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Determinants of BID-ASK Spread of Banking Stocks Listed on The Indonesia Stock Exchange

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ABSTRACT: *The purpose of this research is to find out and analyse the effect of market value on the bid-ask spread of the stock; to find out and analyse the effect of trading volume activity on the bid-ask spread of the stock; to find out and analyse the effect of trading frequency on the bid-ask spread of the stock; to know and analyse the effect of return volatility on the bid-ask spread of the stock. The population of this study consists of companies in the banking company listed on the Indonesia Stock Exchange (IDX). A total of 23 companies were selected as the sample for observation. The data analyse using multiple linear regression analysis with using SPSS version 23 for data processing and analysis. The results of this finding show that market value has a negative and significant effect on the bid-ask spread of shares of banking companies; trading volume activity has a negative and significant effect on the bid-ask spreads of shares of banking companies; trading frequency has a negative and insignificant effect on the bid-ask spreads of shares of banking companies; and return volatility has a positive and significant effect on the bid-ask spreads of shares of banking companies.*

Keywords: Market Value; Trading Volume Activity; Trading Frequency; Return Volatility; and bid-ask spread.

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I. INTRODUCTION

The capital market has a strategic role in supporting the economy, where the banking sector plays a vital role as a driving force and the main barometer of financial system stability. Banking stocks on the Indonesia Stock Exchange (IDX) are often the main choice of investors because of their liquid, large-capitalized, and considered to have relatively measurable risks. However, the existence of information asymmetry risk remains an important concern in transactions in the secondary market, which is reflected in the bid-ask spread level.

Bid-ask spreads are a key indicator of market efficiency and indirect transaction costs borne by investors. High spreads reflect the high cost of information and the potential risk of information asymmetry between market participants (Stoll, 1989; Chung & Wei, 2005). In the context of banking stocks, the dynamics of spreads are influenced by internal and external factors, including macroeconomic conditions, trading volume and frequency, volatility returns, and stock market size or market value.

Fluctuations in the bid-ask spread of banking stocks in the January-June 2023 period show that although the sector is projected to be positive, macroeconomic conditions such as global uncertainty and pressure on the JCI also affect market efficiency. On the contrary, domestic policies such as the lifting of pandemic status have become endemic and the prospect of political stability ahead of the 2024 election have the potential to increase investor optimism.

Some previous studies have shown inconsistent results regarding the determinants of bid-ask spreads. For example, market value is considered to be able to expand or narrow spreads depending on the perception of risk and liquidity of stocks (Wiharno & Rahayu, 2018; Widhyawati & Damayanthi, 2015). Trading volume activity and trading frequency are theoretically expected to reduce spreads as liquidity increases, but empirical evidence shows variability in the influence (Liu et al., 2016; Windiana et al., 2022; Pan & Misra, 2021). Meanwhile, return volatility is considered to be able to increase spreads because it increases information risk and price uncertainty (Pinder, 2003), although there are also opposite results.

The inconsistency of the empirical results shows the need for a more in-depth and contextual study, especially on banking stocks in the Indonesian capital market. This study aims to identify and analyse the influence of market value, trading volume activity, trading frequency, and return volatility on the bid-ask spread of banking stocks listed on the Indonesia Stock Exchange. The findings of this study are expected to make a theoretical contribution to the financial literature, as well as a practical reference for investors and regulators in understanding the factors that affect the efficiency of prices and information costs in the capital market.

II. LITERATURE REVIEW

Capital Markets

One of the most in-demand capital market instruments today is stocks. In transacting shares on the IDX, buyers and sellers of securities cannot make their own transactions but are represented by brokers or Securities Dealer Intermediaries (PPE). Investors cannot directly make transactions on the exchange floor, only brokers can make buy and sell transactions on the exchange floor based on orders from investors. This creates a bid-ask spread in exchange for brokers over three types of fees: inventory storage fees, processing fees and information fees (Stoll 1989).

Information Asymmetry

According to Rio, Husnatarina and Octavia (2020), and Information Symmetry occurs when one party in the transaction has access to better information than the other party. This can cause market participants who have more information to make excessive profits, while other players are in a weaker position. There are two types of investors in digesting information, namely informed and uninformed investors. Informed investors are investors who can capture everything related to the trading process and know when to place buy and sell orders at all events, such as private information, good news and bad news. Meanwhile, uninformed investors are investors who lack or do not have awareness of the existence of events, private information, good news and bad news (Syamni 2014, 1). Therefore, uninformed market participants face higher risks if they transact with informed market participants (Khoirayanti and Sulistiyo 2020).

Bid-Ask Spread

The bid price is the highest price offered by a broker or the price at which the specialist offers to buy the stock, while the ask price is the lowest price at which the specialist or broker is willing to sell the stock. The spread is the distance between the bid and ask values. The bid-ask spread is the difference between the highest buy price and the lowest selling price at any one time (Rio, Husnatarina and Oktavia 2020). Conceptually, a spread is a compensation that a broker sets for its services in incurring three types of costs: inventory storage fees, order processing fees and information fees (Stoll 1989). Khoirayanti and Sulistiyo (2020) states that "bid-ask spreads are transaction fee manoeuvres". The market must provide reasonable spreads so that investors are not burdened with the costs incurred as a result of stock ownership.

Market Value

Market value is the value of all shares owned by a company in the stock market. Investors' assessment of the company's good and bad can be done by looking at the company's market value. In other words, market value can be referred to as a reflection of the size of the company. Market value is different from the market price if the market price is the price of a stock in the ongoing market and if the Stock Exchange has closed, the market price is the closing price, while the market value is the result of multiplying between the market price and outstanding shares (Nor 2013, 72).

Trading Volume Activity

Trading volume activity is the ratio between the number of shares traded at a given time to the number of shares outstanding at a given time (Rio, Husnatarina and Oktavia 2020). Tandelilin (2017, 35) states that, "Indicators of stock trading activity include the volume of shares transacted between investors and the value of the transaction in one transaction or for a certain period of time". Trading volume activity is a method used to see how the capital market reacts to information through the observation of the movement of stock trading volume activity in the capital market (Khoirayanti and Sulistiyo 2020).

Trading Frequency

Trading frequency is the number of times a buying and selling transaction occurs on the stock in question at a given time (Patoni and Lasmana 2015). One of the things that investors use as a reference in knowing whether the company's shares are in demand or not, is by looking at how many times the shares are traded. In the activities of the Stock Exchange or the capital market, the frequency of stock trading is one of the elements that is used to see the market's reaction to information that enters the capital market.

Return Volatility

Return is one of the factors that motivate investors to invest and is a reward for the investor's courage to take risks on the investment he makes (Musthafa 2017, 106). Return and risk are two things that are inseparable, because the consideration of an investment is a trade-off of these two factors. Stock volatility returns are used as one of the risk gauges. Return volatility in this case is a calculation of the risk that a stock is associated with deviations from the received results with the expected ones.

The Influence of Variables and Research Hypothesis Formulation

The Influence of Market Value on Bid-Ask Spreads

Market value is the stock price that occurs in the stock market at a certain time due to transaction activity in the stock market (market mechanism). Market value is a reflection of the size of the company which is calculated by multiplying the number of outstanding shares by the closing price of the shares (Fitriyah and Rahayu 2013). Investors assume that large companies are able to produce better financial reports, information and are considered a less risky level of investment than the stocks of smaller companies (Sharpe, Alexander and Bailey 2005, 67), so investors hope to get a greater return by holding the stock longer. Based on this belief, it will cause the bid-ask spread to widen (Chung and Wei 2005). This is in line with the results of the research Wiharno and Rahayu (2018) which states that the market value has a positive and significant effect on the bid-ask spread. Based on the above statement, the hypotheses that can be formulated in this study are:

H1: market value has a positive and significant effect on the bid ask spread

The Influence of Trading Volume Activity on Bid-Ask Spread

Trading volume activity is the ratio between the number of shares traded at a given time to the number of shares outstanding at a given time (Rio, Husnatarina and Oktavia 2020). Tandelilin (2017, 35) states that, "Indicators of stock trading activity include the volume of shares transacted between investors and the value of the transaction in one transaction or for a certain period of time". Small trading volumes tend to indicate a lack of investor confidence in the stocks being traded. On the other hand, a large trading volume indicates that the stock is in demand and is actively traded by investors, so that when the trading volume of stocks is getting higher, the broker has a tendency not to own the stock for a long period of time given the large number of investors who are interested in the stock and cause a decrease in the cost of ownership. The cost of ownership has a positive effect on the bid-ask spread, this indicates that the higher the cost of ownership, it will cause the value of the bid-ask spread to widen and vice versa, the smaller the cost of ownership, the narrower the value of the bid-ask spread (Wiharno and Rahayu 2018). In this case, it is concluded that the more active the trading of a stock or the greater the trading activity of a stock, it will cause a decrease in the value of the bid ask spread. This is in line with the results of the research Liu, Hua and An (2016) which states that trading volume activity has a negative effect on the bid-ask spread. Based on the above statement, the hypotheses that can be formulated in this study are:

H2: trading volume activity has a negative and significant effect on the bid ask spread

The Influence of Trading Frequency on Bid-Ask Spreads

Trading frequency is the number of times a trade transaction occurs on the stock at a given time. Trading frequency is one of the materials to see the market's reaction to information that enters the capital market, by looking at the number of times or frequency of the number of shares traded, it can also be seen whether the stock is in demand or not by investors (Patoni and Lasmana 2015). Determinants such as the number of trades will have an impact on the bid-ask spread as well as the asymmetry of information and the cost component of order processing, exchanges can manage the bid-ask spread by increasing trading frequency (Pan and Misra 2021). Keown et al. (2000, 885) states that, "if the transaction is large in volume and the frequency of its trading occurs continuously, this may result in the spread shrinking by less than 0.5%".

When the frequency increases, it is likely that the broker will change its share ownership position or in other words the broker will not need to hold the shares for too long thus lowering the cost of ownership and lowering the spread. This statement is in line with the results of research conducted by Pan and Misra (2021) which states that the frequency of trades has a negative and significant effect on the bid-ask spread. Based on the above statement, the hypotheses that can be formulated in this study are:

H3: trading frequency has a negative and significant effect on the bid ask spread.

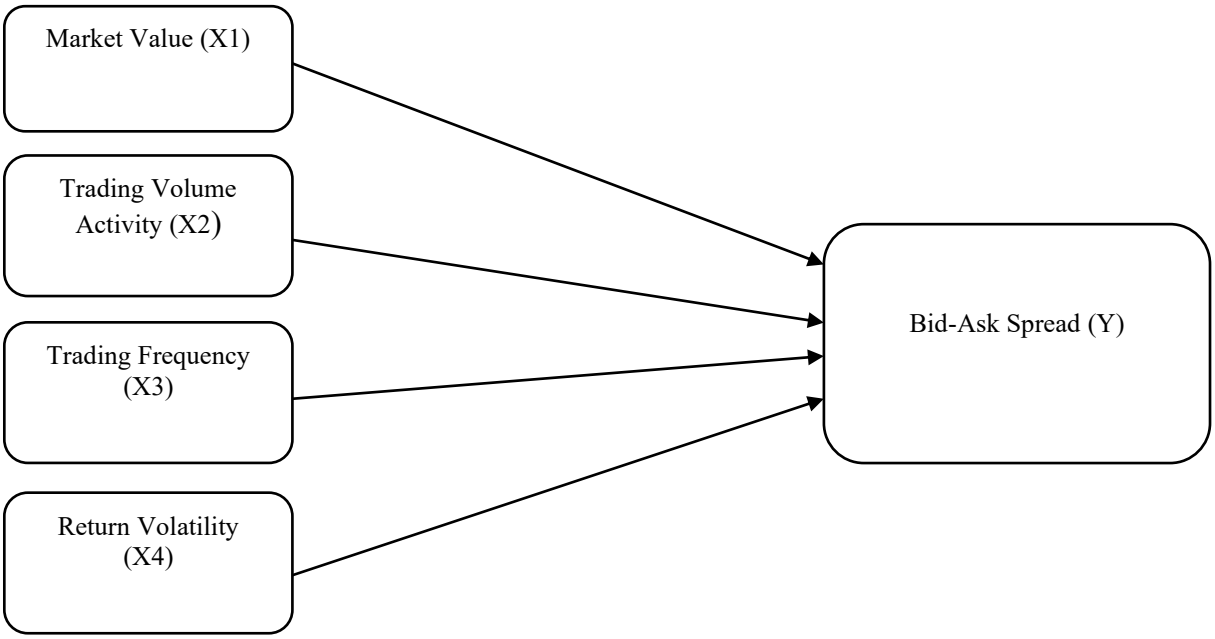
The Influence of Return Volatility on Bid-Ask Spread

Stock return volatility describes the ups and downs of stocks over a certain period of time. Volatility of returns fluctuates in response to new information received by investors (Hussain 2011). All market participants, including investors, traders, brokers and the government as policymakers are very concerned about return

volatility because returns and risks have a positive relationship, the greater the risk that must be beared, the greater the return that must be compensated, this means that the greater the volatility of a company's stock returns, the company will be considered to have a very high risk. thus causing the bid-ask spread to get bigger (Hartono 2017, 305). This statement is in line with the results of the research Pinder (2003) which states that return volatility has a positive effect on the bid-ask spread. Based on the above statement, the hypotheses that can be formulated in this study are:
H4: return volatility has a positive and significant effect on the bid ask spread.

Research Conceptual Framework

Figure 1. Research Conceptual Framework



III. RESEARCH METHOD

Operational Definition

1. Bid-Ask Spread (Y)

The bid price is the highest price offered by a broker or the price at which the specialist offers to buy the stock, while the ask price is the lowest price at which the specialist or broker is willing to sell the stock. The spread is the distance between the bid and ask values. The bid-ask spread is the difference between the highest buy price and the lowest selling price at one time. The bid and ask price used in this study are the daily bid and ask price throughout the research period, namely January-June 2023. The bid-ask spread can be calculated with the following formula (Atkins and Dyl 1990):

$$BAS = \left[\frac{Ask - Bid}{(Ask + Bid)/2}\right] \times 100$$

Where:
BAS : Bid-ask spread daily spread of banking stocks
Bid : Daily highest bid price for banking stocks
Ask : Daily lowest selling price of banking stocks

2. Market Value (X1)

Market value is the value of all shares owned by banking companies in the stock market. Market value is the result of multiplying the market price and the number of outstanding shares. The market price used in this study is the daily closing price of banking stocks listed on the Indonesia Stock Exchange (IDX) for the January-June 2023 period. Market value can be calculated with the following formula (Nor 2013, 72):

$$MV = Mp \times Js$$

Where:
MV : Daily market value of banking stocks
Mp : Daily market price of banking stocks
Js : Number of outstanding shares

3. Trading Volume Activity (X2)

Trading volume activity is defined as the number of shares traded in a certain period. Stock trading volume is the ratio between the number of shares traded at a given time versus the number of shares outstanding at a given time. The trading volume activity used in this study is the daily trading volume of banking stocks listed on the Indonesia Stock Exchange during the research period, namely January-June 2023. Trading volume activity can be calculated with the following formula (Husnan 2009, 283):

$$TVA = \frac{\sum \text{Saham perusahaan perbankan yang diperdagangkan}}{\sum \text{Saham perusahaan perbankan yang beredar}}$$

Where:
TVA : Daily trading volume of banking stocks

4. Trading Frequency (X3)

Trading frequency is the number of times a banking company's stock buying and selling transactions occur at a given time (Patoni and Lasmana 2015). The trading frequency used in this study is the daily trading frequency of banking stocks listed on the Indonesia Stock Exchange for the January-June 2023 period.

5. Return Volatility (X3)

Return is one of the factors that motivate investors to invest and is a reward for the investor's courage to bear the risk of the investment he makes. Return volatility in this case is a calculation of the risk that a stock is associated with deviations from the received results with the expected ones. Return volatility can be calculated with the following formula (Hartono 2017, 307):

$$Rv = \sqrt{\frac{\sum_1^N (Xi - X)^2}{N-1}}$$

Where:
Rv : Daily volatility return of banking stocks
Xi : Daily return of banking stocks
X : Average daily return of banking stocks
N : Amount of data

Population and Sample

The population in this study is 46 banking companies listed on the Indonesia Stock Exchange (IDX) for the January-June 2023 period. However, because the volatility return calculation uses stock price data 1 day before the research period, stock price data on the last trading day in 2022 and a sample of 23 banking companies during the January-June 2023 period are needed.

Data Analysis Techniques

The data analysis technique used in this study is multiple linear regression analysis with the help of the SPSS statistical calculation tool. The SPSS program used in this study is SPSS 23. Multiple linear regression analysis is an analysis to measure the magnitude of the influence between two or more independent variables on a single dependent variable and predict the dependent variable using independent variables (Priyastama 2020, 154). In this study, there are two or more independent variables and one dependent variable. The multiple linear regression model is as follows:

$$\text{Bid-Ask Spread} = \alpha + \beta 1MV + \beta 2TVA + \beta 3TF + \beta 4RV + \varepsilon$$

Where.
α : Constant
β1β2β3β4 : Independent variable regression coefficient
MV : Market value
TVA : Trading Volume Activity
TF : Trading Frequency
RV : Return Volatility
ε : Standard error

IV. ANALYSIS AND DISCUSSION

Descriptive Statistic

Descriptive statistical analysis was carried out to provide an overview of the characteristics of the research data before further testing was carried out. Descriptive statistics in this study include mean values, minimum values (min), maximum values (max), and standard deviations (std. dev) from the research variables

consisting of bid-ask spread (BAS), market value (MV), trading volume activity (TVA), trading frequency (TF), and return volatility (RV).

Table 1. Descriptive Statistical Test Results

No.	Variable	N	Minimum	Maximum	Mean	Std. Deviation
1	Market Value	2622	14,89	34,66	30,3410	2,07968
2	Trading Volume Activity	2622	-17,70	15,59	-9,0552	2,97594
3	Trading Frequency	2622	1,39	10,91	6,0405	2,15002
4	Return Volatility	2622	-13,80	-4,62	-9,9235	2,47195
5	Bid Ask Spread	2622	-1,61	1,79	-0,3758	0,63228
Valid N (listwise)		2622				

Source: IBM SPSS, Data Processed, 2023.

Based on Table 1, it is known that the Market Value variable has an average value of 30.3410 with a relatively low data spread (standard deviation of 2.07968), indicating that most of the observed banking stocks are classified as large capitalized. Meanwhile, the Trading Volume Activity variable has a negative average value (-9.0552), with a considerable range of values, which indicates a significant difference in liquidity levels between stocks. The Trading Frequency variable shows an average of 6.0405, indicating that the frequency of banking stock transactions is quite active. For the Return Volatility variable, the average value of -9.9235 indicates volatile price volatility during the observation period. The main variable of the study, namely the Bid-Ask Spread, has an average value of -0.3758 with a standard deviation of 0.63228, reflecting the disparity in transaction costs between banking stocks that is quite varied. This variability can indicate the existence of different information asymmetry between issuers. These findings provide an early indication that each variable exhibits a fairly high heterogeneity, which is the basis for further testing through regression analysis.

Classic Assumption Test

The classical assumption test is a statistical requirement that must be met in multiple linear regression analysis. The classical assumption test consists of normality, multicollinearity, heteroscedasticity and autocorrelation tests. Here are the results of each of the classic assumption tests:

1. Normality Test

In this study, the normality test was tested with jarque-bera. Basically, the jarque-bera test is the same as the skewness and kurtosis test, but the difference is that the jarque-bera test compares the statistical value of jarque-bera with the chi-square table. Here are the results of the normality test:

Table 2. Normality Test Results

	N	Skewness		Kurtosis	
	Statistics	Statistics	Std. Error	Statistics	Std. Error
Standardized Residual	2622	-0,689	0,048	-0,960	0,096
Valid N (listwise)	2622				

Source : IBM SPSS, Data Processed, 2023.

By Table 2 of the results of the normality test are known to be *Skewness* of -0.689, value *Kurtosis* of -0.960 and n (total data) of 2,622. With this data, the statistical value of *Jarque-Bera* It can be calculated with the following formula:

$$JB = n\left[\frac{skewness^2}{6} + \frac{(kurtosis-3)^2}{24}\right]$$

$$JB = 2.622\left[\frac{-0,689^2}{6} + \frac{(-0,960-3)^2}{24}\right]$$

$$JB = 2.622\left[\frac{0,4747}{6} + \frac{15,682}{24}\right]$$

$$JB = 2.622\ [0,791\ +\ 0,6543]$$

$$JB = 2.622 \times 0.7325$$

$$JB = 1,920,615$$

Known statistical value Jarque-Bera of 1,920,615 and based on Chi Square A table with a significance level of 0.05 and a degree of freedom (DF) of n-1 is obtained Chi Square table of 2,741,216. With this, it is

concluded that the statistical value Jarque-Bera amounting to 1,920,615 < value Chi Square table of 2,741,216, which means the data is normally distributed.

2. Multicollinearity Test

The multicollinearity test was performed to find out if there is a high linear relationship between independent variables in the regression model. Multicollinearity can cause the estimation results to be unreliable due to the increase in the variance of the regression coefficient. The multicollinearity test in this study can be concluded with the decision-making criteria that multicollinearity does not occur if the tolerance value is greater than 0.10 and the VIF (Variance Inflation Factor) value is less than 10.00. The results of the multicollinearity test are presented in the following table:

Table 3. Multicollinearity Test Results

Variable	Collinearity Statistics		Conclusion
	Tolerance	VIVID	
Market Value	0,433	2,311	Multicollinearity does not occur
Trading Volume Activity	0,203	4,937	Multicollinearity does not occur
Trading Frequency	0,203	4,928	Multicollinearity does not occur
Return Volatility	0,164	6,116	Multicollinearity does not occur

Source: IBM SPSS, Data Processed, 2023.

Based on the results of the multicollinearity test presented in Table 3, all independent variables showed a Tolerance value of > 0.10 and a VIF value of < 10. The Tolerance value ranges from 0.164 to 0.433, while the VIF value is in the range of 2.311 to 6.116. Thus, it can be concluded that there are no symptoms of multicollinearity between independent variables in this regression model. These results indicate that each independent variable has a fairly good ability to uniquely explain the dependent variable without a high correlation with the other variables. Therefore, all independent variables can be included in the multiple regression model without causing distortion to the analysis results.

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3. Heteroscedasticity Test

The heteroscedasticity test in this study uses a white test, with decision-making that if the value of chi square is calculated < *chi square* table, then it is stated that heteroscedasticity does not occur. The results of the heteroscedasticity test are presented in the following table:

Table 4. Heteroscedasticity Test Results

R	R Square	Adjusted R Square	Std. Error of the Estimate
0,354	0,125	0,122	5,32508

Source: IBM SPSS, Data Processed, 2023.

Based on table 4 above, the value of R square is obtained as 0.125, with this chi square can be calculated with the following formula:

$$\text{Chi Square Count} = n \times R \text{ square}$$
$$\text{Chi Square Count} = 2.622 \times 0.125$$
$$\text{Chi Square Count} = 327.75$$

It is known that the chi square value is calculated as 327.75 and based on the chi square table with a significance level of 0.05 and the degree of freedom (df) n-1, the chi square value of the table is 2,741,216. With this, it is concluded that the chi square value is calculated as 327.75 < the chi square value of the table is 2,741,216, which means that does not occur heteroscedasticity.

4. Autocorrelation test

The test method used is the runs test method. A good regression model is a regression that is free of autocorrelation or no autocorrelation with decision-making if the probability value is greater than the alpha value of 0.05, it means that there is no autocorrelation. Here are the results of the autocorrelation test:

Table 5. Autocorrelation Test Results

Asymp. Sig (2-tailed)	0,784

Source: IBM SPSS, Data Processed, 2023.

Based on table 5 of the autocorrelation test results, it shows that the value of asymp Sig (2-tailed) of 0.784 was greater than the alpha value of 0.05, so it can be concluded that there were no symptoms of autocorrelation in this study.

Multiple Linear Regression Analysis

Multiple linear regression is intended to test the liner relationship between two or more variables to dependent variables using market value data, trading volume activity, trading frequency, return volatility and bid-ask spreads in banking companies listed on the Indonesia Stock Exchange in the January-June 2023 period. The results of the analysis are as follows

Table 6. Results of Multiple Linear Regression Analysis

Type	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-8,774	1,041		-8,429	0,000
Market Value	-0,231	0,111	-0,059	-2,084	0,037
Trading Volume Activity	-0,142	0,049	-0,119	-2,870	0,004
Trading Frequency	-0,057	0,034	-0,068	-1,642	0,101
Return Volatility	0,422	0,053	0,367	7,939	0,000
Dependent variable: Bid-ask spread					

Source: IBM SPSS, Data Processed, 2023.

Based on table 6 of the results of the multiple linear regression analysis test above, the regression equation is obtained as follows:

$$\text{Bid-Ask Spread} = -8.774 - 0.231(MV) - 0.142(TVA) - 0.057(TF) + 0.422(RV) + \varepsilon$$

The results of the partial test (t-test) showed that the Market Value had a negative and significant effect on the bid-ask spread, with a coefficient value of -0.231 and a significance value of 0.037 (< 0.05). This shows that the greater the market capitalization value, the bid-ask spread tends to decrease. These findings support research by Widhyawati and Damayanthi (2015) which states that large companies tend to have lower spreads due to smaller risk perceptions from investors; Trading Volume Activity also has a negative and significant effect on the bid-ask spread, with a coefficient of -0.142 and a significance of 0.004 (< 0.05). These findings support the research of Liu, Hua, and An (2016), who stated that increased trading volume activity lowers bid-ask spreads due to decreased liquidity risks that brokers must bear; Trading Frequency has a negative but not significant effect on the bid-ask spread, with a coefficient of -0.057 and a significance of 0.101 (> 0.05). This means that high trading frequencies do not necessarily have a significant direct effect on lowering spreads. This shows that this variable has not yet become the dominant indicator in influencing information asymmetry in the stock market in the banking sector; and Return Volatility shows a positive and significant influence on the bid-ask spread, with a coefficient of 0.422 and a significance value of 0.000 (< 0.01). These results indicate that the higher the volatility of returns, the larger the bid-ask spread, reflecting the high risk and information uncertainty faced by investors. These findings are consistent with financial theory that high risk demands compensation in the form of larger spreads.

Thus, partially the variables market value, trading volume activity, and return volatility have a significant influence on the bid-ask spread, while the trading frequency does not show a significant influence. These findings reinforce the argument that bid-ask spreads are influenced by market micro factors, especially related to company size, liquidity, and market risk.

Correlation Coefficient (R) and Coefficient of Determination (R^2)

The strength of the influence of market value, trading volume activity, trading frequency, and return volatility on the bid-ask spread of banking stocks listed on the IDX for the January-June 2023 period can be seen from the correlation coefficient (R) and determination coefficient (R^2) in the following table:

Table 7. Results of Correlation Coefficient (R) and Determination (R^2)

R	R Square	Adjusted R Square	Std. Error of the Estimate
0,296[a]	0,087	0,086	2,36330

Source: IBM SPSS, Data Processed, 2023.

Based on the Table 7 show that the value of the correlation coefficient (R) is 0.296. This value indicates a positive but weak relationship between independent variables (market value, trading volume activity, trading

frequency, and return volatility) and the dependent variable bid-ask spread. Nonetheless, a positive direction of the relationship suggests that simultaneous changes in independent variables tend to correlate with changes in bid-ask spreads in the same direction. Furthermore, the value of the determination coefficient (R Square) of 0.087 or 8.7% indicates that the variation in the bid-ask spread can be explained by the four independent variables of 8.7%. Meanwhile, the remaining 91.3% was explained by other factors outside of this research model. The Adjusted R Square value of 0.086 adjusts the R^2 value to the number of independent variables and sample size, and shows very close results, which means that the model is quite stable although not very strong in explaining the dependent variables. Although the level of determination is relatively low, these findings are still academically relevant because they show that micro factors such as market size, trading activity and frequency, and return volatility have a role in influencing the asymmetry of information reflected through bid-ask spreads. However, these results also provide room for further exploration of other variables that may be more dominant in explaining the movement of bid-ask spreads, including macroeconomic factors, market regulation, and investor sentiment.

F Test (Simultaneous)

A statistical test f was performed to test the feasibility of the model used in the study. If the p-value < a level of significance (Sig < 0.05), then it can be said that the model is worth researching, or the model fits. The results of the f test are as follows:

Table 8. Results of F Test

F-Statistics	62,630
Sig. F-Statistics	0,000
Dependent variable : Bid-ask spread	

Source: IBM SPSS, Data Processed, 2023.

Based on the results of the F test presented in Table 8, an F-calculation value of 62.630 was obtained with a significance value of 0.000. The significance value is well below the threshold of $\alpha = 0.05$, which means that the regression model is simultaneously statistically significant. Thus, it can be concluded that together independent variables consisting of market value, trading volume activity, trading frequency, and return volatility have a significant effect on the dependent variable, namely the bid-ask spread. These findings strengthen the hypothesis that the dynamics of the microstructure characteristics of the banking stock market on the Indonesia Stock Exchange in the observation period (January–June 2023) contribute significantly to explaining the variation in bid-ask spreads that reflect the level of information asymmetry in the market. This F test also shows that the regression model constructed is feasible for use in further analysis because it is able to explain the causal relationship between the free variable and the bound variable as a whole.

V. CLOSING

Conclusion and Recommendation

Conclusion

1. Market value has a negative and significant effect on the bid-ask spread of shares of banking companies listed on the IDX for the January-June 2023 period. Large market value can attract investors and cause brokers to quickly offload shares. However, when the market value decreases due to a decrease in the price and the number of shares outstanding, this can lower investor confidence and increase the cost of ownership for the broker. The cost of owning shares borne by the broker is what will ultimately lead to an increase in the value of the bid ask spread.
2. Trading volume activity has a negative and significant effect on the bid-ask spread of shares of banking companies listed on the IDX for the January-June 2023 period. Trading volume activity reflects the market's response to information and affects the bid ask spread. Low trading volume activity causes the bid ask spread to widen due to information asymmetry and lack of liquidity. Conversely, high volume trading activity increases liquidity, lowers the cost of ownership of shares for brokers and narrows the bid ask spread, thus creating better price efficiency in the capital market.
3. Trading frequency has a negative and insignificant effect on the bid-ask spread of shares of banking companies listed on the IDX for the January-June 2023 period. High trading frequency encourages competition between buyers and sellers so that it can reduce the bid ask spread. In contrast, stocks that are rarely traded tend to have wider bid ask spreads due to a lack of competition and the potential for information asymmetry. The high trading frequency also encourages brokers not to hold shares for too long which ultimately reduces the cost of ownership and reduces the bid ask spread.
4. Return volatility has a positive and significant effect on the bid-ask spread of shares of banking companies listed on the IDX for the January-June 2023 period. Stock return volatility is used as one of the risk gauges, this means that the greater the volatility of a company's stock returns, the company will be considered to

have very high risk and cause uncertainty in the market. This causes dealers to tend to set larger ask spread bids to offset the risk level on the company.

Recommendation

Based on the conclusion regarding the influence of market value, trading volume activity, trading frequency and return volatility on bid-ask spreads in banking companies listed on the Indonesia Stock Exchange for the period January-June 2023, it is recommended that:

1. With the right strategy, brokers can generate significant revenue from the difference between the bid price and the ask price. To maximize profits through bid-ask spreads, brokers can optimize their bid and ask price quotes, adjust the broker's strategy to market value, trading volume activity and return volatility which in this study have been shown to have a significant effect on bid-ask spreads.
2. Before making a decision to invest in stocks, investors and traders should consider the market value, trading volume activity and return volatility which are proven to show significant results on the bid ask spread. This can provide an overview of information and reference considerations to avoid losses incurred and maximize profits for investors and traders.
3. For the next researcher, first, it is hoped that they can research more deeply related to other factors that can allegedly affect *the bid-ask spread*. Second, it is suggested that the subject of the research is not only limited to banking companies. Third, it can consider the influence of *trading volume activity* and *trading frequency* as independent variables because the two variables are similarly related so that the results obtained are more accurate and varied.

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