Determinants of Indonesian Capital Market Reaction

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Abstract: - Several research results in the Indonesian Capital Market have found a market anomaly phenomenon caused by the market reacting to internal and external information. This study aims to examine whether company-specific factors (company size, growth, and risk), national macroeconomic factors (Inflation, interest rates, and exchange rates on a national scale), and world macroeconomic factors (market returns, Inflation, interest rates, and world-scale exchange rates)) may cause the Indonesian Capital Market to react. The form of this research is associative descriptive with a population of all companies indexed by LQ45, totaling 45 companies. According to purposive sampling, the sample used is 22 companies, and data analysis using panel data regression with the help of software Eviews 12. The study's results found that only national interest rates and world inflation could cause the Indonesian Capital Market to react. In contrast, size, growth, risk, national Inflation, world returns, world interest rates, and world exchange rates did not cause the Indonesian Capital Market to react.

Key-Words: - determinants, market reactions, anomalies, Indonesia.

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1 Introduction

Testing of the efficient market hypothesis (EMH) and market anomalies (MA) has been carried out by several previous researchers, which prove that the Indonesian capital market is included in semi-strong market efficiency, [1], [2], [3], [4]. Fama, [5], states that the semi-strong form of efficiency reflects all information internally and externally to the public.

Internal information comes from the company itself, for example, earnings announcements, dividend payments, IPOs, stock dividends, and stock splits, as well as company-specific factors such as company size, growth, and risk. Meanwhile, external information comes from outside the company, domestically and globally, including Inflation, interest rates, exchange rates, world oil prices, and global stock market movements, [6].

The market reaction can be measured through changes in security prices, either in the form of stock returns or abnormal returns, [7]. For example, Prombutr and Phengpis, [8], who researched the NYSE, AMEX, and NASDAQ Markets, found that company-specific factors consisting of investment growth, size, and value caused the market to react. On the other hand, dash and Mahakud, [9], who researched the Indian Market (NSE), found that market risk, firm size, and book value did not cause the market to react, but liquidity caused the need to respond.

The results of research on the reaction of the Indonesian Capital Market (ICM) also found inconsistent results. Assagaf et al., [10], find that earnings management and company size do not cause the market to react, but leverage which is the company's risk, drives the need to respond. Suteja and Seram, [11], found that ROE, Inflation, exchange rates, and interest rates can cause market reactions, but leverage does not cause the market to react.

Based on the phenomenon of the gap in the results of the research above and to enrich research on the reaction of the ICM. Research aims to examine whether company-specific factors (company size, growth, and risk), national macroeconomic factors (Inflation, interest rates, and exchange rates on a national scale), and world macroeconomic factors (market returns, Inflation, interest rates, and world-scale exchange rates) can cause the ICM to react.

This research has both practical and theoretical contributions. Practically contribute to company management and investors making investment decisions as study material in enriching knowledge and references regarding capital market reactions and empirical findings related to efficient market theory.

2 Literature Review

State of the Art in this study uses the results of research on several capital markets. Prombutr and Phengpis, [8], who examined industrial companies listed on the NYSE, AMEX, and NASDAQ for the period July 1975 to June 2006, found that company-specific factors, including investment growth, company size, and value had an influence on stock returns or caused the market to react. Dash and Mahakud, [9], who examined non-financial companies listed on the National Stock Exchange (NSE) in India, found that market risk, company size, and book value did not cause the market to react, but liquidity caused the market to respond. Suteja and Seram, [11], who researched the automotive and component industry companies on the IDX from 2009 to 2013, found that ROE, national Inflation, national exchange rates, and national interest rates can cause market reactions. Still, leverage does not cause the market to react. Meanwhile, Adiwibowo, [12], who researched manufacturing companies on the IDX from 2010 to 2012, found that earnings management and company size did not cause the market to react. Still, leverage, the company's risk, caused the market to respond.

The four studies above examine the capital market's reaction in Indonesia and the world. The similarity is that they both look at the capital market's response using company-specific and national macroeconomic factors. However, what makes the difference here is that apart from the object, sample, and period, as a novelty, the researcher adds world-scale macro variables and uses abnormal return proxies for market reactions. In contrast, the results of previous studies use stock returns.

The market is called efficient because the prices of securities fully reflect the available information, [13]. For this reason, an efficient market is a market whose security prices fully reflect past, present, and future data. But in reality, a genuinely efficient market does not exist because there are market anomalies due to events that contain information that can cause the market to react. Market reaction to news depends on the efficiency of the market itself.

The market reacts to announcements, events, and company-specific factors such as company size, growth, and risk; national macroeconomic factors such as Inflation, interest rates, and exchange rates on a national scale; and world macroeconomic factors such as market returns interest rate inflation and world-scale exchange rates. It contains information. Market reaction is proxied by return or abnormal return. Abnormal return is expected return minus average return, [14]. An announcement, events, and specific factors, national and world macroeconomics are said to have information if an abnormal return can cause the market to react.

In addition to announcements, events, and actions that cause the market to react, the researcher also wants to examine some company-specific factors that can explain how the market reacts, such as size, growth, and risk. Size is the scale of the company which is proxied by asset value, growth is the company's cash flow due to an increase or decrease in the volume of business activities which is proxied by the growth of profit, while company risk is a condition of uncertainty that is proxied by the leverage which is total equity divided by total debt.

It is suspected that macroeconomic factors on a national scale can cause the capital market to react. For example, Lestari and Nugroho, [15], found that economic factors had an effect of 36% where the exchange rate variable was responded to negatively by the market. In contrast, the market reacted positively to the BI rate, Inflation, and money supply. Therefore, the national macroeconomic variables the researcher uses are Inflation, interest rates, and national currency exchange rates.

World-scale macroeconomic factors are also suspected of having caused the ICM to react. For example, Silim, [16], who examined the effect of macroeconomic variables of gold prices and world-scale oil prices on the JCI, found that gold prices and

world-scale oil prices positively influenced the JCI. In this research, the world macroeconomic factors that the researcher uses are market returns, Inflation, interest rates, and world-scale exchange rates.

Based on the description above, the hypothetical formulas in this study are: company size can cause the ICM to react, company growth can cause the ICM to react, company risk can cause the ICM to react, national Inflation can cause the ICM to react, federal interest rates can cause the ICM to respond, The exchange rate of the national currency can cause the ICM to react, world capital market returns can cause the ICM to react, world inflation can cause the ICM to react, world interest rates can cause the ICM to respond, and The exchange rate of world currencies caused the ICM to react.

3 Research Method

The form of this research is associative descriptive research which involves data collection, data processing, and data analysis to determine whether there is an association between two or more variables. Then the association between these variables will be interpreted by researchers to answer the research objectives, namely to determine the determinants of the cause of the ICM reaction.

There are two variables in this study, namely the dependent and independent variables. The abnormal return (Y) as the dependent variable . At the same time, Size (X1), Growth (X2), Risk (X3), National Inflation (X4), National Interest Rate (X5), National Exchange Rate (X6), World Stock Return (X7), World Inflation (X8), World Interest Rate (X9), World Exchange Rate (X10) as the independent variables

The operational definitions of variables and their measurements are explained below:

1. Abnormal Return (Y).
   Abnormal return is the realized return minus the expected return, which is measured using the formula, [17]:
   $$ARi,t = Ri, t – E(Ri, t)$$
2. Size (X1)
   Size is the scale of a company which is calculated by the formula, [18]:
   $$Size = Ln\ (Total\ assets)$$
3. Growth (X2)
   Growth is the result of cash flow which is an increase or decrease in the volume of activities measured using the formula, [19]:
   $$Growth = \frac{EAT_t - EAT_{t-1}}{EAT_{t-1}}\ x\ 100\%$$
4. Risk (X3)
   Risk is a condition of uncertainty measured by the leverage, which is calculated using the formula, [20]:
   $$Leverage = \frac{Debt}{Equity}$$
5. National Inflation (X4)
   National Inflation is an increase in the price of domestic goods over a long period proxied by the Indonesian Consumer Price Index.
6. National Interest Rate (X5)
   The national interest rate is the Bank Indonesia proxied by SBI.
7. National Exchange Rate (X6)
   The national exchange rate is between the rupiah and the US dollar.
8. World Stock Returns (X7)
   World Stock Return is the rate of return on the New York Stock Exchange Index (Dow Jones Index)
9. World Inflation (X8)
   The increase in world-scale goods prices is proxied by the United States inflation rate.
10. World Interest Rates (X9)
    World interest rates are proxied by the LIBOR interest rate
11. World exchange rates (X10).
    The World Exchange Rate is the world currency exchange rate proxied by the Japanese yen with the United States dollar.

The population in this study are all companies that are members of the LQ 45 index, totaling 45 companies; the research period is from 2015 - 2021. By using purposive sampling with the criteria of the number of companies that are continuously included in LQ45 during the study period and which report their financial statements in the LQ45 index. Rupiah (IDR), the number of samples processed was 22 companies with a total data of 154 (22 companies x 7 years).

Data analysis used panel data regression method. Before testing the hypothesis, the selection of the correct regression model was tested, namely: first, the Chow test was carried out to determine between CEM or FEM; second, the LM test was carried out to determine between CEM or REM; third, Hausman test is conducted to examine between

FEM or REM. After getting the correct regression model, then hypothesis testing is carried out. The role of the Thumb to conclude the hypothesis is that the hypothesis is accepted if the sign value is 5%, but the hypothesis is rejected if the sign value is 5%.

4 Results and Discussion

This study was conducted to determine the determinants of the reaction of the ICM, namely whether company-specific factors (company size, growth, and risk), national macroeconomic factors (Inflation, interest rates, and national-scale exchange rates), and world macroeconomic factors (market returns, Inflation, interest rates, and world-scale exchange rates) can cause the ICM to react.

The initial stage in panel data regression analysis is model selection. There are three-panel data regression models used in this study, namely Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). A paired test will be carried out for each model to choose which model is the best regression estimation model.

By the results of the selection of the panel data regression estimation model, the appropriate estimation model used is the common effect model. The results of panel data regression using CEM are as follows:

Table 1. Common Effects Model Output

Dependent Variable: ABN_RETURN
Method: Panel Least Squares
Date: 10/19/22 Time: 19:30
Sample: 2015 2021
Periods included: 7
Cross-sections included: 22
Total panel (balanced) observations: 154

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SIZE	0.014665	0.021045	0.696838	0.4870
GROWTH	-9.11E-06	0.000123	-0.073763	0.9413
RISK	-0.005311	0.010126	-0.524535	0.6007
INF_NAS	0.054163	0.117454	0.461143	0.6454
SB_NAS	-0.112725	0.043717	-2.578555	0.0109
RETURN_DUNIA	0.321998	0.337873	0.953015	0.3422
INF_DUNIA	-0.080666	0.037427	-2.155289	0.0328
SB_DUNIA	0.085266	0.071840	1.186887	0.2372
KURS_DUNIA	-159.8745	121.0867	-1.320331	0.1888
C	1.354960	1.535671	0.882325	0.3791

Root MSE	0.277825	R-squared	0.177850
Mean dependent var	-0.009629	Adjusted R-squared	0.126466
S.D. dependent var	0.307405	S.E. of regression	0.287310
Akaike info criterion	0.406220	Sum squared resid	11.88676
Schwarz criterion	0.603425	Log likelihood	-21.27894
Hannan-Quinn criter.	0.486324	F-statistic	3.461176
Durbin-Watson stat	2.783848	Prob(F-statistic)	0.000682

Based on the output of the common effect model in table 1, the probability values of the influence of size, growth, risk, national Inflation, world stock returns, national interest rates, and national exchange rates on abnormal returns appear to be 0.4870, and 0.9413, respectively. 0.6007, 0.6454, 0.3422, 0.2372, and 0.1888, which are more significant than = 0.05, it can be concluded that size, growth, risk, national Inflation, world stock returns, national interest rates, and the National Exchange Rate did not cause the Indonesian capital market to react. While the National Interest Rate and World Inflation have probability values of 0.0109 and 0.0328, which are smaller than = 0.05, it can be concluded that the National Interest Rate and World Inflation caused the Indonesian Capital Market to react.

The size proxied by the natural logarithm of the company's total assets does not cause the Indonesian capital market to react. The results of this study are consistent with the results of research conducted by Dash and Mahakad, [9], Adiwibowo, [12], Nadiyah and Suryono, [21], and Chandra et al., [22]. This means that the company's size does not influence investors' interest in buying shares, so that size does not cause the Indonesian capital market to react. In other words, information about company size needs to contain data for investors.

The company's growth, as proxied by profit growth, did not cause the Indonesian capital market to react. The results of this study are consistent with the results of Chandra et al., [22]. The results of this study indicate that information about growth needs to contain information on how investors will react to markets.

The company's risk, proxied by the debt-to-equity ratio, does not cause the Indonesian capital market to react. The results of this study are consistent with the results of research conducted by Dash and Mahakud, [9], Suteja and Seran, [11], Nurmasari, [23], Haanurat, [24], and Legiman et al., [25]. The results of this study explain that investors are not too concerned with the condition of the company's capital structure so that the capital structure does not cause the capital market to react.

National Inflation did not cause the ICM to react. The results of this study are consistent with the results of Maharditya et al., [26], Wahyudi and Sani, [27], and Setiawan, [28]. The results of this study indicate that national Inflation needs to contain the information investors need in buying and selling shares in the ICM.

The national interest rate proxied by the SBI caused the Indonesian capital market to react. The results of this study are consistent with the results of research by Suteja and Seran, [11], Wahyudi and Sani, [27], and Utama and Utama, [29]. Therefore, the national interest rate can cause the Indonesian capital market to react; this indicates that the national interest rate contains information used by investors in buying and selling shares.

World stock returns, as proxied by returns on the Dow Jones index, did not cause the Indonesian capital market to react. This means that investors buying shares in the Indonesian capital market are not influenced by world stock returns, so world stock returns do not cause the Indonesian capital market to react.

World inflation caused the Indonesian capital market to react. The results of this study are consistent with the results of research conducted by Ibrahim and Agbaje, [30]. The results of this study indicate that world inflation contains information investors need in buying and selling shares, causing the Indonesian capital market to react.

World interest rates did not cause the Indonesian capital market to react. The results of this study are consistent with the results of research conducted by Maharditya et al., [26], Mishra and Mishra, [31], and Nurhayati et al., [32]. The results of this study indicate that world interest rates do not contain the information investors need to buy and sell shares on the Indonesian capital market. Some relevant study exists in [33].

The world exchange rate proxied by the Japanese yen exchange rate with the United States dollar did not cause the Indonesian capital market to react. The study's results explain that the world exchange rate does not influence investors in buying shares in the Indonesian capital market, so the world exchange rate does not cause the Indonesian capital market to react.

5 Conclusion

Based on research that has been carried out on ten independent variables that can cause the capital market to react, it is found that there is one variable that is excluded from the model because it has perfect multicollinearity with another independent variable, namely the national exchange rate variable so that the dependent variable that is processed is nine variables. Therefore, the research results on nine variables

show that Size, Growth, Risk, National Inflation, World Stock Returns, World Interest Rates, and World Exchange Rates do not cause the Indonesian Capital Market to react. In contrast, National Interest Rates and World Inflation can cause the Indonesian Capital Market to react.

Based on the limitations of the study, several suggestions can be recommendations for further researchers: first, considering the value of R2 (R-Square) in this study is relatively low, which is only about 17.79%, then further research can be developed by adding several independent variables. as determinants that can cause the Indonesian capital market to react, among others, cash flow, liquidity, and profitability. Second, this research can also be developed using other samples, such as a sample of companies listed on sharia indices such as the Jakarta Islamic Index (JII) and the Indonesian Sharia Stock Index (ISSI).

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