

ECONOMIC ANALYSIS OF REACTION CONDITIONS MOKRO INVESTOR AND INVESTMENT DECISION IN INDONESIA STOCK EXCHANGE (IDX)

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ABSTRACT

This study aimed to analyze the phenomenon of investors in making investment decisions in the Indonesia Stock Exchange (IDX). The nature of this research is explanatory research and this study aims to obtain empirical evidence and analyze macroeconomic conditions on the reaction of investors and investor's decision to invest in shares in the stock exchanges of Indonesia. The unit consisted of (estimates of economic growth, inflation estimates, the estimated interest rate, the estimated value of the rupiah exchange rate against the USD, the estimation of security conditions, and estimate the political situation) that prospective investors responded by manufacturing companies that go public (listed) on the Stock Exchange. Data were obtained through direct observation of the macro-economic conditions (ME) and the reaction of investors (RI) around the date of the financial statements are then analyzed to measure the magnitude of the variable investment decision (KI), in IDX.

Analytical tool in this study using structural modeling using the package equation Lisrel program, to test the hypothesis of an association of each exogenous variable (ME) on endogenous variables (RI) and (KI). This study conducted a census of the entire population who meet the following criteria: financial reports to the Capital Market Reference Center (PRPM) and are actively traded stocks from the Stock Exchange.

This study to obtain empirical evidence that the results of the tendency of investors and prospective investors to consider using a macroeconomic conditions (economic growth estimates, estimates of inflation, interest rate estimates, the estimated value of the rupiah exchange rate against the USD, the estimation of security conditions, and estimate the political situation) are addressed by the candidate investor manufacturing company that went public (listed) as consideration for the long-term investment decision-making in Indonesia Stock Exchange. while the

Keywords: Macroeconomic Conditions, The Reaction Of Investors, Investor Decisions,

INTRODUCTION

Sodik (2011, 2012) obtain empirical evidence that investors in the Stock Exchange's behavior is influenced by the state of the economy, government policy in the field of monetary and fiscal, as well as the circumstances of each company which went public. These conditions can affect the predicted reaction of investors and investor decisions in the Indonesian stock exchange.

Investor's decision to buy, hold, and sell stocks is influenced by the availability of information that can be used in assessing a stock. One of the required information for stock investors is an enterprise information macroeconomic conditions. This information can influence the decision of investors to bear risk in the investment. Anticipation of the state of the economy, political, social, cultural, security, law enforcement, state Exchanges and changes in the issuer becoming an important factor in assessing the investment in the stock exchange, as well as investors' risk preference.

Investors basically tend to use to predict the market situation and make an assessment of the securities. The performance of companies that investors consider to be a factor, because it can reflect the internal management of the company effective or not.

Research conducted by Ball and Brown (1968), Foster (1977) and Hyan (1995) were used as the basis for an efficient market assessment (efisient market hypotheses) relating to the publication of financial statements in general, the conclusions can be misleading. This is due to the three research settings are the companies went public in the United States capital markets which have been classified in the developed capital markets and has a background to the social, political, economic, legal and business systems that are very different from the characteristics of the stock exchanges of developing countries (emerging capital markets) such as Indonesia.

Differences in the environmental setting and the characteristics, researchers suspect that the market's reaction to information macroeconomic conditions around the publication of financial statements may differ when setting research conducted in IDX are characteristic of emerging capital markets is still relatively capital markets. This allegation refers to the results of research and opinion of Bailey and Chung (1995), Aggarwal et al (1999), Saudagaran (2001), Radebaugh and Gray (1997), Haskins et al (1996), and Scott (2000), Sodik (2011) which states that the difference in the dynamics of economic factors, social, political and markets between countries can lead to differences in the market reaction to an announcement event economic conditions.

Assessment of macroeconomic conditions (economic growth estimates, estimates of inflation, interest rate estimates, the estimated value of the rupiah exchange rate against the USD, the estimation of security conditions, and estimate the political situation) that prospective investors responded by publicly traded manufacturing company (issuer) and the decisions of investors who reflected in the act of making a purchase of shares, it is important to research conducted continuously.

Based on the above description can be obtained a description of the background of situational and conditional on macroeconomic issues and the reaction of investors and investor's decision to invest in shares in Indonesia Stock Exchange. To obtain empirical evidence on situational picture and the conditional, the researchers are interested in

doing research with the title of the macroeconomic analysis of the reactions of investors and investment decisions in the Indonesia Stock Exchange.

Problem Formulation

Based on the background of the above problems can be formulated some problems in this study as follows:

- 1) How does the analysis of macroeconomic conditions simultaneously affect the reaction of investors and investment decisions in the Indonesia Stock Exchange.
- 2) How does the analysis of macro-economic conditions partial effect on the reaction of investors and investment decisions in the Indonesia Stock Exchange.
- 3) Which of the macroeconomic conditions of the dominant influence on the reaction of investors and stock investment decisions in the Indonesia Stock Exchange.

CONCEPT VARIABLE MACROECONOMIC CONDITIONS

In this study, the variable macroeconomic conditions through indicators such variable is the estimate of economic growth, inflation estimation, estimation of deposit rates, and the estimated value of the rupiah exchange rate against the \$ US, security, and political situation. The conceptual framework of each indicator variable can be defined as follows:

Estimates of economic growth. Is a change not anticipated (unanticipated) on the condition of general economic growth experienced by the investor issuer. This condition describes the ability to produce more output in a number of unanticipated by the issuer. Roll and Ross (1995: 326) do a calculation that estimates of economic growth is measured by the difference between the estimated economic growth at the beginning of the period compared to the economic growth that occurs at the end of the period. While Burgman (1996) calculate an estimate of economic growth by finding the regression coefficient of the level of corporate earnings is a function of the rate of economic growth in the final period.

In this study estimates economic growth is defined as the difference in economic growth estimates with actual economic growth. To estimate the economic perumbuhan used the average regression coefficient with the corporate income rate of economic growth rate of the initial period and the final period.

Estimated inflation. Samuelson and Nordhaus, (1992: 306) argues that inflation is one of the macroeconomic factors that indicate the increase in the general price level: Inflation occurs when the general level of prices is rising. The rate of inflation is defined as the rate of change of the price level (as Measured, say, by the consumer price index,

$$\text{Rate of inflation (year } t) = \frac{\text{Price level (year } t) - \text{Price level (year } t-1)}{\text{Price level (year } t-1)}$$

or CPI) and is a Measured as follows:

General price level proxied by Price Index (Price Index), which is a weighted average of prices of some goods and services. Price index the most important is the Consumer Price Index - CPI (Consumer Price Index), Producer Price Index - PPI (Producer Price Index) and the GNP deflator (Samuelson & Nordhaus, 1992: 308-309).

In Indonesia, the national inflation rate measurements using a proxy for changes in the Consumer Price Index (CPI). To calculate the period t inflation rate using the formula $\{[\text{IHKt} / \text{IHKt-1}] - 1\}$ in units of percent.

Samuelson and Nordhaus (1992: 311-312) classifies inflation into three categories, namely: (1) moderate inflation (inflation moderate) when the inflation rate / year less than or equal to 10%, (2) the galloping inflation (inflation malignant) when inflation / year more than 10 to 100%, and (3) hyper inflation (hyperinflation) when the rate of infalsi / year more or equal to 100%.

Estimates of inflation is defined as a difference between the estimated inflation minus the actual inflation is unanticipated inflation. One of the most common ways to estimate inflation is to use the concept of adaptive expectation (Dernburg, 1985: 322), formulated $X_t = X_{t-1} + g (\pi_t - X_{t-1})$, where X_t = estimate of inflation in period t, X_{t-1} = estimate of inflation in period t-1, π_t = actual inflation rate period t, and g = coefficient of adjustment.

Estimation of Deposit Rate. Dernburg (1985: 143-144), states that the consideration of an investor in making an investment decision on a particular asset depends on whether the expected rate of profit on investment assets is greater or smaller than the interest rate to get the funds. If it is an equity fund, investors will also consider the expected return is obtained compared to the amount of interest earned if the capital itself was loaned to other parties.

Based on what was raised by Dernburg (1985) concluded that investors in the investment decision, in addition to the expected returns to be obtained, also consider the interest rate that would be obtained if the funds deposited in the bank. This fact indicates that deposit / savings to the stock are two types of investment are interchangeable.

Estimated rate in this study was defined as the difference between the initial deposit rate period estimates with actual deposit rates are not anticipated period end. One way to estimate the interest rate is to use the concept of adaptive expectation (Dernburg, 1985: 322), formulated sebgai $i_t = i_{t-1} + g (\pi_t - i_{t-1})$, where i_t = estimate of the interest rate in period t, i_{t-1} = estimate of the interest rate in period t-1, π_t = actual interest rate period t, and g = coefficient of adjustment.

Estimated Rupiah / USD. Rupiah exchange rate against the United States Dollar (USD / EUR) is the relative price of IDR against USD in foreign exchange market. IDR / USD is a number that indicates the amount of rupiah to get one USD. Exchange rate rupiah / USD is determined by supply and demand Rupiah against the USD in the foreign exchange market. If the request Rupiah against the USD down, then the Dollar will depreciate against the USD, in other words IDR / USD weakened. Conversely, if demand Rupiah against the USD goes up, there will be appreciation of the Rupiah against the USD, in other words Dollar appreciated against the USD or Rupiah / USD strengthened.

Estimated exchange rate of Rupiah / USD in this study is defined as the difference between the exchange rate of Rupiah / USD exchange rate estimates with Rupiah / USD actually were not anticipated. To estimate the rate of Rupiah / USD is to use the concept of adaptive expectation (Dernburg, 1985: 322), formulated sebgai $k_t = k_{t-1} + g (\pi_t - k_{t-1})$, where k_t = estimated exchange rate of Rupiah / USD at period t, k_{t-1} = estimate of the exchange rate rupiah / USD in period t-1, π_t = level of the exchange rate of Rupiah / USD current period t, and g = coefficient of adjustment. Furthermore Burgman (1996) used for the calculation of the regression coefficients sought Rupiah exchange rate /

USD end of the month which is a function of the rate of the end of the month and end of month USD index.

Security conditions in this study is defined as the difference between the estimated initial security conditions with the period of the end of the actual security conditions are not anticipated. One of the most common ways to estimate the security condition is to use the concept of adaptive expectation (Dernburg, 1985), formulated $X_t = X_t \text{ sebgai-1} + g (\pi_t - X_{t-1})$, where X_t = estimate of the security conditions in period t , X_{t-1} = estimate of inflation in period $t-1$, π_t = actual security state of period t , and g = coefficient of adjustment.

The political situation in this study is defined as the difference between the political situation of the estimated initial period to the end of the actual security conditions are not anticipated. Common method used to estimate the political situation is to use the concept of adaptive expectation (Dernburg, 1985), formulated $X_t = X_t \text{ sebgai-1} + g (\pi_t - X_{t-1})$, where X_t = estimate of the political situation in period t , X_{t-1} = estimate of the political situation in period $t-1$, π_t = actual political situation in period t , and g = coefficient of adjustment.

The concept of reaction variables Investors and Investment Decisions.

According to Francis (1993: 5), the company's stock price is a reflection of the value of wealth (wealth ending) investors. Furthermore, Francis (1993) states that the objectives of investors to invest their money in stocks is to maximize the rate of return of investment. Stock yield rate consists of 2 elements, ie, capital gain / loss and cash dividends.

The reaction of investors and investment decisions in this study is defined as a reflection of the decisions taken and the reaction of investors to buy shares of the investment act, observe and wait, and sell stocks. This action is reflected in the price of each share of common stock is traded either before, during, or after the issuance of the financial statements of listed companies on the Stock Exchange.

Based on the above, the macro-economic conditions, and the reaction of investors and stock investment decisions have positive relationships interrelated. If the accounting information that reflects the financial performance of a company either partially or simultaneously show good conditions or increased and experienced by almost all companies, it will be able to encourage an increase in positive reactions indicating that investors keperayaan improved or increased. This will affect investor decisions as reflected in the share price on the Stock Exchange.

Research Design

This study used methods of field research (field research), that is by doing surveys and grounded research. Type of research is explanatory research. Explanatory research as written by Subiyanto (1992: 87), a study conducted to describe the symptoms caused by an object of research.

The design of this study used a descriptive-correlational. Descriptive design was intended to obtain information related to the phenomenon that is observed today (Arikunto, 1989: 73). While correlational, because trying to explain the presence or absence of a relationship between the various variables based on the size of the correlation coefficient (Ardhana, 1987: 29).

The population in this study is the investors and prospective investors that the manufacturing company went public (listed) in Indonesia Stock Exchange whose shares

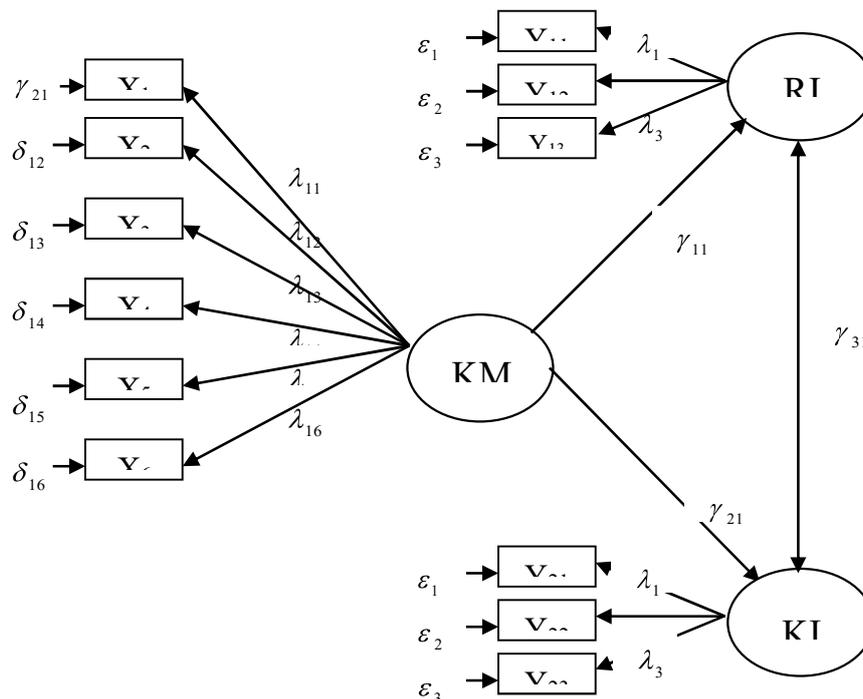
are actively traded, were analyzed as a whole (census). If found manufacturing issuers failing to submit annual financial reports to the Capital Market Reference Center is complete, it will be set aside. Based on the observation and analysis of the population that meet the specified criteria, then the population is eligible for further analysis in this study. Reason retrieval manufacturing companies, because there is relatively more than other types of companies.

Methods of Data Collection

The data used are primary and secondary data. The primary data obtained from respondents actors IDX investment in both investors and prospective investors. While the secondary data obtained from records or reports macroeconomic conditions in 2013 - 2014 trimuwan 1 To search for the data obtained from investors reaction rates that occurred during the 5 (five) days prior to the publication of the report, the price of which occurred at the time of publication of the report and the price is going 5 (five) days after the publication of the report. The reason is because in one week stock trading on the Stock Exchange just done a five-day transactions. Methods of data collection done personally direct the Indonesia Stock Exchange.

MODEL STRUCTURE RESEARCH

Based on the framework and the operationalization of the variables are adopted from various results of previous studies, the researchers can develop models of the structure of the relationship between the variables of the study as presented as follows:



Remarks

- X₁ = Estimates of economic growth
- X₂ = Estimated Inflation
- X₃ = Estimated deposit rates
- X₄ = Estimated Dollar / USD

- Y₁₁ = stock price prior to publication
- Y₁₂ = stock price saa publication
- Y₁₃ = stock price after the publication
- Y₂₁ = The decision to buy shares
- Y₂₂ = The decision to wait and observe
- Y₂₃ = The decision to sell shares

DATA ANALYSIS

In this study, the observed variables are 1 (two) independent variables consisting of 4 (four) indicator and two (2) dependent variables. Variables with one another the possibility of inter-related and should be reviewed in its entirety. Therefore, appropriate methods of analysis is a multivariate statistical analysis methods.

Data analysis was performed equation pursued through structural analysis modeling (Augusty Ferdinand, 2002), this test is performed to determine how the link between a variable to another variable based on the model structure described.

Results

Variable Macroeconomic Conditions (ME).

Measurements for indicators of macroeconomic condition variables can be seen in Table 2 below:

Table 2 Results of analysis measurements exogenous parameter estimation (ME)

Parameter	Parameter Estimation	R ²	Error variance
Estimates of economic growth (X ₁)	0,35	0,1225	0,8775
Estimates inflation (X ₂)	0,81	0,6561	0,3439
Estimates deposit rates (X ₁₃)	0,87	0,7569	0,2431
Estimates exchange rate USD / EUR (X ₄)	0,74	0,5476	0,4524

Source: Results of LISREL Analysis Program

Based on Table 2 the results of the analysis were conducted simultaneously to pasial and macroeconomic variables (ME).

Indicators of macroeconomic variables that have the largest coefficient is surprise deposit rate (X₃) which is equal to (0.87) 2 or 76% by value of the error variance (delta) the smallest of 0.24 or 24%. Indicator which has the smallest coefficient is a surprise to economic growth (X₁) of (0.35) 2 or 12%. While the indicator has an error variance (delta) is the biggest surprise of economic growth (X₁) of 0.88 or 88%.

Variable reaction Investor (RI)

Measurements for indicators of reaction variables Investor (RI) can be seen in Table 3 below:

Table 3 Results of the analysis of the measurement of endogenous variable parameter estimates (RI)

Parameter	Parameter Estimation	R ²	Error variance
Stock price prior to publication (Y ₁₁)	0,69	0,48	0,52
Stock price saa publication (Y ₁₂)	0,74	0,55	0,45
Stock price after the publication (Y ₁₃)	0,99	0,98	0,02

Source: Results of LISREL Analysis Program

Based on the results of this analysis indicate that the share price indicator surrounding the publication of the report macroeconomic conditions can be used to describe and measure investor reaction variables.

Indicator variable macroeconomic conditions that have the largest coefficient is the stock price after the issuance of the macroeconomic conditions (Y_{13}) which is equal to (0.99) 2 or 98% as well as an indicator that has a value of error variance (η) smallest 0.02 or 2%. Indicator which has the smallest coefficient is the stock price prior to the publication of reports macroeconomic conditions (Y_{11}) of (0.69) 2 or 48% by value of the error variance (η), the largest in the amount of 0.52 or 52%.

THE DECISION VARIABLES INVESTORS (KI).

Measurements for indicators of decision variables Investorn (KI) can be seen in Table 4 below:

Table 4 Results of the analysis of the measurement of endogenous variable parameter estimates (KI)

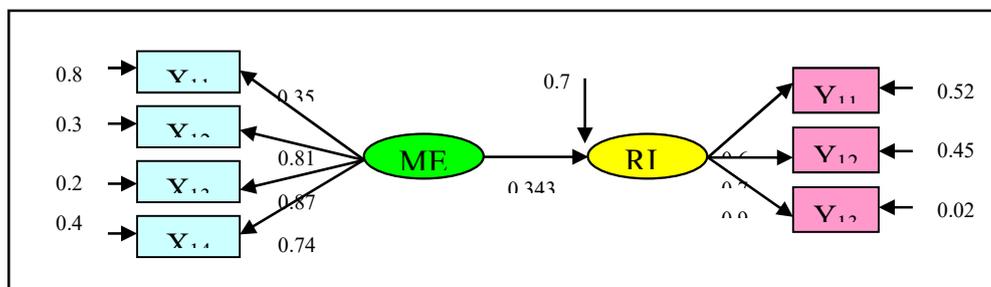
Parameter	Parameter Estimation	R ²	Error variance
The decision to buy shares (Y_{21})	0,75	0,56	0,44
The decision to wait and observe (Y_{22})	0,69	0,51	0,46
The decision to sell shares (X_{23})	0,78	0,60	0,40

Source: Results of LISREL Analysis Program

Indicator variable Investorn decision that has the largest coefficient is sell / take off stock investments (Y_{23}) which is equal to (0.78) 2 or 60% as well as an indicator that has a value of error variance (η) of 0.40 or 40% smallest. Indicator which has the smallest coefficient is holding stock investments (Y_{22}) of (0, 69) 2 or 56% by value of the error variance (η) of 0.46 or the smallest 46%.

Judging from the results of the analysis of the partial indicators or simultaneously appears that the coefficient of the indicator variable equal investment decisions in the stock investment decision variable measure that is equal to 56%, 51% and 60%. This suggests that the three indicators can be used to measure or explain stock investment decision variables (KI).

Based on the analysis results of calculations using the LISREL program package as presented as follows:

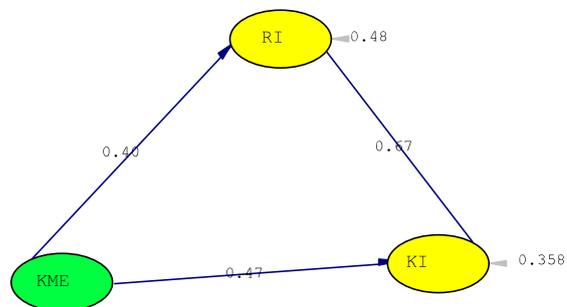


Source: Results of LISREL Analysis Program

Seen from above shows that the direct effect of macroeconomic conditions on the reaction of investors is equal to $(0.38)^2 = 0.14$ or 14%. Thus it can be said that the macroeconomic conditions of the reaction of investors in the Stock Exchange, and thus there is a correlative effect between macroeconomic conditions on the reaction of investors is equal to $(0.38)(0.44)(0.47) \times 2 = 0.1572$ or 16%. So that the overall effect of macroeconomic conditions on the reaction of investors $(0.1444 + 0.1572) = 0.3016$ or 30%.

Based on the analysis results of calculations using the LISREL program package, as presented in Figure 4.5 shows that the direct effect of financial accounting information and non-accounting information on changes in the value of stock trading is equal to $(0.40)^2 + (0.343)^2 = 0.2776$ or or 28%. Thus it can be said that the financial accounting information and non-accounting information has a direct influence on the change in the value of stock trading on the JSE. From the analysis of the relationship between non-accounting information to financial accounting information has a correlative relationship, then there is also an indirect effect of financial accounting information and non-accounting information on changes in the value of trading stock that is equal to $(0.40)(0.343)(0.44) \times 2 = 0.1207$ or 12%. So that the overall effect of financial accounting information and non-accounting information on changes in the value of stock trading simultaneously $(0.2776 + 0.1207) = 0.3983$ or 30%. Sedangkan epsilon value of 1 to $0.30 = 0.70$ or 70%.

Figure: Results of testing the effect of variables (ME & RI) and endogenous (RI) to (KI)



Chi-Square=276.23, df=113, P-value=0.00000, RMSEA=0.111

Overall macroeconomic condition variables seem equally affect the reaction of investors as reflected in the company's stock price either before, during or after the publication of the report macroeconomic conditions.

Thus the results of this test proves that the macro-economic conditions and investor reaction to influence the decisions of investors shares in BEI. So the macro-economic conditions and investor reactions significantly affect stock investment decision.

DISCUSSION

Statistical tests were performed to test simultaneously showed a positive effect. Overall effect of macroeconomic conditions and the reaction of investors and stock investment decisions by 86%. The direct effect of economic conditions by 74%. While the direct effect of the reaction of investors to the stock investment decisions of 45%. If seen from the results of simultaneous testing showed a value of 62%. Chi Square = 276.23; df = 113; P-value = 0.000; and RMSEA = 0.111; t-value = 9.30.

Thus these findings prove that the economic conditions and the reaction of investors and stock investors' decisions in the Indonesia Stock Exchange is acceptable. This means that investors in the Indonesian stock exchange investment decision considering the economic conditions of a country's information.

These findings support and complement the results of the study Michael A. Berry: Edwin Burncister & Majorie B. McElroy (1988), Baillie and McMahon (1990), Beneish (1991), Rogers (1991), Francis (1994), Hirst et al (1995), Ross (1996), Ainum Naim (1997), Arifin & Baridwan (1997), Joseph A. Imam Suja'i (1999), Sarjono (2000), Sodik (2011).

CONCLUSION

The conclusion of this study indicate that macroeconomic conditions are indicated with an estimated economic growth conditions, inflation, interest rates, the exchange rate of the rupiah against the dollar investor consideration in making investment decisions stake in Indonesian stock exchange. The results of the analysis of both partially and simultaneously obtain a positive coefficient, which means that in the event of macroeconomic konisi increases, the tendency will increase the number of investors and amount of investment in the Indonesia Stock Exchange.

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