



Research Paper

The Effect Of Interest Rates, Exchange Rates And Financial Performance On The Stock Price Index Of Combined With Trading Volume As Intervening Variable

Hasma^[1], Yohanis Rura^[2], R. A. Damayanti^[3]

^{1,2,3}Faculty of Economics and Business, Hasanuddin University Makassar, Indonesia

ABSTRACT: This study aims to examine the effect of interest rates, exchange rates and financial performance on the composite stock price index with trading volume as an intervening variable on the Indonesia Stock Exchange for the period 2013-2020. This study uses a quantitative approach. The object under study is the Indonesian Stock Price Index for the period 2013-2020. The sample in this study were 32 samples, obtained using purposive sampling technique. Data was obtained by means of non-participant observation and analyzed using path analysis and Sobel test methods. The results show that interest rates have a negative effect and financial performance has a positive effect on trading volume, while the exchange rate has no effect on trading volume. Furthermore, interest rates have a negative effect and trading volume has a positive effect on the CSPI, while the exchange rate and financial performance have no effect on the CSPI. Trading volume was able to mediate the relationship between interest rates and financial performance on the CSPI, while the exchange rate was unable to mediate trading volume on the CSPI.

KEYWORDS: Interest Rate, Exchange Rate, Financial Performance, Trading Volume, Composite Stock Price Index.

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I. INTRODUCTION

The issue of investment in relation to the composite stock price index has been widely discussed in the accounting literature such as the issue of investors monitoring the performance of the stock market by observing the composite market index before investing funds (Cidar and Mary, 2017), the stock price index is used as a barometer of a country's economic health. As well as being the basis for statistical analysis of current market conditions (Halim, 2013), the movement of the composite stock price index (CSPI) is an important concern for all investors on the Indonesia Stock Exchange, because the movement of the composite stock price index (CSPI) will affect the attitude of investors whether to buy, hold or sell their shares (Zakaria, et al., 2018) as well as the events and dynamics of stock prices between exchanges and other exchanges influence each other, especially with exchanges in nearby countries such as crashes that occurred in several exchanges in other countries. European countries will result in a fall in the stock market in other countries Asian countries including Indonesia (Marjohan, 2015).

Exchange rates and interest rates are one of the most important variables in a country that adheres to an open economic system. Exchange rate is the relative price of one currency against another currency. Exchange rates have a direct relationship with stock prices. Foreign stock prices reflect the economic conditions of other countries. Globalization and the increasing integrity of capital markets make this variable have a direct relationship with domestic stock prices. Therefore, this variable is one of the factors that also influence the changes in the JCI. The exchange rate (otherwise known as the exchange rate) can be defined as the price of the domestic currency from foreign currencies (Salvatore, 2014). The exchange rate is one of the indicators that affect activity in the stock market and money market because investors tend to be careful when making portfolio investments. The depreciation of the rupiah against foreign currencies, especially the US dollar, has a negative effect on the economy and capital market (Sitinjak and Kurniasari, 2003).

The interest rate is the price of the loan that must be paid by the debtor to the creditor (Sunariyah, 2013: 82). Interest rates that are too high have an effect on the present value of the company's cash flow so that existing investments become unattractive. If there is an increase in bank interest rates, it will be able to make investors move their investment from stocks to savings or deposits that have higher interest compared to stocks that have a higher risk (Tandelilin, 2010:343). The number of investors withdrawing their funds in shares can have an impact on decreasing stock prices. When many stock prices fall, it will cause the Composite Stock Price Index (JCI) to weaken.

A high rate of return increases people's motivation to invest, so that stock trading activities in the capital market will increase. According to Husnan (2015) stock trading activity can be seen with trading volume activity indicators. Trading volume is the number of shares traded in a certain period in the capital market. High trading volume in the market can be interpreted that the country's capital market is improving.

Changes in stock trading volume will affect the Composite Stock Price Index (CSPI), which in turn will change the welfare of investors. The greater the volume of stock transactions carried out by investors in the capital market, the higher the JCI. On the other hand, the smaller the volume of stock transactions carried out by investors in the capital market, the JCI decreased. Changes in the JCI reflect the development of a country's company or industry. The declining stock price index can be caused by the economic conditions in that country that are experiencing problems. On the other hand, an increasing stock price index may indicate an improvement in economic performance in the country (Mutakif and Nurwulandari, 2012).

The movement of stock prices can be seen from the stock price index. The movement of the stock price index is an important indicator for investors to determine whether they will sell, hold, or buy one or more stocks. Because stock prices move within seconds and minutes, the value of the stock price index will move up and down in a fast matter of time as well. The stock price pattern is still considered an anomaly and is a serious challenge for researchers (Kudryavtsev, 2017) so that the uncertainty of the stock price index is something that investors need to predict so that there are no mistakes in making investment decisions.

II. LITERATUR REVIEW

2.1 Random Walk Theory

Random walk theory states that changes in stock prices (equity) or the entire market that have occurred cannot be used to predict future stock price movements (Ali et al., 2017). Changes in stock prices are independent of each other and have the same probability distribution (Mills, 1999). In other words, this theory states that stock prices move in random and unpredictable directions. So it is impossible for an investor to get a return that exceeds the market return without taking more risk. This also means that the difference between prices in certain periods and prices in other periods is random. The difference is the stock price return, which in a certain period of time meets the requirement that the average is zero. This means that stock volatility will not have a significant trend in a long period of time. Malkiel (2003) states that the random walk is a theory in the stock market that reveals that stock prices or the entire market cannot be used as a reference to predict future stock price movements. This is because stock price movements are random and unpredictable. The probability of increasing is the same as the probability of going down. However, in the long term, the stock price tends to increase.

2.2 Arbitrage Pricing Theory (APT)

Arbitrage Pricing Theory (APT) was first formulated by Ross (1976) as an alternative balance model to assess the relationship between risk and return of an asset other than the Capital Asset Pricing Model (CAPM) proposed by Sharpe (1964), Lintner (1965), Mossin (1969) and Black, Jensen & Scholes (1972) in Arifin (2005). APT appears to overcome the weakness of the CAPM model which allows the inclusion of more than one factor to determine asset return in addition to systematic risk. APT is based on the view that the expected return for a security is influenced by several risk factors that indicate general economic conditions.

APT assumes that investors believe security returns will be determined by a factorial model with a number of (n) risk factors. Risk in the APT is defined as the sensitivity of stocks to macroeconomic factors, and the amount of expected return will be influenced by that sensitivity. In general, it will not be possible to use factor analysis in identifying the underlying factors (Underlying Factors) of changes in Return, but a number of researchers have tried to use various macroeconomic variables to replace the Underlying Factors.

Arbitrage Pricing Theory (APT) basically uses the idea that two investment opportunities that have identical characteristics cannot be sold at different prices (Husnan, 2005). The Arbitrage Pricing Theory (APT) model is based on the view that the expected return for a stock (security) will be influenced by several risk

factors. These risk factors are macroeconomic conditions of a country such as inflation, interest rates, exchange rates and GDP.

2.3 Interest Rate

Sunariyah (2013: 80) explains that "the interest rate is the price of the loan. The interest rate is expressed as a percentage of principal per unit of time. Interest is a measure of the price of resources used by debtors that must be paid to creditors. Meanwhile, according to Boediono (2014: 76) "the interest rate is the price of the use of investment funds (loanable funds). The interest rate is one indicator in determining whether someone will invest or save.

Bank interest rates are one of the monetary indicators that have an impact on various economic activities (Herman, 2006). Interest rates that are too high will affect the present value of the company's cash flows, so that existing investment opportunities will no longer be attractive. High interest rates will also increase the cost of capital that will be borne by the company and will also cause the return that investors are signaling from an investment will increase. Changes in the SBI interest rate will have an impact on the capital market. If the interest rate rises, it will directly increase the interest expense. Companies that have high leverage will have a very heavy impact on the increase in interest rates. This increase in interest rates can reduce the company's profitability so that it can have an influence on the company's stock price.

2.4 Exchange Rate

Each country has a currency and its value is different. Each of these values can be measured in comparison to the currency values of other countries. According to Todaro (2000) "exchange rate is a rate, rate, price at which the Central Bank is willing to exchange the currency of a country with the currency of other countries". Meanwhile, according to Samuelson (2001: 620) "foreign exchange rate or foreign exchange is the price of foreign currency in units of domestic currency". In simple terms the price of one currency against another is called the exchange rate or exchange rate. The exchange rate describes the price of one currency against another country's currency, it is also the price of an asset or the price of an asset (asset price).

There are four types of exchange rates or exchange rates in various transactions or buying and selling, namely (Dornbusch and Stanlay, 1992):

1. Selling Rate is the rate determined by a bank for the sale of certain foreign currencies at a certain time.
2. Middle Rate is the middle rate between the selling rate and buying rate of foreign exchange against the national currency, which is determined by the central bank at a certain time.
3. Buying Rate is the exchange rate determined by a bank for the purchase of certain foreign currencies at a certain time.
4. Flat Rate is the exchange rate that applies in buying and selling bank notes and traveler chaques, where promotions and other costs have been taken into account at that rate.

According to Hamdy (2010: 109-116), there are several factors that affect the exchange rate, namely the supply and demand of foreign currency, the position of BOP (Balance Of Payment) international balance of payments), inflation rate, interest rates, income levels (Income), government oversight and expectations and speculation.

2.5 Financial Performance

Sucipto (2003:6) financial performance is the determination of certain measures that can measure the success of an organization or company in generating profits. To find out the company's financial performance, it is generally necessary to analyze the financial statements, which according to Brigham and Houston (2007:78) include (1) comparing the company's performance with other companies in the same industry and (2) evaluating the tendency of the company's financial position over time. . The company's financial statements report both the company's position at a certain time and its operations over several past periods.

Based on the technique, one of the financial analysis according to Jumingan (2006:242), namely financial ratio analysis, is a financial analysis technique to determine the relationship between certain items in the balance sheet and income statement either individually or simultaneously. The measurement of financial performance used in this study is Return On Total Assets (ROA). Fahmi (2011: 137) Return on Assets (ROA) is this ratio to see the extent to which the investments that have been invested are able to provide a return of profits as expected and the investment is actually the same as the company's assets that are invested and placed.

2.6 Trading Volume

Husnan (2009:63) defines stock trading volume as follows: "trading volume is the ratio between the number of shares traded at a certain time to the number of shares outstanding at a certain time". Meanwhile, according to Hartono (2009: 242) "trading volume is the number of shares outstanding that affects the level of trading volume".

Trading volume is a measure of the volume of certain shares traded, indicating the ease of trading these shares. The size of the trading volume variable is known by observing stock trading activities which can be seen through the trading volume activity (TVA) trading volume indicator. To see the amount of trading volume, namely the number of shares traded in a certain period divided by the number of shares outstanding (listing) (Hartono, 2009:83). Trading volume reflects the strength between supply and demand which is a manifestation of investor behavior. With the increase in trading volume, the market condition can be said to be strengthened, and vice versa (Ang, 2010:121).

2.7 Composite Stock Price Index

The stock price index is a record of changes in stock prices since they were first circulated until a certain time. The Composite Stock Price Index is a composite index of all types of shares listed on the stock exchange (Samsul, 2006:185).).

The Composite Stock Price Index is the combined value of the shares of companies listed on the Indonesia Stock Exchange whose movements indicate conditions that occur in the capital market. The Composite Stock Price Index will show the general stock price movements listed on the Stock Exchange (Anoraga and Pakarti, 2006: 101). In the capital market, an index is expected to have five functions, namely (Darmadji and Hendi, 2012:129):

1. As an indicator of market trends,
2. As an indicator of the level of profit,
3. As a benchmark (bench mark) of a portfolio's performance,
4. Facilitate the formation of a portfolio with a passive strategy, and
5. Facilitating the development of derivative products.

2.8 Hypothesis

The Following are the hypotheses in this study:

H1 : Interest rates have a negative effect on trading volume.

H2 : Exchange rate has a negative effect on trading volume.

H3 : ROA has a positive effect on trading volume.

H4 : Interest rates have a significant negative effect on the Composite Stock Price Index.

H5 : Exchange rate has a negative effect on the Composite Stock Price Index.

H6: ROA has a positive and significant effect on the Composite Stock Price Index.

H7 : Trading volume has a positive effect on the Composite Stock Price Index.

H8 : Interest rates affect the Composite Stock Price Index through trading volume.

H9 : The exchange rate has an effect on the Composite Stock Price Index through trading volume.

H10 : ROA has an effect on the Composite Stock Price Index through trading volume.

III. RESEARCH METHODOLOGY

Based on the characteristics of the research problem, it is classified into the type of Explanatory Research which highlights the relationship between the research variables and tests the formulated hypothesis so that the influence of the independent and dependent variables is known. This study was conducted to examine the direct effect of interest rate, exchange rate and ROA variables on trading volume and the CSPI and the effect of stock returns, interest rates, exchange rates and ROA on the CSPI through trading volume for the 2013-2020 period on the Indonesia Stock Exchange.

3.1 Population and Sample

The population in this study is the overall quarterly closing price data on interest rates, exchange rates, trading volumes and the JCI for the period January 2013 to December 2020, as well as the average quarterly ROA of manufacturing companies listed on the IDX.

In this study, the researcher uses all the population at once as a sample. This kind of sampling technique is called census sampling or saturated sampling. Based on the sampling technique, the number of

samples (n) obtained from the quarterly time series data for the period January 2013 to December 2020. So the number of samples studied in this study was 25 samples of companies registered for ROA measurement.

3.2 *Types and Sources of Data*

The type of data used in this research is quantitative data. The data source used in this study is secondary data, namely data obtained from other parties, such as company annual reports. The data in this study can be obtained through www.sahamok.com, edusaham.com, [www. Yahoo. Finance.com](http://www.Yahoo.Finance.com), Kompas Newspaper, Bisnis Indonesia, and JSX Monthly Statistics issued by the IDX, as well as through the IDX official website, namely www.idx.co.id.

3.3 *Variable Measurement*

1. *Composite Stock Price Index (Y2)*

The composite stock price index is a composite index of all types of stocks listed on the Indonesian stock exchange (Samsul, 2006:185).

$$JCI = \frac{\sum \text{market capitalization}}{\sum \text{Market Value}} \times 100\%$$

2. *Trading Volume (Y1)*

Trading volume is the ratio between the number of shares traded at a certain time to the number of shares outstanding at a certain time (Husnan, 2009:63).

$$TVA = \frac{\sum \text{Shares traded at time t}}{\sum \text{Shares outstanding on the IDX at the time t}} \times 100\%$$

3. *Interest Rate (X1)*

Interest rate is the value, level, price and profit given to investors from the use of investment funds based on the calculation of economic value in a certain period (Puspoprano, 2004:60).

4. *Exchange Rate (X2)*

The exchange rate is a rate, rate, price at which the Central Bank is willing to exchange the currency of one country for the currency of other countries (Todaro 2000).

5. *ROA (X3)*

Tandelilin (2010: 372) ROA (Return On Assets) describes the extent to which the company's assets can generate profits.

$$\text{Return on Asset (ROA)} = \frac{\text{Earning After Tax (EAT)}}{\text{Total Assets}} \times 100\%$$

IV. RESULTS

4.1 *Path Analysis*

Table 1 Results of Path Analysis Model 1
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error				
	7,761	7,680		1,011	,321	
	(Constant)					
1	Interest Rate	-,243	,066	-,486	-3,674	,001
	Exchange Rate	1,499	,789	,256	1,900	,068
	ROA	,131	,035	,475	3,799	,001

Table 2 Results of Path Analysis Model 2

Model	Coefficients ^a				t
	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta		
	(Constant)	6,225	1,658		3,755
1	Interest Rate	-,041	,017	-,365	-2,404
	Exchange Rate	-,006	,178	-,005	-,036
	ROA	-,007	,009	-,111	-,770
	Trading Volume	,127	,040	,562	3,159

a. Dependent Variable: CSPI

The result of the regression equation model 1 is the value of the coefficient β_0 of 7.761. If the variables of interest rates, exchange rates, and financial performance (ROA) do not change or are constant, then there is a possibility of an increase in trading volume (Y1) by 7.761. The regression coefficient value of the interest rate variable (X1) is -0.243 indicating that every one unit increase in the interest rate variable will decrease trading volume by -0.243. The regression coefficient value of the exchange rate variable (X2) of 1.499 indicates that each increase of one unit of the exchange rate variable will increase the trading volume by 1.499. The regression coefficient value of the ROA variable (X3) of 0.131 indicates that each increase of one unit of the ROA variable will increase the trading volume by 0.131.

The result of the regression equation model 2 is the value of the coefficient β_0 of 6.225. If the variables of interest rate, exchange rate, financial performance and trading volume do not change or are constant, then the CSPI (Y2) is likely to increase by 6.225. The regression coefficient value of the interest rate variable (X1) of -0.041 indicates that every one unit increase in the interest rate variable will decrease the CSPI by -0.041. The regression coefficient value of the exchange rate variable (X2) of -0.006 indicates that each increase of one unit of the exchange rate variable will decrease the CSPI by -0.006. The regression coefficient value of the financial performance variable (X3) of 0.007 indicates that each increase of one unit of the ROA variable will increase the CSPI by 0.007. The regression coefficient value of the trading volume variable (Y1) of 0.127 indicates that each increase of one unit of the trading volume variable will increase the CSPI by 0.127.

4.2 Hypothesis test results

1. Model Feasibility Test and Coefficient of Determination Model 1

Table 3 F Test Results Model 1

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	7,575	3	2,525	13,054	,000 ^b
	Residual	5,416	28	,193		
	Total	12,991	31			

a. Dependent Variable: Trading Volume

b. Predictors: (Constant), ROA, Interest Rate, Exchange Rate

The results of the regression output as described above can be explained that simultaneously interest rates, exchange rates, and financial performance have a significant simultaneous effect on trading volume on the IDX.

Table 4 Hasil Uji Determinasi Model 1

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,764 ^a	,583	,538	,43982

a. Predictors: (Constant), ROA, Interest Rate, Exchange Rate

Based on the results of the coefficient of determination, the value of R² (R Square) from the regression model is used to determine how much the independent variable is able to explain the dependent variable. From the table above, it is known that the R² value is 0.583, this means that 58.3% which indicates that the trading volume is influenced by the variables of interest rates, exchange rates and financial performance (ROA). The remaining 41.7% is influenced by other variables that have not been studied in this study.

2. Model Feasibility Test and Coefficient of Determination Model 2

Table 5 F Test Result Model 2

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	,425	4	,106	12,207	,000 ^b
	Residual	,235	27	,009		
	Total	,660	31			

a. Dependent Variable: CSPI

b. Predictors: (Constant), Trading Volume, Exchange Rate, ROA, Interest Rate

The results of the regression output are as described in the table above. It can be explained that simultaneously the variables of interest rates, exchange rates, financial performance (ROA) and trading volume simultaneously affect the CSPI on the IDX.

Table 6 Determination Test Result Model 2

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,802 ^a	,644	,591	,09327

a. Predictors: (Constant), Trading Volume, Exchange Rate, ROA, Interest Rate

Based on the results of the coefficient of determination above, the value of R2 (R Square) from the regression model is used to determine how much the independent variable is able to explain the dependent variable. From the table above, it is known that the R2 value is 0.644, this means that 64.4% which indicates that the CSPI is influenced by the variables of interest rates, exchange rates and financial performance (ROA) and trading volume. The remaining 35.6% is influenced by other variables that have not been studied in this study.

3. Partial Test (t Test) Model 2

Table 7 Partial Test Result Model 1

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	7=,761	7,680		1,011	,321
	Interest Rate	-,243	,066	-,486	-3,674	,001
	Exchange Rate	1,499	,789	,256	1,900	,068
	ROA	,131	,035	,475	3,799	,001

a. Dependent Variable: Trading Volume

Based on the above, it can be seen the results of the interpretation of the research hypotheses (H1, H2 and H3) proposed as follows:

a. The interest rate variable with a significance level of 0.001 which is greater than 0.05, then the hypothesis is accepted. This means that interest rates have a negative effect on trading volume. In a condition where the interest rate on savings is higher than the expected stock return, investors will prefer to save their funds rather than invest in the capital market. Vice versa. Thus, the interest rate on savings is negatively correlated with stock prices and stock trading volume (Habbe, 2004). The results of this study are in line with Murni's research (2010) which shows that there is a negative relationship between interest rates and trading volume.

b. The exchange rate variable with a significance level of 0.068 which is greater than 0.05, then the hypothesis is rejected. This means that the exchange rate has no effect on the trading volume. The absence of a significant effect indicates that the size of the exchange rate in the study period does not affect the trading volume. According to Idris (2016) Investors who invest in the Indonesian capital market tend to see the capital market in Indonesia as a capital market with a half-strong form compared to an emerging market, where in a half-strong market, investors can still get abnormal returns from their investments. So that when investors can still get abnormal returns, investors will continue to carry out stock trading activities in the capital market even though macroeconomic factors are not supportive, such as when the country's currency is depreciating or vice versa. The results of this study are in line with the results of research by Idris (2016) and Jonathan (2013) that the exchange rate has no effect on trading volume.

c. The ROA variable with a significance level of 0.001 which is smaller than 0.05, then the hypothesis is accepted. This means that the projected financial performance with ROA has a positive effect on trading volume. With the increase in the amount of expected return on assets, the market valuation will increase which allows the increasing demand for company shares which affects the trading volume.

4. Partial Test (t Test) Model 2

Table 8 Partial Test Results Model 2
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	6,225	1,658		3,755	,001
Interest Rate	-,041	,017	-,365	-2,404	,023
1 Exchange Rate	-,006	,178	-,005	-,036	,971
ROA	-,007	,009	-,111	-,770	,448
Trading Voleme	,127	,040	,562	3,159	,004

a. Dependent Variable: CSPI

Based on the above, it can be seen the results of the interpretation of the research hypotheses (H4, H5, H6 and H7) proposed as follows:

a. Interest rate variable with a significance level of 0.023 which is greater than 0.05, then the hypothesis is accepted. This means that interest rates have a negative effect on the CSPI. If the interest rate rises, it will directly increase the interest expense. Companies that have high leverage will have a very heavy impact on the increase in interest rates. This increase in interest rates can reduce the company's profitability so that it can have an influence on the company's stock price. In addition to the increase in interest expense, the high SBI interest rate can attract investors to move their funds to time deposits. This happens because the increase in the SBI interest rate will be followed by commercial banks to increase the deposit interest rate. Research conducted by Cidar and Mary (2017), Mohammad et al. (2017), Astuti et al. (2016), Harsono and Worokinasih (2018) support this theory with the results of research on interest rates affecting the CSPI.

b. The exchange rate variable with a significance level of 0.971 which is greater than 0.05, then the hypothesis is rejected. This means that the exchange rate has no effect on the CSPI. Idris (2016) Investors who invest in the Indonesian capital market tend to see the capital market in Indonesia as a capital market with a half-strong form compared to an emerging market, where in a half-strong market, investors can still get abnormal returns from their investments. So that when investors can still get abnormal returns, investors will continue to carry out stock trading activities in the capital market even though macroeconomic factors are not supportive, such as when the country's currency is depreciating. The results of this study are in line with the results of research by Suprihati (2017), Oktavia and Handayani (2018) and Pantas et al. (2019) stated that the rupiah exchange rate had no effect on the Jakarta Composite Index (JCI).

c. The ROA variable with a significance level of 0.448 which is smaller than 0.05, then the hypothesis is rejected. This means that the projected financial performance with ROA has no effect on the CSPI. This is because the data in this study only consists of manufacturing companies that meet the sample criteria, while the JCI is formed and influenced by the fundamental conditions of all companies listed on the Indonesian stock exchange, especially companies that have large capitalization and are not included in the manufacturing sector companies that are part of the Indonesian Stock Exchange. research sample. The results of this study are in line with the research of Efendi and Ngatno (2018) and Jonathan (2013)

d. The trading volume variable with a significance level of 0.004 which is greater than 0.05, then the hypothesis is accepted. This means that trading volume has a positive effect on the CSPI. Stock trading volume is important for an investor, because for investors the stock trading volume describes the condition of shares traded in the capital market which can have an impact on stock prices. Stock trading volume is a concept that is closely related to stock prices and returns (Kudryavtsev, 2017). Research by Murwaningsari (2008), Mutakif and Nurwulandari (2012), Choiriyah and Yuliana (2018) and Herlina (2018) supports this theory with the results of research that trading volume has a positive effect on the CSPI.

5. The direct and indirect effect of the independent variable on the dependent variable

Table 9 Direct and Indirect Influence

Influence between Variables	Direct Influence	Significance Level	Indirect influence through Y_1	Total Influence
X1 → Y1	-0,243	0,001	-	
X2 → Y1	0,066	0,068	-	
X3 → Y1	0,395	0,001	-	
X1 → Y2	-0,041	0,023*	-0,072	-0,301
X2 → Y2	-0,006	0,971	0,002	0,008
X3 → Y2	0,007	0,448	0,0507	0,050
Y1 → Y2	0,127	0,004	-	

a. The Effect of Interest Rates on CSPI Through Trading Volume

- Indirect Influence
PTL= $-0,243 \times 0,127 = -0,031$
- Mediation Effect (Sobel test)

Table 10 The results of the Sobel Test of the effect of interest rates on the CSPI through trading volume

Code	Input	Description	Test Statistic:	Std. Error:	p-value:
a	-0.243	Sobel Test	-2.40444756	0.01283496	0.01619693
b	0.127	Aroian Test	-2.3551434	0.01310366	0.01851556
s _a	0.066	Goodman test	-2.45698379	0.01256052	0.0140109
s _b	0.040		Calculate		

The results of the indirect effect test on the Sobel Test in Table 5.14 P-Value of the Sobel test (0.016), Aroian (0.018), Goodman Test (0.014) all three are less than the value of = 5%. it can be concluded that there is a mediating effect. This shows that interest rates indirectly through trading volume have an effect on the composite stock price index. With the mediation effect, it can be concluded that H8 is accepted, which means that there is an influence between interest rates on the CSPI through trading volume.

b. The Effect of Exchange Rates on CSPI Through Trading Volume

- Indirect Influence
PTL= $0,066 \times 0,127 = 0,193$
- Mediation Effect (Sobel test)

Table 11 The results of the Sobel Test of the influence of the Exchange Rate on the CSPI through trading volume

Code	Input	Description	Test Statistic:	Std. Error:	p-value:
a	1.499	Sobel Test	1.63028811	0.11677261	0.10304062
b	0.127	Aroian Test	1.57382102	0.12096229	0.11552883
s _a	0.789	Goodman test	1.69330462	0.11242691	0.0903975
s _b	0.040		Calculate		

The results of the indirect effect test on the Sobel Test are in Table 5.15 P-Value of the Sobel test (0.103), Aroian (0.115), Goodman Test (0.090). The results of Sobel, Goodman Test and Aroian show that the P-Value is greater than =5%, so it can be concluded that there is no mediation effect. This shows that indirectly the exchange rate through trading volume has no effect on the composite stock price index. With the mediation effect, it can be concluded that H9 is not accepted, which means that there is no influence between the exchange rate on the CSPI through trading volume.

c. Influence of ROA on CSPI Through Trading Volume

- Indirect Influence
PTL= $0,395 \times 0,127 = 0,050$
- Mediation effect (Sobel test)

Table 12 The results of the Sobel Test of the influence of Financial Performance on the CSPI through trading volume

Code	Input	Description	Test Statistic:	Std. Error:	p-value:
a	0.131	Sobel Test	2.42120825	0.00687136	0.01546901
b	0.127	Aroian Test	2.37246641	0.00701253	0.01766977
s _a	0.035	Goodman test	2.47308323	0.00672723	0.01339529
s _b	0.040		Calculate		

The results of the indirect effect test on the Sobel Test in Table 5.16 P-Value of the Sobel test (0.015), Aroian (0.017), Goodman Test (0.013) all three are less than the value of = 10%. it can be concluded that there is a mediating effect. This shows that financial performance indirectly through trading volume has an effect on the composite stock price index. With the mediation effect, it can be concluded that H10 is accepted, which means that there is an influence between financial performance on the CSPI through trading volume.

V. CONCLUSION

Based on the results of research that has been conducted regarding the effect of interest rates, exchange rates and financial performance on the CSPI with trading volume as an intervening variable, the following conclusions can be drawn.

1. Interest rates have a negative effect on trading volume on the Indonesia Stock Exchange. When interest rates rise and provide better returns than investing in the capital market, investors tend to choose to allocate their funds in the form of savings or deposits rather than securities in the capital market, thereby reducing trading volume in the capital market.
2. The exchange rate has no effect on trading volume on the Indonesia Stock Exchange.
3. ROA has a positive effect on trading volume on the Indonesia Stock Exchange. A positive ROA (larger) will result in an increase in market valuation, which allows the demand for company shares to increase which affects trading volume.
4. Interest rates have a negative effect on the CSPI on the Indonesia Stock Exchange. If the deposit interest rate is higher than the rate of return expected by investors, of course investors will shift their funds to deposits, so that when many people move their investment from stocks to savings or deposits, the stock price will fall, accompanied by a weakening of the CSPI.
5. The exchange rate has no effect on the CSPI in the Indonesia Stock Exchange.
6. Financial Performance has no effect on the CSPI in the Indonesia Stock Exchange.
7. Trading volume has a positive effect on the CSPI on the Indonesia Stock Exchange. The greater the volume of stock transactions carried out by investors in the capital market, the higher the CSPI.
8. Trading volume is able to mediate the effect of interest rates on the CSPI on the Indonesia Stock Exchange.
9. Trading volume is unable to mediate the effect of the exchange rate on the CSPI on the Indonesia Stock Exchange.
10. Trading volume is able to mediate the effect of ROA on the CSPI on the Indonesia Stock Exchange.

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