Research Article

Determinants of the Developed Country Index and Indonesian Macroeconomic on the IDX Growth 30 and IDX Value 30

Pardomuan Sihombing[1*], Idris Samsudin[2]

[1] Mercu Buana University, Jakarta
[2] Faculty of Economics and Business, Trisakti University, Jakarta

Abstract

This study analyzes the determinants of the Developed Country Index (Hang Seng Index, Dow Jones Index) and Indonesian macroeconomic variables (10-Year Government Bond Yield, Foreign Ownership in Government Bonds, and the BI-7 Day Reverse Repo Rate, BI7DRR) on the movement of the IDX Growth 30 Index (IDXG30) and IDX Value 30 Index (IDXV30) from 2018–2022. Monthly time series data is used with a saturated sampling technique, processed via Eviews 12 using VECM analysis. The study conducts Stationarity, Optimal Lag, VAR Stability, and Cointegration Tests, along with Impulse Response Function (IRF) and Forecast Error Variance Decomposition (FEVD) analyses Results show that the Hang Seng Index and Foreign Ownership in Government Bonds negatively affect IDXG30 and IDXV30, while BI7DRR positively influences both. The Dow Jones Index positively affects IDXG30 but negatively impacts IDXV30. Meanwhile, the 10-Year Government Bond Yield negatively affects IDXG30 and positively influences IDXV30. Additionally, the performance of IDXG30 and IDXV30 themselves and BI7DRR significantly contribute to both indices' movements.

Keywords: IDXG30, IDXV30, Hang Seng Index, Dow Jones Index, 10 Year Government Bond Yield, Foreign Ownership in Government Bonds and BI7DRR

How to cite: Sihombing, P., Samsudin, I., (2024). Determinants of the Developed Country Index and Indonesian Macroeconomic on the IDX Growth 30 and IDX Value 30, *Research of Economics and Business (REB) 2(2)*, 78-93

Corresponding author: Pardomuan Sihombing (pardomuan.sihombing@mercubuana.ac.id)

1. Introduction

Some factors influence the movement of a country's stock index, especially the country's macro economy, positive and negative sentiment from the buying and selling actions of foreign investors, as well as the influence of other countries' indices (Sihombing et al., 2023). Economic, social and political relations between Indonesia and the United States are very close. The high level of trade in the United States can affect the economies of other countries. The variables influence the development of the Indonesian index, apart from influences from other countries. Several determining factors are economic indicators, world oil prices, global economic conditions, and the political stability of a country (Sihombing et al., 2023).

Overall, amidst commodity price volatility in 2022, the performance of the IDXG30 index has the potential to disrupt energy stocks. However, shares from the banking industry are likely to continue to push IDXG30 considering the positive financial report after the release. Internal and external factors that can influence the IDX Growth 30 and IDX Value 30 stock price indices (Mansur, 2023).

What is meant by "external factors" are factors originating from abroad, including the impact of global stock indices. The presence of an infectious effect or contagion effect is the cause. Internal factors such as macroeconomic variables. Investors should, before deciding to invest in the IDX Growth 30 and IDX Value 30 stock price indices, pay attention to global stock indices and macroeconomic variables first (Santosa & Santoso, 2019). According to Midesia (2022) found that this may be the result of the unstable Indonesian capital market during the COVID-19 pandemic. Investors must look for fundamental and technical information related to other macroeconomic variables that influence the movement of the Composite Stock Price Index (IHSG) when making investment decisions.

Astakomiya (2017) states that the rate of return on the value stocks portfolio was lower than the rate of return on the growth stocks portfolio and Endri, et al. (2020) found the Global Index and Macroeconomic variables have an impact on the movement of the Composite Stock Price Index (IHSG). Exchange rates, interest rates, inflation and economic expansion are internal macroeconomic factors. However, external factors (Global Indexes) include the Dow Jones Index, Federal Reserve Interest Rates, and Hang Seng Index. The Composite Stock Price Index (IHSG) is significantly positively influenced by IDX30 and Net Asset Value (NAV) of sharia mutual funds (Adnyana et al., 2022). Fluctuations that occur in the capital market will be related to changes that occur in various macroeconomic variables. Investors must pay attention to several macroeconomic indicators that can help them understand and predict macroeconomic conditions. Gross domestic product is the market value of all final goods and services produced in a country in a certain period (Mankiw, 2014). The interest rate is the price of using investment funds (loanable funds). The interest rate is an indicator in determining whether someone will invest or save (Santosa & Sihombing, 2015; Boediono, 2014). For example, when a stock practitioner named Ellen May introduced the public to how to invest in the capital market through her book entitled Saving Stocks Now (Kurniawan, 2017). This can increase knowledge and trigger people to practice investing, one way is by investing in the capital market.

The capital market in Indonesia is regulated in Republic of Indonesia Law Number 8 of 1995, the existing capital market contains various things that deviate from sharia principles. This is a problem because Indonesia is one of the largest Muslim countries in the world (Afendi, 2017), of course the majority of Indonesian people are Muslim. Macroeconomic indicators that are often linked to the capital market are fluctuations in interest rates, inflation, exchange rates, rupiah and GDP growth. Over the last few decades, the interaction between stock levels and macroeconomic variables has become a concern among circles and practitioners (Kumar & Sahu, 2017). The exchange rate or exchange rate is a macroeconomic variable that also influences stock price volatility (Kumar & Sahu, 2017). The capital market is a forum for investment through the sale of shares, issuance of bonds, apart from that, the capital market is also an indicator of the stability of a country's economic conditions and has an important role for a country's economy. This important role is based on two capital market functions, namely the economic function and the financial function. The economic function is as a means for companies to obtain funds from the public, namely financiers or investors. The financial function of the capital market offers investors the opportunity to earn returns (Hidayat, 2019). According to (Midesia, 2022) found that this may be the result of the unstable Indonesian capital market during the COVID-19 pandemic. Investors must look for fundamental and technical information related to other macroeconomic variables that influence the movement of the Composite Stock Price Index (IHSG) when making investment decisions. JCI movements are also influenced by fluctuations in IDX Growth 30 and IDX Value 30 share prices, because they

reflect indicators that describe share price movements of issuers listed on the Indonesia Stock Exchange. The stock price index is an indicator or reflection of stock price movements. The stock price index is a guide for investors when investing in the capital market, especially shares. The function of recording share price movements of all securities on the Indonesia Stock Exchange (BEI), IHSG is an important highlight for investors. This movement will influence the decisions of all investors whether to sell, hold or buy their shares (Widodo, 2018).

Investment is an action taken by someone to prepare funds for the future. Preparation for future funds can be done in several ways, such as investing money in capital market instruments, building a business from the money earned, or buying. Apart from that, by investing, the community has participated in building the country's economic development, this happens because with investment the money circulating in the market can be monitored by the government (Putri, 2021). According to Sari, et al. (2021) if an individual has the determination and interest to invest, he will show various characteristics such as how much effort and intention he puts into finding information about various types of investments, their advantages and disadvantages, how they can invest well and so on. There are several very important factors that give rise to a person's interest in investing, including: interest, desire and belief (Widiawati & Yuniasih, 2023).

2. Literature Review and Hypothesis
Hang Seng Index
The Hang Seng Index is one of the earliest stock market indices in Hong Kong, publicly launched on November 24 1969, HIS has become the most widely quoted indicator of Hong Kong stock market performance. To better reflect price movements in the market's main industrial sectors, constituent securities, the HIS is grouped into 4 sectors including the Financial, Utilities, Property and Trade and Industry Sub-Indices (HIS, nd). The Hang Seng Index (HIS) is a capitalization-weighted stock market index on the Hong Kong Stock Exchange. This index is used to record and monitor daily changes in the largest companies in the Hong Kong stock market and as a main indicator of overall market performance in Hong Kong (Chia et al., 2015).

Down Jones Industrial Average
The Dow Jones Industrial Average index has a positive effect on the Composite Stock Price Index on the Indonesian Stock Exchange because the United States is Indonesia's main export destination, so changes in the economic conditions of the United States are reflected in the IHSG (Untono, 2015). The Dow Jones Index is a stock market index established by the Editor of the Wall Street Journal and founder of Dow Jones & Company, Charles Dow as a way to measure the performance of industrial components that have widely gone public (Hartono, 2013). The Dow Jones Index is the oldest US market index that is still running today and is one of the index references for investors, both domestic and foreign investors because it represents the global economy. The increase in the Dow Jones index shows the increasing performance of the US economy (Santosa & Puspitasari, 2019; Wicaksono & Yasa, 2017).

Composite Stock Price Index (IHSG)
According to (Santosa, 2011), IHSG is a combined index of all types of shares listed on the stock exchange. IHSG is an indicator that shows stock price movements. This index describes market conditions when the market is active or when it is sluggish (Dwiati & Ambarwati, 2016). JCI noted that the decline was again caused by a number of negative catalysts both from within and outside Indonesia, Indonesia's economic growth which had not yet moved 5%, the depreciation of the rupiah exchange rate, the trade balance deficit, and foreign sentiment such as trade wars and increases in the Fed Funds Rate (RFR) of banks US center (Parulian & Mahendra, 2021). IHSG is a bearer securities in rupiah issued by Bank Indonesia as recognition of short-term debt with a discount system (Basit, 2020).

Research Hypothesis
The Influence of the Hang Seng Index (HIS) on IDX Growth 30 and IDX Value 30
The Hang Seng Index (HIS) is a capitalization-weighted stock market index on the Hong Kong Stock Exchange. This index is used to record and monitor daily changes in the largest companies in the Hong Kong stock market and as a main indicator of overall market performance in Hong Kong (Chia et al., 2015). Southeast Asia consists of countries such as Indonesia and Hong Kong. In addition, the two countries maintain collaborative and diplomatic relations in the political, economic, security, social and cultural fields. Investors share investments in adjacent stock markets, so that changes in the Hong Kong stock market spread to the Indonesian stock market and index (contagion effect). In contrast to research conducted by Midesia et al. (2022) and Beureukat et al. (2021), which states that the Hang Seng index has a negative impact on the Composite Stock Price Index (IHSG). The hypothesis proposed is as follows, and it is based on the justification and results of previous research:
H1: The Hang Seng Index has a negative influence on the movement of IDXG30 and IDXV30

The Influence of the Dow Jones Industrial Average on IDX Growth 30 and IDX Value 30
The Dow Jones Index is the oldest US market index that is still running today and is one of the index references for investors, both domestic and foreign investors because it represents the global economy. The increase in the Dow Jones index shows the increasing performance of the US economy (Wicaksono & Yasa, 2017). Dow Jones consists of the 30 largest companies listed on the American stock market. Indonesia and the United States have strong economic, social and political relations. The United States' high level of trade can also affect the economies of other countries, including Indonesia. Dow Jones has a positive impact on IHSG, according to research by (Haryanto, et al., 2021). The hypothesis proposed is as follows, and it is based on the justification and results of previous research:
H2: The Dow Jones Industrial Average has a positive influence on the movement of IDXG30 and IDXV30

The Influence of 10 Year Indonesian Government Bond Yield on IDX Growth 30 and IDX Value 30
Bond yield is a measure of the bond income that investors will receive, which tends to be variable, because bond yield will be closely related to the level of return indicated by investors. Therefore, issuers and investors must always pay attention to fluctuations in bond prices and factors that influence changes in bond yields (Jogiyanto, 2010). Bonds that have a longer maturity period will have a higher level of risk so that the yield obtained is also different from bonds that have a fairly short maturity period (Surya & Nasher, 2011). To know the bond yield at a certain point in time, investors need to know the remaining period until maturity, nominal value, coupon and market interest rates for bonds with the same characteristics. Research conducted by Sari (2015); Ross, et al. (2010) stated that the 10 Year Indonesian Government Bond Yield had a negative and significant effect on the IHSG
H3: 10 Year Indonesian Government Bond Yield Has a Negative Influence on IDXG30 and IDXV30 Movements

The Influence of Foreign Ownership in Government Debt Securities (SUN) on the Movement of IDX Growth 30 and IDX Value 30
According to Law no. 25 of 2007, article 1 paragraph 3, International investment is an investment activity to conduct business in the territory of the Republic of Indonesia carried out by international investors, either using entirely foreign capital or collaborating with domestic investors. Foreign ownership follows foreign investment. As of April 30 2023, foreign ownership in Government Debt Securities reached IDR. 822.69 trillion, this could possibly influence the movement of the Composite Stock Price Index. Findings in research by Rasa, Khodijah & Hakim (2023) which stated that foreign ownership had a negative effect on transfer

pricing decisions for consumer goods sector companies listed on the IDX supports this. This is also supported by research conducted by Lena, et al. (2023), which states that foreign ownership has no effect on transfer pricing decisions. According to the description given, the following hypothesis is put forward:

H4: Foreign Ownership in Ngara Debt Securities Has a Negative Influence on IDXG30 and IDXV30 Movements

Influence of BI-7 Day Reverse Repo Rate (B17DRR) on IDX Growth 30 and IDX Value 30
The BI7DRR interest rate, according to Bank Indonesia (2018), is a representation of the bank's published stance and monetary policy. Announced at every monthly Board of Governors (RDG) Meeting by the Board of Governors of Bank Indonesia, and implemented by Bank Indonesia to achieve operational monetary policy objectives through money market liquidity management. The increasing development of Indonesian interest rates reflects the operational objectives of monetary policy. BI 7-Day Reverse Repo Rate, according to Bank Indonesia, is an interest rate that reflects monetary policy that has been determined and announced directly by Bank Indonesia. In order to carry out its currency operations, the Board of Governors of Bank Indonesia announces the BI rate at every monthly Board of Governors meeting and manages liquidity (liquidity management) in the money market. Based on research conducted states that the IHSG is positively influenced by interest rates. This is in line with research conducted, which states that the interest rate (reverse) repo rate has a positive effect on inflation. The hypothesis proposed based on the description and previous research is as follows:

H5: BI-7 Day Repo Rate Has a Positive Influence on IDXG30 and IDXV30 Movements
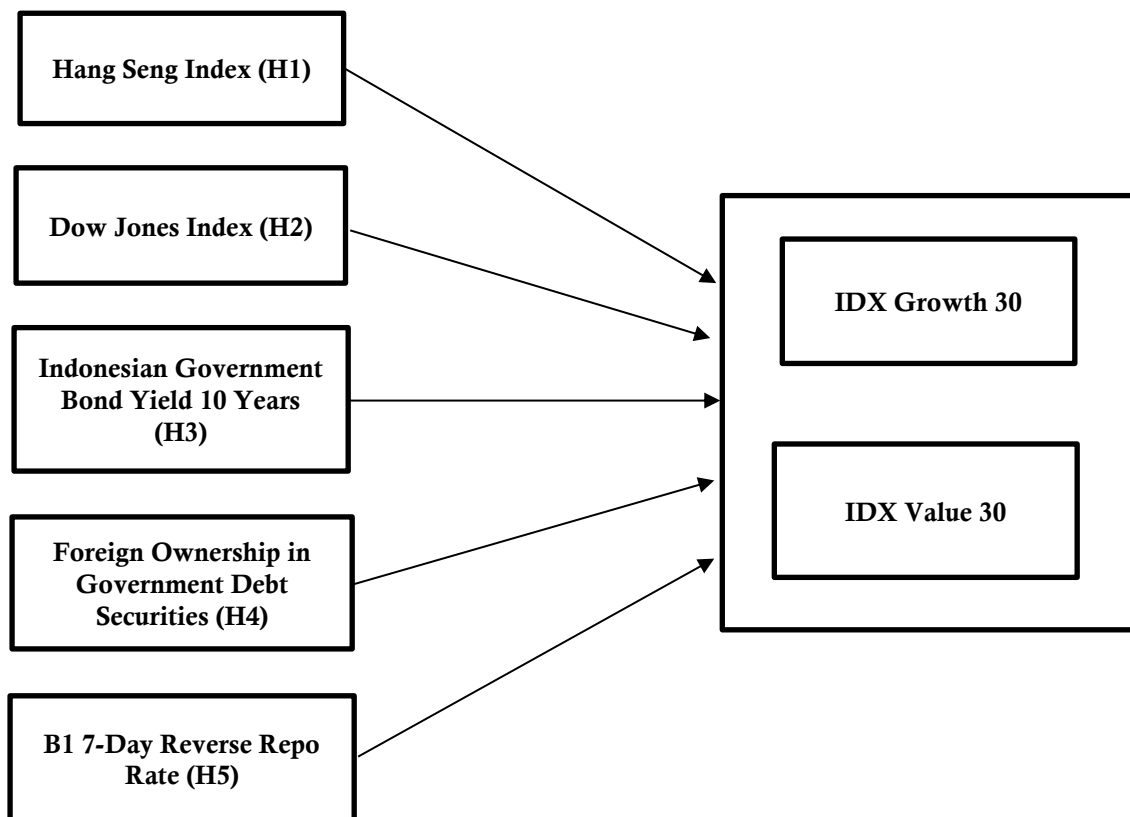
Research Conceptual Framework

Figure 1. Research Conceptual Framework

3. Data and Methods

Research design

This research method uses a causal model as its design and begins with data collection before using a special approach for data analysis. A causal relationship is defined as a cause-and-effect relationship. The purpose of causal analysis is to examine a hypothesis about how one or more independent variables, also known as independent variables, influence a dependent variable also known as a dependent variable.

Data Types and Sources

In this analysis, the independent variable is an indirect source (the researcher acts as a second hand) through intermediary media. This information was collected from company records and documents related to the research. The data source in this research was obtained from Infovesta.com, which released secondary data information from 2018 to 2022, collected and processed through analysis and hypothesis testing. Used in this research is time series data collected according to time within a certain range taken from monthly stock price data for the Growth 30 Index and Value 30 Index combined with the Hang Seng Index, Dow Jones Index, 10 Year Indonesian Government Bond Yield, Foreign Ownership in Government Debt Securities, and BI-7 Day Reverse Repo Rate from the Infovesta Beyond Data website (investpro.id) used from January 2018 to December 2022. Growth 30 Index and Value 30 Index, index categories as benchmarks for fund managers, and the interest rate benchmark is the BI 7-Day Reverse Repo Rate.

Research Population and Sample

Population is any subject (object, company, event) or subject of any research. This research involves the population of the Growth 30 Index and Value 30 Index listed on the Indonesia Stock Exchange for the period 2018 to 2022. Variables such as the Hang Seng Index, Dow Jones Index, 10 Year Indonesian Government Bond Yield, Foreign Ownership in Government Debt Securities (SUN), and BI-7 Day Reverse Repo Rate (BI7DRR) are examples of factors that can influence the Growth 30 Index and Value 30 Index. Meanwhile, the research sampling method used is a saturated sample. Stated that both the number and characteristics of the population included the sample. Based on this sampling method, this research uses a total of 60 samples, based on monthly data from 2018 to 2022. The sample criteria used in this research include information on index movements and macroeconomic indicators as follows: Hang Seng Index from the period 2018 to 2022, Dow Jones Industrial Average Index from 2018 to 2022, 10 Year Indonesian Government Bond Yield from 2018 to 2022, Foreign Ownership in Government Debt Securities (SUN) from 2018 to 2022, BI-7 Day Reverse Repo Rate (BI7DRR) from the period 2018 to 2022. Currently Indonesia is still in a middle.

4. Results

Descriptive Statistical Analysis

Research that uses descriptive statistics tries to describe phenomena and is used to describe and present information about large data sets. This type of research utilizes standard deviation, variance, maximum, minimum, total, range, kurtosis, and skewness (skewness of the distribution) are some of the terms used to describe the average (mean). In this research, the data analysis method uses descriptive statistics to estimate the value of the Hang Seng Index, Dow Jones Index, 10 Year Indonesian Government Bond Yield, Foreign Ownership in Government Bonds, BI 7-Day Reverse Repo Rate, Growth 30 Index, and Value Index 30. The results of the descriptive statistics below will provide a general summary of the research topic.

Table 1. Descriptive Statistics

	IDXG30	IDXV30	HSI	DJIA	GOV10Y	FOREIGN	BI7DRR
Mean	137,83	136,54	25669,21	29038,00	7,15	912,82	4,48
Median	138,28	139,35	26111,10	27916,56	7,08	932,49	4,25
Maximum	163,89	172,86	32887,27	36398,08	8,77	1077,06	6,00
Minimum	104,91	80,99	14687,02	21917,16	5,94	713,23	3,50
Std. Dev.	12,88	21,94	3594,83	4055,90	0,66	88,68	0,92
Skewness	-0,38	-0,74	-0,73	0,31	0,34	-0,36	0,43
Kurtosis	3,30	2,99	3,47	1,68	2,31	2,60	1,75
Jarque-Bera	1,69	5,46	5,82	5,30	2,31	1,69	5,73
Probability	0,43	0,06	0,05	0,07	0,32	0,43	0,06
Sum	8270,09	8192,51	1540153	1742280	429,16	54769,19	269,00
Sum Sq. Dev.	9789,78	28413,16	7.62E+08	9.71E+08	25,39	463987,5	49,73
Observations	60	60	60	60	60	60	60

Source: Data processed (2023)

Based on the table above, the average IDXG30 value for the 2018 - 2022 observation period is 137.83, with the highest IDXG30 value of 163.89 occurring in November 2022 and the lowest IDXG30 value of 104.91 occurring in March 2020. Variable standard deviation value IDXG30 is 12.88. The average IDXV30 value was 136.54 during the 2018 - 2022 observation period, with the highest value of 172.86 occurring in February 2018 and the lowest value of 80.99 occurring in March 2020. Where the standard deviation value of the IDXV30 variable was 21.94. The average HSI value was 25,669.21 during the 2018 - 2022 observation period, with the highest value of 32,887.27 occurring in January 2018 and the lowest 14,687.02 occurring in October 2022. Where the standard deviation value of the HSI variable was 3,594.83. The average DJIA score was 29,038.00. during the 2018 - 2022 observation period, with the highest value of 36,398.08 occurring in December 2021 and the lowest value of 21,917.16 occurring in March 2020. Where the standard deviation value of the DJIA variable is 4,055.90. The average GOV10Y value is 7.15. during the 2018 - 2022 observation period, with the highest value of 8.77 occurring in October 2018 and the lowest value of 5.94. Where the standard deviation value of the GOV10Y variable is 0.66 which occurred in December 2020. The average value of Foreign is 912.82. during the 2018 - 2022 observation period, with the highest value of 1,077.06 and the lowest value of 713.23. Where the standard deviation value of the Foreign variable is 88.68. The average BI7DRR value is 4.48. during the 2018 - 2022 observation period, with the highest value of 6.00 occurring in December 2018 and the lowest value of 3.50 occurring in March 2021. Where the standard deviation value of the Foreign variable is 0.92.

Research result
Stationarity Test

Table 2. Stationarity Test

Variable	Levels		First Difference	
	P-Value	Information	P-Value	Information
IDXG30	0.2517	Not Stationary	0.0000	Stationary
IDXV30	0.39149	Not Stationary	0.0000	Stationary
HIS	0.4241	Not Stationary	0.0000	Stationary
DJIA	0.6086	Not Stationary	0.0000	Stationary
GOV10Y	0.2625	Not Stationary	0.0000	Stationary
FOREIGN	0.9095	Not Stationary	0.0000	Stationary
B17DRR	0.6181	Not Stationary	0.0462	Stationary

Description: Unit root test using Augmented Dickey-Fuuller (ADF)

Based on the test results above, it was found that none of the variables studied were stationary at level. Apart from that, retesting the stationarity of each variable in the first difference condition using the ADF test. It is known that in testing the first difference stage, the variables IDXG30, IDXV30, HSI, DJIA, GOV10Y, Foreign, and BI7DRR are stationary with a probability value of less than 0.05. So there is no need to test at the second difference stage.

Optimal Lag Test

Table 3. Stationarity Test

Lag	LogL	L.R	FPE	AIC	S.C	HQ
IDXG30 Optimum Lag Test Results						
0	152.1143	NA	2.39e-10	-5.126818	-4.911760	-5.043239
1	482.8888	580.3061*	7.76e-15*	-15.46978*	-13.96438*	-14.88473*
2	514.5710	48.91291	9.41e-15	-15.31828	-12.52253	-14.23176
3	540.9133	35.12301	1.47e-14	-14.97941	-10.89331	-13.39141
IDX30 Optimum Lag Test Results						
0	117.7221	NA	7.99e-10	-3.920074	-3.705016	-3.836495
1	457.0310	595.2788*	1.92e-14*	-14.56249*	-13.05708*	-13.97744*
2	488.7104	48.90849	2.33e-14	-14.41089	-11.61514	-13.32436
3	514.2328	34.02993	3.76e-14	-14.04326	-9.957154	-12.45526

Source: Data Processes (2023)

Test results the lag length for IDXG30 is at the 1st lag with the smallest FPE, AIC, SC and HQ criteria or with the sign *). Meanwhile, the lag length test results for the IDXV30 are at the 1st lag with the smallest FPE, AIC, SC and HQ criteria or with the sign *).
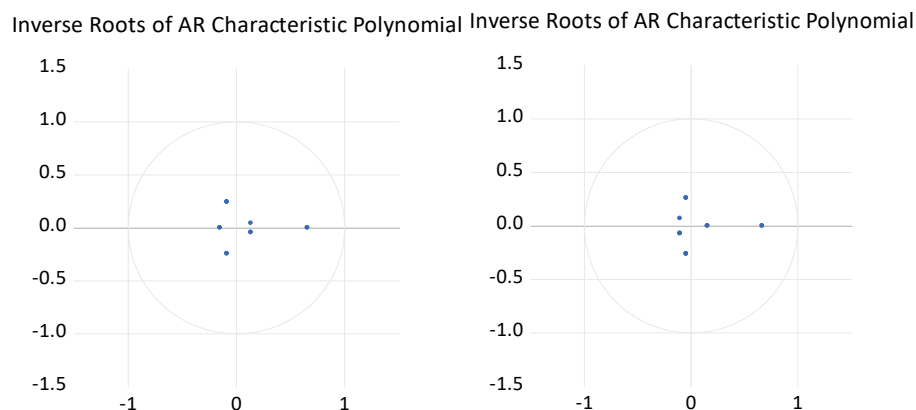
VAR Stability Test

Figure 1. Invetse Roots AR Characteristic Polymonial Lag 1 for IDXG30 and IDXG30

As shown by the results of the Inverse Roots of AR Characteristic Polymonial Lag 1 test for IDXG30 in the figure above, it shows that all points are inside the circle, meaning that VAR is stable. The results of the Inverse Roots of AR Characteristic Polymonial Lag 1 test in the figure above for IDXV30 show that VAR is stable because all points are inside the circle.
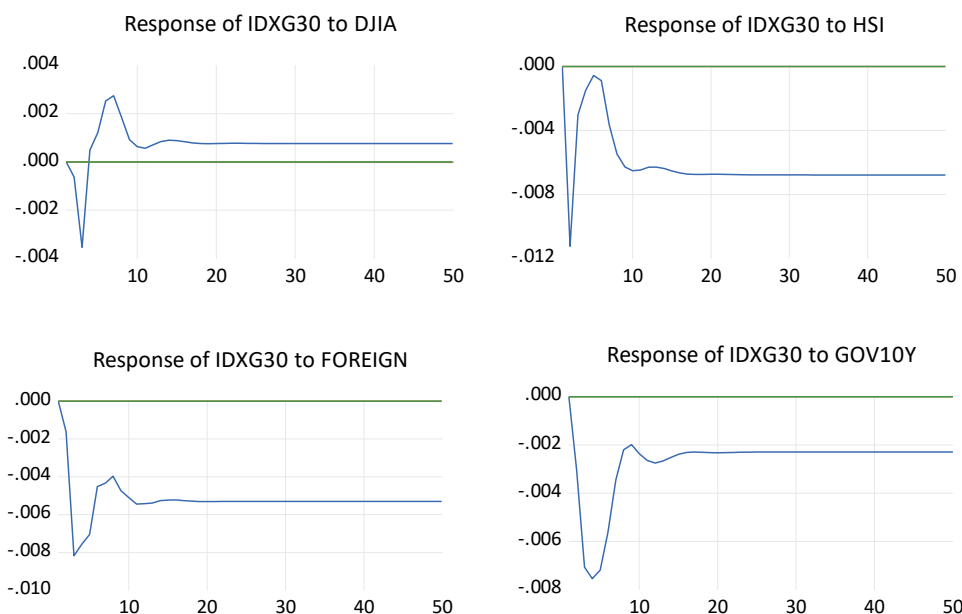
Cointegration Test

Table 4. Cointegration Test

Hypothesized No. of CE(s)	Eigenvalues	Trace Statistics	0.05 Critical Value	Prob.**
IDXG30 Cointegration Test Results				
None *	0.628525	168.0526	95.75366	0.0000
At most 1*	0.516963	111.6071	69.81889	0.0000
At most 2*	0.392903	70.13028	47.85613	0.0001
At most 3*	0.333824	41.68349	29.79707	0.0014
At most 4*	0.195435	18.52999	15.49471	0.0169
At most 5*	0.102044	6.135130	3.841465	0.0132
IDXG30 Cointegration Test Results				
None *	0.632601	161.9757	95.75366	0.0000
At most 1*	0.497356	104.9011	69.81889	0.0000
At most 2*	0.406456	65.69238	47.85613	0.0005
At most 3*	0.255566	35.95869	29.79707	0.0086
At most 4*	0.190774	19.13623	15.49471	0.0135
At most 5*	0.116661	7.070658	3.841465	0.0078

Source: Data Processes (2023)

The results of the Johansen Cointegration Test show that stationary data experiences cointegration with trace statistics that are smaller than the critical value of 5 equations from the table above. Therefore, the VECM (Vector Error Correction Model) technique can be used to continue the model used in this research. Meanwhile, the results of the Johansen Cointegration Test show that stationary data experiences cointegration with trace statistics that are less than the critical value by 5 percent (Table 4.6). Therefore, by using the VECM (Vector Error Correction Model) testing technique, the model used in this research can be continued.

Impulse Response Function (IFR) Analysis

Response of IDXG30 to DJIA

Response of IDXG30 to HSI

Response of IDXG30 to FOREIGN

Response of IDXG30 to GOV10Y
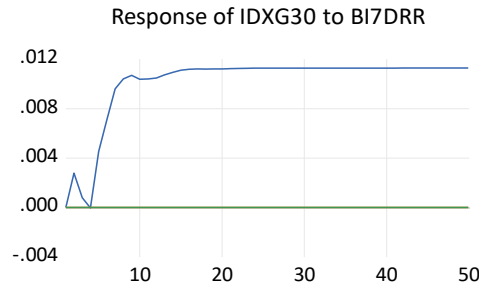
Response of IDXG30 to BI7DRR

Figure 2. Impulse Response Function on IDXG30

According to the IRF test results, the Hang Seng Index (HSI) has a negative effect on the performance of the IDXG30, as shown by the IRF test results. The Dow Jones index (DJIA) has a positive effect on the performance of IDXG30. The 10 Year Indonesian Government Bond Yield (GOV10Y) has a negative effect on the performance of IDXG30. Foreign ownership in Government Debt Securities (Foreign) has a negative effect on the performance of IDXG30. BI-7-Day Reverse Repo Rate (BI7DRR) has a positive impact on IDXG30 performance
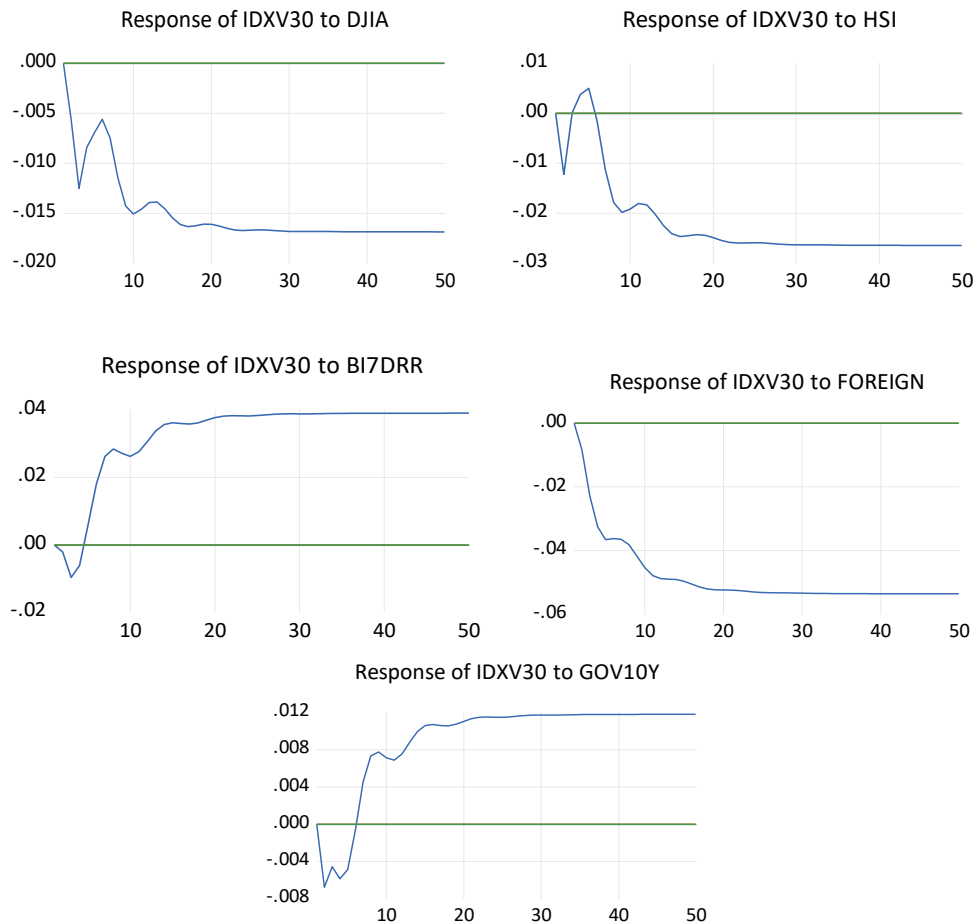
Response of IDXV30 to DJIA

Response of IDXV30 to HSI

Response of IDXV30 to BI7DRR

Response of IDXV30 to FOREIGN

Response of IDXV30 to GOV10Y

Figure 3. Impulse Response Function on IDXV30

According to the IRF test results, the Hang Seng Index (HSI) has a negative impact on the performance of the IDXV30, as shown by the IRF test results. The Dow Jones Index (DJIA) has a negative effect on the performance of IDXV30. 10 Year Indonesian Government Bond Yield (GOV10Y) positively influences IDXV30 performance. Foreign ownership in

Government Debt Securities (Foreign) has a negative impact on the performance of IDXV30. BI-7 Day Reverse Repo Rate (BI7DRR) has a positive effect on IDXV30 performance

Forecast Error Variance Decomposition (FEVD) Analysis

Table 5. Variance Decomposition

Period	S.E	IDXG30	HSI	DJIA	GOV10Y	FOREIGN	BI7DRR
IDXG30 Variance Decomposition							
1	0.049379	100,0000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.062210	99.32159	0.103840	0.355836	0.095744	0.090760	0.032231
3	0.068989	97.90772	0.496315	0.851677	0.442008	0.259437	0.042842
4	0.073257	95.89243	1.266838	1.246845	1.094493	0.460869	0.038527
5	0.076365	93.44983	2.373754	1.450146	1.987659	0.655094	0.083514
6	0.078894	90.78927	3.675679	1.487471	2.975298	0.814093	0.258191
7	0.081089	88.11657	4.999196	1.436168	3.900308	0.923993	0.623765
8	0.083042	85.59660	6.196677	1.369423	4.647966	0.983351	1.205981
9	0.084778	83.33509	7.174050	1.329556	5.165703	0.999730	1.995866
10	0.086304	81.37925	7.892514	1.326281	5.456623	0.986365	2.958970
IDXV30 Variance Decomposition							
1	0.075804	100,0000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.097611	99.56861	0.084718	0.006721	0.241563	0.095785	0.002605
3	0.110147	98.58785	0.328820	0.060640	0.698279	0.297586	0.026829
4	0.118487	97.10257	0.747963	0.218785	1.249649	0.575036	0.105993
5	0.124641	95.20407	1.314008	0.526558	1.787130	0.891491	0.276746
6	0.129566	93.01843	1.968034	1.000360	2.233513	1.210820	0.568838
7	0.133742	90.68503	2.639679	1.623927	2.549695	1.503043	0.998626
8	0.137405	88.33486	3.264451	2.355359	2.730651	1.747488	1.567188
9	0.140664	86.07546	3.794557	3.139038	2.795545	1.933410	2.261986
10	0.143567	83.98391	4.202849	3.917320	2.776754	2.058844	3.060326

Source: Data Processes (2023)

The results of the FEVD IDXG30 analysis of the shock provided by each variable, in the first period IDXG30 contributed 100% to itself, while the variables HSI, DJIA, GOV10Y, Foreign, and BI7DRR had not contributed. However, over time, in the long term, only IDXG30 contributed 49.98% to the end of the 50th period. FEVD analysis results for IDXV30 from shocks provided by each variable, including itself. In the first period IDXV30 contributed 100% to itself, while for variablesHSI, DJIA, GOV10Y, Foreign, and BI7DRRhave not contributed yet. However, over time, in the long term, only IDXG30 contributed 58.15% to the end of the 50th period.

5. Discussion

The Influence of the Hang Seng Index on the Performance of IDXG30 and IDXV30

The Hang Seng Index (HIS) is a capitalization-weighted stock market index on the Hong Kong Stock Exchange. This index is used to record and monitor daily changes in the largest companies in the Hong Kong stock market and as a main indicator of overall market performance in Hong Kong (Chia et al., 2015). Based on Figure 3, the IRF test results reveal that the Hang Seng Index variable has a negative effect on the performance of IDXG30 and IDXV30. The hypothesis which states that the Hang Seng Index variable has a negative effect on performance is accepted. A previous study by Midesia et al. (2022) and Beureukat et al. (2021) found that the Hang Seng index had a negative impact on the JCI. This is in line with research conducted by Wibowo, et al. (2016) who stated that the Hang Seng Index had a negative effect on the IHSG.

The Influence of the Dow Jones Index on the Performance of IDXG30 and IDXV30

The Dow Jones Index is the oldest US market index that is still running today and is one of the

index references for investors, both domestic and foreign investors because it represents the global economy. The increase in the Dow Jones index shows the increasing performance of the US economy (Santosa & Puspitasari, 2019; Wicaksono & Yasa, 2017). Based on Figure 3, the IRF test results show that the Dow Jones Index (DJIA) has a positive effect on the performance of IDXG30. The hypothesis states that the DJIA variable has a big influence on the performance of IDXG30. This is because the DJIA shows that the economic growth of the United States is affecting the Indonesian capital market because it is one of the main export destinations for the United States. Investors will buy assets in the Indonesian capital market when the DJIA increases, which results in an inflow of funds that makes shares in IDXG30 increase. Investors should buy shares on IDXG30 when the DJIA rises. This research is in line with that conducted by Haryanto, et al. (2021), noted that the Dow Jones Index had a positive effect on the IHSG. Meanwhile, the IRF test results show that the Dow Jones Index (DJIA) has a negative effect on the performance of IDXV30. The hypothesis which states that the DJIA variable has a positive effect on IDXV30 performance is rejected. This is due to the fact that the DJIA shows the economic development of the United States. Investors will buy assets from the Indonesian capital market when the DJIA rises, which causes an outflow of funds that makes shares on the IDXV30 fall. If the DJIA rises, investors are better off avoiding shares on IDXV30. According to Midesia et al. (2022), DJIA has a negative effect on JCI performance. This research is in line with this research.

The Influence of 10 Year Indonesian Government Bond Yield on the Performance of IDXV30 and IDXG30
Bond yield is a measure of the bond income that investors will receive, which tends to be variable, because bond yield will be closely related to the level of return indicated by investors. Therefore, issuers and investors must always pay attention to fluctuations in bond prices and factors that influence changes in bond yields (Jogiyanto, 2010). Based on Figure 3, the 10 Year Indonesian Government Bond Yield (GOV10Y) has a negative effect on the performance of IDXG30. The hypothesis which states that the GOV10Y variable has a negative effect on IDXG30 performance is accepted. Thus, when GOV10Y increases, investors will withdraw funds from the equity market, causing an outflow of funds, causing shares in the IDXG30 index to decline. This research is in line with research conducted by Based on research conducted by Sari (2015) stated that the 10 Year Indonesian Government Bond Yield has a negative and significant effect on the IHSG. Meanwhile, the IRF test results show that the 10 Year Indonesian Government Bond Yield (GOV10Y) has a positive effect on the performance of IDXV30. The hypothesis which states that the GOV10Y variable has a negative effect on IDXV30 performance is rejected. Thus, when GOV10Y increases, IDXV30 will increase.

The Influence of Foreign Ownership in Government Debt Securities on the Performance of IDXV30 and IDXG30
Based on Figure 3, the IFR test results. Foreign ownership in Government Debt Securities has a negative effect on the performance of IDXG30 and IDXV30. The hypothesis which states that the Foreign variable has a negative effect on the performance of IDXG30 and IDXV30 is accepted. Thus, when Foreign Affairs experiences an increase, foreign investors will move funds from the equity market to Government Debt Securities (SUN), which causes shares in the IDXG30 and IDXV30 indices to decline. This research is in line with research conducted by Rasa, Khodijah & Hakim (2023) and research conducted by Lena, et al. (2023), states that foreign ownership has a negative influence on the transfer pricing choices of business actors listed on the IDX in the consumer goods sector.

Influence of BI-7 Day Reverse Repo Rate (B17DRR) on IDXV30 and IDXG30 Performance
Based on Figure 3, the IFR test results. BI7DRR has a positive effect on the performance of IDXG30 and IDXV30. The hypothesis which states that the BI7DRR variable has a positive effect on the performance of IDXG30 and IDXV30 is accepted. The positive influence of BI7DRR on IDXG30 is because when interest rates are higher, investors will choose companies or shares that have good performance, growth and finances to gain profits. This research found

that Interest Rates (BI7DRR) have a positive and significant impact on index performance. This is in line which states that the interest rate (reverse) repo rate has a positive effect on inflation.

6. Conclusion
The following are the conclusions of the research on the IDX30 as a whole: The Hang Seng Index (HIS) has a negative effect on the performance of the IDX30, this is because the HIS is a reflection of economic growth in Hong Kong. The Dow Jones Industrial Average (DJIA) index has a positive effect on the performance of IDXG30. This means that the DJIA is Indonesia's export destination country and the US has a significant influence on the Indonesian capital market, so the increase in the DJIA will follow the increase in IDXG30. The 10 Year Indonesian Government Bond Yield (GOV10Y) has a negative effect on the performance of IDXG30. This is because investors often take cash out of the Indonesian stock market to invest in GOV10Y when GOV10Y is strengthening. Foreign ownership in Government Debt Securities (Foreign) has a negative effect on the performance of IDXG30. This is because when Foreign Affairs increases, foreign investors will withdraw funds from the equity market and switch to Government Debt Securities (SUN), which causes shares on the IDXG30 index to decline. BI-7 Day Reverse Repo Rate (BI7DRR) has a positive effect on the performance of IDXG30, because when interest rates increase, investors will choose companies or shares that have strong performance, growth and financial resources to generate profits.

The research implications of this research are that the results of the research show that this research can have an impact on the following policies: Regulators must be able to provide financial literacy to stock investors and maintain macroeconomic stability. For stock investors, the Growth 30 Index (IDXG30) and the Value 30 Index (IDXV30) must pay attention to individual performance (the performance of each stock) compared to macroeconomics and global stock exchange indices represented by the Hang Seng Index (HSI) and the Dow Jones Industrial Average Index (DJIA). Investors who test the FEVD on IDXG30 before making investment decisions must pay attention to variables of the Hang Seng Index, Dow Jones Index, and Bank Indonesia's reference interest rate. Investors in testing the FEVD on IDXV30 before making investment decisions must pay attention to the variables of the Dow Jones Index and Bank Indonesia's reference interest rate.

Recommendations
Based on the research results, the following are suggestions for further research in this research: For further research, include company performance variables, because from the results of this research macroeconomics and global stock exchanges contribute relatively little or little to the movement or fluctuation of the Growth 30 Index (IDXG30) and the Value Index 30 (IDXV30), For further research it is recommended to conduct research on the Sharia Index or Indexes related to economic sustainability (Sustainability Development). For further research it is recommended to use the Structural VAR research method because some of the variables used come from from external.

References

Adnyana, IM, Nurwulandari, A. & Suryadi. (2022). The Influence of the World Gold Price, STI Index, N225 Index, KS11 Index, DJI Index, on the IHSG and its Impact on the IDX30 Index of the Indonesian Stock Exchange (2012-2020), *Scientific Journal of Accounting and Finance*, 4(7), 2733-2743.

Afendi, A. (2017). The Influence of Macroeconomic Variables on the Stock Index in the Jakarta Islamic Index. (*JII*). (Period 2012-2016), 13(2), 48–72.

Anisa Fitri Ani, Thomas Andrian (2022). The Influence of Foreign Stock Indexes and Macroeconomic Variables on the Lq45 Stock Price Index, *Journal of Economic and Development Studies,* 4(2), 69-76. https://doi.org/10.24036/jkep.v4i2.13534

Askotamiya, C. (2017). Comparative Rate of Return between Value Stock and Growth Stock in Companies on the Indonesian Stock Exchange. *FinAcc Journal*, 2(5), 733-744.

Bank Indonesia. (2018). *Decision of the Board of Governors' Meeting regarding Determination of the BI7DRR Interest Rate as a Representation of the Bank's Monetary Policy and Attitude.* Jakarta, Indonesia: Bank Indonesia.

Basit, Abdul. (2020). The Influence of World Gold and Oil Prices on the IHSG for the 2016-2019 Period. *JAA*, 5(1). https://doi.org/10.29303/jaa.v5i1.89

Beureukat & Andriani, EY (2021). The Influence of World Oil Prices, the Dow Jones Index and the Hang Seng Index on the Composite Stock Price Index for the 2016-2020 Period, Oikonomia: *Management Journal*, 17(1), 1-12. https://doi.org/10.47313/oikonomia.v17i1.1129

Boediono. (2014). *Synopsis Series Introduction to Macroeconomics*. Yogyakarta Special Region: BPFE.

Chia, Ricky Chee-Jiun, Venus Khim-Sen Liew, SAW (2015). The Day-of-the-week Effect in the Hang Seng Index. *The Empirical Economics Letters,* 14(2), 107–111.

Dwiati, Agustina Ratna., Ambarwati, Yulian Belinda. (2016). The Influence of Gold Prices on the Indonesian IHSG with the Exchange Rate as a Moderating Variable. Implementation and Contribution of Accounting, Management and Business Sciences in Building National Economic Resilience. *National Conference & Call for Papers* 3(2)

Eko Supriyanto Hadi, Teuku Alexander Azwani Amzul (2022). Analysis of the Effect of Inflation, 10y-Yield Government Bonds, Exchange Rates and HSI Index on the Composite Stock Price Index (IHSG) for the 2008-2017 period. *Journal of Primary Economics*, 1(2), 100-113. https://doi.org/10.55903/juria.v1i2.15

Endri, Abidin, Z., Simanjuntak, TP, & Nurhayati, I. (2020). Indonesian Stock Market Volatility: GARCH Model, *Montenegrin Journal of Economics*, 16(2), 7-17. https://doi.org/10.14254/1800-5845/2020.16-2.1

Ermawati, P & Lumbangaol, HE. (2018). The existence and determinants of the middle income trap in Indonesia. *Journal of economics & public policy* 9(2). https://doi.org/10.22212/jekp.v9i2.984

Hartono, J. (2013). Portfolio Theory and Investment Analysis.BPFE. Yogyakarta

Haryanto, Astuti (2021) Analysis of the Influence of the Dollar Exchange Rate, World Gold Prices, Dow Jones, Interest Rates on the Composite Stock Price Index. *Scientific Journal of Management, Business and Accounting Students*, 3(1), 113-123. https://doi.org/10.32639/jimmba.v3i1.771

Hidayat, WW (2019). *Basic Concepts of Investment and Capital Markets*. Uwais Indonesian inspiration.

HSI. (nd). Hang Seng Indexes. Retrieved April 17, 2022, from https://www.hsi.com.hk/eng/indexes/all-indexes/hsi

Jogiyanto, H. (2010). *Portfolio Theory and Investment Analysis*. BPFE. Yogyakarta.

Kumar, K. K., & Sahu, B. (2017). Dynamic Linkages Between Macroeconomic Factors and Islamic Stock Indices in a Non-Islamic Country India. *Journal of Developing Areas,* 51(1). https://doi.org/10.1353/jda.2017.0011

Kurniawan, A. (2017). Ellen May Invites People to Save in Stocks Now. Retrieved January 1, 2017, from https://ekbis.sindonews.com/read/1263986/32/ellen-may-ajak-communitynabung-saham-kini-1512718670

Lena Panca Mustika Rasa, Ina Khodijah, Cecep Abdul Hakim (2023). Foreign Ownership of Tunneling Incentives and Intangible Assets on Transfer Pricing Decisions with Tax Rates as an Intervening Variable. *Scientific Journal of Management Science and Entrepreneurship,* 3(1), 493-521.

Mansur, A. (2023). Determinants of Foreign Direct Investment from China to Indonesia. *Research of Economics and Business*, *1*(2), 68–75. https://doi.org/10.58777/reb.v1i2.82

M. Rifki Bakhtiar, Tri Purwani (2021). Impact of the Nikkei 225 Index, Dow Jones Index, Fed Interest Rates and Inflation on the JCI. *Journal of Economics and Business*, 3(1), 61-70. https://doi.org/10.47729/indicators.v3i1.88

Mankiw, N.G. (2014). *Introduction to Macroeconomics*. Jakarta: Salemba Empat.

Midesia, S. (2022). The Influence of the Dow Jones Industrial Average and Hang Seng Index on the Composite Stock Price Index in 2021. Jo*urnal of Accounting Economic Research (JENSI)*, 6(2), 129-135. https://doi.org/10.33059/jensi.v6i2.6740

Nadi Hernadi Moorcy, Mahfud Alwi, Tamzil Yusuf (2021). The Influence of Inflation, Interest Rates and Exchange Rates on the Composite Stock Price Index on the Indonesian Stock Exchange. *GeoEconomic Journal*, 12(1), 67-78. https://doi.org/10.36277/geoeconomics.v12i1.146

Parulian, Tohap., Mahendra, A. 2021. The Effect Of The Fed Rate, Exchange Rate, and Economic Growth on The IHSG with Inflation as a Moderating Variable. *International Journal of Research and Reviews*, 8(7). https://doi.org/10.52403/ijrr.20210735

Putri, LP (2021). The Influence of Financial Literacy on Investment Decisions Through Financial Behavior as a Moderating Variable. *National Seminar on Social and Humanities Educational Technology*, 1(1), 769–775. https://doi.org/10.52300/jmso.v1i1.2372

Rasa, Lena Panca Mustika., Khodijah, Ina., & Hakim, Cecep Abdul. (2023). Ading Ownership, Tunneling Incentive and Intangible Assets on Transfer Pricing Decisions with Tax Rates as an Intervening Variable. *Journal of Valuation* 3(1)

Ross, S. A., Westerfield, R., & Jordan, B. D. (2008). *Fundamentals of Corporate Finance*. Tata McGraw-Hill Education.

Santosa, P. W. (2011). Probability of Price Reversal and Intraday Trading Activity on Tick Size-25 at Indonesia Stock Exchange. *Journal of Technology Management*, *10*(3), 226–242. https://journal.sbm.itb.ac.id/index.php/mantek/article/view/142

Santosa, P. W., & Puspitasari, N. (2019). Corporate Fundamentals, Bi Rate And Systematic Risk: Evidence From Indonesia Stock Exchange. *Jurnal Manajemen*, *23*(1), 40–53. https://doi.org/10.24912/jm.v23i1.443

Santosa, P. W., & Santoso, P. W. (2019). Does Exchange Rate Volatility cause Overreaction in the Capital Market? Evidence from Indonesia. *International Journal of Finance and Accounting*, *8*(3), 80–87. https://doi.org/10.5923/j.ijfa.20190803.02

Santosa, P. W., & Sihombing, P. (2015). Factors affecting the yeld curve fluctuation of Indonesia government bond. *International Journal of Applied Business and Economic Research*, *13*(6), 4073–4087.

Sari, NWLN, & Abundati, N. (2015). Variables that Influence Bond Yield in Companies Listed on the Indonesian Stock Exchange. *E-Journal of Management*, 4(11), 3796–3824.

Sari, VM, Putri, NK, Arofah, T., & Suparlinah, I. (2021). The Influence of Investment Motivation, Basic Investment Knowledge, Minimum Capital, and Technological Progress on Students' Investment Interest. *Journal of Doctoral Management (JDM)*, 4(1), 88. https://doi.org/10.22441/jdm.v4i1.12117

Sihombing, P., Edi Santoso, & Dini Hariyanti. (2023). Macroeconomic Variables Effect on 10-Year Tenor Government Bonds Yield. *Research of Economics and Business*, *1*(2), 57–67. https://doi.org/10.58777/reb.v1i2.83

Sihombing, P., Melitana, C. L., & Oktavia, D. (2023). Analysis of factors influencing stock returns with firm size as a moderating variable in the garment and textile industry listed on the Indonesian Stock Exchange (BEI) 2016-2020. *Research of Finance and Banking*, *1*(2), 93–102. https://doi.org/10.58777/rfb.v1i2.140

Surya and Nasher. 2011. Analysis of the Effect of SBI Interest Rates, Exchange Rates, Company Size, Debt to Equity Ratio and Bond Rating on Corporate Bond Yield in Indonesia. *Journal of Technology Management*. 10(2).

Tumundo, Sandi Rendy. (2020). The Effect of Reverse Repo Rate and Inflation on Stock Returns. *Journal of Regional Accounting & Finance* 15(1). https://doi.org/10.52062/jakd.v15i1.1463

Untono, M. (2015). Analysis of the Effect of Economic Growth, Inflation, Exchange Rates, DJIA Index, and World Oil Prices on the Composite Stock Price Index. Parsimonia: *Journal of Accounting, Management and Business,* 2(2), 1–12.

Wibowo, F., Arifati, R., & Raharjo, K. (2016). Analysis of the Influence of the Inflation Rate, SBI Interest Rate, US Dollar Exchange Rate on the Rupiah, Money Supply, Dow Jones Index, Nikkei 225 Index, and Hangseng Index on the Movement of the Composite Stock Price Index (IHSG) for the 2010-2014 Period. *Journal of Accounting*, 2(2)

Wicaksono, IS & Yasa, GW (2017). The influence of the FED rate, Dow Jones index, Nikkei 225, Hang Seng on the composite stock price index. *Udayana University Accounting E-Journal,* 18(1),366-380. Retrieved from https://ojs.unud.ac.id/index.php/Akuntansi/article/view/24216

Widiawati, NKES, & Yuniasih, NW (2023). The Influence of Investment Knowledge, Minimum Capital, Investment Benefits, and Financial Literacy on Students' Investment Interest in the Capital Market (Study of Accounting Students, Faculty of Business Economics and Tourism, Indonesian Hindu University). *Hita Accounting and Finance*, 8, 149–160. https://doi.org/10.32795/hak.v4i1.3094

Widodo. (2018). Analysis of the Influence of the Asian Regional Composite Stock Price Index on the Indonesian Composite Stock Price Index. EkBis: *Journal of Economics and Business,* 1(2), 148–164. https://doi.org/10.14421/EkBis.2017.1.2.1016

Wulan Nur Fitriani, Titi Rapini, Hadi Sumarsono (2020). The Influence of Interest Rates, Inflation and the Dow Jones Index on the Composite Stock Price Index on the IDX for 2014-2018. *Journal of Economics, Management and Accounting*. 4(2), 252-265. https://doi.org/10.24269/iso.v4i2.491