

Comparison of Factors toward the Changes of Composite Stock Price Index in LQ 45 and Jakarta Islamic Index

(Case Study in Indonesian Stock Exchange)

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Abstract. The composite stock price index (CSPI) is a reflection of capital market activities in general. JCI movement which indicates increased capital market conditions are bullish, on the contrary if the decline shown in capital market conditions are bearish. These events are influenced by factors, such as volume of transactions, exchange rate, and Interest Rates Indonesia. The purpose of this research is to analyze: the influence of factors through volume of transactions, exchange rates, and interest rates of Indonesia (SBI) of the JCI in LQ45 and Jakarta Islamic Index. The research sample of this study are volume of transactions, exchange rate, and interest rate (SBI) rate, and Composite Stock Price Index in LQ45 and Jakarta Islamic Index, with data pooling method (daily data of year 2011), so that the amount of observations (n) = 247.

Keywords: Composite Stock Price Index (CSPI), Volume of transactions, Exchange Rates, Interest Rates (SBI), LQ45, Jakarta Islamic Index.

1. Introduction

The economy of a country is one of the most important aspects for the survival of a country. The capital market is one of the means to raise long-term economic funding available at banks and societies. As part of country's economic system, especially in the financial sector, capital market provides two main functions for society who has different interests, e.g. as an economics and financial function.

As an economic function of the capital market, it is a source of funds for investment in supporting the economic activities of the society. While the finance function applied by providing funds needed by the borrowers, in which funders give the money without having to be involved directly in the form of ownership of real assets used in investment activities.

Investment is actually aiming to get a better life in the future, reducing inflationary pressure and save tax (Tandelilin: 2001). One of the forms of investment is by investing the equity in the form of shares in firms listed on the stock exchange. These companies are divided into a number of sectors, ranging from agriculture, mining, finance to companies incorporated in LQ45 and Jakarta Islamic Index (JII).

The following table shows how the fluctuation of the stock market in LQ45 and Jakarta Islamic Index during 2011.

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Fig. 1: The Fluctuation of Stock Market in Jakarta Islamic Index Year 2011

Month	Average of daily transaction			Composite Stock Price Index			Market Capitalisation (Rp trillion)
	Volume (Million)	Value (Rp Billion)	Frequency (thousand X)	Highest	Lowest	End	
January	509,9	1,747	24,6	490.329	474.137	477.514	1,016
February	636,8	1,500	25,4	496.870	490.721	496.870	1,057
March	738,2	2,569	38,1	514.966	506.625	514.921	1,096
April	1,052	1,355	18,9	528.890	526.062	528.763	1,125
May	2,872	2,471	32,663	532.090	527.442	531.377	1,128
June	1,112	2,220	31,232	537.867	527.286	536.036	1,305
July	1,147	2,086	29,534	574.501	562.608	567.119	1,381
August	1,089	1,470	24,355	530.948	522.057	529.157	1,288
September	1,242	1,889	44,011	497.240	488.294	492.298	1,199
October	1,406	1,448	30,077	537.900	526.103	530.192	1,292
November	1,030	1,721	31,576	523.633	511.981	520.493	1,268
December	3,225	1,586	23,078	537.644	534.230	537.031	1,414

Based on the above table, Composite Stock Price Index (CSPI) in Jakarta Islamic Index (JII) shows an increase. In late January, CSPI was still at the level of 477.514. Although it had declined by the end of September, but at the end of October CSPI has increased again. Similarly, the volume of transactions in determining the value of securities (shares), in the above table shows that the development of CSPI and the volume of transactions are inconsistent, which at the end of June stock trading volume down when CSPI goes up. Meanwhile trading volume rose at the end of September when CSPI went down.

According to Karpoff (1987) opinions of a few expert show an inconsistencies between CSPI and trading volume relationship as Ying, 1966; EPSS, 1975 Smirlock, 1985; Harris, 1986, Jain, 1986 claim there is a correlation between the volume of transactions with CSPI, while Wood, 1985 and Granger, 1963 stating there is no correlation between CSPI and the volume of transactions. Similarly Gallant, Rossi, and Tauchen (1992); research shows that there is a strong correlation between volume and absolute value of the change in the equity market and futures market.

Some of the results of previous studies on the effects of macroeconomic factors on CSPI, such as: Lee (1992) have found that changes in interest rate has a significant impact on the stock price index. Meanwhile, in an article written by Moradoglu, et al. (2000), it was argued that research on the behavior of stock prices has been done, especially in terms of macroeconomic variables, such as Chen et al. (1986), Geske and Roll (1983).

Evidence of other empirical studies conducted by Wand (1970) and Fama (1990) in American capital market showed the increase of rate which is followed by a negative stock market performance. Interest rates have a negative relationship with Composite Stock Price Index.

1.1. Problem Identification

The problem in this study can be formulated as follows:

- Is there an influence between stock trading volume against CSPI in LQ45 and JII
- Is there an influence between exchange rate against CSPI in LQ45 and JII
- Is there an influence between interest rates Indonesia (SBI) against CSPI in LQ45 and JII
- Is there an influence simultaneously between macro-economic, stock trading volume, exchange rate, and interest rate Indonesia (SBI) against CSPI in LQ45 and JII

1.2. Research Framework and Research Model

The fluctuation of CSPI can be influenced by various factors, such as political and economic factors. Economic factors thought to greatly affect the stock market include trading volume, exchange rate, and

interest rates. The stock trading volume is used since the trading volumes are units of shares traded in a given period.

High interest rates are a negative signal to the stock price, as investors tend to attract investment and move it in the form of savings/deposits (Tandelilin: 2001). If interest rates rise, investors will sell all or part of its shares to be transferred into other investments which is relatively more profitable and risk-free, as a result the index goes down. Conversely, if interest rates go down, people will shift their investments in stocks that are relatively more profitable and as a result the index will rise. Thus, interest rates will negatively impact the stock index.

Changes in foreign currency exchange rate (represented by U.S. \$) will also give effect to the stock market. If the exchange rates rise, the investor will sell all or part of its shares, and transferred them to the foreign currency which then be invested elsewhere as a savings, so the stock price will go down. Conversely, if the exchange rate weakens, all investors will buy the domestic currency to be invested in the stock, so the stock price will tend to rise. Exchange rate variable has a direct influence in the form of rising prices of exports and imports goods in the country (Boediono: 1997).

Model 1:

$$CSPI_{LQ45} = a_0 + a_1 TV + a_2 ET + a_3 SBI + e$$

Model 2:

$$CSPI_{JII} = b_0 + b_1 TV + b_2 ET + b_3 SBI + e$$

Based on previous research phenomenon found in background indicate that there are contradictory results, therefore researchers are interested in studying more about the factors; including trading volume, exchange rate, and interest rate and their affect toward CSPI in LQ45 and Jakarta Islamic Index.

2. Methodology

The type of data used is secondary data for the year 2011 in LQ45 and Jakarta Islamic Index. The endogenous variable data is the compound stock price index. While exogenous variable data consists of stock trading volume, exchange rate of Rupiah to U.S. \$, and Indonesia interest rates.

The analysis used in this study is the regression testing continued with the Hierarchy Multiple Regression Analysis.

The regression model is as follows:

$$CSPI_{LQ45} = a_0 + a_1 TV + a_2 ET + a_3 SBI + e$$

$$CSPI_{JII} = b_0 + b_1 TV + b_2 ET + b_3 SBI + e$$

Where is:

- CSPI = Composite Stock Price Index
- TV = volume of stock trading
- Exchange Rate = The rupiah exchange rate against US\$
- SBI = Indonesia interest rate

Hypothesis testing consists of several steps:

The **first step** to test the classical assumptions as follows:

- Multicollinearity
- Autocorrelation
- Heterocedastisity
- Normality

The second step is by using the F, t and R2 test.

- **F test** is used to see the significance of the results of the regression models. When the count value of F is greater than F table or a significant level of less than 5% ($\alpha = 5\%$), this means that there is the influence of the independent variable on the dependent variable.

- **t-test** is used to prove the second hypothesis that there is influence of the independent variable on the dependent variable partially. When the value of t count is greater than the table or significant values <5%, it means that there is influence of independent variables on the dependent variable partially.

Test R2 to determine the proportion of variation in the independent variables to the dependent variable.

3. Result and Discussion

Based on tests and data analysis it can be concluded as follows:

There is an influence of macroeconomic factors represented by the volume of trading stocks, and SBI against CSPI. The variable of SBI interest rates does not affect the CSPI significantly. Thus it is evident that changes in stock trading volume, exchange rate, SBI interest rate, and the money supply are simultaneously effecting the CSPI significantly.

Based on the conclusions above, the suggestions that can be given, either to investors, companies and for the development of further research are as follows:

- Investors should consider the information on Stock Trading Volume, exchange rates of Rupiah / U.S. \$, and SBI Interest Rates released by the Bank of Indonesia because the existence of such information can be used to predict the CSPI in LQ45 and JII and then to take an appropriate decision regarding investment.
- Before making policies such as export or import, firms must first examine the factors that affect the size of the company expenses which may result from Stock Trading Volume, exchange rates of Rupiah / U.S. \$, and SBI Interest Rates, so in practice the company can take a policy that can attract investors in capital market.
- The limitations of macroeconomic factors that are used as a basis for predicting the CSPI is limited to Volume Trading Stocks, exchange rates of Rupiah / U.S. \$, and SBI Interest Rates. Therefore it is expected in future studies to consider the influence of other factors that can affect the movement of CSPI in LQ45 and JII.

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