

The Model of Stock Pricing Banking Sector on the Indonesia Stock Exchange during the Government of Susilo Bambang Yudhoyono and Joko Widodo

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Abstract

Differences in macroeconomic conditions between the SBY and JKW government periods can significantly impact stock prices within the banking sector, especially when the economy experiences fluctuations, leading to increased stock price volatility. This research aims to assess the influence of various macroeconomic factors, including the Global index, macroeconomics, world oil prices, China index, Arab index, competitive resources, and inflation, on banking sector returns from October 2004 to October 2014. The analysis utilizes the arbitrage pricing theory, difference test, and mean absolute deviation. The study divides the analysis into high-return and low-return groups for each government period. Findings indicate that macroeconomic factors exert a simultaneous influence on return groups during both SBY and Jokowi's administrations. However, for JKW high returns, these factors do not significantly impact them. Specifically, the Global Index, China Index, Arab Index, Resource Competitiveness, and Inflation show a positive correlation with both high and low returns during SBY term. Conversely, during JKW tenure, only the Global Index and China Index exhibit positive effects on high and low returns. The difference test reveals disparities in the Arab index for high and low returns of SBY, while only the Global index displays differences for JKW. The variations in high returns between SBY and Jokowi stem from discrepancies in the Global and Arab indices, while no distinctions exist in low returns between the two administrations. Additionally, the mean absolute return values for high returns during JKW era demonstrate the smallest accuracy, indicating potential limitations in the predictive power of the model during this period.

Keywords: Banking, Presidency, Arbitrage Pricing Theory, Mean Absolute Deviation

1. Introduction

The capital market is a place for trading long-term financial products such as stocks and bonds. The role of the capital market influences the economic growth of a country, including in Indonesia, where the capital market serves as a crucial driving force in the economy. Changes in information can affect the stock prices of companies, including information about the current movements of the Indonesian capital market, which is greatly influenced by the quick response of investors in making investment decisions. To choose the best investment, investors need to pay attention to changes in information. Various categories of investors are recorded in the Indonesian capital market, including motivations, financial capabilities, knowledge, experience, and investment behavior. This diversity results in varying levels of confidence, expectations, investment returns, and risks as well. (Permata and Ghoni, 2019). The development and investment opportunities in the Indonesian capital market are continuously

increasing. Investors keep a close eye on market changes, including those affecting their investments. Achieving the best profit is the primary goal in investing. One of the investment focuses is banking stocks, which play a central role in the national economy.

This research analyzes stocks included in the banking sector index group on the Indonesia Stock Exchange (IDX) during the administrations of Susilo Bambang Yudhoyono (SBY) and Joko Widodo (JKW). The economic situation in Indonesia significantly differed between these two periods. During SBY era, it was influenced by global crises and internal politics. Meanwhile, Jokowi faced global economic pressures, trade wars, and the COVID-19 pandemic.

In developing countries like Indonesia, the role of banking is of significant importance in driving the economy. Banking is crucial as it gathers funds from the public and channels them into economic sectors such as industry, agriculture, and infrastructure that require financing, thus supporting economic growth.

The primary objective of stock investment is to achieve optimal profit with minimal risk. Profit, referred to as return, is the positive outcome of an investment, while risk involves uncertainty about future events and their impact on the current market (Fibriantiwi, Dimiyati and Ermawati, 2019). The uncertainty includes the impact of fluctuating stock prices, which can be influenced by macro factors. Figure 1 illustrates the graph of banking stock returns from the SBY era to the JKW era.



Figure 1. Graph of Banking Stock Returns

Based on Figure 1, banking stock returns experienced fluctuating movements from the period of 2004-2021. During SBY government, the highest annual average return was in 2004, at 0.0960 or 9.6%, while the lowest annual average return was in 2008, at -0.1844 or -18.44%. This was caused by the financial crisis that hit the United States in 2008, triggered by the sudden collapse of the world's capital markets due to the subprime mortgage scandal (Bareksa.com, 2015).

During JKW government, the stock returns varied. The highest occurred in 2020 at 22.4%, while the lowest was in 2016 at 2.8% due to a negative IHSG caused by low GDP of 4.92% in the first quarter of 2016 and disappointing issuer results. Economic pressures in Japan led the Bank of Japan (BOJ) to refrain from adding stimulus (¥80 trillion) and maintaining a -0.1% interest rate. Pressure on banking stocks affected Bank Mandiri, which dropped by 1.25%, BNI by 5.41%, BCA by 0.57%, and BRI by 3.44% (Bareksa.com, 2016).

This research is a further development of the Principal Component Analysis (PCA) previously conducted by (Garnia *et al.*, 2023) In this research, there are 40 macro factors that were reduced to 6 macro factors that can influence stock price changes. However, this study adds 1 factor to the PCA analysis, making a total of 7 macro factors that can influence returns. These macro factors include global index, macroeconomics, World Oil, China index, Arabia index, competitiveness resources, and inflation. Figure 2 illustrates the movement of these 7 macro factors during the SBY to JKW era.

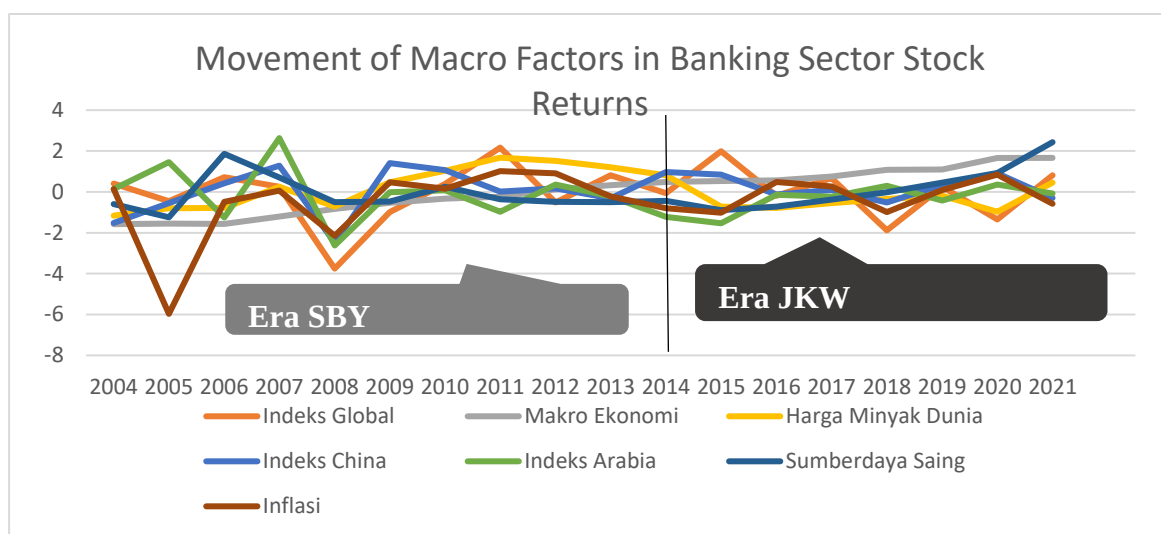


Figure 2. Movement of Macro Factors

Macro-economic variables and the global index have a significant influence on stock returns (Riantani and Tambunan, 2013), Meanwhile, the research results (Herlianto and Hafizh, 2020) The research findings indicate that the Dow Jones Index, Nikkei 225, Shanghai Stock Exchange Composite Index, and Straits Times Index Singapore collectively have a significant influence on the IHSB in the IDX during the period of 2015-2019 (Gumilang and Hidayat, 2014) It concludes that the variables that simultaneously affect the IHSB are the BI Interest Rate, US Dollar Exchange Rate, Gold Price, and World Oil . Subsequent research by (Saragih, Ritonga and Bremana, 2021) States that the World Oil has an influence on stock returns in the mining sector.

The global Shariah stock exchange variable Tadawul All Share Index (TASI) has no influence on JII during the period of 2015-2017 (Samsul Anwar, Lisa Kustina and Fitri Kaniawati, 2018). Research findings (Harsono, 2022) It states that the World Nickel Price affects the Stock Price of PT. Aneka Tambang Tbk, where the world nickel price has a significant and negative influence on the Stock Price of PT. Aneka Tambang Tbk. Research findings (Gusni and Riantani, 2017) It mentions that "the returns of Shariah-compliant stocks included in the Jakarta Islamic Index are not affected by inflation or exchange rates." However, research conducted by (Suyati, 2015) It states that inflation has a significant influence on the stock returns of the property sector.

Based on the phenomenon of banking stock movements and non-aligned macro factors, a research gap is identified from the research results that indicate different outcomes. The purpose of this research is to conduct a broader study on the variables that can influence stock returns by examining the movement of banking sector stock returns along with macro variables that can affect banking sector returns during the presidency serving for 2 terms in Indonesia. In essence, this research utilizes the equilibrium theory model of Arbitrage Pricing Theory (APT), followed by comparing the accuracy values using the Mean Absolute Deviation (MAD) method with the aim of testing the APT model that best approximates investor expectations.

2. Literature Review

2.1 Arbitrage Pricing Theory (APT)

APT is a theory developed by Stephen A. Ross in 1976, where Ross stated that several factors can influence the price of an asset. The concept of arbitrage is to buy securities or commodities when the price is low and sell them when the price rises (Fahmi, 2018). The APT approach states that the expected return of an asset is a linear function of various macroeconomic factors, and the sensitivity of each factor to changes is expressed by the beta coefficient of each respective factor (Daisy, Parengkuan and Saerang, 2010).

The risk factors in APT can vary depending on the specific market context. For example, in the stock market, these factors may include interest rates, economic growth, inflation, and other significant factors in determining stock returns. APT expands on CAPM's perspective by considering more risk factors than just single-market risk measured by beta. While APT provides a more realistic view of risk premiums in finance, its implementation is often more complex and requires careful assessment of relevant risk factors in a market.

2.2 Stock Returns and Macro Factors

The banking sector is one of the government financial institutions that plays a role in collecting and channeling funds to the public, to meet the capital and investment needs of fund owners. (Ojk.go.id, 2017). Return is a driving factor for investors to invest and a reward for an investor's courage in facing investment risks. Return is the rate of return obtained by an investor from their investment activities (Tandelilin, 2017). Therefore, banking stock return is the rate of return obtained by investors from stocks included in the banking sector group.

The Global Index is a collection of indices from various countries. The stock index of a country reflects the current economic situation. A decrease in the value of a country's stock index indicates that the economic condition of that country is deteriorating. Conversely, an increase in a country's stock index may indicate that the economic condition of that country is improving (Herlianto and Hafizh, 2020).

Macroeconomics is a branch of economics that studies economic issues as a whole (collective). Macroeconomics examines social/national economic conditions such as unemployment, job opportunities, government spending, national income, interest rates, exchange rates, etc (Astuti, Lopian and Rate, 2016).

Crude oil is currently a highly viral commodity as processed crude oil is a source of global income. The price of World Oil is measured using the spot price of the world oil market. The World Oil Index generally refers to West Texas Intermediate (WTI). WTI is high-quality crude oil produced in Texas (Sartika, 2017). The China stock index is the most widely used domestic index to reflect market performance. This stock exchange is a non-profit organization managed by the China Securities Regulatory Commission (CSRC) (Wikipedia.org, 2022a).

The Saudi Stock Exchange or Tadawul is the stock exchange in Saudi Arabia. This exchange is supervised by the Capital Market Authority. Tadawul is considered the largest capital market in the Middle East and North Africa. Tadawul ranks ninth among the largest stock exchanges in the world (Wikipedia.org, 2022b). Competitiveness resources of a company are part of the ease of meeting domestic and international market demand in the production of goods and services (Fahmy, 2022). Inflation is the decrease in the value of money openly due to the tendency of commodity price increases. Ibbotson and Brinson state that inflation is the sustained increase in the general price level over time (Daisy, Parengkuan and Saerang, 2010).

Macroeconomic variables and global indices significantly influence stock returns (Riantani and Tambunan, 2013). The World Oil affects stock returns in the mining sector (Saragih, Ritonga and Bremana, 2021). The global Shariah stock exchange variable Tadawul All Share Index (TASI) does not affect the Jakarta Islamic Index during the period of 2015-2017 (Samsul Anwar, Lisa Kustina and Fitri Kaniawati, 2018). The World Nickel Price affects the Stock Price of PT. Aneka Tambang Tbk, as known from the partial test that the World Nickel Price has a significant and negative influence on the Stock Price of PT. Aneka Tambang Tbk (Harsono, 2022). Inflation has a significant influence on property stock returns (Suyati, 2015). The research concept depicted in Figure 3 shows how macro factors influence banking stock returns.

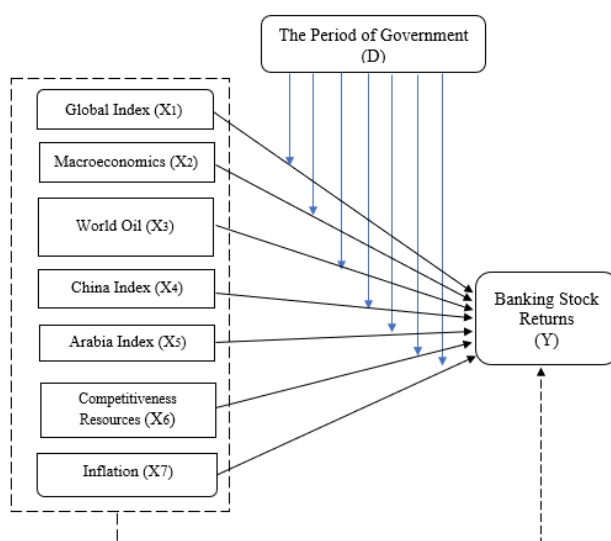


Figure 3. Concept Design

Based on Figure 3, the hypothesis development of this research includes:

H1: Global Index, Macroeconomics, World Oil , China Index, Arabia Index, Competitiveness Resources, and Inflation influence high-return and low-return groups of banking sector stock returns during the SBY government period from 2004-2014, simultaneously and partially.

H2: Global Index, Macroeconomics, World Oil , China Index, ArabiaIndex, Competitiveness Resources, and Inflation influence high-return and low-return groups of banking sector stock returns during the JKW government period from 2014-2021, simultaneously and partially.

H3: There are differences in the influence of Global Index, Macroeconomics, World Oil , China Index, ArabiaIndex, Competitiveness Resources, and Inflation on banking sector stock returns between the SBY and JKW government periods, simultaneously and partially.

3. Research Method

The research method used in this study is a quantitative method employing a verificative analysis approach. This study utilizes secondary data in the form of monthly data from various official sources such as BPS, IDX, and Yahoo Finance. The analysis steps involve calculating the mean to divide stock groups into high-return and low-return according to their government, then to determine the influence and differences in influence, classical assumption tests, regression model selection, multiple linear regression analysis stages, F-test, T-test, and mean absolute deviation test are conducted.

From various macro factors that can influence bank stock returns, this study utilizes 7 macro factors resulting from principal component analysis (PCA) out of 41 macro factors processed into 7 dominant macro factors affecting stock returns.

PCA, which is a statistical technique for transforming a large set of original variables, which are correlated with each other, into a smaller set of new variables that are mutually independent or no longer correlated (Delsen, Wattimena and Saputri, 2017). Principal Component Analysis method is very useful in market analysis or risk diversification as it can provide guidance on the best investment decisions (Pasini, 2017). In the period 2009-2019, Principal Component Analysis of 13 variables used including Inflation, Exchange Rate, BI Rate, The Fed, Corruption Perception Index, Indexes of the USA, Malaysia, Singapore, Japan, and Hong Kong, GDP per Capita, World Oil, and M1 and M2 Money Supply resulted in 5 new variables (Cesariviyanti, 2020). In the period 2007-2016, PCA method from 9 analyzed independent variables formed 3 new variables or main factors (Kurniawati and Rikumahu, 2018).

Classical Assumption Tests, regression model selection, and multiple linear regression analysis stages are conducted using the equation model (1).

$$Y_{it} = a + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \dots + \beta_n X_{nit} + e_{it} \quad (1)$$

The next step is to conduct the coefficient of determination, hypothesis testing, and regression difference test using the Dummy Variable technique as shown in equation (2), and the mean absolute deviation test as shown in equation (3).

$$Y = b_0 + b_1X_1 + b_2X_2 + \dots + b_nX_n + b(n+1)D + b(n+2)D.X_1 + b(n+3)D.X_2 + \dots + b(2n+1)D.X_n \quad (2)$$

Mean Absolute Deviation is a value calculated by dividing the total absolute value of each prediction error by the number of data periods (Ibrahim *et al.*, 2016). A model with a lower MAD indicates greater precision/accuracy compared to a model with a higher MAD (Muhammad and Maulana, 2019). By calculating MAD, we can evaluate how close or far the predictions are from the actual values of the APT model in each group of returns for both SBY and JKW.

$$MAD = \frac{1}{n} \sum_{t=1}^n |Y_t - \hat{Y}_t| \quad (3)$$

The results of statistical analysis based on the division of banking stock groups into high-return and low-return groups under each government during the period from October 2004 to October 2014. The group return allocation matrix is shown in Figure 4.

SBY 2004 -2014	JKW 2014-2021
High Return	High Return
Low Return	Low Return

Figure 4. Group Return Allocation Matrix

4. Finding and Discussion

Descriptive Statistical Analysis. Based on the data collected and analyzed in this study, it is divided into four groups by calculating the mean based on high-return and low-return according to their government. From the calculation results, the mean value for stock groups during the SBY period is 0.017965. There are 6 stocks classified as high-return and 7 stocks classified as low-return. Table 1 shows the distribution of stock groups during the SBY government period. The mean value per period for stock groups during the JKW government period is 0.010268. With a total of 6 stocks classified as high-return and 7 stocks classified as low-return.

Statistical Analysis Results. Table 1 shows the results of the normality test indicating that all stock return groups are normally distributed as indicated by prob. Value test result > 0.05 . Therefore, it is assumed that the data of the return groups are normally distributed.

Table 1: Normality Test Results

Group	Prob. Value	Result
High Return SBY	0.177421	Normally Distributed
Low Return SBY	0.503606	Normally Distributed
High Return JKW	0.120563	Normally Distributed
Low Return JKW	0.091279	Normally Distributed

The results of the multicollinearity test on all stock groups indicate that there are no VIF values greater than 10. Therefore, it can be concluded that this regression model does not have

multicollinearity issues. Table 2 shows the results of the multicollinearity test on all banking groups.

Table 2: Multicollinearity Test Results

Variable	Centered VIF			
	High Return SBY	Low Return SBY	High Return JKW	Low Return SBY
Global Index	1.018469	1.018912	1.086096	1.060637
Macroeconomics	3.902710	3.954252	5.902611	6.781112
World Oil Price	3.424866	3.505641	2.314127	2.121298
China Index	1.089145	1.088129	1.436589	1.522661
Arabian Index	1.037264	1.043727	1.202705	1.229638
Competitiveness Resources	1.030470	1.024777	1.967648	1.802459
Inflation	1.365641	1.395983	6.650857	7.425580

The results of the Heteroskedasticity Test on all banking stock return groups indicate that Prob value > 0.05, thus it can be concluded that there is no variance inequality of residuals in all observations of independent variables in the regression model. The results of the heteroskedasticity test are shown in Table 3.

Table 3: Heteroskedasticity Test Results

Keterangan	Prob. Value
High Return SBY	0,6826
Low Return SBY	0,5651
High Return JKW	0,5793
Low Return JKW	0,0579

The results of the Autocorrelation Test for each government are shown in Table 4 with the decision-making result of $dU < dw < (4 - dL)$, and it can be assumed that the entire group passes the autocorrelation test or there is no autocorrelation.

Table 4: Autocorrelation Test Results

Group	N	K	DW Value	DW Test $dU < dw < (4-dL)$
High Return SBY	556	7	2.103724	$1.8413 < 2.103724 < 2.3034$
Low Return SBY	738	7	1.942292	$1.8413 < 1.942292 < 2.3034$
High Return JKW	345	7	1.998285	$1.8413 < 1.998285 < 2.3034$
Low Return JKW	426	7	2.013288	$1.8413 < 2.013288 < 2.3034$

The results of multiple linear regression equations for the high return SBY group are shown in equation 4, for the low return SBY group in equation 5, for the high return JKW group in equation 6, and for the low return JKW group in equation 7.

$$Y = 0.007511 + 0.030463 X_{1it} - 0.00734 X_{2it} + 0.000225 X_{3it} + 0.008462 X_{4it} + 0.008159 X_{5it} + 0.016021 X_{6it} - 0.00192 X_{7it} \quad (4)$$

$$Y = -0.001499 + 0.029793 X_{1it} - 0.007079 X_{2it} - 0.003011 X_{3it} + 0.011542 X_{4it} + 0.002056 X_{5it} + 0.013578 X_{6it} + 0.000266 X_{7it} \quad (5)$$

$$Y = -0.004202 + 0.014159 X_{1it} - 4.59E-05 X_{2it} - 0.000401 X_{3it} + 0.008531 X_{4it} - 0.007132 X_{5it} + 0.003001 X_{6it} + 0.00428 X_{7it} \quad (6)$$

$$Y = 0.006975 + 0.028942 X_{1it} - 0.012485 X_{2it} - 0.014993 X_{3it} + 0.0115332 X_{4it} - 0.005272 X_{5it} + 0.004766 X_{6it} + 0.007692 X_{7it} \quad (7)$$

The results of the Adjusted R-squared coefficient shown in Table 5 for all banking stock groups. Table 6 shows the results of the F-test for each banking stock return group.

Table 5: Results of the Coefficient of Determination

Group	Adjusted R ²	Level of Influence of Variables
High Return SBY	0.268721	Low
Low Return SBY	0.239353	Low
High Return JKW	0.016848	Very low
Low Return JKW	0.094142	Very low

Tabel 6: Hasil Uji F

Group	Prob. Value
High Return SBY	0.000000 < 0.05
Low Return SBY	0.000000 < 0.05
High Return JKW	0.78495 > 0.05
Low Return JKW	0.000000 < 0.05

Based on Table 7, it shows the results of the T-test from the banking sector stock groups during SBY government, and Table 8 shows the results of the T-test from the banking sector stock groups during JKW government.

Table 7: T-test Results for Banking Stock Return SBY

Variable	Return Tinggi	Return Rendah
	Prob.	Prob.
Global Index	0.0000	0.0000
Macroeconomics	0.2664	0.2716
World Oil Price	0.9561	0.4448
China Index	0.0002	0.0000
Arabian Index	0.0002	0.3063
Competitiveness Resources	0.0000	0.0000
Inflation	0.4825	0.9216

Table 8: T-test Results for Banking Stock Return JKW

Variable	Return Tinggi	Return Rendah
	Prob.	Prob.
Global Index	0.0027	0.0000
Macroeconomics	0.9986	0.6182
World Oil Price	0.9753	0.2273
China Index	0.1489	0.0059
Arabian Index	0.3140	0.4458
Competitiveness Resources	0.6919	0.4903
Inflation	0.7174	0.4957

The results of the test for the difference in the influence of dummy variable regression between the two groups, high return SBY and low return SBY, show that the Arabia index has a significance value of $0.047 < 0.05$, indicating a difference in the influence of the Arabia index on high and low return Banking stocks during the SBY government.

The test results for the difference in the influence of both groups, high return JKW and low

return JKW, reveal only one significant difference, which is the global index with a significance value of $0.016 < 0.05$. This indicates that the global index has a different impact on high and low return Banking stocks during the JKW government. Thus, it is revealed that macroeconomics, world oil prices, the China index, the Arabia index, competitiveness, and inflation have the same influence on high and low returns during the JKW government.

The test results for the difference in the influence of both groups, high return during SBY and high return during JKW, show that the significance value of the Global index is $0.001 < 0.05$, and the significance value of the Arabia index is $0.023 < 0.05$. This indicates that macroeconomics, world oil prices, the China index, competitiveness, and inflation have the same influence on high returns during both the SBY and JKW government periods.

The test results for the difference in the influence of both groups, low return during SBY and low return during JKW, show that the significance value of all variables is > 0.05 . Therefore, it can be concluded that the global index, macroeconomics, world oil prices, the China index, the Arabia index, competitiveness, and inflation do not have different influences on low returns during both the SBY and JKW government periods.

The Mean Absolute Deviation (MAD) results between high and low returns for each government period are as follows: for high return SBY, MAD is 0.55496, while for low return SBY, MAD is 0.63444. High return JKW has MAD of 0.39931, while low return JKW has MAD of 0.41920. Among these four groups, high return JKW tends to be more stable or have smaller variations compared to the average value. The MAD test results are shown in Table 9.

Table 9: Mean Absolute Deviation Test Result

Group	MAD Result
High Return SBY	0,55496
Low Return SBY	0,63444
High Return JKW	0,39931
Low Return JKW	0,41920

The partial influence of macro factors on high returns during SBY government shows that the Global index, China index, Arabian index, competitiveness, and inflation positively affect high returns in the banking sector. Thus, the first, fourth, fifth, and sixth hypotheses are rejected. Meanwhile, for low returns during SBY government, the Global index, China index, and competitiveness positively influence low returns. Thus, the first, fourth, and sixth hypotheses are rejected.

The Global index reflects the health and performance of the global financial market as a whole. China and Saudi Arabia also have close trade relations with Indonesia, so the economic developments of these two countries can directly impact Indonesia's economy and its banking industry. China's index is one of the largest economies in the world, and when it rises, it indicates strong economic growth in the country. Saudi Arabia is the world's largest oil producer and has a strong financial sector, so when the Saudi Arabian index rises, it indicates that the

Saudi financial market is growing and stable. These research findings are consistent with those stating that "The Dow Jones Index, Nikkei 225, Shanghai Stock Exchange Composite Index, and Straits Times Index Singapore collectively have a significant impact on the Composite Stock Price Index (IHSG) on the Indonesia Stock Exchange (IDX)." (Herlianto and Hafizh, 2020), On the other hand, the competitiveness factor does not align with the research findings (Harsono, 2022) that "world nickel prices have a significant negative impact on stock prices."

Macroeconomics, world oil prices, and inflation are variables that can influence the capital market. A stable and well-developed macroeconomy tends to have a positive impact on high returns in banking. When world oil prices rise, a country's income from oil exports can increase, which in turn can generate higher liquidity in the financial market. High inflation can also reduce people's purchasing power, which in turn can reduce loan demand and banking profits.

However, in this research, macroeconomics, world oil prices, and inflation did not affect the group of stocks with high returns during SBY government. This is consistent with the research findings (Andes, Puspitaningtyas and Prakoso, 2017; Ilham, Murni and Maramis, 2020) it would be "interest rates and inflation do not affect stock movements," while for "world oil prices and inflation, the findings are inconsistent with the research." (Saragih et al., 2021; Suyati, 2015) that would be "which states that 'world oil prices and inflation affect return movements'."

Stocks in the banking sector with low returns are more stable and have lower risks. These stocks generally come from banks with more moderate growth. However, stocks with low returns also show resilience amidst market uncertainty or volatile economic conditions. Low returns can also be caused by various factors such as poor management performance, high debt levels, intense market competition, and others. Therefore, these factors may be more dominant in influencing low returns in the banking sector during the government of SBY than external factors such as macroeconomics, world oil prices, the Arabia index, and inflation.

During Jokowi's government, several factors can explain why the global index affects banking sector stocks. The Jokowi government has a strong focus on increasing foreign investment and implementing economic policies to improve the investment climate. With increasing interest from foreign investors in the Indonesian financial market, the global index, which reflects the performance of the global financial market, can influence investor sentiment towards banking sector stocks.

The influence of macroeconomic factors and inflation on the high returns of banking sector stocks during Jokowi's government is not significant, indicating that an increase in macroeconomics and inflation causes a decline in banking sector stock returns. These research results are consistent with studies conducted by (Sahdiah and Komara, 2022) that "inflation, exchange rate, and gross domestic product do not affect the returns of the banking sector."

World oil prices, the China index, the Arabia index, and competitiveness are factors that influence the returns of banking sector stocks, but this research shows that "these factors do not affect high returns in the banking sector during Jokowi's government." This is consistent with

the research results (A. Hamzah, 2021; Anwar et al., 2018).

The direct influence of these factors on the returns of the banking sector stocks is not clearly evident during Jokowi's government. However, it is important to remember that financial markets and their influencing factors are highly complex and interconnected. These factors may have more complex and indirect effects on banking sector stock returns, depending on various other factors, including government policies, global economic conditions, and market sentiment.

Hasil penelitian tersebut selaras dengan penelitian (Herlianto and Hafizh, 2020) menyatakan bahwa “Indeks Dow Jones, Nikkei 225, Shang Hai Stock Exchange Composite Index dan Straits Times Index Singapore secara bersama – sama berpengaruh signifikan terhadap Indeks Harga Saham Gabungan (IHSG) di Bursa Efek Indonesia (BEI)”, dan bertolak belakang dengan penelitian yang dilakukan oleh (Gumilang & Hidayat, 2014; Suyati, 2015;) yang menyatakan Makroekonomi, Harga Minyak Dunia dan Inflasi berpengaruh terhadap *return* saham, sedangkan dalam penelitian ini makroekonomi, harga minyak dunia dan inflasi tidak berpengaruh pada kelompok *return* rendah pada masa kepemimpinan JKW.

Global index and China index affect low returns during Jokowi's government due to political uncertainty in Indonesia. This uncertainty is related to government policies perceived as unclear in providing guidance to specific industries. Moreover, Indonesia also has significant export dependence on countries like China and the United States, so the economic conditions of these countries can directly affect Indonesia's economy. Furthermore, the trade war between the US and China also impacts stock performance worldwide, including in Indonesia. Meanwhile, the influence of the Saudi Arabia index may be smaller because although there is trade cooperation between the two countries, the volume is still relatively small compared to Indonesia-China or even US trade relations.

During this period, the Indonesian government implemented fairly stable macroeconomic policies averaging around 5-6% per year during Jokowi's government, leading to increased credit demand from the public. At the same time, nickel commodity prices were relatively stable throughout the period. Additionally, the Indonesian government initiated several efforts to increase the value-added from nickel processing and exports in the form of processed products like ferronickel or stainless steel.

During that time, Bank Indonesia (BI) implemented tight and effective monetary policies to maintain the stability of consumer goods prices in the domestic market. BI coordinated with the government to create a conducive investment climate and reduce inflation rates. During high returns in both SBY and JKW government periods, macroeconomics, world oil prices, China index, competitiveness index, and inflation did not show any difference in influence, while there was a difference in the influence of the global index and the Arabian index. Different global economic conditions can affect the impact of the global index and the Arabian index on banking sector stocks in Indonesia. When the global economy is strong and stable, both indexes positively affect banking stocks. However, changes in the global economy, including fluctuations in world oil prices and geopolitical uncertainty, can affect the influence of the

Arabian index on banking stocks.

During low returns in both SBY and JKW government periods, all independent variables showed no difference in influence between low returns in the SBY and JKW periods. During low returns, external factors such as fluctuations in world oil prices and global economic uncertainty can negatively impact banking stocks in various countries, including Indonesia. However, internal factors such as economic policies and domestic political stability may have a more significant impact. The high correlation between global markets can lead to similar external factor influences on banking stocks in various countries, resulting in no significant difference in the influence of external factors during low returns.

Large market fluctuations increase MAD because sharp price changes create high data variation. Stable and consistent data result in lower MAD. High returns during SBY are more stable than low returns during SBY (MAD 0.55496 with 0.63444), and high returns during JKW are more stable than low returns during JKW (MAD 0.39931 with 0.41920). These results indicate that high returns during JKW are the most accurate.

5. Conclusion

The research results regarding the influence, differences, and comparison of the accuracy values of the global index, macroeconomics, world oil price, China index, Arabian index, competitiveness resources, and inflation on banking stock returns in the research period from October 2014 to October 2021, affect both high and low returns under SBY and low returns under JKW government, while for high returns under JKW, there is no influence.

In the partial test, the high return group under SBY government showed that the global index, China index, Arabian index, and competitiveness resources have a positive influence on high returns of banking stocks under SBY government. In the low return group, the global index, China index, and competitiveness resources have a positive influence on low returns of banking stocks under SBY government. In the partial test, the high return group under JKW government showed that the global index has a positive influence on high returns of banking stocks under JKW government. In the low return group, the global index and China index have a positive influence on low returns of banking stocks under JKW government.

In the results of the differential test of influence, it can be observed that the differential test of influence between high returns under SBY and low returns under SBY only the Arabian index showed a difference in influence on banking stock returns. The differential test of influence between high returns under JKW and low returns under JKW only the global index showed a difference in influence on banking stock returns. The differential test of influence between high returns under SBY and high returns under JKW only the global index and Arabian index showed a difference in influence on banking stock returns. The differential test of influence between low returns under SBY and low returns under JKW showed no difference in influence on banking stock returns. In the comparison results of accuracy values, the high return group under JKW has the smallest accuracy value, indicating that this group is the most accurate.

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