

THE INFLUENCE OF LIQUIDITY, PROFITABILITY, SOLVENCY, AND STOCK PRICES ON STOCK LIQUIDITY LQ 45

Anita Juwita¹, Putu Aditya Pratama²

^{1,2}Accounting Department, School of Accounting, Bina Nusantara University,
Jakarta, Indonesia, 11480

¹anita.juwita@binus.ac.id , ²putu.pratama@binus.ac.id

ABSTRACT

The research demonstrates the consequence of liquidity, profitability, solvency, and stock prices on stock liquidity of LQ45 for companies listed on the Indonesia Stock Exchange period 2013-2020. The research method uses a quantitative approach, and the population was all LQ45 companies listed in the BEI period 2013-2020. The sampling method uses non-probability sampling with a purposive sampling technique. This study uses secondary data of financial statements and analysis techniques using panel data regression model Eviews 10. The results showed that liquidity and solvability do not affect on stock liquidity of LQ45 companies. Profitability has a positive and significant effect on the stock liquidity of LQ45 companies, and stock prices have a negative and significant effect on the stock liquidity of LQ45 companies.

Keywords: *Liquidity, Profitability, Solvency, Stock Price, Stock Liquidity*

INTRODUCTION

The negative and significant impact of the COVID-19 pandemic has cumulatively increased the number of victims exposed. Leading stocks with high liquidity with large market capitalization and inclusion in the LQ45 stock index on the Indonesia Stock Exchange are also affected by the COVID19 pandemic. The results of the statistical analysis show that there is a difference in stock prices before and after the COVID19 pandemic. The share price has been volatile, and most LQ45 member companies have experienced significant stock price declines. The COVID-19 pandemic has provided a new experience in world stock markets, especially in LQ45 - IDX. It needs crucial attention from investors and issuers to the situation that brought about the economic crisis in almost all fields. Since the first case of Covid-19 in Indonesia, the composite Stock Price Index (IHSG) has decreased continuously, from 6000 to a low of 3000 points on March 24, 2020 (kontan.co.id). The high volatility and fluctuations during the pandemic were experienced by the LQ45 stock index, a collection of stock indices known to be the most liquid with the highest trading volume compared to other indexes on the Indonesia Stock Exchange. LQ45 stock issuers are known to be blue-chip with good fundamentals, and significant declines are also inevitable in this index. This study focused on LQ-45 stocks on the Indonesia Stock Exchange for 2013-2020. LQ-45 stocks are classified as suitable for stock investment options due to stable prices and relatively lower risk. The LQ45 shares have many outstanding shares and high trading volume, so the demand for offers and the number of lots traded daily must exist.

Chandra (2015) states that the most critical consideration for investors in buying shares is the liquidity factor. Harris (2015) states that all stock exchanges like liquidity because they can attract traders to the stock exchange or capital market. Before investing, investors evaluate the company's performance. Investors will certainly only invest in companies with good performance to benefit investors. Investors expect two things when buying shares that return from capital gains and dividends. Investors prefer liquidity because of its low volatility compared to illiquid stocks. Liquid shares are a condition where when an investor wants to sell shares. Other investors are ready to buy them, and vice versa. Other investors are willing to sell their shares when they want to buy shares. (Khan et al, 2019) stated that a company's financial ratio analysis provides

information about the success and direction of the company's policies for the future. Stakeholders consider financial performance factors while deciding to invest in or lend funds to companies. The company's financial achievement can be assessed by analyzing the financial ratios. In this study, only three financial ratios are liquidity, profitability, and solvency. The profitability ratio is the company's ability to fulfill a profit or measure the effectiveness of the company's management.

Profitability in this study is proxied by Earnings Per Share (EPS). Khan et al. (2019) stated the total asset turnover and profit margin is financial factors that positively affect stock liquidity. The liquidity ratio is the company's commitment to fulfilling short-term financial debt utilizing available current funds. Salamat (2016) stated that earnings per share, interest rate, and gross domestic product positively affect stock liquidity. Wira (2012) mentioned that profitability has no consequence on stock liquidity, while liquidity and leverage affect stock liquidity.

The solvency ratio is the company's strength in fulfilling its commitment both for the short and long term, or measuring the company is assisted with liability. Solvency in this study is proxied by the debt to equity ratio. (Kasmir, 2018) stated that investors prefer to avoid stocks with high DER value because higher DER value reflects considerable risk for the company. Khan et al. (2019) stated that the debt ratio and return on assets negatively affect the liquidity of the shares. Besides, corporate liquidity measurement (current ratio) and EPS do not significantly affect liquidity stock. Gopalan et al. (2012) mentioned asset liquidity affecting stock liquidity in the United States. Haddad (2012), the debt ratio not affecting on liquidity shares on the Amman Stock Exchange. The results of the previous research show that there are still inconsistent results between one researcher and another, resulting in gap research; on this basis, the researchers are interested in testing the Effect of Liquidity Ratios, Profitability, Solvency, and Stock Prices on Stock Liquidity LQ45.

Liquidity

Yanti Darmayanti (2019) stated that liquidity could affect a company's value. The company can pay commitment to the creditors on time due to the higher level of company liquidity, the better the company's position with the creditors. Charles P. Jones (2014: 547) mentioned that stock liquidity is convenient while assets can be sold without significant price changes from disposal assets. (Sudana and Nurul Intan, 2008), the more liquid a stock is, the faster and easier it is to be traded or converted into cash. Investors should choose liquid stocks if they make short-term investments to get returns. Timman et al. (2014) mentioned that liquidity is the speediness of conversion days of the asset into cash. The faster time needed to convert into cash can ease the company to commit the due payable. Cornett et al. (2015,78) mentioned the relationship current asset and current liability measured by liquidity ratio. High liquidity indicates the company's commitment to meeting its short-term obligations. (Kasmir, 2018) mentioned liquidity is the company's commitment to fulfilling its financial commitment in the short term with available current funds. In other words, liquidity is helpful to know the company's commitment to financing and debt obligations or when charged at maturity. Liquidity for this study is proxied by current assets.

Profitability

Profitability ratio is the result of several policies and decisions made by the company. This profitability specifies the company's commitment in accomplish profits at a convincing stage of sales, assets, and share capital. There are three ratios which are generally reviewed, specifically profit margin, return on assets (ROA), and return on equity (ROE). ROA measures the company's commitment to accomplish net income based on a convincing stage of assets. Significant ROA demonstrates the efficiency of asset management. Kasmir (2018) mentioned that "profitability is the extent to which the company can generate profits or quantify the effectiveness of the management. The commitment to earn profits can be measured from its

capital or all funds invested into the company. Profitability in this study is proxied by earnings per share (EPS).

Solvability

Solvency is an instrument to convince how the company relies on creditors to finance the company's assets. Solvency is also defined as either long-term or short-term debt of the company. Solvency can be obtained through the capital market and money market by issuing bonds or shares to obtain funds from the capital market. At the same time, if the company wishes to obtain funds from the money market, the company can apply to the bank. (Kasmir,2018) solvency is the company's commitment to fulfilling its financial obligations for the short and long term or convincing the enhancement to which the company is financed by debt. The profit obtained will be even greater if the higher the ratio is achieved. Titman et al. (2014, 520) stated to finance its assets and show how much non-owner financing or financial leverage is needed, a ratio measures the extent to which the company has used non-owner financing (borrowing money) against debt.

Solvency in this research is proxied by the debt to equity ratio (DER), which is used to assess debt to all equity and can provide general instructions about the feasibility and financial risk of the company. The higher the DER reflects, the higher the company's debt level. This high ratio shows that the total debt composition is greater than the total equity, thereby increasing the risk received by investors due to the debt interest expense borne by the company. This high ratio will lead to higher stock liquidity.

Stock Price

The stock price reflects investor intention of factors; cash flow and rate of return required by investors, the third factor is influenced by economic performance, and stock price is one indicator of company management. Success in generating profits will provide satisfaction for rational investors. According to Tandililin (2016), the stock price is divided into three; (1) Book Value is the value calculated based on the books of the issuing company (issuer), (2) Market Value is the value of shares in the market, which is indicated by the price of these shares in the market. (3) Intrinsic Value is the actual or supposed value of the stock. In this study, the stock price will be measured using the stock price based on market value, which is the closing price of the stock's supposed value. In this study, the stock price will be measured using the stock price based on market value, which is the stock's closing price.

Research Model

Independent variables in this study are liquidity, profitability, solvency, and stock prices. The dependent variable in this study is stock liquidity. The following will explain the concept and operational definitions of each variable.

1. Liquidity
Liquidity shows the company's ability to pay the current (short-term) debt using its assets. High liquidity shows the company's ability to meet its short-term obligations, the measurement of liquidity in this study uses the current ratio.
2. Profitability
Profitability is the extent to which the company can generate profits or measure the effectiveness of the company's management; the measurement of profitability in this study uses earnings per share (EPS).
3. Solvency
Solvency is any use of assets or funds that carry the consequences of fixed costs and expenses; the fixed costs in question are in the form of loan interest. Suppose the company uses funds from outside of debt. In that case, the measurement of solvency in this study uses the debt to equity ratio (DER).

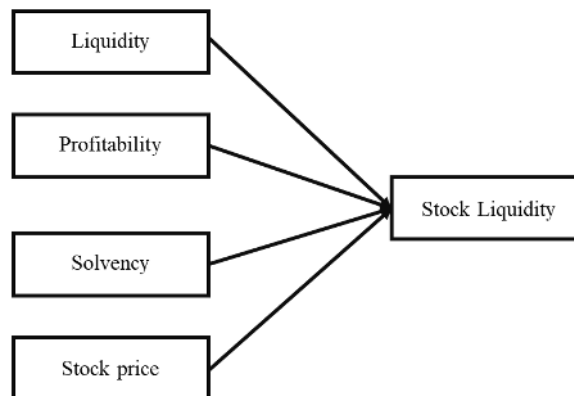
4. Stock price
Stock prices reflect investors' expectations of factors, cash flow, and the level of return required by investors, and these three factors are also influenced by macroeconomic performance. This study's measurement of stock prices uses the closing price of shares on the Indonesia Stock Exchange.
5. Stock Liquidity
Stock liquidity is a measure of the number of stock transactions in the capital market or stock exchange in a certain period. Liquid stocks will be easier to transact, sell, and buy and more easily converted into cash. Liquidity measurement in this study uses stock trading volume.

Table 1. Operationalization Variables

Variable	Measurement	Scale
Liquidity	$CR = \frac{\text{Current asset}}{\text{Current liabilities}}$	Ratio
Profitability	$EPS = \frac{\text{Net profit}}{\text{Number of shares available}} \times 100\%$	Ratio
Solvency	$DER = \frac{\text{Total Amount of debt}}{\text{Total Own Capital}} \times 100\%$	Ratio
Stock price	Stock closing price (Closing Price)	Ratio
Stock Liquidity	$TVA = \frac{\sum \text{Monthly Trading Volume}}{\text{Number of shares outstanding}}$	Ratio

The framework research model is shown below.

Figure 1. Theoretical Framework



- X1 : Liquidity, proxied by current ratio
- X2 : Profitability, proxied by EPS
- X3 : Solvency, proxied by DER
- X4 : Stock Price
- Y : Stock Liquidity

The hypotheses proposed in the study are:

- H1 : Liquidity has a positive effect on stock liquidity
- H2 : Profitability has a positive effect on stock liquidity
- H3 : Solvency has a negative effect on stock liquidity
- H4 : Stock price has a negative effect on stock liquidity

RESEARCH METHOD

(Cooper and Schindler, 2011), stated research uses a quantitative approach with the type of explanatory research, or usually called the independent variable that affects the dependent variable. The independent variables are liquidity, profitability, solvency, and stock prices, and the dependent variable in this study is stock liquidity. The population in this research are all LQ45's companies on the Indonesian Stock Exchange from 2013 to 2020. Determining the sample uses non-probability sampling with a purposive sampling technique. The sample in this study is LQ45 companies for the period 2013-2020. that meet the following criteria:

1. IDX listed companies for the period 2013-2020.
2. LQ45 company that consistently publishes financial statements for the period 2013-2020.
3. LQ45 companies that have the data or variables needed in this study.

This study uses secondary data, the data available on the Indonesia Stock Exchange (www.IDX.go.id), in this case, the company's financial statements LQ45, stock trading volume, and stock prices. The data analysis technique used multiple regression analysis and hypothesis with Eviews program 10. The regression model used in this study is a panel data regression model. Gujarati (2003), "in a panel data regression there are three kinds of approaches consisting of (1) the general effect (common effect), (2) fixed effects (fixed effect), and (3) random effects (random effect).

Hypothesis testing panel regression data as the following model:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Information:

- Y : Stock Liquidity
 $b_1 - b_4$: Regression Coefficient
 X_1 : Liquidity
 X_2 : Profitability
 X_3 : Solvency
 X_4 : Stock price
 e : Error

ANALYSIS

This section will determine the most appropriate model for this research.

Chow Test

The hypotheses of the F and chi-square statistical test are:

H_0 : Follows the common effect model

H_1 : Follows the fixed effect model

Table 2. Chow Test Results

Effects Test	Statistics	df	Prob.
Cross-section F	5.816.377	(11.80)	0.0000
Cross-section Chi-square	56.414.282	11	0.0000

Source: Data Processing Results with Eviews 10.0

The result of the F test and chi-square of 0.0000 < 0.05. H_0 is rejected, and H_1 is accepted. That is, the estimation model approach follows the fixed-effect method.

Hausman Test

The hypothesis in the Hausman test is:
 H₀: The model follows the Random Effect Model
 H₁: The model follows the Fixed Effect Model

Table 3. Hausman Test Results

Test Summary	Chi-Sq. Statistics	Chi-Sq. df	Prob.
Cross-section random	4.446.342	4	0,3490

Source: Data Processing Results with Eviews 10.0

The model follows the random effects model method. The probability value in the random cross-section test is 0.3490, which means it has a significance greater than the 95% significance level $\alpha = 5\%$. The Hausman test is H₀ is accepted, and H₁ is rejected.

Langrage Multiplier Test

The hypothesis of the LM are:
 H₀: Common Effect Model (PLS)
 H₁: Random Effect Model (REM)
 Alpha: 5%. Conditions: Reject H₀ if Prob. Chi-Square < alpha 0.05.

Table 4. Langrage Multiplier Test Results

F-statistic	5.382.898	Prob. F(2,89)	0.0062
Obs *R-squared	1.035.943	Prob. Chi-Square (2)	0.0056

Source: Data Processing Results with Eviews 10.0

The Prob. Chi-Square is 0.0056 is smaller than the alpha of 0.05. Thus, H₀ is rejected, and H₁ is accepted. The estimation model approach follows the random-effects model.

Best Model Selection Recommendation

The summary of the selection model is shown in the table below.

Table 5. Panel Data Regression Model Selection Results

Test Name	Information	Results
Chow test	CEM vs FEM	<i>Fixed effects model</i>
<i>Hausman test</i>	REM vs FEM	<i>Random Effect Model</i>
<i>Langrage Multiplier Test</i>	P LS Vs REM	<i>Random Effect Model</i>

Source: Data Processing Results with Eviews 10.0

Panel Data Regression Analysis

The results of random effects testing with the cross-section weights model can be explained in the following table:

Table 6. Panel Data Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.038643	0.017461	2.213129	0.0294
CR	-0.006460	0.004775	-1.352924	0.1794
EPS	3.74E-05	1.34E-05	2.792817	0.0064
DER	-0.014645	0.009982	-1.467118	0.1458
HR	-0.000172	2.57E-05	-6.707892	0.0000
Effects Specification				
			S.D.	Rho
Cross-section random			0.019397	0.3740
Idiosyncratic random			0.025095	0.6260
Weighted Statistics				
R-squared	0.399319	Mean dependent var	0.012475	
Adjusted R-squared	0.372916	S.D. dependent var	0.031768	
S.E. of regression	0.025157	Sum squared resid	0.057590	
F-statistic	15.12370	Durbin-Watson stat	1.313672	
Prob(F-statistic)	0.000000			
Unweighted Statistics				
R-squared	0.398891	Mean dependent var	0.029990	
Sum squared resid	0.091757	Durbin-Watson stat	0.824498	

Source: Results of Data Processing with Eviews 10.0

The outcome of panel data regression testing with the random effects model explains that profitability (EPS) and stock prices (HR) have a prominent effect on stock liquidity. In contrast, liquidity (CR) and debt (DER) do not affect stock liquidity.

The regression model uses random effect with the cross-section weights model:

Stock Liquidity (Y) = 0,038643 – 0,006460 CR + 3,74 EPS – 0,014645 DER – 0,000172 HR.

Hypothesis Test - Partial Regression Coefficient Test (t-test)

The hypothesis with the t-test in this study is as follows:

Table 7. Partial Test Results (t-test)

Variable	Coefficient (β)	t-Statistic	Sig	Conclusion
Liquidity (CR)	-0.006460	-1.352924	0.1794	H1 rejected
Profitability (EPS)	3.74E-05	2.792817	0.0064	H2 accepted
Solvency (DER)	-0.014645	-1.46 7118	0.1458	H3 rejected
Share Price (HR)	-0.000172	-6.707892	0.0000	H4 accepted

Source: Data Processing Results with Eviews 10.0

ANALYSIS

Liquidity on Stock Liquidity

Based on the results of the t-test (partial) in the regression model, the liquidity variable obtained a (beta) value with an opposing direction of -0.006460 and t-statistic value of -1.352924 and a significance value of 0.1794 > 0.05 (significance level 5%). Thus, it can be definite that

liquidity has no effect on stock liquidity. The research of Mulfitra Yusra (2018), "liquidity does not affect stock liquidity; this is because the fluctuations in the level of stock liquidity are not affected by asset liquidity." This means that asset liquidity does not contribute to stock liquidity. Operationally, stock liquidity is not determined by current assets, current liabilities, and inventories contained in asset liquidity. Meanwhile, asset liquidity is not determined by the selling price and buying price of shares.

Profitability on Stock Liquidity

Based on the results of the t-test (partial) in the regression model, the profitability variable obtained the value of (beta) with a positive direction of 3.74E-05, the t-statistic value of 2.792817 and the significance value of $0.0064 < 0.05$ (significance level 5%). The conclusion, profitability has a significant effect on stock liquidity. The market value ratio is the ratio that relates a company's stock price to its earnings, cash flow, and book value per share. This market ratio provides an overview of the company's prospects and determines how investors view the risks they will face. This study support Salamat's research (2016), "earnings per share have a significant effect on stock liquidity." The results of this study are also in line with the research of Khan et al. (2019), "the profitability ratio has a significant positive effect on the liquidity of a stock." Salamat (2016), "the profitability ratio had a significant positive effect on stock liquidity

Solvency on Stock Liquidity

Based on the results of the t-test (partial) in the regression model, variable solvency obtained a value of β (beta) in the negative direction of -0.014645, the t-statistic value of -1.467118 and significance value of $0.1458 > 0.05$ (5% significance level). Thus, it can be concluded that solvency does not affect stock liquidity. Khan et al. (2019) found that the debt ratio had a negative effect on stock liquidity. This indicates that companies with liquid shares prefer to rely more on equity financing than debt financing because it reduces the cost of equity. According to the trade-off theory, the firm determines the optimal capital structure with a trade-off between the cost of equity and the cost of debt. The tax shield reduces the cost of debt. In contrast, the liquidity of the company's shares reduces the cost of equity. It encourages companies to rely more on equity financing. Ilvia et al. (2014) that leverage, as measured by debt to equity ratio (DER), does not affect stock liquidity. Haddad (2012) also found that leverage does not affect stock liquidity. (DER) does not affect stock liquidity. This situation shows that the leverage position or debt owed by the company during the study period did not experience any problems, which means that the debt position is relatively stable. Besides that, in general, the company can be used as a sample that is considered capable of utilizing debt to increase the value or sales. Therefore, investors began to look for other variables outside the study that affect stock liquidity, such as the presence of other performance variables such as market ratios, activity ratios, and various variables outside the company such as inflation, exchange rates, and more.

Stock Price on Stock Liquidity

Based on the t-test (partial) results in the regression model, the stock price variable obtained the value of (beta) with a negative direction of -0.000172, the t-statistic value of -6.707892 and a significance value of $0.0000 < 0.05$ (significance level 5%). Thus, it can be concluded that stock prices significantly negatively affect stock liquidity. The stock price is one of the main factors seen by every potential investor because the amount of the price determines the purchasing power of investors. In contrast, if the market overvalues the stock price, the number of requests will decrease. Conversely, if the market judges that the stock price is too low, the amount of demand will increase. The high stock price will reduce the ability of investors to buy the stock price (Erlinawati & Mawardi, 2015).

These outcomes are equivalent to research analyzed by Paramitha and Negara (2017), where partially, stock prices have a negative effect on stock liquidity. Erlinawati's research (2015) also results if the stock price has a significant negative effect on stock liquidity. The outcome of preceding studies was also found by Mubarokah (2011), which stated that stock prices had a negative and significant effect on stock liquidity. The higher the stock price, the higher the value of the company and the better the company's performance in generating a profit. However, suppose the stock price is overvalued. In that case, it can reduce investors' interest and purchasing power to invest so that the stock price is challenging to increase again. Investors' buying interest is reflected in high or low stock liquidity. Likewise, suppose the stock price is considered too low (undervalued). In that case, potential investors consider that the price reflects the company's poor performance and achievements, thereby reducing stock liquidity (Paramitha & Negara, 2017).

Coefficient of Determination (R^2)

The results of the coefficient of determination in this study are as follows:

Table 8. Coefficient of Determination Test Results

Predictors	R-Square
(Constant), Liquidity (CR), Profitability (EPS), Solvency (DER), Stock Price (HR)	0.399319

Source: Results of Data Processing with Eviews 10.0

The results of the data, the R-Squared value is 0.399319. This can be interpreted as the independent variables in this study, namely the contribution of the influence of liquidity (CR), profitability (EPS), solvency (DER), and stock price (HR) to stock liquidity of 39.93 %. Other variables outside the research model illustrate the remaining 60.07%.

CONCLUSION

Based on the testing, analysis hypothesis discussion described in the previous chapter, the conclusion obtained is that profitability has a significant positive effect on the liquidity of the stock; it indicates that the higher profitability, the more shareholder is interested in buying shares of these companies, so the liquidity of the stock rises. The stock price has a significant contrary effect on stock liquidity; this indicates that the issuer's setting a stock price that is too high will make the purchasing power of investors decrease so that the level of stock liquidity decreases. Moreover, the conclusion is that liquidity and solvency have no effect on stock liquidity in LQ45 companies listed on the Indonesia Stock Exchange for the 2013-2020 period.

Based on the conclusions above, the suggestions that can be given are as follows:

1. For Investors

Based on the variables that have been tested, it can be seen which variables have the most influence on the liquidity of a stock. Investors must first look at a company's financial condition before making stock trading transactions. The variable that has the most influence on the results of this study is the profitability variable as measured by EPS. Where investors can quickly find out the picture of the company where they want to invest, profitability variables can show investors how much profit they will get from each share they trade. The stock price factor also deserves the attention of investors before deciding to buy shares because a stock price that is too high will reduce the buying ability of investors so that stock liquidity decreases.

2. For Companies

It is hoped that the company will improve its financial performance, primarily by increasing net income and setting stock prices on the stock exchange that are not too expensive and can only reach a few investors.

3. For Further Research

Suggestions for further cell research are expected to focus on fundamental factor variables and involve macroeconomic variables such as inflation, exchange rates, and SBI. In addition, the researcher suggests increasing the research period, which aims to describe better circumstances the influence of the company's financial achievement on stock liquidity in the longer term. In addition, better to expand the number of testing illustrations not only limited to LQ45 sector companies but use groups of companies based on sectors indexed on the Indonesia Stock Exchange, such as the manufacturing sector, property sector, industrial sector, and other sectors.

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