

ANALYZING THE EFFECTS OF INTEREST RATES, INFLATION, AND EXCHANGE RATES ON STOCK MARKET PERFORMANCE: A COMPARATIVE STUDY OF INDONESIA AND JAPAN

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Abstract

Purpose

This study examines the influence of macroeconomic variables on stock market performance in Indonesia and Japan from 2013 to 2023. Drawing upon the Efficient Market Hypothesis (EMH), we investigate how key factors such as interest rates, inflation, exchange rates, and economic events impact stock returns.

Design/methodology/approach

We examine the connections between these characteristics and stock market performance in two different markets using regression analysis and EMH as the theoretical framework. In order to find patterns and trends, we analyse data spanning a decade.

Findings

Interest rates strongly affect Indonesian stocks due to their influence on investor sentiment. In Japan, trade agreements have a significant positive impact on stock returns. However, stock returns in both countries are weakly connected to inflation, currency rates, and other economic and political factors. The global economy remains a key external factor for both markets.

Research limitations/implications

This study has some restrictions, such as data limitations and EMH framework-related presumptions. In the future, research may focus on longer-term effects, behavioural aspects, and sector-specific analysis to further our comprehension of these intricate interactions.

Originality/value

This research advances our understanding of market behaviour under various economic conditions by analysing the interaction of macroeconomic variables and stock market dynamics in two distinct economies.

Keywords: International trade, trade policy, stock market, Japan trade, Indonesia trade

HOW TO CITE

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1. INTRODUCTION

A combination of encouraging economic signs and persisting uncertainty have contributed to the global stock markets' uneven performance over the last years (Chen N. F., 1986). While some major market indices have reached record highs during this time, others have experienced sporadic declines, major stock indices across regions have proven resilient. Overall, the performance of the international stock market (Siegel, 2005) has been defined by periods of rapid expansion and sporadic market corrections. The S&P 500 index in North America has demonstrated amazing tenacity, breaking previous marks despite brief pullbacks. Similar to this, European stock markets, represented by the FTSE 100 index, have experienced consistent growth as a result of the region's improved economic conditions. As a result of geopolitical unrest and other factors, Asian markets, particularly the Nikkei 225 in Japan, have shown relatively modest advances as well as Jakarta composite Index in Indonesia (JCI).

A nation's financial system is not complete without the stock market (Fama, 2012) which offers consumers the chance to invest and increase their wealth while serving as a venue for businesses to obtain funds for investors, decision-makers, and financial analysts to make wise choices and develop winning strategies, it is essential to understand the variables that affect stock market performance. Interest rates, inflation, and exchange rates are three important macroeconomic variables that stand out among the many variables that affect stock market dynamics. These factors can significantly affect stock market behaviour and play a vital influence in determining the economic climate.

The stock market may experience uncertainty and volatility as a result of geopolitical events including political unrest, informs of elections, change in policy, economic crisis like covid-19 pandemic and trade agreements amongst nations. According to investment theory, geopolitical developments may alter investor mood and have an impact on stock prices. A good investment environment can be produced by political stability and advantageous trade deals, which could inspire investors to have more faith in the market and result in possible stock price gains. Stock prices may decline as a result of investors seeking out safer assets as a result of geopolitical tensions and uncertainty making them more risk-averse.

The Indonesian government's economic policies and laws may have an impact on enterprises and the wider stock market commodity prices because Indonesia exports a lot of commodities like coal, palm oil, and rubber, changes in those prices can have a big impact on how well some businesses do in related sectors. Japan's economy depends heavily on exports, changes in trade and demand conditions may have an impact on how well Japanese enterprises perform as well as the performance of the stock market. In addition, Japan's population is getting older, which could have an effect on consumer behaviour and business outlooks. Investor confidence in the Japanese stock market may benefit from improved corporate governance, transparency norms and technological innovation given Japan's position as a world leader in this industry, investors may be more interested in technology-related enterprises and the broader market.

2. LITERATURE REVIEW

2.1 The Theory of the Capital Asset Pricing Model (CAPM).

The Capital Asset Pricing Model (CAPM), a crucial element of modern finance (Sharpe, 1964), provides a systematic framework for understanding how risk and expected return interact in financial markets. This concept has been utilized in a number of researches to analyze how macroeconomic factors impact stock prices. 1980's Merton the CAPM sheds light on how changes in three variables—Exchange rates, inflation, and interest rates all have an impact on investors' necessary rates of return, which in turn has an impact on stock prices.

Interest rates and the CAPM are important variables in calculating the minimal return required by an investor to bear risk. The Cross-Section of Expected Stock Returns by Fama E. F., (1992) according to the CAPM. The minimal expected return for all assets, including stocks, rises as interest rates rise as does the risk-free rate. CAPM and inflation: Over time, inflation reduces the purchasing power of money. The CAPM framework takes into account how inflation will affect both the market risk premium and the risk-free rate (Fama, 1977). A higher nominal risk-free rate is required when inflation is strong because it reduces the real return on risk-free investments.

Exchange Rates and CAPM increasingly globalized environment (Bekaert G. &, 2000) exchange rates are important in determining how much an asset is worth. The CAPM accepts that changes in the exchange rate have an impact on both the risk-free rate and the risk premium for assets with a global component.

2.2 The Efficient Market Hypothesis (EMH)

According to the Efficient Market Hypothesis (EMH), stock markets and other financial markets are particularly good at absorbing and reflecting all available information (Assefa et al., 2017). The EMH asserts that it is hard to consistently achieve above-average returns by utilizing publicly available information because market prices integrate and react to such information quickly. In a broader sense, the EMH contends that financial markets are efficient at processing information and modifying asset prices to reflect their true value (Hsing, 2014). The actions of market participants, such as traders, investors, and analysts, who continuously evaluate and take fresh information into account while making trading decisions, are what lead to this efficiency.

According to the EMH, stock prices react swiftly to any relevant information, whether it relates to interest rates, inflation, exchange rates (Malkiel, 2003) or any other element affecting stock market performance. Therefore, as investors make wise decisions based on the available knowledge, changes in these macroeconomic variables should result in equivalent changes in stock values - selecting undervalued or overvalued stocks based on information that is readily available to the public can be difficult when attempting to regularly outperform the market (Grossman, 1980).

2.3 Conceptual Framework

The goal of this study's conceptual framework is to clarify the complex connections between important macroeconomic variables (Mankiw, 2011) and stock market performance in Indonesia and Japan. The framework's foundation is based on the knowledge that interest rates, inflation rates, and exchange rates are key factors that determine stock market movements and have a big impact on both countries' financial markets. Within the paradigm, these macroeconomic indicators are viewed as the main independent variables.

The following are the null hypotheses (H_0):

H_{01} : Indonesia's interest rates, inflation, exchange rates, political and economic developments, as well as stock market performance, don't significantly affect each other.

H_{02} : In Japan, there is no substantial correlation between interest rates, inflation, exchange rates, political and economic events with stock market performance.

Different/Alternative Hypotheses (H_1)

H_{11} : Interest rates, inflation, exchange rates, political and economic developments, as well as stock market performance, are all significantly correlated with one another in Indonesia

H12: Interest rates, inflation, exchange rates, political, economic, and stock market performance all significantly affect each other in Japan.

3. RESEARCH METHODS

3.1 Approach to Research Design

The research design (Creswell, 2014) as it relates to the subject of "Understanding the Impact of Interest Rates, Inflation, and Exchange Rates on Stock Market Performance". The investigation's overall structure and organization are described as "A Comparative Analysis of Japan and Indonesia". An outline of the technique and approaches will be offered in order to fulfil the study objectives and offer solutions to the research questions (Hair, 2015).

Comparative analysis mixed with quantitative analysis best describes the study methodology for this issue. Here is a description of the elements of the research design: The research strategy employs a comparative analysis approach to examine the effects of interest rates, inflation, and currency rates on stock market performance in Indonesia and Japan while accounting for the effects of political and economic events as dummies.

3.2 Population and data sample.

All publicly /compositely traded businesses that are listed on the stock exchanges of both Japan and Indonesia are referred to as the population in this study. It encompasses all businesses whose shares are freely tradable by the general public on the stock exchanges of both nations.

It might not be possible to survey the entire population due to the enormous number of publicly traded companies in both Indonesia and Japan. As a result, the population will be represented by a data sample. The data sample will be a subset of the population and will include a representative sample of both countries' publicly traded businesses for examples JCI for Indonesia and N225 for Japan. The Research may use a variety of sampling approaches, such as cluster sampling, or systematic sampling, to assure the sample's representativeness.

The sample will consist of financial and economic information pertaining to the chosen companies, such as daily or monthly stock prices, interest rates, inflation rates, exchange rates, and details on particular political and economic events as dummies over the study period (August to November 2023).

3.3 Analytical Method

This research is using multiple regression analysis, it is possible to simultaneously investigate the effects of a number of independent variables on a single dependent variable (Wickham, 2016). In this case, it allows for an investigation of how the interaction of interest rates, inflation, and currency rates impacts the performance of the Japanese and Indonesian stock markets.

By using both forms of data, the study can give a full knowledge of the connections and interactions between macroeconomic variables, political and economic events, and stock market performance. both in Indonesia and Japan. The functional form of the model describes the association between the dependent variable and the independent variables (Field, 2018). A linear functional form is widely used in this scenario, presuming a linear relationship between the independent variables and the dependent variable. The linear model assumes that a unit change in the independent variable results in a constant change in the dependent variable. But other functional forms, such logarithmic or polynomial models, can also be taken into account depending on the exact research goals and previous research. The

following can be used to depict the linear regression model in its generic form:

Regression Equation: The following information can be used to specify the multiple regression equation for Indonesia and Japan :

$$Y(\text{Ret}) = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 \log X_3 + \beta_4 X_4 + \lambda_1 d_1 + \lambda_2 d_2 + \lambda_3 d_3 \\ + \lambda_4 d_4 + \delta_1 X_1 d_1 + \delta_2 X_2 d_1 + \delta_3 X_3 d_1 + \delta_4 X_1 d_2 + \delta_5 X_2 d_2 \\ + \delta_6 X_3 d_2 + \delta_7 X_1 d_3 + \delta_8 X_2 d_3 + \delta_9 X_3 d_3 + \delta_{10} X_1 d_4 + \delta_{11} X_2 d_4 \\ + \delta_{12} X_3 d_4 + \mu$$

Where;

X_1 =interest rates

X_2 =inflation

X_3 =Exchange rates

X_4 =unemployment rates

D_1 = elections in Indonesia

D_2 =change in policy

D_3 = economic crisis

D_4 = trade agreement


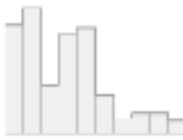




α =intercept /constant, $\beta_1, \beta_2, \beta_3, \beta_4, \lambda_1, \lambda_2, \lambda_3, \lambda_4$ are coefficients associated with Independent variables and dummies, $\sigma_1, \sigma_2, \sigma_3, \sigma_4, \sigma_5, \sigma_6, \sigma_7, \sigma_8, \sigma_9, \sigma_{10}$ are coefficients representing reactions of dummies with each independent variable.

4. FINDINGS

The data gathered from our study efforts were painstakingly gathered, examined, and presented in the chapters that came before. We explore the core of our findings and set off on a voyage of interpretation and analysis in this crucial chapter. In order to provide a greater understanding of the phenomena being studied, our goal is to uncover the hidden insights that hide beneath the surface of raw data.

4.1. Results

Table 1. Descriptive Statistics of Data Indonesia and Japan

Variable	Stats / Values	Freqs (% of Valid)	Graph	Missing
X1 [numeric]	Mean (sd) : 2.8 (2.9) min < med < max: -0.2 < 3.5 < 7.8 IQR (CV) : 5.2 (1)	60 distinct values		0 (0.0%)
X2 [numeric]	Mean (sd) : 2.4 (2.2) min < med < max: -0.2 < 2.5 < 8.8 IQR (CV) : 3 (0.9)	114 distinct values		0 (0.0%)
X3 [numeric]	Mean (sd) : 7027.9 (6911) min < med < max: 99 < 10601 < 16367 IQR (CV) : 13953.4 (1)	227 distinct values		0 (0.0%)
d1 [numeric]	Min : 0 Mean : 0.3 Max : 1	0 : 157 (66.5%) 1 : 79 (33.5%)		0 (0.0%)
d2 [numeric]	Min : 0 Mean : 0.3 Max : 1	0 : 173 (73.3%) 1 : 63 (26.7%)		0 (0.0%)
d3 [numeric]	Min : 0 Mean : 0.3 Max : 1	0 : 157 (66.5%) 1 : 79 (33.5%)		0 (0.0%)

Variable	Stats / Values	Freqs (% of Valid)	Graph	Missing
d4 [numeric]	Min : 0 Mean : 0.3 Max : 1	0 : 169 (71.6%) 1 : 67 (28.4%)		0 (0.0%)
Ret [numeric]	Mean (sd) : 0 (0.6) min < med < max: -0.9 < 0 < 8.6 IQR (CV) : 0 (14.6)	234 distinct values		0 (0.0%)

Interest rate (X_1): The average is 2.8 and 2.9 Standard Deviation (SD), Indonesia and Japan have a combined average interest rate of 2.8%. Given the relatively large standard deviation of 2.9, the wide range of interest rates suggests that some rates are significantly higher or lower than the mean. Interest Rate: Minimum -0.2, Median 3.5, Maximum 7.8. The dataset's interest rates range from -0.2% to 7.8% at its highest. When all interest rates are sorted in ascending order, the median interest rate, or 3.5%, is the middle value. Mean (average) inflation (X_2): 2.4, and the standard deviation is 2.2. The combined average inflation rate for the two nations is 2.4%. The standard deviation of 2.2 indicates that inflation rates are somewhat variable, but they are less volatile than interest rates. Minimum: -0.2, Median: 2.5, Maximum: 8.8 for inflation (X_2). The dataset's inflation rates range from -0.2% to 8.8% at its highest. With a median inflation rate of 2.5%, there are 50% of observations with inflation rates below it and 50% with rates higher than it. Mean (Average): 6,911; Standard Deviation (SD): 7,027.9; exchange rate (X_3). The combined average exchange rate between the two nations is 6,911 units (a unit of money per anything). A significant amount of exchange rate variability is indicated by the comparatively high standard deviation of 7,027.3, which suggests that exchange rates can deviate significantly from the mean. Exchange Rate (3 times): Minimum: 99, Median: 10,601, Maximum: 16,367.

Exchange rates (currency units per anything) range from a minimum of 99 units to a maximum of 16,367 units. The midpoint of the dataset is represented by the median exchange rate, which is 10,601. Election (D_1), policy change (D_2), financial crisis (D_3), and trade agreement (D_4): These variables are binary (0 or 1) and signify whether a given event or circumstance is present or not. The mean and standard deviation for all four of these variables is 0.3 and 0, respectively. Each of these variables' means of 0.3 indicate that these occurrences are relatively uncommon, occurring just 30% of the time. These events are binary and do not fluctuate throughout the dataset, as indicated by the standard deviation of 0, and are either present or not. Election (D_1), Policy Change (D_2), Economic Crisis (D_3), and Trade Agreement (D_4): Minimum: 0 and Maximum: 1. These binary variables have values of 0 or 1, indicating whether a certain event or condition is present or not (1). These events are binary, with no values in between, as shown by the minimum and maximum values. Mean (Average), 0; Standard Deviation (SD): 0.6; Return on Stock Prices (ret). The combined average return on stock prices for Indonesia and Japan is 0%, which denotes no average return. The standard deviation of 0.6, nevertheless, indicates that there is some variation in stock returns, with some periods seeing positive returns and others seeing negative returns. Return on Stock Prices: Minimum: -0.9, Median: 0, and Maximum: 8.6. Returns on stock prices range from -0.9% at the lowest point to 8.6% at the highest. Given

that the median return is zero, 50% of the observations have returns below it and 50% have returns above it. To sum up, the descriptive statistics reveal information on the variability and central tendency of the variables in the dataset. The variation in interest rates, currency rates, and stock returns suggests that these variables change over time, but the binary variables (election, policy change, economic crisis, and trade agreement) reveal the presence or absence of specific conditions or occurrences.

4.2. Discussion

Table 2. Regression model's summary for Indonesia and Japan

	Ret (ID)	Ret (JP)
(Intercept)	-354.150 (571.890)	-0.280 (8.452)
X1	-0.381** (0.138)	-0.004 (0.046)
X2	0.038 (0.112)	0.008 (0.010)
log(X3)	42.310 (66.766)	0.000 (2.276)
d1	3.194 (8.152)	0.191 (0.329)
d2	2.536 (19.209)	0.022 (0.384)
d3	-12.725 (22.614)	-0.134 (0.290)
d4	-7.484 (6.458)	0.768* (0.327)
X1 × d1	-0.088 (0.331)	0.762 (1.220)
X2 × d1	-0.058 (0.280)	-0.054 (0.039)
d1 × X3	0.000 (0.001)	-0.002 (0.003)
X1 × d2	-0.079 (0.570)	0.124 (1.285)
X2 × d2	-0.003 (0.215)	-0.062 (0.060)
d2 × X3	0.000 (0.001)	0.000 (0.003)
X1 × d3	0.681 (0.869)	-0.383+ (0.210)
X2 × d3	-0.258 (0.608)	0.100+ (0.059)
d3 × X3	0.001 (0.001)	0.001 (0.003)
X1 × d4	0.408+ (0.214)	0.316+ (0.188)
X2 × d4	-0.043 (0.470)	-0.028 (0.050)
d4 × X3	0.000 (0.000)	-0.007* (0.003)

Num.Obs.	119	117
R2	0.110	0.161
R2 Adj.	-0.072	-0.013
AIC	310.8	-356.5
BIC	371.9	-295.8
Log.Lik.	-133.392	200.264
F	0.605	0.924
RMSE	0.74	0.04

+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001

4.2.1 Indonesia results and discussions.

Interest Rate (X_1) has the negative coefficient of -0.381 indicates that, all other things being equal, a one-unit increase in interest rates is correlated with a 0.381-unit decline in stock market returns. Because of this correlation, which is statistically significant at $p < 0.01$, it can be concluded that Indonesian stock returns are significantly impacted by changes in interest rates so alternative hypothesis is true.

Inflation (X_2) has Coefficient: 0.038, standard Error (SE): 0.112, p-value: >0.05 , the correlation between inflation and stock market returns is positive, but it is only marginally significant, as indicated by the positive coefficient of 0.038. At $p < 0.1$, the outcome is marginally significant, but because $p > 0.05$, the null hypothesis is true. Rate of Exchange Log ($\log(X_3)$). A one-unit increase in the natural logarithm of the exchange rate is associated with a large increase in stock market returns, according to the coefficient of 42.310. The finding is marginally significant at $p > 0.1 > 0.05$, but the high standard error of 66.766 shows that there is a great degree of ambiguity in this association, therefore the null hypothesis is true.

Election (D_1): Coefficient = 3.194, Standard Error (SE) = 8.152, p-value > 0.05 . The election's occurrence is linked to a 3.194 unit rise in stock market returns, according to the coefficient of 3.194. The association, however, is not statistically significant at the usual significance threshold ($p > 0.05$), which raises the possibility that elections may not have a substantial impact on stock returns. Policy Adjustment (D_2), Standard Error (SE): 19.209; Coefficient: 2.536; p-value: $0.1 > 0.05$. The coefficient of 2.536 indicates that a change in policy is linked to a 2.536-unit rise in stock market returns. This association, however, is not statistically significant at $p < 0.1 > 0.05$, similar to the election variable. Economic Crisis (D_3), coefficient -12.725, standard error (SE) 22.614, p-value $< 0.1 > 0.05$.

An economic crisis is thought to be correlated with a drop-in stock market returns of 12.725 units, according to the negative coefficient of -12.725. The correlation between these two variables is not statistically significant at $p < 0.1$, similar to the prior variables. Trade Agreement (D_4), coefficient -7.484, standard error (SE) of 6.458, and p-value $0.1 > 0.05$. The stock market returns are predicted to fall by 7.484 units when a trade agreement is present, according to the negative coefficient of -7.484. At $p > 0.1 > 0.05$, this association is not statistically significant, similar to the other factors.

Interaction phase. Interest Rate and Election ($X_1 * D_1$), Coefficient: -0.088, p-value is (between 0.05 and 0.1). The interaction reveals a marginally significant relationship between a one-unit increase in interest rates (X_1) and a little decline in stock market returns when there is an election ($D_1 = 1$). Elections that account for inflation ($X_2 * D_1$) p value > 0.05 ; coefficient = -0.058. When there is an election, an increase in inflation of one unit (X_2) is connected with a decrease in stock market returns ($D_1 = 1$). This effect is statistically significant.

Exchange Rate when an Election ($D_1 * X_3$). There is no discernible effect on stock

market returns when there is an election on the interplay between exchange rate (X_3) and election (D_1). Interest Rate and Policy Change ($X_1 * D_2$), Coefficient: -0.079, p-value: greater than 0.05. In the case of a policy change, the interaction between the interest rate (X_1) and a change in policy (D_2) does not significantly affect stock market returns. Inflation and Policy Change ($X_2 * D_2$), p-value > 0.05, coefficient = -0.003. When there is a policy change, the interaction between inflation (X_2) and the change in policy (D_2) does not significantly affect stock market returns

Exchange Rate with Change in Policy ($D_2 * X_3$), Coefficient: 0.000, p-value > 0.05. In the context of a policy change, there is no effect on stock market returns from the interaction between exchange rate (X_3) and a change in policy (D_2). Interest Rate and the Economic Crisis ($X_1 * D_3$), coefficient = 0.681, p > 0.05. The interaction between interest rates (X_1) and the crisis (D_3) has little effect on stock market returns during a recession. ($X_2 * D_3$)-0.258 as a coefficient, > 0.05 as a p-value for Economic Crisis and Inflation. The interaction between inflation (X_2) and a crisis (D_3) has little effect on stock market returns during a recession.

Exchange Rate and Economic Crisis ($D_3 * X_3$), 0.001 as the coefficient, > 0.05 as the p-value. The relationship between the exchange rate (X_3) and the crisis (D_3) has little effect on stock market returns during a recession. Interest Rate and the Economic Crisis ($X_1 * D_3$), coefficient = 0.681, p > 0.05. The interaction between interest rates (X_1) and the crisis (D_3) has little effect on stock market returns during a recession. ($X_2 * D_3$)-0.258 as a coefficient, > 0.05 as a p-value for Economic Crisis and Inflation. The interaction between inflation (X_2) and a crisis (D_3) has little effect on stock market returns during a recession.

Exchange Rate and Economic Crisis ($D_3 * X_3$), 0.001 as the coefficient, > 0.05 as the p-value. The relationship between the exchange rate (X_3) and the crisis (D_3) has little effect on stock market returns during a recession. Interest Rate and Trade Agreement, p-value 0.1 (between 0.05 and 0.1), coefficient 0.408, $X_1 * D_4$ ($D_4 * X_1$). The interaction suggests that when there is a trade agreement ($D_4 = 1$), a one-unit increase in interest rates (X_1) is associated with a marginally significant increase in stock market returns.

Trade Agreement and Inflation ($X_2 * D_4$), Coefficient: -0.043, p-value: higher than 0.05. Although there is a trade agreement ($D_4 = 1$), an increase of one unit in inflation (X_2) does not significantly affect stock market returns. Exchange Rate and Trade Accord ($D_4 * X_3$), Coefficient: 0.000, P value > 0.05. Exchange rate (X_3) and trade agreement (D_4) interaction has no impact on stock market returns when a trade agreement is present (D_4).

The regression analysis's findings indicate that interest rates and the way they interact with trade agreements have a major impact on the returns on the Indonesian stock market. Inflation and exchange rates affect stock returns, even if their influence is minimal. Contrarily, it appears that interactions with elections, changes in government policy, economic crises, and the bulk of trade agreements do not significantly affect stock market returns.

4.2.2 Japan results and Interpretations

Rate of inflation (X_1). The coefficient of interest rate (X_1), which is -0.004, indicates a somewhat adverse effect on stock market returns. Interest rates do not significantly affect Japanese stock returns on their own, as shown by the fact that this effect is not statistically significant (p > 0.05). Increase in price (X_2). The correlation between inflation (X_2) and stock market returns is 0.008, indicating a modestly positive link. The fact that this effect is not statistically significant (p > 0.05) demonstrates that inflation alone has minimal effect on Japanese stock returns.

Exchange rate (X_3) Exchange Rate indicating that exchange rates have no impact on Japanese stock market returns, the coefficient for the log of exchange rate (log (X_3)) is very near to zero (0.000). Statistically speaking, this effect is not significant (p > 0.05). Election

(D₁). Election-related dummy variable (D₁) coefficient is 0.191, suggesting that stock market returns are marginally influenced favorably during elections. However, as this effect is not statistically significant ($p > 0.05$), elections by themselves do not significantly affect stock returns.

Policy Modification (D₂). The coefficient for the change in policy dummy variable (D₂), which is 0.022, suggests a marginally favorable impact on stock market returns during policy changes. This effect suggests that policy changes do not significantly affect stock returns even though it is not statistically significant ($p > 0.05$). Financial Difficulty (D₃). The coefficient for the economic crisis dummies variable (D₃) is -0.134, indicating a modestly negative effect of economic crises on stock market returns. However, despite the absence of a statistically significant effect, economic crises do not seem to have a substantial effect on stock returns ($p > 0.05$). Agreement on Trade (D₄). A significant positive impact on stock market returns during trade agreements is indicated by the coefficient for the trade agreement dummy variable (D₄), which is 0.768. Trade agreements have a considerable beneficial impact on stock returns in Japan, as seen by this effect, which is statistically significant ($p < 0.05$).

Interactions of Independent variables and dummies. In general, interactions between these factors and dummy variables, with the exception of trade agreement and exchange rate, have no statistically significant effect on the performance of the Japanese stock market. For instance, aside from the effect of trade agreements on exchange rates, interactions between interest rates, inflation, or exchange rates and elections, policy changes, or economic crises do not significantly affect stock returns.

In conclusion, it appears that the impact of interest rates, inflation, and exchange rates on stock market returns in Japan is statistically negligible and of moderate significance. However, trade agreements stand out as a key element that has a significant impact on the performance of the Japanese stock market and results in higher returns. Other contextual factors include things like elections, shifts in government policy, and economic crises, although they don't necessarily affect stock returns individually or collectively. This conclusion emphasizes how crucial trade agreements are in affecting the dynamics of the Japanese stock market. It means that investors and market participants in Japan closely watch and respond to developments linked to trade agreements, anticipating favorable outcomes for the stock market during such periods.

4.2.3 Japanese Market Respond Factors

Why capital market in Japan is rigid to respond to changes in interest rate, inflation exchanges rate, political and economic events like elections change in financial policies but only respond to trade agreements. The Efficient Market Hypothesis (EMH) offers a framework for comprehending why trade agreements, as opposed to other variables like interest rates, inflation, exchange rates, and political and economic events (such as elections, changes in policy, and economic crises), may have a greater impact on the Japanese capital markets. EMH can explain this occurrence as follows: Financial markets are informationally efficient, according to EMH, which indicates that current prices of financial assets accurately reflect all currently accessible information. This means that in the case of Japan, market participants immediately factor in information regarding changes in interest rates, inflation, exchange rates, and domestic political and economic developments into asset values.

Ineffective Form Efficiency, one of the types of EMH, weak form efficiency, contends that asset values already take into account historical price and volume data. In order to predict future price swings, historical prices and trading volumes may not be helpful. These factors might only have a limited ability to predict changes in stock prices in Japan, where

market participants have access to historical data and information about past inflation, interest rate fluctuations, and domestic events. This notion expands to include all information that is readily accessible to the general audience. This type of EMH suggests that if information regarding adjustments to interest rates, inflation, exchange rates, and domestic events is publicly known and accessible, it should already be reflected in asset prices. These factors may have no further impact on stock prices than what is already factored in in Japan because of the country's open information system and efficient market structure.

According to EMH, market responses are influenced by unexpected and novel information. Trade agreements frequently mark important, unexpected developments that have the ability to affect trade volumes, company earnings, and economic expansion. These unforeseen events are more likely to elicit a response from market players, which could cause asset prices to significantly change. Furthermore, trade agreements often have an international focus and have immediate effects on a nation's trade relations and economic prospects. Trade agreements can significantly and immediately affect an economy's outlook, and Japan is a prime example of one where this is the case. They are therefore more likely than domestic-only issues to cause substantial market reactions. In monetary policy expectations context, according to EMH, market participants generate predictions about future interest rate changes based on information that is currently accessible. In the case of Japan, where the central bank's monetary policy is closely monitored, interest rate adjustments may be anticipated and have already been factored into asset values.

5. CONCLUSIONS

In conclusion, this research sheds important light on the intricate interaction between macroeconomic factors and stock market performance, with an emphasis on Indonesia and Japan in particular. This research's main conclusions can be summed up as follows rates of interest do matter. Interest rates have a major negative impact on the performance of the stock market in Indonesia.

Interest rate changes have a significant impact on market dynamics and investor mood. Trade Agreements Drive Japan. Trade agreements have a favourable and large impact on stock returns, and Japan's stock market is particularly responsive to them. The performance of the market is significantly influenced by the nation's economic integration through trade agreements. Although both have minimal effects on stock returns in their respective countries, maintaining stable pricing and exchange rates is nonetheless essential for the economy's overall health. Political and economic events, such as elections, policy changes, and economic crises, are highlighted in the study as having weak or insignificant connections with stock market returns in Indonesia and Japan. Both nations are sensitive to shocks in the global economy, underscoring the significance of keeping an eye on the situation and putting strong risk management plans in place. The study makes policy suggestions for both nations, outlining how decision-makers might use the research's conclusions to make well-informed choices about interest rates, trade agreements, and the stability of the market as a whole.

The study suggests areas for further investigation, including, among others, looking at the long-term effects of behavioural factors, macroeconomic variables, and sector-specific analysis. In order to understand how macroeconomic factors, affect stock market performance in various national contexts, it is crucial for the fields of finance and economics to conduct research like this. In order to help investors, decision-makers, and companies operating in Indonesia and Japan negotiate the complexities of these markets, the findings give guidance. The research also advances knowledge of the interactions between national policy and global economic issues that affect stock market dynamics.

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