

The Effect Of Stock Price, Share Trading Volume And Stock Return Volatility On Bid-Ask Spread On Lq45 Companies Listed On Idx In 2019

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ABSTRACT

The purpose of this study was to determine the effect of stock prices, stock trading volume, and stock return volatility on the bid-ask spread on the LQ45 index of companies listed on the Indonesia Stock Exchange. The period used in this study is four quarters during 2019. The technique used in sampling is by using purposive sampling and obtained 32 companies. The data analysis technique used is multiple linear regression analysis. The results showed that partially the stock price had a negative and significant effect on the bid-ask spread as indicated by the t-count value of $-3.964077 > t\text{-table } 1.649$ and the value of Prob. $0.001 < 0.05$. The stock trading volume variable partially has no effect on the bid-ask spread as indicated by the t-count value of $0.177347 < t\text{-table } 1.649$ and the value of Prob. $0.8595 > 0.05$. Then the stock return volatility variable has no effect on the bid-ask spread as indicated by the t arithmetic value of $0.634639 < t\text{-table } 1.649$ and the value of Prob. $0.5268 > 0.05$. Simultaneously F-statistic $5.93433 > F\text{-table } 2.68$ and the value of Prob (F-statistic) $0.000814 < 0.05$, it can be concluded that the variables of Stock Price (X1), Stock Trading Volume (X2) and Stock Return Volatility (X3) jointly affect the Bid-Ask Spread (Y).

Keywords : Bid-Ask Spread, Stock Prices, Stock Trading Volume, and Stock Return Volatility

PRELIMINARY

Economic growth in the current era of globalization shows a fairly rapid development. Business actors are required to continue to innovate and develop their business. With globalization, it is easier for business actors to expand the market and get profits. This causes the competition in the business world to be more stringent. More and more companies are ready to compete in the business and economic world by increasing the value of the company (Putra et al, 2017).

In increasing the value of the company, capital is needed so that the company can run its business in the long term. Capital is an important aspect in running a company or business. Without capital, the company's activities will be very limited. One way to get funds is through the capital market. The capital market also provides various kinds of investments and the level of risk that is expected so that investors can choose investments according to their wishes, one of which is stocks.

Generally, the purpose of investors in stock investment is to get dividends and capital gains. To be able to make the right investment, investors need some information related to stock price movements in order to make decisions about stocks that are worth choosing.

The availability of information is very important for investors who want to invest so that there is no information imbalance or asymmetric information among market participants. Asymmetric information is a situation where market participants know important information while other market participants do not know the information at all. The bid-ask spread actually measures asymmetric information or asymmetric information between brokers and investors. Therefore, the bid-ask spread is very important to obtain information about asymmetric information in the capital market (Rio et al, 2020).

The bid-ask spread is the difference between the buying and selling prices at a certain time. Bid price is the price of investors who will buy shares from an issuer. Ask price is the price of investors who will sell shares of an issuer. Spread is the difference between the selling price (ask spread) and buying (bid price).

Based on data obtained from the financial services authority (OJK), the development of the average bid ask spread for shares over the last six years has

experienced an unstable increase and decrease. In 2014 the average bid ask spread value of shares listed on the IDX was 3.82%, then in 2015 it rose to 3.99%, after that in 2016 it decreased by 3.10%. Then in 2017 the average value of the bid-ask spread rose to 3.50%. However, in 2018 and 2019 the average value of the bid-ask spread has decreased drastically, namely by 3.16% and 2.87%, respectively.

From the data, the average bid-ask spread has increased and decreased, especially in 2017-2019. This shows the trend in the capital market tends to fall and investors will be careful in making investment decisions.

One of the factors that affect the bid-ask spread is the stock price. The share price is the price offered by market participants from the demand or supply of shares listed on the stock exchange. According to Wahyuni and Rikumuhu (2017), high stock prices tend to attract investors to buy these shares, this will lead to a decrease in the cost of ownership (inventory cost) which will also have an impact on the size of the bid ask spread which will narrow.

Stock trading volume is used to see the market reaction through observing changes in trading volume in the capital market. By observing the trading volume of shares, investors will know whether the transactions in these shares tend to be liquid or not. Investors do not like illiquid stocks because it will lower the pressure on the spread.

Volatility can be interpreted as fluctuations in the return of a security within a certain period (Pratama and Susetyo, 2020). Stock return volatility is the volatility of stock price returns that pays attention to the ratio of stock price returns. In addition, the volatility of stock returns also reflects the uncertainty or risk of the magnitude of changes in the value of securities. In this case, investors can see the risks that will be faced by taking into account the volatility or variance of stock returns.

RESULTS AND DISCUSSION

A. Descriptive Analysis

Table 1 Descriptive Statistical Test Results

	Y	X1	X2	X3
Mean	0.003543	9163.234	0.001326	0.085645
Median	0.003195	3775.000	0.000828	0.058809
Maximum	0.016110	83200.00	0.007855	1.228295
Minimum	0.000469	260.0000	0.000137	2.10E-05
Std. Dev.	0.002054	14421.17	0.001410	0.129777
Skewness	2.371894	2.931174	2.442310	6.087366
Kurtosis	13.61453	12.28726	9.367542	50.13374
Jarque-Bera	720.9159	643.3080	343.4938	12639.01
Probability	0.000000	0.000000	0.000000	0.000000
Sum	0.453500	1172894.	0.169740	10.96254
Sum Sq. Dev.	0.000536	2.64E+10	0.000253	2.138936
Observations	128	128	128	128

Table 1 shows that the statistical test results for each variable are as follows:

1. The dependent variable, namely Bid-Ask Spread, has a minimum value of 0.000469, a maximum value of 0.016110, an average value of 0.003543 and a standard deviation of 0.002054.
2. The independent variable, namely stock price, has a minimum value of 260, a maximum value of 83,200, an average value of 9,163 and a standard deviation of 12.28.
3. The independent variable, namely Trading Volume, has a minimum value of 0.000137, a maximum value of 0.007855, an average value of 0.001326 and a standard deviation of 0.001410.
4. The independent variable, namely the volatility of stock returns, has a minimum value of 0.00021, a maximum value of 1.228295, an average value of 0.085645 and a standard deviation of 0.1297.

B. Panel Data Regression Model

Dalam mengestimasi model regresi data panel, maka perlu dilakukan tiga metode uji, yaitu :

- a. Common Effect Model (CEM)

Table 2. Estimation of Common Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.003993	0.000299	13.35297	0.0000
X1	-5.93E-08	1.20E-08	-4.948815	0.0000
X2	-0.002912	0.122483	-0.023774	0.9811
X3	0.001136	0.001288	0.881854	0.3796

b. Fixed Effect Model (FEM)

Table 3. Estimated Fixed Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.003816	0.000447	8.531869	0.0000
X1	-4.55E-08	3.22E-08	-1.416102	0.1601
X2	0.085751	0.171965	0.498657	0.6192
X3	0.000356	0.001389	0.256161	0.7984

c. Random Effect Model (REM)

Table 4. Estimated Random Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.003971	0.000345	11.51335	0.0000
X1	-5.76E-08	1.45E-08	-3.964077	0.0001
X2	0.023416	0.132037	0.177347	0.8595
X3	0.000802	0.001264	0.634639	0.5268

C. Selection of Panel Data Regression Model Estimation

Furthermore, the researchers conducted the Chow, Hausman and Lagrange Multiplier tests. To find out what model is selected in the estimation of the model. Is it CEM, FEM or REM test.

Table 5. Chow test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	1.881904	(31,93)	0.0108
Cross-section Chi-square	62.326157	31	0.0007

Based on the test results above, it can be seen that the probability value of the Cross section F shows the number 0.0108 and the cross-section chi-square 0.0007,

where the number is smaller than the test significance level of 0.05, it can be concluded that the Fixed Effect Model (FEM) is more feasible to use than the FEM. with the Common Effect Model (CEM).

Tabel 6. Uji Haussman

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.147481	3	0.7656

Based on the test results above, it can be seen that the probability value (Prob.) of random cross-section shows the number 0.7656, where the number is greater than the significance test level of 0.05, it can be concluded that the Random Effect Model (REM) is more feasible to use than the Fixed Effect. Models (FEM).

Table 7. Uji Langrange Multiplier

Null (no rand. effect) Alternative	Cross-section One-sided
Honda	2.411865 -0.0079

Based on the results of the above calculation, the value of the Breusch Pagan Honda Cross-section Probability is $0.0079 < 0.05$, it can be concluded that the Random Effect Model (REM) is more feasible to use than the Common Effect Model (CEM).

D. Classic assumption test

In panel data regression, the Ordinary Least Squared (OLS) based model is the Common Effect Model (CEM) or Fixed Effect Model (FEM). On the other hand, if the regression equation is more suitable to use the Random Effect Model (REM), then there is no need to test the classical assumption, because the Random Effect Model (REM) uses the General Least Squared (GLS) approach in its estimation technique. The results of the estimation of the regression model chosen in this study are the Random Effect Model (REM) model, so there is no need to test the classical assumptions.

E. Panel Data Regression Equation

Table 8. Panel Data Regression Equation

Variable	Coefficient
C	0.003971
X1	-5.76E-08
X2	0.023416
X3	0.000802

$$Y = 0,003971 - 5,76E-08 X1 + 0,023416 X2 + 0,000802 X3 + \varepsilon$$

The interpretation of the regression equation above is as follows:

1. Coefficient (α) 0.003971 The constant value indicates that if the Stock Price, Stock Trading Volume, and Stock Return Volatility have a value of 0 (zero) then the Bid-Ask Spread that occurs is 0.004771.
2. Share Price Coefficient (β_1) - 5,76E-08 The Share Price Coefficient value of - 5,76E-08 indicates that every 1% increase in Share Price will be followed by a decrease in Bid-Ask Spread of 5.76E-08 assuming the other coefficients are held constant.
3. Share Trading Volume Coefficient (β_2) 0.023416 Share Trading Volume coefficient value of 0.023416 indicates that every 1% increase in Stock Trading Volume will be followed by an increase in Bid-Ask Spread of 0.023416 assuming other coefficients are held constant.
4. Stock Return Volatility Coefficient (β_3) 0.000802 The Stock Return Volatility coefficient value of 0.000802 indicates that every 1% increase in Stock Return Volatility will be followed by an increase in Bid-Ask Spread of 0.000802 assuming the other coefficients are held constant.
5. Epsilon If the values of X1, X2 and X3 are 0 (zero) then Y is equal to 0.003971 due to other factors that affect the Y variable but are not examined

F. Hypothesis Test

1. F test (simultaneous)

Table 9. F test (simultaneous)

F-statistic	5.93433
Prob(F-statistic)	0.000814

Table 9 shows that the F-statistic value is 5.93433, while the F table with a level of = 5%, $df_1(k-1) = 3$ and $df_2(n-k) = 124$ the F table value is 2.68. Thus, F-statistic $5.93433 > F$ Table 2.68 and the value of Prob (F-statistic) $0.000814 < 0.05$, it can be concluded that H_a is accepted, meaning the variables of Stock Price (X1), Stock Trading Volume (X2) and Stock Return Volatility (X3) together have an effect on the Bid-Ask Spread (Y), so that the panel data regression model deserves further research.

2. Test R2 (Coefficient of Determination)

Table 10. R2 Test (Coefficient of Determination)

R-squared	0.125547
Adjusted R-squared	0.104391

Table 10 shows that the Adjusted R-squared value is 0.104391, meaning that the variation of changes in the company's value can be explained by Stock Price, Stock Trading Volume and Stock Return Volatility of 10.439%, while the remaining 89.561% is explained by variables. others that were not investigated in this study.

3. t test (Partial)

Tabel 11. t test (Partial)

Variable	t-Statistic	Prob.
C	11.51335	0.0000
X1	-3.964077	0.0001
X2	0.177347	0.8595
X3	0.634639	0.5268

Based on table 11 above shows that:

a. Effect of Stock Price on Bid-Ask Spread.

The t-statistic value of the stock price is -3.964077, while the t-table with a level of $\alpha = 5\%$, $df (n-k) = 124$ the t-table value is 1.97928. Thus the t-statistic of Stock Price - 3.964077 > t Table (1.649) and the value of Prob. 0.0001 < 0.05, it can be concluded that H_0 is accepted, so it can be concluded that the stock price variable in this study has an effect on the Bid-Ask Spread.

Stock prices have a negative and significant effect, meaning that the more active the stock price, the investors or dealers will not hold their shares for too long, causing the cost of ownership to decrease and the spread to narrow. In addition, stock turnover tends to be fast and stocks become liquid. With the increase in stock prices, it indicates that economic conditions are good so that investors assess investment in the form of shares to be profitable.

These results are in line with the research conducted by Hamidah et al. (2018), Wahyuni and Rikumuhu (2017), Doni and Mayar (2019), Fatikhah and Puryandani (2020) which state that stock prices have a negative effect on the bid-ask spread.

b. Effect of Stock Trading Volume on Bid-Ask Spread.

Nilai t-statistic Volume Stock trading is 0.177347, while t table with a level of $\alpha = 5\%$, $df (n-k) = 124$ obtained t table value of 1.97928. Thus the t-statistic of Stock Trading Volume 0.177347 < t Table 1.649 and the value of Prob. 0.8595 > 0.05, it can be concluded that H_0 is rejected, so it can be concluded that the Stock Trading Volume variable in this study has no effect on the Bid-Ask Spread.

Stock Trading Volume has no effect on Bid-Ask Spread. This reflects that the size of the trading volume will not affect the value of the decline in the stock bid-ask spread. This condition occurs when a large trading volume is not supported by a large trading frequency, because the trading volume formed on the exchange does not come from active trading from market participants but is the result of purchases to increase the liquidity of certain shares. So the trading volume cannot show that the stock is in demand by investors.

This is in line with research conducted by Sabna and Siti (2020), Erlinda et al. (2019), and Rosdiana (2019) which states that Stock Trading Volume has no effect on the stock bid-ask spread.

c. Effect of Stock Return Volatility on Bid-Ask Spread

The t-statistic value of Stock Return Volatility is 0.634639, while the t-table with a level of $\alpha = 5\%$, $df (n-k) = 124$ the t-table value is 1.97928. Thus, the t-statistic of Stock Trading Volume is $0.634639 < t \text{ Table } 1.649$ and the value of Prob. $0.5268 > 0.05$, it can be concluded that H_a is rejected, so it can be concluded that the Stock Return Volatility variable in this study has no effect on the Bid-Ask Spread.

According to Husnan in Rio et al. (2020), an efficient investment is one that provides a certain risk with the greatest rate of return, or the highest level of return with the smallest risk. In other words, if there are two investment proposals that provide the same level of profit, but have different risks, a rational investor will choose an investment that has a smaller risk. The results in this study indicate that risk has no effect on the bid-ask spread, this can be because investors do not care about the amount of risk that must be borne as long as the bid-ask spread remains profitable.

The results of this study are in line with Wahyuni and Rikamuhu's research (2017) which states that Stock Return Volatility has no effect on the bid-ask spread. However, contrary to the research of Rio et al. (2020), Farida et al. (2019), Rasyid et al. (2016), Doni and Mayar (2019), and Rosdiana (2019) which state that the volatility or variance of stock returns has a positive effect on the bid ask spread.

CONCLUSIONS AND SUGGESTIONS

Based on the results of the analysis of the Stock Price, Stock Trading Volume and Stock Return Volatility of the Bid-Ask Spread on the LQ 45 company, the following conclusions can be drawn:

1. The results of the first variable test show that the stock price has a partial and significant effect on the Bid Ask Spread with a t-count value of $-3.964077 > t\text{-table } 1.649$ and the value of Prob. $0.0001 < 0.05$ so the first hypothesis is accepted. This means that the stock price has a significant negative effect on the Bid Ask Spread.
2. The results of the second variable test show that the Stock Trading Volume partially has no effect on the Bid-Ask Spread with a t count value of $0.177347 < t \text{ Table } 1.649$ and a Prob value. $0.8595 > 0.05$ so the second hypothesis is rejected. This means that the Stock Trading Volume has no effect on the Bid-Ask Spread.
3. The results of the third variable test show that Stock Return Volatility partially has no effect on the Bid-Ask Spread with a t-count value of $0.634639 < t\text{-table } 1.649$ and a Prob value. $0.5268 > 0.05$ so that the third hypothesis is accepted. This means that Stock Return Volatility has NO effect on the bid-ask spread.

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