0.487204. This shows that transaction volume, transaction frequency and DPR contributed 48.72% to PBV, while the remaining 51.28% was the contribution of other variables besides the independent variables studied. Meanwhile, Model 2 shows an R-squared value of 0.956943. This shows that PBV, Transaction Volume, Transaction Frequency and DPR contribute to SP amounting to 95.69% while the remaining 4.31% is the contribution of other variables besides the independent variables studied. **Novelty/values** of this research is seen from the research framework. Other financial research only examines associative descriptive relationships that connect independent variables to dependent variables with mediating variables. Meanwhile, this research is more comprehensive by adding moderating variables.

INTRODUCTION

Law Number 8 of 1995 concerning Capital Markets emphasizes the important role of capital markets in supporting the implementation of national development, especially in carrying out its strategic role as a source of financing for the business world and equal distribution of income as well as a vehicle for investment for the community. The existence of a capital market in a country is a barometer of a country's economic progress. Kung examines the role of the capital market in the financial system in the country, and analyzes its level of efficiency over time (Kung et al., 2010). Capital market activities in Indonesia are increasingly important compared to banking after reform and increased in 2004. The

efficiency referred to is the speed of transaction completion (settlement) and the running of the Jakarta Automatic Trading System (JATS) and online trading. The speed of buying and selling stock transactions in the capital market will make it easier for investors to execute their securities (Amihud & Mendelson, 1986). The speed of transactions in the capital market will influence investor behavior in investing both short and long term, this is illustrated by the frequency and volume of transactions that occur daily in the capital market. Technically and fundamentally, transaction speed, which is proxied through the volume and frequency of stock trading transactions on the stock exchange, is used as a parameter for the level of liquidity in the secondary market (Næs et al., 2011) . The average volume and frequency of secondary market transactions on the Indonesian Stock Exchange in December 2020 per day was 20 billion shares and 750 thousand transactions, both buying and selling.

Changes in share prices are not only influenced by buying and selling actions which are marked by the frequency and volume of transactions , but dividend policy is also a determining factor, even though Modigliani Miller's (1961) theory states that dividends are irrelevant (Drucker, 2014) , however, dividends provide certainty of investors' investment activities in the capital market, although it cannot be denied that the returns are not as big as trading activities. In general, there are two approaches to predicting stock price movements, both fundamental (intrinsic) and technical (chart) approaches. The efficiency of the capital market, at least in the semi-strong form, has a random walk, that changes in prices of independent securities and changes in share prices do not have a flashback so that past prices cannot predict future prices (Fama, 1995). The ratio of the book value per share to the market price is the best measure that is easy to reach. This ratio provides an important index of how much the market price of a share is worth as opposed to its book value which must always be of concern to managers (Branch et al., 2005). This research was conducted to determine the frequency and volume of transactions that influence share prices through price to book value and moderated dividend policies in companies listed on the LQ45 Indonesian Stock Exchange.

LITERATURE REVIEW

Stock price

The rise and fall of share prices will be influenced by company fundamentals and technical factors. Fundamental analysis is used to calculate the true intrinsic value of a stock. Fundamental analysis is used to find opportunities for stock values to differ from their current market prices. To carry out fundamental analysis as a basis for calculations using company financial report sources, as well as reports on various macroeconomic indicators. Meanwhile, technical analysis is used to predict the future market price of a stock using past performance statistics. Technical analysis takes into account changes in stock prices and tries to predict future price movements. Technical analysis is based on the assumption that patterns in stock price movements repeat themselves and can determine the best time for buying and selling (Petrusheva & Jordanoski, 2016) . According to Farias Nazarao; Fundamental analysis uses economic factors to estimate the intrinsic value of securities, while technical analysis relies on historical stock price data (Farias Nazário et al., 2017)

In general, fundamental analysis is based on the essence of Graham's work, Intelligent Investor in (Farias Nazário et al., 2017) which recommends buying shares based on a set of stock selection rules. Technical analysis has been understood as a set of tools that make it possible to predict future returns in financial sets by looking at past market data, mostly stock prices and volumes. Meanwhile, according to Fama an ideal capital market is one in which prices provide accurate signals for the allocation of resources: that is, a market in which firms can make production and investment decisions, and investors can choose securities that represent holdings of the firm's activities under the assumption that security prices at any time "fully reflect " all available information (Fama, 1991).

The next article from Van Horne empirically tests the random-walk theory relative to certain decision rules based on past stock price movements. A random sample of thirty stocks on the New York Stock Exchange was selected. A rigorous test of past price movements was conducted, and evidence was found to support the idea that stock price changes regarding a stock's intrinsic value are essentially random. This intrinsic value is determined by fundamental analysis of the company's expected future earnings performance (Horne & Parker, 1967). V. Horne further said that Investors can revise their estimates of future earnings as new information becomes available. Revisions to earnings estimates will

affect the estimate of a stock's intrinsic value. As a result, actual stock prices may change in response to new information.
In real life, there is no reason to believe that market prices are always clear. At certain prices there may be excess demand or excess supply, which in turn will lead to adjustments in price and/or quantity (Weber, 2012). The idea of Walrasian equilibrium in (Weber, 2012) is based on the behavior of the price adjustment process by postulating that changes in the price of goods are proportional to the excess demand for goods. In the final part of the theory of stock prices put forward by Thomas Kuhn in (Thaler, 1987) there are economic anomalies. Kuhn said that economic anomalies are a result that is not in line with the current economic paradigm. Economics is distinguished from other social sciences by the belief that most behavior can be explained by assuming that investors have stable, well-defined preferences and make rational choices consistent with well-defined preferences in the market. The anomaly according to (Thaler, 1987) is the "January Effect". Stock prices tend to rise in January, especially the prices of small companies and companies whose share prices have fallen drastically over the last few years. Additionally, risk stocks earned most of the risk premium in January.

Transaction Volume :
The volume of transactions that occur in the capital market will be greatly influenced by existing information. Information will have a response in the short term, and in the long term this information will decrease. This is in line with Karpoff's opinion, company shareholders will tend not to sell shares when they have information that the market does not have. Furthermore, according to (Karpoff, 2016), the increase in transaction volume is positively correlated with the "surprise content" of information, the subsequent effect of information shock content is positively correlated with prices. Model simulations show that the relationship between information and volume is influenced by market institutional design. Market design will also influences the relationship between price and volume changes around informational events. Markets with significant friction (e.g. large queues of orders) require some time before all trades are completed.
Based on field observations in the Indonesian investment gallery, the peak transaction volume occurs at the beginning of 09.30 WIB or the first five minutes after the market opens, then the movement of transaction volume will move slowly until the close of the first session, then the second session at the start of 13.30 WIB will move flat, and will increases at the closing session or one minute before 16.00 WIB. This is in line with research conducted by Abhyankar et al, trading volume and volatility for a sample of 8,235 shares traded on the London Stock Exchange during the first quarter of 1991. The results can be summarized that trading transactions were highest at market opening, relatively constant throughout the day and widened slightly again. at closing. Trading volume, on the other hand peaks around 09:30 and then drops to its lowest level around 13:30. Then it rises again before closing and peaks again at 16.00. Interestingly, the average volume traded per transaction during the day is relatively flat with slight increases around 09:30 and 16:00.
Furthermore, the pattern of trading volume per fifteen minute interval is different for liquid and illiquid stocks (Abhyankar et al., 1997). Research conducted by Jiang Wang examined the relationship between the nature of heterogeneity among investors and trading volume behavior and its relationship with price dynamics. It is found that volume is positively correlated with absolute changes in prices and dividends (Wang, 1994). Furthermore, other results show that informational trading and non-informational trading lead to different dynamic relationships between trading volume and stock returns.
The large volume of transactions in the capital market cannot be separated from the technical and fundamental performance of the issuer as a whole. Technically, shares will move following the historical pattern of security prices (Masry, 2017). Furthermore, Masry in his research said that capital market inefficiencies in developing countries can be easily exploited by investors, where abnormal income can be obtained under inefficient market conditions. Furthermore, in technical analysis the one-day moving average as a short-term average will produce high returns, and ultimately investors will

increase investment awareness in terms of making investment decisions based on good data and information.
The technical approach is very suitable for capital markets in developing countries, while the fundamental approach is suitable for capital markets in developed countries. This is in line with research conducted by Erhan Beyaz on 140 companies listed on the S&P 500, that price changes using fundamental indicators outperform those using technical indicators. namely, seen from the results of the root mean square error of 126 or 252 days (Tekiner et al., 2019).

Transaction Frequency
Trading transaction frequency on the Stock Exchange generally only occurs in the secondary market on the stock exchange. Price changes are greatly influenced by the speed of transactions which is greatly influenced by the technological era, so that the speed of transactions in the secondary market exceeds the speed of settlement. The speed of transactions and the difference in transaction settlement are what can give rise to price formation in the secondary market. Increased speed of trade execution can make risk mitigation less effective, resulting in many companies gaining direct access to trading platforms and not subject to adequate risk mitigation (Miller & Shorter, 2018).
Research conducted by Benos & Sagade in the UK capital market which measured the contribution of HFT to share prices with a sample of 92 FTSE 100 shares for four months by grouping HFT based on their liquidity taking/creation behavior, namely aggressive HFT, neutral HFT, and passive and to examine how price discovery contributions vary across the three HFT groups. Aggressive HFTs tend to trade in the opposite direction to price changes. Whereas neutral HFTs are trend chasers (i.e., they trade in the same direction as the most recent price change), and passive HFTs exhibit behavior consistent with changes. Later in the study we also examined the contribution of HFTs to price determination and how it varies across groups. Aggressive HFT leads to future price changes and this does not apply to neutral or passive HFT. Aggressive HFT has consistently been a major contributor to pricing. Simultaneously shows that HFTs collectively contribute about 14% of total trading-related information. Of this amount, approximately 10% is accounted for by aggressive HFT, 3% by neutral HFT, and the remaining 1% by passive HFT (Benos & Sagade, 2016)
The frequency of trading on the stock exchange can occur with a transaction frequency speed of under one minute bid-ask, this is greatly influenced by the transaction costs set by the security; such as research conducted by Korojczyk & Murphy on trading frequency dynamics in the Canadian equity market using investor order level data. It was found that increasing bid-ask spreads resulted in decreasing prices for institutional trades. During institutional trade execution, HFTs send more orders in the same direction and increase the average rate of return on their investments. Research evidence shows that high-frequency trading is associated with lower transaction costs for small, uninformed trades and higher transaction costs for large, informed trades (Korajczyk & Murphy, 2018).
Research conducted by Aït-sahalia & Brunetti uses a data set that uniquely identifies each S&P500 transaction, by classifying each market participant as a high or low frequency transaction, and each transaction, based on the speed of the investors involved. This research empirically investigates the comparative influence of high and low frequency transactions on the price process, and conversely the influence of the price process on high and low frequency transactions. The results of the study found that high-frequency investors have a very high success rate on each transaction, measured by the probability that price changes will follow the direction as well as the time they have to wait to realize their profits. His research also found that high frequency transaction activity did not cause volatility or price jumps (Aït-sahalia & Brunetti, 2019).
Research conducted by Caivano focuses on the impact of HFT on stock price volatility during the 2011-2013 period for a sample of 35 blue chips traded on the Borsa Italiana. High-frequency securities firms were identified by two methods. First, based on public information about market participants' trading strategies, leading to the identification of 14 pure-play companies; The second includes the main investment banks that are active in the European market, because they carry out several exclusive transactions that can take the form of securities companies with high transaction frequency. The results show that an exogenous increase in HFT activity causes a statistically and economically significant increase in volatility. In detail, a one standard deviation increase in HFT activity by a 'pure' HFT security

increases volatility by between 0.5 and 0.8 standard deviations. This means that, if HFT activity increases by 10 percentage points, annual intraday volatility increases by an amount between 4 and 6 percentage points depending on the specifications used. Furthermore, if we take into account the activities carried out by investment banks, the impact of a 10-percentage point increase in HFT activity causes an increase in annual volatility of between 3 and 5 percentage points. This paper adds to the existing literature by providing new empirical evidence from the Italian market (Caivano, 2015).
Furthermore, according to Hsieh et al, stock trading based on Kelly's Expected Logarithmic Growth (ELG) criterion, a recipe for optimal resource allocation, has received much attention in the literature. Uses ELG as a performance metric by comparing the impact of trade execution delays on the relative performance of high-frequency trading versus buy and hold. Although it is intuitively clear and immediately evident that in the presence of fairly high transaction costs, buy and hold is a better strategy, or without transaction costs buy and hold can still be a better strategy (Hsieh et al., 2019).
Research conducted by Conrad et al, examined the relationship between high-frequency pricing and stock price behavior between 2009 and 2011 for all securities in the US. On average, higher fixing activity is associated with price series that are more similar to a random walk, and significantly lower transaction costs. This research explores market resilience during extremely high low-latency trading periods: large liquidity draws where, within the same millisecond, trading algorithms systematically sweep large volumes across multiple trading venues. Although such large drawdowns incur trading costs, they do not appear to decrease the price formation process or increase subsequent trading costs (Conrad et al., 2015).

Price To Book Value (PBV)
Price to book value is a parameter to measure whether a company's shares are expensive or cheap. The book value ratio is usually done by looking at the price in the secondary market and the book value in the primary market. A low PBV value indicates that the share price is undervalued or vice versa, that the market value is greater or less than the company's net value. Research conducted by Dimitropoulos in the Kandil article with a sample of 101 companies listed on the ASE (Athens Stock Exchange) for the period 1995 - 2004 results from simultaneous research on the relationship between Return and price to book ratio which has a positive and significant influence on stock prices (Panagiotis E. Dimitropoulos , 2018).
Furthermore, research conducted by Asif et al examined the relationship between accounting information which includes the ratio of earnings per share, book value per share, capital used per share and operating cash flow per share on share prices. The time span from 2006 to 2013 found evidence that the parameters Accounting information has a positive and significant influence on share prices in the emerging capital market on the Pakistan Stock Exchange using KSE-30 companies. (Asif et al., 2016). Research conducted by Shittu et al on the national stock exchange, using data from 100 listed companies selected randomly for the period 2009 to 2013. The random effect estimation model was used to estimate the regression, the research results showed that there was a significant positive relationship between price to book value on stock prices (Shittu et al., 2016).
Meanwhile, research conducted by Ibrahim Obeidat on 38 companies listed on the Abu Dhabi Securities Market showed that there was a significant positive relationship between PBV and stock market prices (Ibrahim Obeidat, 2009) . A significant influence also occurs on the Jordanian stock exchange, between the Price Book value assessment and banking share prices for the period 2008 to 2014, there is a significant relationship between PBV and share prices (Warrad, 2017).

Dividend Policy (DPR)
Dividend Payout Ratio is the percentage of company income distributed to shareholders. Any funds that are not paid to shareholders will generally be used to pay debts and/or investments, both business expansion investments and replacement investments. Dividend policy is not the main part of the company, but some say dividends are an important part of the company which is often called the Bird

in the hand. Dividends are expected to boost company value and share prices. Company value and share prices can rise and fall due to dividends. Research conducted by State, regarding the dividend moderation policy on share prices of consumer goods listed on the Nigerian Stock Exchange NSE, with a population of twenty-one companies listed on the Nigerian Stock Exchange NSE from 2009-2019 concluded that dividend payout as a moderating variable has a positive and significant influence on the share prices of companies listed in Nigeria, while Dividend yields and Dividend increases have a significant negative moderating effect on company share prices (State, 2020) . State recommends that company management should consider their status before making decisions about dividend payment policies and they should also know that dividend yield and dividend increases have a significant negative effect on share prices.

Dividend policy can be related to company growth and leverage. Companies with high levels of debt have a high risk of default, and investors are generally less interested in companies that have high debt, which in turn will reduce the value of the company. Meanwhile, a company with a high growth rate shows that the company is able to develop its business and has high productivity, this is a positive signal for investors to invest, so that demand for shares becomes high, which in turn increases the value of the company and share prices. With a dividend policy, the company is expected to be able to reduce the level of leverage so that investors have the expectation that the company has the ability to pay dividends. Furthermore, research conducted by Byson Majanga on the Malawi Stock Exchange for the 2008-2014 period determined that there was a direct relationship between company dividends and share prices on the Malawi Stock Exchange (MSE), and found that share prices were the result of a number of factors, dividends being one of them. has a very significant contribution (Majanga, 2015).

Majanga's research results will further help investors, both potential and existing; as well as issuer managers to understand the impact of the presence or absence of dividend announcements on shareholder psychology which will later influence the share price of each company on the stock exchange. Meanwhile, research to see the relationship between financial performance and company value which is moderated by dividends was carried out by Eleizer Pascareno on 18 insurance and banking companies. listed on the Indonesia Stock Exchange during the 2010-2013 period, using moderated regression data analysis, the results obtained were that financial performance does not affect the value of the company, and this also shows that dividend policy does not moderates the influence of financial performance on company value (Pascareno & Siringoringo, 2016).

Research conducted by Hieu Nguyen at the Hochiminh Stock Exchange (HOSE) in Vietnam, examined the relationship between dividend policy and share price volatility of 260 listed companies for the 2009-2018 period using statistical panel data regression coefficients such as fixed effects models (FEM), random models effect (REM) and general method of movement (GMM). The findings show a positive relationship between dividend yield and share price volatility and a negative relationship between dividend payout ratio and share price volatility. In addition, it was found that the company's growth rate, leverage and earnings volatility have a positive influence on stock price volatility (Hieu Nguyen et al., 2020).

Meanwhile, research conducted by Fajaria on manufacturing companies listed on the IDX for the 2013 - 2016 period showed that dividend policy cannot increase company value when company growth is high. or low. This can happen because there are many samples that do not pay dividends, and there are several companies experienced a decline in assets. Company growth is closely related to revenue, but most companies that have good asset growth will use the profits obtained as funding, so dividend income decreases. Therefore, the role of dividend policy does not look good for shareholder prosperity in increasing shareholder value (Fajaria, 2018).

Furthermore, research conducted by Ullah et.al at the Karachi Stock Exchange 2003-2008 regarding the relationship between dividend payments and share prices in the listed textile industry, with share prices being the dependent variable while the other variables are company size, income volatility, growth and dividend payout. ratio as an independent variable and moderating variable. The results show that overall models such as dividend payments greatly influence stock prices, while other variables overall have a significant relationship (Ullah et al., 2016).

METHOD

Sample description

Population is a generalization area consisting of: objects or subjects that have certain qualities and characteristics determined by researchers to be studied and then conclusions drawn. Meanwhile, the sample is part of the number and characteristics possessed by the population. (Sugiono, 2012). The sampling technique is Nonprobability Sampling, a sampling technique that does not provide the same opportunity or chance for each element or member of the population to be selected as a sample. The sample technique is purposive sampling.

This research is quantitative and associative descriptive, research that looks for causal relationships between the variables studied (Sugiono, 2012). In quantitative research, researchers try to prove hypotheses from secondary data that has been processed and the results will explain the relationship between each variable. The subject and object of the research data are secondary data on companies listed on the secondary market of the Indonesia Stock Exchange. Secondary data which is an independent variable is cross sectional and time series data (Panel Data). Of the many indices on the Indonesian stock exchange, the LQ45 (Blue chip) index was chosen by the researchers, with the reason that shares in the LQ45 group are the best collection of shares in the Indonesian Capital Market. The LQ45 stock group was released in February 1997 with the main parameter being liquidity and other criteria such as frequency, value and volume of transactions. The LQ45 index is a complement to the Composite Stock Price Index (IHSG).

From the LQ 45 Index share list which was the object of research, 29 issuers were used as research samples (purposive), for the reasons:

a. During the observation period (8 years) these 29 issuers were consistently listed and entered the LQ45 share group.
b. Complete financial reports.

Data analysis method

This research tries to test statistical hypotheses originating from research samples, in the form of inferential statistics, namely parametric and non-parametric statistics. Parametric statistics is used to test population parameters through statistics or test population size through sample data. Research with a statistical hypothesis, which is tested is the null hypothesis, because there is no difference between population and statistical parameters (data obtained from the sample).

The mathematical model of this research is as follows:

$$PBV_{it} = a_0 + \beta_1 Vol.T + \beta_2 Fre.T + \beta_3 DPR + \beta_4 Vol.T * DPR + \beta_5 Fre.T * DPR + \varepsilon_1$$

$$SP = c_0 + \delta_1 PBV + \delta_2 Vol.T + \delta_3 Fre.T + \delta_4 DPR + \delta_5 PBV * DPR + \delta_6 Vol.T * DPR + \delta_7 Fre.T * DPR + \varepsilon_2$$

Information :

1. Vol T : Transaction Volume
2. T Freq : Transaction Frequency
3. DPR : Dividend Payout Ratio
4. PBV : Price to Book Value
5. SP : Share Price

Meanwhile, the data that has been tabulated is then processed using eviews and tested using Panel Data Regression. Panel Data Regression Flow is as follows:

Panel data is a combination of cross section data and time series data, where the same cross section units are measured at different times. Panel data regression analysis is regression analysis based on panel data to observe the relationship between one dependent variable and one or more independent variables (Ahmadin, nd)

1. Panel Data Regression

The general model of panel data regression is as follows

$y_{it} = \alpha + x\beta_{it} + U_{it}$

2. Estimation of Panel Data Regression Models

In the panel data regression method, there are three parameter estimates that will be used, namely the *Common Effect Model* (CEM), *Fixed Effect Model* (FEM), and *Random Effect Model* (REM). (Rahmatullah et al., 2020). In selecting the appropriate CEM, FEM, and REM parameter estimation models, three tests were used, including the *Chow test, Lagrange multiplier* test , and *Hausman test.*

RESULT

1. Numerical Results

1.1. NuModel 1 Regression Test

Effect of VOLT, FREKT on PBV with DPR as a moderating variable

Table 1. Regression Analysis Table

Dependent Variable: PBV
Method: Least Squares Panel
Date: 11/30/22 Time: 07:09
Sample: 2012 2019
Periods included: 8
Cross-sections included: 29
Total panel (balanced) observations: 232

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	-0.745193	0.758538	-0.982408	0.3270
VOLT	-0.145343	0.064709	-2.246105	0.0257
FREKT	0.000398	0.000152	2.621645	0.0094
DPR	3.122845	0.546617	5.713036	0.0000
VOLTXDPR	0.009183	0.065711	0.139745	0.8890
FRETXDPR	0.068860	0.076611	0.898824	0.3697

The estimation calculation results in the table 1 show the estimation equation as follows:

PBV = -0.745193 -0.145343VOLT + 0.000398FREKT + 3.122845DPR + 0.009183VOLT*DPR +0.068860FRET*DPR

Based on the results of the equation above, it can be concluded that the PBV variable is not influenced by the independent variables VOLT, FREKT and DPR (zero value), then the average PBV is will be -0.745193 unit .

If VOLT increases by 1% and other variables remain constant, then PBV will decrease by 0.145343 units.

If FrekT increases by 1% and other variables remain constant, then PBV will increase by 0.000398 units.

If DPR increases by 1% and other variables remain constant, then PBV will increase by 3.122845 units.

If VOLT*DPR increases by 1% and other variables remain constant, then PBV will increase by 0.009183 units.
If FREKT*DPR increases by 1% and other variables remain constant, then PBV will increase by 0.068860 units.

1.2. Partial Hypothesis Testing (t Test)

To find out whether or not the influence of the independent variables is significant or not on a dependent variable, the t test is used. In this case the independent variable consists of seven variables, namely VOLT, FREKT and DPR.

Table 2. Partial Hypothesis Testing Table (t Test)

Dependent Variable: PBV
Method: Least Squares Panel
Date: 11/30/22 Time: 07:09
Sample: 2012 2019
Periods included: 8
Cross-sections included: 29
Total panel (balanced) observations: 232

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	-0.745193	0.758538	-0.982408	0.3270
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FREKT	0.000398	0.000152	2.621645	0.0094
DPR	3.122845	0.546617	5.713036	0.0000
VOLTXDPR	0.009183	0.065711	0.139745	0.8890
FRETXDPR	0.068860	0.076611	0.898824	0.3697

Based on the table 2, the following results are obtained:

1. The VOLT variable is significant at the 5% level with a probability value (0.0257) < 0.05, so Ho is rejected. Therefore, it can be concluded that partially there is a significant negative influence of VOLT on PBV.
2. The FREKT variable is significant at the 5% level with a probability value (0.0094) < 0.05, so Ho is rejected. Therefore, it can be concluded that partially there is a significant influence of FREKT on PBV.
3. The DPR variable is significant at the 5% level with a probability value (0.0000) <0.05, so Ho is rejected. Therefore it can be concluded that partially there is a significant influence of DPR on PBV.
4. The VOLT*DPR variable is not significant at the 5% level with a probability value (0.8890) > 0.05, so Ho is accepted. Therefore, it can be concluded that the DPR does not moderate the relationship between VOLT and PBV.
5. The FREKT*DPR variable is not significant at the 5% level with a probability value (0.3697) > 0.05, so Ho is accepted. Therefore, it can be concluded that the DPR does not moderate the relationship between FREKT and PBV.

1.3. Simultaneous Hypothesis Testing (F Test)

To determine whether the influence of the independent variables together on a dependent variable is significant or not, the F test or simultaneous testing is used. In other words, will the seven independent variables together be able to influence the dependent variable significantly?
H_0 : VOLT, FREKT and DPR together they do not have a significant effect on PBV.

H_1 : VOLT, FREKT and DPR together they have a significant effect on PBV.
The results of *the F test based on Eviews 9.0* processing are presented in the following table:

Table 3. Simultaneous Hypothesis Testing Table (F Test)

R-squared	0.487204	Mean dependent var	1.069914
Adjusted R-squared	0.456625	SD dependent var	1.018569
SE of regression	0.750828	Akaike info criterion	2.323166
Sum squared resid	122.8958	Schwarz criterion	2.531159
Log likelihood	-255.4873	Hannan-Quinn Criter.	2.407048
F-statistic	15.93234	Durbin-Watson stat	0.611043
Prob(F-statistic)	0.000000		

From the table 3, the Prob value is obtained. F count is 0.000 . Because the value of Prob. F count (0.000) < 0.05, then H_0 is rejected . Thus it can be concluded that simultaneously there is a significant influence of the variables VOLT, FREKT and DPR together on PBV.

1.4. Analysis of the Coefficient of Determination (R^2)

To find out the magnitude of the influence of VOLT, FREKT and DPR together with PBV, the coefficient of determination is used . If the simultaneous test is used to test the hypothesis as a whole, then the coefficient of determination is used to calculate the magnitude of the influence of the seven independent variables, namely the variables VOLT, FREKT and DPR. the magnitude of this effect ranges from the interval 0 to 1 or 0% to 100%. The table below shows the results of calculating the coefficient of determination.

Table 4. Coefficient of Determination Analysis Table

R-squared	0.487204	Mean dependent var	1.069914
Adjusted R-squared	0.456625	SD dependent var	1.018569
SE of regression	0.750828	Akaike info criterion	2.323166
Sum squared resid	122.8958	Schwarz criterion	2.531159
Log likelihood	-255.4873	Hannan-Quinn Criter.	2.407048
F-statistic	15.93234	Durbin-Watson stat	0.611043
Prob(F-statistic)	0.000000		

Eviews 9.0 output table 4, an *R-squared value* of 0.487204 is obtained . This shows that VOLT, FREKT and DPR contributed 48.72% to PBV , while the remaining 51.28% was the contribution of other variables besides the independent variables studied.

1. Model 2 Regression Test

Influence of PBV, VOLT, FREKT on SP with DPR as a moderating variable

Table 5. Regression Analysis Table

Dependent Variable: SP
Method: Least Squares Panel
Date: 11/30/22 Time: 07:17
Sample: 2012 2019
Periods included: 8
Cross-sections included: 29
Total panel (balanced) observations: 232

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	10.80534	0.519896	20.78366	0.0000
PBV	0.417201	0.079500	5.247849	0.0000

VOLT	-0.455751	0.047711	-9.552282	0.0000
FREKT	0.000243	7.96E-05	3.046302	0.0026
DPR	-0.088334	0.400201	-0.220725	0.8255
PBVXDPR	-0.069183	0.062955	-1.098934	0.2732
VOLTXDPR	-0.069706	0.036173	-1.927006	0.0555
FRETXDPR	-0.163099	0.031841	-5.122310	0.0000

The estimation calculation results in the table 5 show the estimation equation as follows:
SP = 10.80534 + 0.417201PBV - 0.455751VOLT + 0.000243FREKT - 0.088334DPR - 0.069183 PBV*DPR - 0.069706VOLT*DPR - 0.163099FRET*DPR

Based on the results of the equation above, it can be concluded that the SP variable is not influenced by the independent variables VOLT, FREKT and DPR (zero value), then the average value of SP would be worth 10.80534 unit.
If PBV increases by 1% and other variables remain constant, then SP will increase by 0.417201 units.
If VOLT increases by 1% and other variables remain constant, then SP will decrease by 0.455751 units.
If FREKT increases by 1% and other variables remain constant, then SP will increase by 0.000243 units.
If DPR increases by 1% and other variables remain constant, then SP will decrease by 0.088334 units.
If PBV*DPR increases by 1% and other variables remain constant, then SP will decrease by 0.069183 units.
If VOLT*DPR increases by 1% and other variables remain constant, then SP will decrease by 0.069706 units.
If FREKT*DPR increases by 1% and other variables remain constant, then SP will decrease by 0.163099 units.

2. Partial Hypothesis Testing (t Test)

To find out whether or not the influence of the independent variables is significant or not on a dependent variable, the t test is used. In this case the independent variables consist of the variables PBV, VOLT, FREKT, and DPR.

Eviews 9.0 processing are presented in the following table:

Table 6. Partial Hypothesis Testing Table (t Test)

Dependent Variable: SP
Method: Least Squares Panel
Date: 11/30/22 Time: 07:17
Sample: 2012 2019
Periods included: 8
Cross-sections included: 29
Total panel (balanced) observations: 232

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	10.80534	0.519896	20.78366	0.0000
PBV	0.417201	0.079500	5.247849	0.0000
VOLT	-0.455751	0.047711	-9.552282	0.0000
FREKT	0.000243	7.96E-05	3.046302	0.0026

DPR	-0.088334	0.400201	-0.220725	0.8255
PBVXDPR	-0.069183	0.062955	-1.098934	0.2732
VOLTXDPR	-0.069706	0.036173	-1.927006	0.0555
FRETXDPR	-0.163099	0.031841	-5.122310	0.0000

Based on the table 6, the following results are obtained:

1. The PBV variable is significant at the 5% level with a probability value (0.0000) < 0.05, so Ho is rejected. Therefore, it can be concluded that partially there is a significant influence of PBV on SP.
2. The VOLT variable is significant at the 5% level with a probability value (0.0000) < 0.05, so Ho is rejected. Therefore, it can be concluded that partially there is a significant influence of VOLT on SP.
3. The FREKT variable is significant at the 5% level with a probability value (0.0026) < 0.05, so Ho is rejected. Therefore, it can be concluded that partially there is a significant influence of FREKT on SP.
4. The DPR variable is not significant at the 5% level with a probability value (0.8255) > 0.05, so Ho is accepted. Therefore, it can be concluded that partially there is no significant influence of DPR on SP.
5. The PBV*DPR variable is not significant at the 5% level with a probability value (0.2732) > 0.05, so Ho is accepted. Therefore it can be concluded that the DPR does not moderate the relationship between PBV and SP.
6. The VOLT*DPR variable is not significant at the 5% level with a probability value (0.0555) > 0.05, so Ho is accepted. Therefore, it can be concluded that the DPR does not moderate the relationship between VOLT and SP.
7. The FREKT*DPR variable is significant at the 5% level with a probability value (0.0000) < 0.05, so Ho is rejected. Therefore it can be concluded that the DPR moderates the relationship between FREKT and SP.

3. Simultaneous Hypothesis Testing (F Test)

To determine whether the influence of the independent variables together on a dependent variable is significant or not, the F test or simultaneous testing is used. In other words, will the seven independent variables together be able to influence the dependent variable significantly?

H_0 : PBV, VOLT, FREKT and DPR together they do not have a significant effect on SP .

H_1 : PBV , VOLT, FREKT and DPR together they have a significant effect on SP .

the F test based on Eviews 9.0 processing are presented in the following table:

Table 7. Simultaneous Hypothesis Testing Table (F Test)

R-squared	0.956943	Mean dependent var	8.485517
Adjusted R-squared	0.947094	SD dependent var	1.150418
SE of regression	0.264611	Akaike info criterion	0.347900
Sum squared resid	13.16353	Schwarz criterion	1.001591
Log likelihood	3.643619	Hannan-Quinn Criter.	0.611527
F-statistic	97.16872	Durbin-Watson stat	1.710485
Prob(F-statistic)	0.000000		

From the table 7, the Prob value is obtained. F count is 0.000 . Because the value of Prob. F count (0.000) < 0.05, then $_{H0}$ is rejected . Thus, it can be concluded that simultaneously there is a significant influence from the PBV, VOLT, FREKT and DPR variables jointly against SP.

4. Analysis of the Coefficient of Determination (R^2)

To find out the magnitude of the influence of PBV , VOLT, FREKT and DPR together with SP, the coefficient of determination is used . If the simultaneous test is used to test the hypothesis as a whole, then the coefficient of determination is used to calculate the magnitude of the influence of the seven independent variables, namely the PBV, VOLT, FREKT and DPR variables. the magnitude of this effect ranges from the interval 0 to 1 or 0% to 100%. The table below shows the results of calculating the coefficient of determination.

Table 8. Coefficient of Determination Analysis Table

R-squared	0.956943	Mean dependent var	8.485517
Adjusted R-squared	0.947094	SD dependent var	1.150418
SE of regression	0.264611	Akaike info criterion	0.347900
Sum squared resid	13.16353	Schwarz criterion	1.001591
Log likelihood	3.643619	Hannan-Quinn Criter.	0.611527
F-statistic	97.16872	Durbin-Watson stat	1.710485
Prob(F-statistic)	0.000000		

Eviews 9.0 output results table 8, an *R-squared value* of 0.956943 is obtained . This shows that PBV, VOLT, FREKT and DPR contributed 95.69% to SP while the remaining 4.31% was the contribution of other variables besides the independent variables studied.

2. Proposed Improvements
For future researchers, who are interested in the same subject matter as this research, it would be better that research variables were added and developed, especially independent variables related to financial behavior.

DISCUSSION

Partially there is a significant negative influence of VOLT on PBV. This is in line with the results of research conducted by (Johannes Nababan., 2015) and (Amaliyah, 2015). Partially there is a significant influence of FREKT on PBV. This indicates that the faster the transactions are marked, the greater the number of rotating stock transactions, the greater the financial performance, marked by the numerator variable in financial performance, the PBV will increase. This is in line with research conducted by (Ahmad Taslim, 2016) but not in line with research conducted by (Niawaradila et al., 2021) and (Yusra, 2019) which explains a large number of frequencies but in selling positions.
Partially, there is a significant influence of DPR on PBV. Dividend payments made by companies to investors provide certainty of return and are considered to have good financial performance, as per research conducted (Sasongko, 2019), (Maggee, 2016). Meanwhile, research that is not in line with the results of this research was conducted by (Lumapow & Tumiwa, 2017), (Husna & Satria, 2019) and (Septariani, 2017) according to the Irrelevant Dividend Theory of (Ross, 1977).
In this research, dividend policy does not moderate the relationship between transaction volume and financial performance, this really depends on investors' decisions in buying and selling which will cause share prices to rise and fall, ultimately ending up with shares being in an over or undervalued position. The dividend policy was unable to accelerate the acceleration of transaction volume. Investors feel that if dividends are distributed, financial performance will decline. The results of this research try to

complement the combination of moderating variables from research conducted (Amaliyah, 2015), (Nababan, 2015), (Divecha & Morse, 1983) and (Al-Twaijry, 2007).
In this research, DPR did not moderate the relationship between TRANSACTION FREQUENCY and PBV. The results of this research indicate that dividend policy weakens the relationship between transaction frequency and financial performance, this is because investors' perception of dividend distribution will reduce financial performance, which in turn will reduce the speed of transactions seen from buying and selling activities, causing financial performance to also decrease. The results of this research complement the research results of (Ahmad Taslim, 2016), (Yusra, 2019), and (Al-Twaijry, 2007), (Divecha & Morse, 1983).
Partially there is a significant influence of PBV on SP. The results of this study illustrate that financial performance influences stock prices. The higher the financial performance, the higher the share price will be, or vice versa. This is in line with research (Rimbani, 2016), (Warrad, 2017), (Asmirantho & Yuliawati, 2015), but not in line with research (Sha, 2017).
Partially there is a significant influence of VOLT on SP. The results of this research illustrate that the greater the number of shares traded, the higher the increase in share prices or vice versa. This is in line with research conducted by (Rahmayani et al., 2020), but is not in line with research by (Ahmad Taslim, 2016) and research (Priana & Rm, 2017).
Partially there is a significant influence of FREKT on SP. The faster the buying and selling turnover on the stock exchange, the more influence it will have on share prices or vice versa. This is in line with research conducted by (Caivano, 2015) and (Ahmad Taslim, 2016), but contradicts research conducted by (Niawaradila et al., 2021).
Partially there is no significant influence of DPR on SP. The results of this research show that dividend policy has no effect on share prices. This can be explained by the rise and fall in share prices which are not only influenced by fundamental factors, but increases or decreases in share prices can occur from technical activities that occur in the capital market, both in terms of transaction volume and transaction frequency. . The results of this study are not in line with research conducted by (Ali et al., 2017) and Bursa Karaci, (Rozaimah et al., 2018) and (Hooi et al., 2015) on Bursa Malaysia.
In this research, DPR does not moderate the relationship between PBV and SP. Several studies have found that dividend policy as measured by the dividend payout ratio has a significant negative influence on stock price volatility in Indonesia. These findings indicate that a higher dividend payout ratio can reduce stock price volatility, Suad Husnan at.al (2019). Several studies show that the dividend payout ratio has a moderating role in the relationship between financial performance (PBV) and stock prices, but these results may vary depending on the sample, time period and other variables used in the research.
The DPR does not moderate VOLT's relationship with SP. The results of this research are not in line with research conducted by Nguyen at al (2020), Zhang et al (2021) Gupta (2022) whose research results show that dividend policy moderates the relationship between transaction volume and share prices. Specific findings may vary depending on the market context and country studied.
DPR moderates FREKT's relationship with SP. The results of this research are in line with research by Nguyen et al (2020) which shows that dividend policy has a significant moderating effect on the relationship between transaction frequency and share prices on the Vietnamese stock market. Companies with higher DPR show a stronger relationship between transaction frequency and stock price; Likewise, research conducted by Huang et al (2022) in China shows that a higher dividend policy shows a strong relationship between frequency and stock prices.

CONCLUSION

Based on the output results of Eviews 9.0. Model 1 PBV, obtained an R-squared value of 0.487204. This shows that Transaction Volume, Transaction Frequency and Dividend Policy contribute to PBV by 48.72%, while the remaining 51.28% is the contribution of other variables besides the independent variables studied. Meanwhile, Model 2. SP, obtained an R-squared value of 0.956943. This shows that Financial Performance, Transaction Volume, Transaction Frequency and DPR contribute to SP amounting to 95.69% while the remaining 4.31% is the contribution of other variables besides the independent variables studied.

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