

# The Influence Money Supply, Inflation and Transaction Volume on Consumer Goods Index

Najiatun <sup>1\*</sup>, Malikul Adil <sup>2</sup>, Muhammad Sanusi<sup>3</sup>

<sup>1</sup> Universitas of Bahaudin Mudhary Madura

<sup>2</sup> University of Trunojoyo Madura

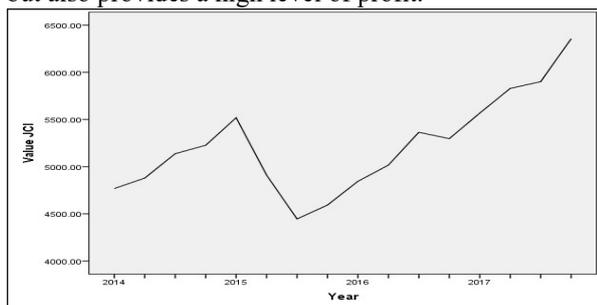
<sup>3</sup> STEI HAMZAR

**Abstract.** Investments in the capital market have a high level of risk but also provide high profits, so it is very important to know changes in macroeconomic variables and investor behavior. In this study will examine the effect of the money supply, inflation volume, and transactions on the Consumer Goods Index. The partial test results show that the money supply and transaction volume have a significant positive effect on the consumer goods index, but inflation has no significant effect on the consumer goods index. Simultaneous testing shows that all variables have a significant influence on a good consumer index. The results show that all variables of money supply, inflation and transaction volume can explain 74.90%, and 25.10% are explained by other factors outside the research variable.

**Keywords:** Money Supply, Inflation, Transaction Volume, Consumer Goods Index

## 1 Introduction

The capital market is a financial institution that provides investment instruments in various products such as bonds, mutual funds and stocks. Stocks are one of the investments that are classified as high-risk high returns, meaning that investment in shares has a very high risk but also provides a high level of profit.



**Fig 1.** Jakarta Composite Index

The capital market in Indonesia can make it possible for investors to benefit, this can be seen in Figure 1 Indonesia's capital market experienced growth from Q1 2014 to Q1 2015. But in the second quarter of 2015 there was a sharp decline to Q3 2015. Jakarta Composite Index managed to rise after falling in Q2 2015. This is indicated by the positive trend that continues to climb significantly until Q4 of 2017. Jakarta Composite Index growth which continues to increase is certainly not spared from the sectoral role. Table 1 shows sectoral data from 2014- 2017. In 2017, the sector which

contributed the most to the Jakarta Composite Index was sector finance by 40%, followed by the industry sector 28% and consumer sector 23%. If seen from 2014-2017 on average from 4 years the biggest contribution to the Jakarta Composite Index was sector finance 22%, followed by the consumer sector 13%.

**Tabel 1** Index Sectoral

| Sectoral       | Year  |        |       |        |       |
|----------------|-------|--------|-------|--------|-------|
|                | 2014  | 2015   | 2016  | 2017   |       |
| Agriculture    | 9.86  | -26.87 | 8.43  | -13.30 | -5.47 |
| Mining         | -4.22 | -40.75 | 70.73 | 15.11  | 10.22 |
| Basic Industry | 13.09 | -24.98 | 31.96 | 28.06  | 12.03 |
| Mis Industry   | 8.47  | -19.11 | 29.64 | 0.77   | 4.94  |
| Consumer       | 22.21 | -5.19  | 12.56 | 23.11  | 13.17 |
| Property       | 55.76 | -6.47  | 5.47  | -4.31  | 12.61 |
| Infrastructure | 24.71 | -15.42 | 7.57  | 12.14  | 7.25  |
| Finance        | 35.41 | -6.10  | 18.17 | 40.52  | 22.00 |
| Trade          | 13.11 | -3.31  | 1.31  | 7.08   | 4.55  |
| Manufacturing  | 16.04 | -13.75 | 18.84 | 19.83  | 10.24 |

Investors' motives in investing in the stock market are usually based on the specified time period, namely in the short and long term. Short term is more likely to benefit from the difference between buying and the selling price which is often called capital gain. In the long run, profits are obtained from dividends, and from the difference between the buying and selling prices. Investors who use time in the short term are very

\* Corresponding author : najiatun@unibamadura.ac.id

sensitive to stock price fluctuations when compared to investors in the long run. The stock price fluctuations are often influenced by many factors.

According to Yuanita (2014) that stock price movements in the market are more due to rational and irrational influences. Rational influence is caused by the influence of macroeconomic factors and the performance of the company itself. While irrational influences are more caused by market rumors from certain parties.

Investors will always pay attention to the risks that will be faced with the expected benefits. These risks can arise from market turbulence, business environment conditions and the general macroeconomic situation. Macroeconomic conditions are very decisive in investing in the capital market, it is necessary to understand macroeconomic conditions so as not to suffer losses (Jonathan, 2013).

It is very important for investors to make decisions to pay attention to market reactions due to the influence of various macroeconomic variables. This will certainly have an impact on the movement of the stock index. There are many indices used in the Indonesian capital market, but in this study more use the consumer goods index.

Alamsjah (2017) conducted a study to see the effect of IHSG, IHSS, Exchange Rate, Interest Rate, and Inflation Rate on food industry stock prices. Kesuma (2016) conducted a study to determine the effect of exchange rates, interest rates, inflation, the amount of money in circulation, and GDP on the Jakarta Composite Index. Siregar (2014) tested the Jakarta Composite Index with independent variables namely interest rates, inflation and the money supply. Gumilang (2014) uses macroeconomic variables namely interest rates, exchange rates and the money supply to the Jakarta Composite Index. While Christina (2014) conducted a study to see the effect of trading volume on stock prices on the IDX.

From several studies there are many researchers testing using macroeconomic variables such as Kesuma (2016), Gumilang (2014) and Siregar (2014), while those that use other than macroeconomic variables are Christina's trading volume (2014) against the Jakarta Composite Index. Whereas only Alamsjah (2017) uses food industry stock prices as the dependent variable.

Jakarta Composite Index is an index used to measure the average of the total shares listed on the Indonesia Stock Exchange. If referring to the Jakarta Composite Index, it is certainly very broad, in which there are various types of stocks by sector. Whereas in research only uses Sector Consumer Goods. Consumer Goods Index is an index that measures the average of all shares included in the consumer sector category.

According to Khoo (2015) the consumer sector is included as a cycle sector. This means that this sector tends to be related to economic conditions. This shows that stocks in this sector work well when the economy rises and falls most far when the economy is in a recession. These stocks are very volatile but offer high returns. Share price fluctuations can occur due to the effects of macroeconomic variables such as the money

supply, inflation and the effects of market reactions such as the volume of transactions of foreign investors.

Stock price movements that rise and fall will certainly influence the movement of the consumer index. The causes of changes in stock prices can occur among others due to macroeconomic effects such as the money supply, inflation and transaction volume of foreign investors.

Money supply is the amount of money officially issued by the central bank in the form of currency, demand deposits, and quasi money, which consists of savings, deposits, and foreign exchange (Arif, 2014). The money supply in a broad sense is also called M2, and in a narrow sense - M1. According to Kesuma (2016) and Siregar, (2014) that there is a significant positive relationship between the money supply and the stock price index, the index used is the Jakarta Composite Index.

The demand for goods and services affects the increase in the money supply. The income of a company will increase when the consumption of goods and services also increases this is directly proportional. When the profit generated by the company increases, the company's stock price will also increase, thus affecting the movement of the Consumer Goods Index. with the understanding that the greater the money supply, the higher the rate of economic growth in Indonesia. The money supply has a positive and significant effect on economic growth and the Consumer Goods Index.

Inflation has a direct impact on the price increase of goods. As a result of the increase in prices of these goods will affect the amount of demand for goods (Kesuma, 2016).

According to Alamsjah (2017) that inflation has a significant effect on the stock price of the food industry. This shows that if the inflation rate rises, then the prices of goods will also increase, which means the purchasing power of the people will decrease. The resulting effect has an effect on sales and company revenue, so that the company's performance will decline and have an impact on the decline in stock prices.

The results of Siregar's (2014) study that inflation does not show a significant influence on the Gabunga Stock Price Index. This indicates that inflation will only affect consumption levels. According to Nur (2012) the increase in prices of goods has caused the people's real purchasing power to decline. The decline in people's purchasing power towards goods will have an impact on the decline in consumption.

According to Manganeli (2002) that there is a positive relationship between transaction volume and stock price volatility, but only applies to stocks that are often traded. Stock price movements that can affect the movement of the Index. Xu (2013) found that there is a transaction volume that has a positive relationship with price movements. This can be taken according to Karpoff's (1987) statement, namely: small volumes are usually accompanied by a decrease in prices, large volumes are usually accompanied by rising prices, and a large increase in volume is usually accompanied by a large price increase. or the collapse of a large price.

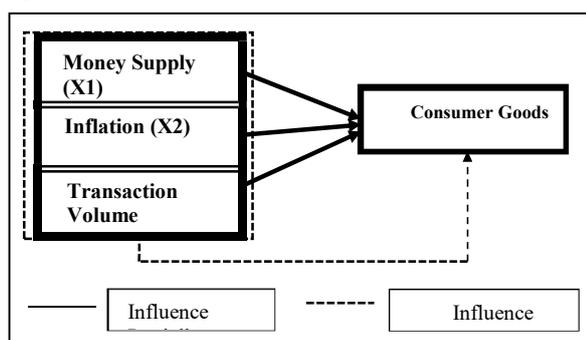
The tendency shows that when high transaction volume will have an impact on the increase in stock

price movements. The concept of volume influence is built on the fact that prices require volume to move, thus, high stock price volatility can be generated as a result of volatility in volume and trading activity (Tripathy, 2011).

The results of research conducted by Peter (2011) and Christina (2014) show that trading volume has no effect on stock prices, because in buying shares investors pay less attention to the amount of trading volume that occurs, investors are more likely to choose stocks based on their wishes.

Transaction volume can affect the movement of the price of shares traded. The higher the level of transaction volume will form a high price. This is evidenced by the increasing demand will affect the movement of prices. The concept of volume influence is built on the fact that price requires volume to move, thus, high stock price volatility can be generated as a result of volume volatility and trading activity.

In this study will examine the effect of the money supply, inflation rate, and the volume of foreign transactions on the movement of the Consumer Goods Index. So that it can build a conceptual framework and hypothesis 1 as follows:



**Fig 2.** Conceptual Framework  
 H1: Money Supply influence significant to Consumer Goods Index  
 H2: Inflation influence significant to Consumer Goods Index  
 H3: Transaction Volume influence significant to Consumer Goods Index

## 2 Research Methods

### 2.1 Analytical Method

The analytical method used in this study is a multiple regression model to determine the effect of the dependent variable with the independent variables. Multiple linear regression can be written with the formula:

$$Y = \beta + \beta_1.X_1 + \beta_2.X_2 + \beta_3.X_3 + e \quad (1)$$

Explanation:

Y = Consumer Goods Index X1 = Money Supply

X2 = Inflation

X3 = Transaction Volume  $\beta$  = Constanta

$\beta_{1,2,3,4}$  = Coefisien Regretione = error

### 2.2 Test of Normality Data

Data distribution test is used to test research data in statistical models, the dependent variable and independent variables are normally distributed or not normally distributed. To find out the distribution of data in a study, one of the tools used is the Kolmogorov Smirnov test. If the probability value  $> 0.05$  is normality data. If the probability value  $< 0.05$  then the data is not normal.

### 2.3 Test of Hypothesis

#### 2.3.1 Partially test (t-Test)

The t-test was conducted to determine the effect of each variable individually (partial) on the dependent variable. In determining the level of significance, the percentage used is 5% based on the probability value, the decision-making method is:

H0 will be rejected if the probability value is  $> 0.05$  and will be accepted if the probability value is  $< 0.05$ .

#### 2.3.2 Simultaneous test (F-test)

Simultaneous test is a test conducted to determine the effect of independent variables together on certain variables. The P-value used of 5% can be done based on the probability value, by:

H0 will be rejected if the probability value is  $> 0.05$  and will be accepted if the probability value is  $< 0.05$ .

#### 2.3.3 Coeffisien Determination

The determination coefficient is essentially to measure how far the model's ability to explain the variation of the dependent variable. The value of a small determination coefficient indicates the ability of independent variables to explain the dependent variable is very limited.

## 3 Result and Discussion

### 3.1 Multiple regression analysis

Based on the test results in table 3, the regression can be formulated as follows:  $Y = 773,920 + 0,000.X_1 - 21,134 X_2 + 0.003.X_3 + e$

- Coefficient value of 0.000 means that if the money supply is increased by one scale or one unit, it will increase the consumer goods index by 0,000.
- Coefficient value of -21.134 means that if inflation is increased by one scale or one unit, it will reduce the consumer goods index by 21,134.
- coefficient value 0.003 it means that if inflation is increased by one scale or one unit, it will increase the consumer goods index by 0.003.

### 3.2 Normality Test Result

One form of data distribution testing is to test a research data in a statistical model, the dependent variable and independent variables are normally distributed or not normally distributed. In order to determine the distribution of data in a study, one of the components used is the Kolmogorov Smirnov test.

**Tabel 2:** Kolmogorov Smirnov Test Result

| One-Sample Kolmogorov-Smirnov Test |                |                 |              |           |                    |
|------------------------------------|----------------|-----------------|--------------|-----------|--------------------|
|                                    |                | Consumer Indeks | Money Supply | Inflation | Transaction Volume |
| N                                  |                | 55              | 55           | 55        | 55                 |
| Normal Parameters <sup>a,b</sup>   | Mean           | 2313.1455       | 4636985.8727 | 1.5135    | 51164.1091         |
|                                    | Std. Deviation | 230.32903       | 557765.77133 | .33511    | 17118.98024        |
| Most Extreme Differences           | Absolute       | .088            | .089         | .157      | .164               |
|                                    | Positive       | .083            | .054         | .157      | .164               |
|                                    | Negative       | -.088           | -.089        | -.155     | -.103              |
| Kolmogorov-Smirnov Z               |                | .656            | .657         | 1.164     | 1.213              |
| Asymp. Sig. (2-tailed)             |                | .782            | .782         | .133      | .106               |

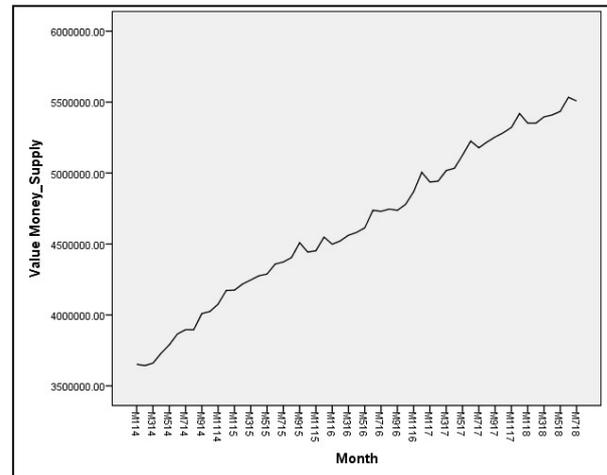
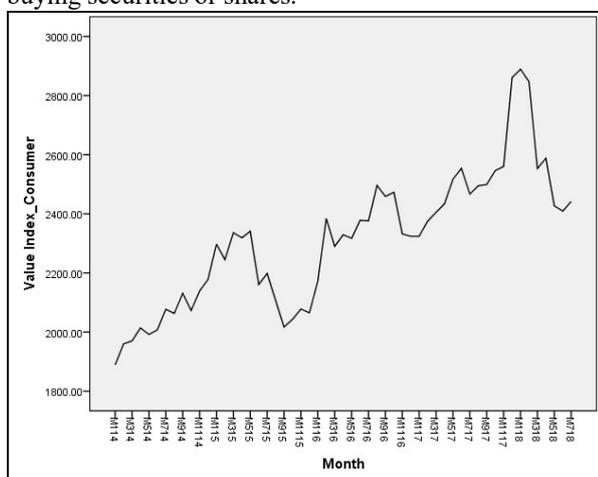
The results of the normality test at tabel 2 show that the data used are the consumer goods index 0.782, money supply 0.782, 0.133 inflation, and transaction volume of 0.106 > from 0.05 so that it can be said that the data is normally distributed

### 3.3 Partially test Result (t-test)

Based on the test results in Table 3, it can be concluded that:

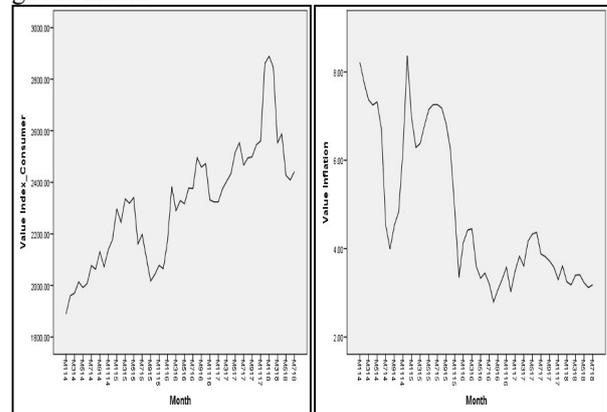
The results of this study are supported by Kesuma (2016) and Siregar (2014) that there is a significant positive relationship between the money supply and the stock price index.

This means that the people of Indonesia have used their money other than for transaction purposes as well as using their money for speculative purposes, namely by buying securities or shares.



**Fig 3.** Consumer Goods Index and Money Supply

Inflation variables show a no significant influence on the consumer goods index, because the value of Sig. t greater than 0.05, which is 0.773. These results indicate that there is no influence of inflation on the consumer goods index.

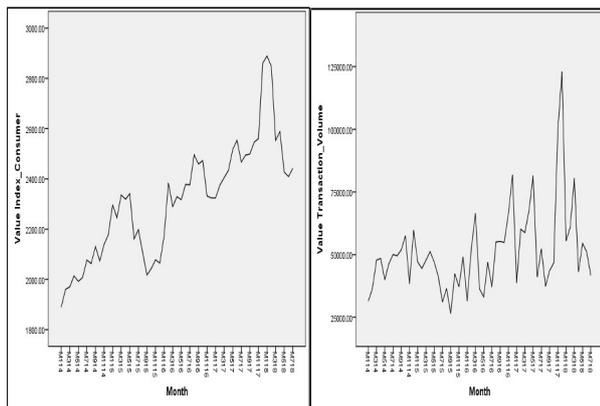


**Fig 4.** Index Consumer Goods and Inflation

The results of this study are supported by Siregar (2014) that inflation has no significant effect on the Composite Stock Price Index. This indicates that inflation will only affect consumption levels. Based on the results of a study by Nur (2012) that the increase in prices of goods has caused the real purchasing power of the people to decline. The decline in people's purchasing power towards goods will have an impact on the decline in consumption.

The results of this study are contrary to Alamsjah's research, (2017) which says that inflation has a significant effect on the food industry's stock price. This shows that if the inflation rate rises, then the prices of goods will also increase, which means the purchasing power of the people will decrease. The resulting effect has an effect on sales and company revenue, so that the company's performance will decline and have an impact on the decline in stock prices.

Transaction volume have a significant effect on the consumer goods index, because the value of Sig. t is smaller than 0.05, which is 0.010. These results indicate that there is an influence of the transaction volume on the consumer goods index. This proves that an increase in transaction volume can affect the movement of the consumer goods index.



**Fig 5.** Index Consumer Goods and Transaction Volume

The results of the study are supported by Karpoff (1987), Manganelli, (2002) and Xu (2013) there is a positive relationship between transaction volume and stock price volatility, but only applies to stocks that are often traded. Stock price movement in the Index.

Based on the opinion by Karpoff (1987) that small volumes are usually accompanied by a decrease in prices, large volumes are usually accompanied by rising prices, and a large increase in volume is usually accompanied by a large price increase or a large fall in prices.

The results of this study contradict the research conducted by Peter (2011) and Christina (2014) showing that trading volume has no effect on stock prices, because in buying shares investors pay less attention to the amount of trading volume that occurs, investors are more likely to choose stocks based on trends.

**Tabel 3:** t-Tes Result

| Coefficients <sup>a</sup> |                             |            |                           |       |       |      |
|---------------------------|-----------------------------|------------|---------------------------|-------|-------|------|
| Model                     | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig.  |      |
|                           | B                           | Std. Error | Beta                      |       |       |      |
|                           | (Constant)                  | 773.920    | 296.057                   |       | 2.614 | .012 |
|                           | Money Supply                | .000       | .000                      | .748  | 6.908 | .000 |
|                           | Inflation                   | -21.134    | 72.943                    | -.031 | -.290 | .773 |
|                           | Transaction Volume          | .003       | .001                      | .201  | 2.686 | .010 |

**Tabel 4.**F Test Result

| ANOVA <sup>a</sup> |            |                |    |             |        |                   |
|--------------------|------------|----------------|----|-------------|--------|-------------------|
| Model              |            | Sum of Squares | Df | Mean Square | F      | Sig.              |
|                    | Regression | 2186341.586    | 3  | 728780.529  | 54.784 | .000 <sup>b</sup> |
|                    | Residual   | 678437.250     | 51 | 13302.691   |        |                   |
|                    | Total      | 2864778.836    | 54 |             |        |                   |

### 3.4 Simultaneous test Result

Referring to the data in table 4, the test was carried out using SPSS, so the Sig value was obtained. F is 0.000. The value is smaller than 0.05. Based on the test results, the variables of the money supply, inflation and transaction volume simultaneously have a significant effect on the consumer goods index.

### 3.5 Coeffesien Determination Result

In this study the coefficient of determination (Adjusted R Square) in tabel 5 is equal to 0.749. This means that the variable money supply, inflation and transaction volume can explain 74.90%. While the rest is equal to 100% - 74.90% = 25.10% explained by other factors outside the variables studied.

**Tabel 5:** Coeffesien Determination Result

| Model Summary <sup>b</sup> |                   |          |                   |                            |
|----------------------------|-------------------|----------|-------------------|----------------------------|
| Model                      | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1                          | .874 <sup>a</sup> | .763     | .749              | 115.366<br>37              |

### 4 Conclusion

The results of the normality test show that the data used are the consumer goods index 0.782, money supply 0.782, 0.133 inflation, and transaction volume of 0.106 > from 0.05 so that it can be said that the data is normally distributed. In partially test the money supply and transaction volume influence is positively significant to consumer goods index, but no influence significant to consumer goods index inflation. The simultaneous test shows that all variables are significant influence to consumer good index. The research show that all money supply variables, inflation and transaction volume can explain 74.90%, and 25.10% explained by other factors outside the variables research.

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