THE INFLUENCE OF THE DOW JONES INDUSTRIAL AVERAGE, STANDARD & POOR'S 500, AND INFLATION ON THE COMPOSITE STOCK PRICE INDEX: A VECM ANALYSIS

Deris Lazuardi[1]
Email: *derislazuardi95.dl@gmail.com*

Muhamad Aqim Adlan[2]
Email: *aqim.adlan@uinsatu.ac.id*

Abstract

One of the main indicators of the Indonesian economy is the movement of the Composite Stock Price Index (CSPI), which reflects the performance and health of the capital market as a whole. The CSPI itself is also influenced by various factors, both external and internal factors.

Researchers aim to analyze the influence of the Dow Jones Industrial Average (DJIA), Standard & Poor's 500 (S&P 500), and Inflation variables on the Composite Stock Price Index using the Vector Error Correction Model (VECM) model, and data collected from the Month in 2009 to the Month in 2024.

Researchers in this study used quantitative methods and the sources used were secondary data sources. Variable sources are taken from Yahoo Finance, Investing.com, and Bank Indonesia data. Researchers used EViews version 13 Enterprise software to analyze the time series data.

DJIA has a positive and significant influence on CSPI in the long term. While the DJIA in the short term has a positive and insignificant influence on the CSPI. Regarding the S&P 500 in the long term, the S&P 500 has a negative and insignificant effect on the CSPI. While the S&P 500 in the short term has a negative and significant influence on the CSPI. Then related to Inflation in the long term and short term, Inflation has a positive and insignificant effect on the CSPI. The R2 value is 54%, this indicates a moderate or fairly good influence.

Keywords: *CSPI, Influence, Dow Jones Industrial Average, Standard & Poor's 500, Inflation, VECM.*

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[1] *Corresponding author: Sayyid Ali Rahmatullah State Islamic University Tulungagung, Mayor Sujadi Street Number 46, Kudusan, Plosokandang, Kedungwaru District, Tulungagung Regency, 66221, East Java, Indonesia*
[2] *Sayyid Ali Rahmatullah State Islamic University Tulungagung, Mayor Sujadi Street Number 46, Kudusan, Plosokandang, Kedungwaru District, Tulungagung Regency, 66221, East Java, Indonesia*

1. INTRODUCTION

The capital market itself is very important, because the capital market is one of the main drivers in a country's economy, which itself functions as a means of long-term investment and capital formation with the aim of encouraging public involvement in the flow of funds to support national development funding (Kinanty et al. 2023 p.529). According to Asrif'ah & Wahyudin in 2021, "by providing opportunities for the wider community to participate in driving the national economy, the capital market functions as a source of investment and funding for businesses and other institutions" (Octavia 2022 p.2).

According to the view of San Marino and Badriatin in 2021, "investment is the process of allocating a certain amount of money with the aim of generating income or increasing the value of assets over time". The ultimate goal is to generate sustainable returns by investing in various financial instruments or assets that are expected to increase in value over time (Putri et al. 2025 p.4). The capital market serves as a means for businesses to raise funds, and investment serves as a place for the general public to invest (Aditiya and Arafat 2025 p.859). Before making any financial commitment, investors should ascertain which stocks will yield the maximum return on investment (Tasiman and Reskino 2024 p.39). Stocks are one of the most significant financial market investments. This is because stocks have the potential to generate huge profits. Therefore, investors often choose them as an investment option (Arianingtias and Dura 2024 p.232).

The development of the Composite Stock Price Index (CSPI) is erratic, characterized by shifts in value, both up and down (Chaerudin and Setiyowati 2024 p.344). The CSPI closed at 6.223,39 on March 18, 2025, down 3,84% (dtd) from the previous day's close. CSPI fell more than 5% at the beginning of the morning trading closure, so the Indonesia Stock Exchange (IDX) imposed a trading pause mechanism. Although it closed weak, in the afternoon trading session, CSPI was able to bounce back (Kementerian Koordinator Bidang Perekonomian Republik Indonesia 2025 p.1).

The main indicator to observe the average movement of stock prices on the Indonesia Stock Exchange (IDX) is often the CSPI. In addition to serving as a capital market measurement tool, the CSPI is a macroeconomic indicator that reflects the country's tax revenue, capital flows, and economic growth. Both internal (such as company performance, inflation, etc.) and external (such as global economic conditions and changes in international stock indices) factors often influence changes in the CSPI. A widespread and sustained increase in the cost of products or necessities is known as inflation. It can also be understood as a continuous process of currency depreciation (Priyana et al. 2024 p.965). One of the impacts on the global economy that significantly affects the Indonesian capital market is inflation in the United States (US) (Bahi 2023 p.17).

Halisa in 2020, emphasized that in the era of modern economic integration, international stock market dynamics have significant transmission effects on domestic markets. CSPI is vulnerable to variations in the international market due to its dependence on foreign investment and global market sentiment (Hariyadi and Irawati 2025 p.93). According to Investing.com, as of May 8, 2024, Dow Jones recorded an average trading volume of 348.288.200, making it one of the largest stock exchanges. The volume difference is about three times greater than the average trading volume of the CSPI as of May 8, 2024, which amounted to 146,920,300. The US economy, as a major economic power, has the greatest influence on the economies of other countries,

including Indonesia. The Indonesian stock market will suffer if the Dow Jones Index plummets in the midst of a crisis, which will cause the CSPI to fall as well. The decline in the CSPI was caused by unfavorable sentiment and techniques used by domestic investors. As one of Indonesia's export markets, the US economy can stimulate the Indonesian economy through exports and capital inflows from the capital market and direct investment (Sasongko and Athoillah 2025 p.66). Meanwhile, the Standard & Poor's 500 is a stock market index that tracks the performance of 500 US companies with significant market capitalization (Xiang et al. 2024 p.89).

Previous research was conducted by Yulia Albasita et al., in 2022, with the title "The Effect of Inflation, BI Rate, Echange Rate, and Standard and Poor's 500 on the Composite Stock Price Index: an Empirical Study of Manufacturing Companies Listed on the Stock Exchange in 2015-2019". The results of this study indicate that "The Composite Stock Price Index is positively and insignificantly influenced by Standard & Poor's 500" (Albasita et al. 2022 p.111). Previous research has also been conducted by M. Rizki Nasution et al., in 2023, with the title "Analysis of the Effect of World Crude Oil Prices, Exchange Rates, Inflation, Dow Jones Industrial Average, and the Nikkei 225 Index on the Composite Stock Price Index". The results of this study indicate that "in the long-term model, factors such as Inflation, and the Dow Jones Industrial Average have a variation of 0.784464, or 78.44%, which can affect the value of the Composite Stock Price Index both separately and combined" (Nasution et al. 2023 p.764).

Seeing the problems above, that "researchers in this study, aim to analyze the effect of the Dow Jones Industrial Average, Standard & Poor's 500, and Inflation on the Composite Stock Price Index, where researchers in this study, using the Vector Error Correction Model (VECM), and the period studied is the Month in 2009 to the Month in 2024". The problem formulations in this study are: 1). How does the Dow Jones Industrial Average affect the Composite Stock Price Index? 2). How does the Standard & Poor's 500 affect the Composite Stock Price Index? 3). How does Inflation affect the Composite Stock Price Index? Analysis of these influences, which are reviewed from the period 2009-2024.

2. LITERATURE REVIEW
Composite Stock Price Index

According to the IDX team, a stock index is a statistical measure that describes the overall price changes of several stocks according to certain standards and procedures that are frequently evaluated. The stock index serves as a measure of the overall performance of the capital market over a period of time (Sumantri and Latifah 2021 p.12). Another index that includes all listed companies in its calculation is the Composite Stock Price Index (CSPI). One or more listed companies may be excluded from the calculation of the CSPI by the Indonesia Stock Exchange (Ningsih and Waspada 2018 p.250).

In order to determine the average development of all stocks listed on the stock exchange, a composite stock price is calculated (Tampubolon et al. 2021 p.70-71). "The formula for calculating the return of the Composite Stock Price Index", among others, is:

$$Return\ CSPIt = \frac{CSPIt - CSPIt - 1}{CSPIt - 1}\ X\ 100\%\ ...\ (III-1)$$

Description :
"CSPIt = CSPI value at time t"
"CSPIt-1 = CSPI value at time t-1"

Dow Jones Industrial Average

According to Jones in 2008 and Riantani in 2013, the Dow Jones Industrial Average (DJIA) is a collection of weighted prices of 30 leading industrial companies, which is a benchmark of stock market activity. Meanwhile, Amin in 2012 defined the Dow Jones Index as a sample of all equities listed on the New York Stock Exchange used in the calculation of the Dow Jones Index, and as the main index on the New York Stock Exchange (NYSE) (MN and Permatasari 2016). Meanwhile, according to Roofica & Pertiwi in 2021, defines "The Dow Jones Index is a significant stock index in the United States (US) and is the main measure used to assess how well the country's capital market is performing". The performance of the US industrial sector in its financial markets is reflected in this index. The Dow Jones Index is the oldest index in the US and consists of the top 30 International companies. It is a measure of market dynamics and the health of the country's economy (Renaldo et al. 2024 p.111).

The movement of the DJIA will be transmitted to the CSPI as a result of globalization and the economic relationship between the US and Indonesia, where "larger stock exchanges will have an impact on smaller stock exchanges". "The CSPI was significantly impacted by the DJIA's decline during the US economic crisis caused by subprime mortgages, which started in mid-2007 and peaked in September 2008". As global capital markets continue to have a significant impact on Indonesia's stock market, a shock to a major country's stock index may trigger fear among local investors (Sejati and Wijaya 2021 p.129).

Standard & Poor's 500

The Standard & Poor's 500 Index (S&P 500) compiles "information on 500 significant public companies from various industry sectors listed on U.S., stock exchanges. The S&P 500 is one of the most well-known and significant indices, and is managed by Standard & Poor's, a subsidiary of McGraw Hill" (Putri and Fadila 2023 p.386).

Charles P. Jones in 2013, defined that "Standard & Poor's 500 is a market value index of stock market activity that includes 500 stocks". Investors often cite this index as a "good" indicator of the overall state of the market, and it is reported in publications such as "The Wall Street Journal" and on many other websites. Indonesia, is no exception to the state of the global stock market in the event of a downturn on "Wall Street". Investors can basically use the US index as a benchmark when making choices (Abnaina and Swandari 2022 p.86).

Inflation

Setianto in 2014, confirmed that operating profit and savings can be affected by inflation. Because inflation has a significant impact on the company's rate of return and capacity to meet its debts to funders and lenders, investors should look at it carefully. If inflation increases rapidly in the future, then funders will receive less money (Kurniawati and Khairunnisa 2020 p.1665).

The tendency for prices to rise continuously and generally is known as inflation. According to Bank Indonesia's official website, "inflation is defined as a

widespread and sustained increase in the prices of goods and services over a period of time. It can be said that rising prices affect a wide range of goods and services, not just one or two" (Rante and Wakarmamu 2024 p.108).

3. RESEARCH METHOD

This research uses quantitative research methods and the data used is secondary data in the form of time series data or time series data. Quantitative research is a methodical strategy that uses numerical data to measure, examine, and understand events (Aida et al. 2025 p.31). Meanwhile, secondary data is "information collected by researchers from various pre-existing sources or information obtained from third parties" (Husna et al. 2025 p.31). Secondary data is also a data source that does not directly provide data to data collectors (Aprilyada et al. 2023 p.171). Secondary data sources used by researchers in this study are journals or scientific papers, and other sources related to the subject matter or discussion. These secondary data sources are based on selection criteria, which include data novelty, source reliability, and relevance to research objectives, only high-quality and relevant data are included in the analysis (Mustafa et al. 2025 p.32). While the source of variables is taken from the data of "Yahoo Finance, Investing.com, and Bank Indonesia".

This study uses the Vector Error Correction Model (VECM) as the main analysis method. VECM is a development of the Vector Auto Regression (VAR) model that considers whether there is a co-integration relationship between variables. This approach was chosen because of its "ability to analyze short-run and long-run interactions between variables and provide an adjustment mechanism from short-run imbalances to long-run equilibrium" (Fadhilah et al. 2025 p.31). Researchers in this study used Eviews version 13 Enterprise software to analyze the time series data. This study analyzed data collected from the month of 2009 to the month of 2024.

4. RESULTS AND DISCUSSION
Stationarity Test

The purpose of this stationarity test is to determine whether the time series used is stationary or not. If the data is not stationary, false regression will occur (Kuswanto et al. 2025 p.71). The ADF calculation can be used to determine the test statistic in the stationarity test (Amelia et al. 2024 p.1449). The following are the results of the stationarity test conducted on the research variables:

Table 1. Stationary Test Results at Initial Level

Series	Prob.	Lag	Max Lag	Obs
CSPI (Y)	0.0000	0	14	191
DJIA (X1)	0.9768	1	14	190
SAP (X2)	0.9987	1	14	190
INFLATION (X3)	0.0210	1	14	190

Source: EViews 13 Enterprise Results, data processed

Table 2. Stationary Test Results at the First Difference Level

Series	Prob.	Lag	Max Lag	Obs
D(CSPI) (Y)	0.0000	4	14	186
D(DJIA) (X1)	0.0000	0	14	190
D(SAP) (X2)	0.0000	0	14	190
D(INFLATION) (X3)	0.0000	0	14	190

Source: Eviews 13 Enterprise Results, data processed

In table 1, seen from the level level, "only two are stationary at the initial level, namely the Composite Stock Price Index and Inflation variables". So these variables must be tested again, and at the first difference level, which can be seen in table 2, the results show "all variables are stationary at the first difference level". All variables are significant or less than the 5% level (0.05). This "indicates that all variables are stationary at the first difference level".

Optimal Lag Test

Conducting an optimal lag test is the next step in modelling, after determining that all variables are stationary. The current information criterion will be used to determine the ideal lag duration. Finding lags is essential to overcome autocorrelation in a VAR system and indicates how long a variable takes to respond to another variable (Aufa and S 2025 p.857). The following are the results of the optimal lag test in this study:

Table 3. Optimal Lag Testing Results

Lag	LogL	LR	FPE	AIC	SC	HQ
0	1837.585	NA	3.97e-14	-19.50622	-19.43736	-19.47832
1	1892.535	106.9772	2.62e-14	-19.92058	-19.57628*	-19.78108
2	1926.046	63.81372*	2.18e-14*	-20.10687*	-19.48713	-19.85577*
3	1933.284	13.47486	2.39e-14	-20.01366	-19.11847	-19.65096

Source: Eviews 13 Enterprise Results, data processed

The lags have different lags, specifically there is 1 acentric mark (*) on lag 1 and 4 acentric marks (*) on lag 2, according to the findings of the best lag test above. Based on the number of acentric marks (*) on each lag, the table shows that lag 2 is a good lag. Lag 2 is the ideal lag that works well for the study.

VAR Model Stability Test

Before conducting further analysis, this VECM stability test should be conducted. "If the VECM estimation results, which will be integrated with the error correction model, are determined to be unstable, the level of variance decomposition (VDC) and impulse response function (IRF) will be considered invalid". Table 4, below, displays the results of the stability test. "The VAR model stability test is considered stable if the modulus value is < 1, and unstable if the modulus is > 1". (Rambe et al., 2025, p. 279).

Table 4. VAR Model Stability Test Results

Root	Modulus
-0.290627 - 0.322414i	0.434067
-0.290627 + 0.322414i	0.434067
0.290627 - 0.322414i	0.434067
0.290627 + 0.322414i	0.434067
-1.95e-17 - 0.396697i	0.396697
-1.95e-17 + 0.396697i	0.396697
0.369091	0.369091
-0.369091	0.369091

Source: Eviews 13 Enterprise Results, data processed

The test results in table 4 above show "where the modulus value and the roots value are > 1", so it is said to be stable (stationary) and further testing can be done.

Cointegration Test

The Johansen Cointegration Test is used "to ascertain whether there is a long-run equilibrium relationship between the variables in this study, and in other words, the purpose of this test is to ascertain whether or not there is a long-run equilibrium relationship between the variables" (Nwaeze and Ireokwu 2024 p.254).

Table 5. Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.** Critical Value
None *	0.788076	644.5448	47.85613	0.0000
At most 1 *	0.573118	352.8578	29.79707	0.0000
At most 2 *	0.497076	192.8234	15.49471	0.0000
At most 3 *	0.287047	63.60785	3.841465	0.0000

Source: Eviews 13 Enterprise Results, data processed

The results in table 5 above, show that "it has met the requirements, in particular the trace statistic value > 5% critical value, as indicated by the cointegration test in the trace statistic test in the table above, namely in table 5, which shows the existence of 4 cointegration or that there is an acentric sign (*) in the long-run effect".

Table 6. Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.** Critical Value
None *	0.788076	291.6869	27.58434	0.0000
At most 1 *	0.573118	160.0344	21.13162	0.0000
At most 2 *	0.497076	129.2156	14.26460	0.0000

| At most 3 * | 0.287047 | 63.60785 | 3.841465 | 0.0000 |

Source: Eviews 13 Enterprise Results, data processed

Table 6 above shows that the conditions have been met. "There are 4 cointegrations that meet the condition that the max-eigen statistic value > 5% critical value, or also seen, the presence of an acentric sign (*)". Looking at these results, all the research variables have a long-run equilibrium effect, which indicates that "the VECM model estimation can be used for further analysis in this study".

Vector Error Correction (VECM) Estimation

At the 5% significance level, significance testing is based on "the t-statistic value in relation to the t-table. If the t-statistic of a variable is greater than the t-table, the variable is considered significant" (Anjani and Cupian 2025 p.245). Based on the estimation results, the following findings were obtained:

Table 7. R-squared & Adj. R-squared Results

R-squared	0.546192
Adj. R-squared	0.533793

Source: Eviews 13 Enterprise Results, data processed

The R-squared value is 0.546192 or 54%, which shows that the effect is stated to be moderate or quite good. While Adj. R-squared of 0.533793 or 53%, this shows that the data that has been tested has a moderate or fairly good level of suitability.

Table 8. Long-Term VECM Testing Results

Variable	Coefficient	T-statistic	T-table	Description
DJIA (X1)	0.194233	[2.26660]		Significant
SAP (X2)	-0.144177	[-1.92405]		Not Significant
INFLATION (X3)	0.490942	[2.36529]	1.972397	Significant
C	-0.838559			

Source: Eviews 13 Enterprise Results, data processed

Long-Term VECM Estimation

Based on the table above, namely in table 8, we can see the results of the VECM estimation in the long term, which are as follows:

1. **The effect of the Dow Jones Industrial Average on the Composite Stock Price Index**

The Dow Jones Industrial Average variable has a positive and significant influence on the Composite Stock Price Index in the long-term test, this is shown in the findings of this study, that the "t-statistic value of 2.26660 is higher than the t-table value of 1.972397. This indicates that for every 1% increase in the Dow Jones Industrial Average, the CSPI will increase by 0.194233".

This finding is in line with previous research conducted by Irfani Azzah Nabiilah et. al. in 2024, with the title "Analisis Kointegrasi Indeks Saham Filipina PSEI, Indeks Saham Malaysia KLCI, Indeks Saham AS DJIA dan Variabel

Makroekonomi dengan IHSG", which states that "the large p-value on DJIA (0.000) < α (0.05), then reject H₀. Therefore, it can be said that there is enough data to support the idea that DJIA and CSPI have a long-run equilibrium relationship. In addition, a positive coefficient is considered to signify a favorable correlation between DJIA and CSPI, where CSPI increases along with DJIA" (Nabiilah et al. 2024 p.549).

Seeing these results, the government should closely watch the movement of the Dow Jones Industrial Average and its impact on the Composite Stock Price Index (CSPI). This is important because the CSPI is a benchmark for the performance of the Indonesian capital market. Looking at these findings, it shows that the increase in the Dow Jones Industrial Average is a good thing, but it can also cause market fluctuations. To prevent volatility, the government must be ready to predict it and take appropriate action. In general, an increase in the DJIA is a sign of investor optimism about economic conditions. However, too rapid or sudden an increase can also cause volatility, or large price swings, in the stock market, especially if other risky elements are present.

2. Effect of Standard & Poor's 500 on the Composite Stock Price Index

The results above or in table 8 show that "the t-statistic value is -1.92405, which is smaller than the t-table value of 1.972397, the Standard & Poor's 500 variable has a negative and insignificant effect on the Composite Stock Price Index. This means that for every 1% increase in Standard & Poor's 500, the CSPI will decrease by -0.144177".

This finding is in line with previous research conducted by Ikka Wijayanti et. al. in 2017, with the title "Analisis Pengaruh Tingkat Inflasi, BI Rate, Kurs, dan Standard & Poor's 500 terhadap Indeks Harga Saham Gabungan (IHSG) di Bursa Efek Indonesia (BEI) Tahun 2014-2016", which states that "in the long run, the S&P 500 has no significant effect on the CSPI".

The Standard & Poor's 500, which is the main stock index in the United States, has a negative impact on the Composite Stock Price Index. This is due to several factors, one of which is investors switching from the Indonesian stock market to the US stock market, or external forces that may affect both markets at the same time. The CSPI falls by -0.144177 for every 1% increase in the Standard & Poor's 500. This implies that "a small adjustment in the US stock index may result in negligible or unimportant changes in the Composite Stock Price Index. In other words, the t-statistic value, which is smaller than the t-table value, indicates that the Standard & Poor's 500 does not have enough influence on the Composite Stock Price Index to be considered statistically significant. However, the influence is not strong enough to be the main factor influencing changes in the Composite Stock Price Index".

3. The Effect of Inflation on the Composite Stock Price Index

Looking at the results above or in table 8, that "the t-statistic value of 2.36529, or higher than the t-table value of 1.972397, the inflation variable has a positive and significant influence in the long run on the Composite Stock Price Index (CSPI). This shows that every 1% increase in inflation, the CSPI will increase by 0.490942". These results are in line with previous findings, which have been carried out by Suryo Refli Ranto, in 2019, with the title "Pengaruh Jangka Pendek dan Jangka Panjang Variabel Makro Ekonomi terhadap IHSG di Bursa Efek Indonesia dengan Pendekatan Error Correction Model (ECM)", where the findings resulted, that "in the long run, Inflation also has a significant effect on the Composite Stock Price Index" (Ranto 2019 p.21).

Looking at the findings, it is "important to remember that although inflation has a positive impact on the Composite Stock Price Index, this does not mean that an increase in inflation will always result in an increase in the value of the Composite Stock Price Index". It is important to remember that other factors also affect the stock market. Therefore, the government should take appropriate measures to maintain economic stability and promote economic expansion, while keeping inflation under control to maximize its positive impact and reduce its negative impact, as high inflation can be detrimental to the economy, while inflation that is too low can also hamper growth.

Short-Term VECM Estimation

Table 9. Short-Term VECM Testing Results

Variable	Coefficient	T-statistic	T-table	Description
COINTEQ1	-1.032839	[-14.1811]		
DJIA (X1)	0.103265	[0.34708]		Not Significant
SAP (X2)	-0.183823	[-1.98365]	1.972397	Significant
INFLATION (X3)	1.298802	[1.94523]		Not Significant
C	0.000790	[0.21146]		

Source: Eviews 13 Enterprise Results, data processed

Based on table 9 above, the results of the VECM estimation in the short term can be seen as follows:

1. **The effect of the Dow Jones Industrial Average on the Composite Stock Price Index**

The results above or in table 9 show that "the t-statistic value (0.34708) is smaller than the t-table (1.972397), this indicates that the Dow Jones Industrial Average variable on lag 2 has a positive and insignificant effect, and this indicates that the Composite Stock Price Index will increase by 0.103265 for every 1% increase in the Dow Jones Industrial Average".

These results are in line with previous research conducted by Hasanudin, in 2025 with the title "The Dynamics of Composite Stock Price Index Market: A Review of Key Economic Factors". The findings support that "DJI or DJIA has no real influence on the variation of CSPI in this study". In addition, Hasanudin's analysis revealed that Herlianto and Hafizh's study in 2020, also "found a positive but insignificant relationship between DJI and CSPI" (Hasanudin 2025 p.79).

While the DJIA often has a positive impact on the stock market, there are a number of reasons why this impact is not always statistically significant in the short term, one of which is that the DJIA does not reflect the US stock market as a whole as it only includes 30 large-cap stocks. Then because the DJIA uses a price-weighting methodology, the movement of the index is more influenced by higher priced stocks, which does not accurately represent the state of different sectors. Although the DJIA has a positive effect, this effect is not statistically significant in the short term, meaning that "the Composite Stock Price Index will only increase by 0.103265, and this increase is not always constant, for every 1% increase in the Composite Stock Price Index". Providing businesses with access to alternative funding, capital markets such

as the CSPI are vital to the economy. Companies will be encouraged to invest and create jobs if the Composite Index performs well. However, this impact is not strong enough to drive changes in the CSPI.

2. **Effect of Standard & Poor's 500 on the Composite Stock Price Index**

Looking at the results above or in table 9, that "the t-statistic value is greater (-1.98365) than the t-table value (1.972397), it can be concluded that the Standard & Poor's 500 variable at lag 2 has a negative and significant effect on the Composite Stock Price Index in the short term. This shows that the Composite Stock Price Index will decrease by -0.183823 for every 1% increase in the Standard & Poor's 500".

These results are in line with previous research conducted by Yulia Albasita, in 2022, with the title "The Effect of Inflation, BI Rate, Echange Rate, and Standard and Poor's 500 on the Composite Stock Price Index: an Empirical Study of Manufacturing Companies Listed on the Stock Exchange in 2015-2019". The study resulted in the finding that "S&P 500 Index has a negative and significant influence" (Albasita et al. 2022 p.83).

Looking at these results, it shows that foreign investors will be more interested in investing in the United States when the Standard & Poor's 500 index rises, as it will show them that the country has strong economic growth potential. As a result of foreign capital leaving Indonesia to invest in the United States, this could result in a decline in the CSPI. Recognizing this, the government can take steps to boost Indonesia's economic growth and CSPI, such as improving economic stability, attracting foreign investment, and making the local sector more competitive.

3. **The Effect of Inflation on the Composite Stock Price Index**

The results above or in table 9 show that "the t-statistic value is 1.94523 which is smaller than the t-table of 1.972397, it appears that the inflation variable at lag 2 has a positive and insignificant effect in the short term. This indicates that the Composite Stock Price Index will increase by 1.298802 for every 1% increase in inflation".

This finding is in line with previous research conducted by Ayu Kurnia Fatmawati et. al. in 2024, with the title "Perkembangan Indeks Harga Saham Gabungan (IHSG) sebelum dan sesudah Krisis Ekonomi Global Tahun 2008". Stating that "in the short term, the inflation variable has no significant effect on the CSPI. Given that the inflation rate from 2005 to 2015 was mostly within the range of inflation targets set by Bank Indonesia, inflation has no real impact on the CSPI" (Fatmawati et al. 2024 p.37).

The Composite Stock Price Index rises in response to rising inflation. This can be due to a number of reasons, including increased investor expectations of economic expansion or that rising inflation will boost the profits of listed companies. However, while there is a tendency for inflation to raise the CSPI, the impact is weak and not immediately apparent as the effect of inflation is positive and insignificant in the short term. In other words, rising inflation does not always or substantially raise stock prices.

Impulse Response Function (IRF) Analysis

An analytical method to determine how a variable in a statistical or economic system reacts to shocks or disturbances from other variables is the Impulse Response Function (IRF) test (Sultan and Samsuddin 2025 p.87).
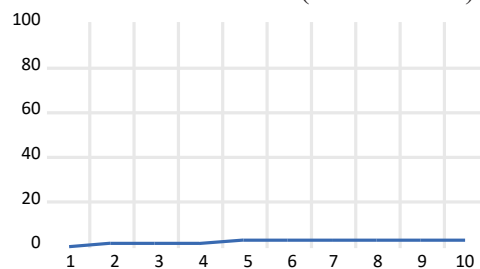
Percent CSPI variance due to LOG(DJIA) Innovation
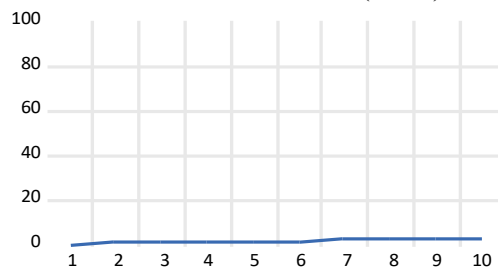
Figure 1. IRF Results of CSPI percentage variance due to innovations in DJIA

Percent CSPI variance due to LOG(SAP) Innovation
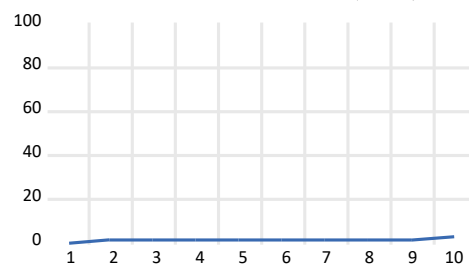
Figure 2. IRF Results of CSPI percentage variance due to innovations in S&P 500

Percent CSPI variance due to LOG(INFLATION) Innovation

Figure 3. IRF Results of CSPI percentage variance due to innovations in Inflation

The percentage response of the variance of the Composite Stock Price Index to changes in the DJIA, S&P 500 and inflation is shown in the graph above. Although the trend is only growing gradually, the figure shows that the Composite Stock Price Index has a tendency to increase from the first to the tenth period.

Variance Decomposition Analysis

Variance decomposition analysis is the next step after IRF analysis. The variance of a variable can be estimated using this methodology, both before and after changes or shocks to the variable and related variables (Widyaningrum and Lubis 2024 p.58).

Table 10. Variance Decomposition Analysis Results

Period	S.E.	CSPI	LOG(DJIA)	LOG(SAP)	INFLATION
Variance Decomposition of CSPI:					
1	0.049675	100.0000	0.000000	0.000000	0.000000
2	0.049861	99.36530	0.180156	0.162653	0.291889
3	0.050351	97.70287	1.103339	0.176418	1.017378
4	0.050513	97.07769	1.202869	0.419935	1.299509
5	0.050621	96.66664	1.263492	0.481954	1.587910
6	0.050776	96.10350	1.368655	0.710980	1.816862
7	0.050928	95.53601	1.494669	0.921924	2.047400
8	0.051070	95.00693	1.607822	1.133779	2.251465
9	0.051214	94.47563	1.713292	1.346001	2.465075
10	0.051359	93.94768	1.817701	1.554647	2.679970

Source: Eviews 13 Enterprise Results, data processed

Based on the table above, the innovations of DJIA, S&P 500, and inflation cause "CSPI to increase gradually from the first to the tenth period". In the first period, CSPI itself influences the CSPI variable, and is able to explain itself 100% of the time. However, in the second period and subsequent periods, until the tenth period, it continued to fall by 93.94%. The CSPI variable in the 2nd period was influenced by the Dow Jones Industrial Average variable "by 0.18% and continued to increase until the 10th period by 1.81%". The CSPI variable in the 2nd period was influenced by the Standard & Poor's 500 variable "by 0.16% and continued to increase until the 10th period by 1.81%". While the CSPI variable in the 2nd period was influenced by the Inflation variable "by 0.29% and also continued to increase until the 10th period by 2.67%".

5.   CONCLUSION

Based on the explanation that has been described above, the conclusions that can be obtained are:

1. In the long run the DJIA variable has a positive and significant influence on the CSPI. While in the short term the DJIA variable at lag 2 has a positive and insignificant effect on the CSPI. Regarding the S&P 500 variable in the long term has a negative and insignificant effect on the CSPI. While in the short term the S&P 500 variable at lag 2 has a negative and significant effect on the CSPI. Then in the long and short term the Inflation variable at lag 2 has a positive and insignificant effect on the CSPI. The R-squared value is 54%, which shows that the effect is stated as moderate or good enough.
2. The percentage response of the CSPI variance to changes in the DJIA, S&P 500 and Inflation shows an upward trend, although the increase is gradual, but the figure shows that the CSPI has an upward trend from the first to the tenth period.
3. The innovation of DJIA, S&P 500, and Inflation caused the CSPI to increase gradually from the first to the tenth period. The CSPI variable in the second

period is influenced by the DJIA, S&P 500, and Inflation variables and continues to increase until the tenth period.

Researchers realize that additional data and variables are still needed for the study of the Composite Stock Price Index (CSPI). It is expected that future research will examine CSPI related data in more detail and include other related variables. Research on the CSPI is important because of its strong correlation with Indonesia's economic growth. The CSPI itself is an important indicator that shows the condition of the capital market and the economy as a whole.

REFERENCES

Abnaina, E., and F. Swandari. 2022. Pengaruh Variabel Makroekonomi dan Variabel Global Index tehadap Indeks Harga Saham Gabungan (IHSG). *Jurnal Manajemen dan Bisnis Performa.* 19 (1): 83-92.

Aditiya, and F. Arafat. 2025. Pengaruh Tingkat Suku Bunga Bank Indonesia dan Jumlah Uang Beredar terhadap Indeks Harga Saham Gabungan. *Jemsi (Jurnal Ekonomi, Manajemen, dan Akuntansi).* 11 (2): 858-868.

Aida, D. Hermina, and Norlaila. 2025. Jenis Data Penelitian Kuantitatif (Korelasional, Komparatif, dan Eksperimen). *AL-Manba, Jurnal Ilmiah Keislaman dan Kemasyarakatan.* 10 (1): 31-40.

Albasita, Y., E. H. Halim, and Fitri. 2022. The Effect of Inflation, BI Rate, Echange Rate, and Standard and Poor's 500 on the Composite Stock Price Index: an Empirical Study of Manufacturing Companies Listed on the Stock Exchange in 2015-2019. *IJEBA: International Journal of Economics, Business and Applications.* 7 (2): 111-133.

Amelia, R., D. Wahyuni, and E. Julianti. 2024. Implementation of Vector Autoregressive (VAR) and Vector Error Correction Model (VECM) Method in Pneumonia Patients with Weather Elements in Pangkalpinang City. *BAREKENG: Jurnal Ilmu Matematika dan Terapan.* 18 (3): 1447-1458.

Anjani, V., and Cupian. 2025. Analisis Pengaruh Inklusi Keuangan Syariah, Perbankan Syariah, dan Pasar Modal Syariah terhadap Pertumbuhan Ekonomi di Indonesia Periode 2013-2023. *Journal of Islamic Economics and Finance.* 3 (2): 236-253.

Aprilyada, G., M. A. Zidan, Nurlia, R. A. Ainunisa, and W. Winarti. 2023. Peran Kajian Pustaka dalam Penelitian Tindakan Kelas. *Jurnal Kreativitas Mahasiswa* 1 (2): 165-173.

Arianingtias, D. D., and J. Dura. 2024. Mengoptimalkan Return: Menganalisis Dampak Kurs, Book Value Per Share, dan Earning Per Share. *JEAM : Jurnal Ekonomi Akuntansi dan Manajemen.* 23 (2): 232-248.

Aufa, A. A., and M. A. S. 2025. Pengaruh Inflasi dan Tingkat Pengangguran terhadap Pertumbuhan Ekonomi Indonesia Tahun 1994-2024 Analisis Menggunakan Model VECM. *Jurnal Semesta Ilmu Manajemen dan Ekonomi (J-SIME).* 1 (4): 850-870.

Bahi, N. S. C. 2023. Hubungan Pasar Indonesia dan AS dalam Isu Inflasi Global. *Riset Akuntansi dan Portofolio Investasi.* 1 (1): 17-21.

Chaerudin, A. R., and Setiyowati. 2024. Indeks Harga Saham Gabungan (IHSG), Nilai

Tukar Rupiah dan BI 7- Day Reverse Repo Rate (BI Rate) terhadap Nilai Aktiva Bersih Reksa Dana. *Jurnal Bina Bangsa Ekonomika* 18 (1): 343-349.

Fadhilah, F. N., I. Fathurrahman, M. Akbar, and A. Malik. 2025. Efektivitas Sertifikat Bank Indonesia Syariah (SBIS) sebagai Instrumen Kebijakan Moneter: Analisis Empiris di Indonesia. *Al-A'mal: Jurnal Manajemen Bisnis Syariah.* 2 (1): 30-36.

Fatmawati, A. K., L. S. Badriah, and D. S. Gunawan. 2024. Perkembangan Indeks Harga Saham Gabungan (IHSG) sebelum dan sesudah Krisis Ekonomi Global Tahun 2008. *Journal of Economic, Management, Accounting and Technology (JEMATech).* 7 (1): 31-39.

Hariyadi, F., and Z. Irawati. 2025. Analisis Pengaruh Inflasi, Nilai Tukar (Kurs), Tingkat Suku Bunga SBI, Indeks Dow Jones dan Indeks Nikkei 225 terhadap Indeks Harga Saham Gabungan pada Bursa Efek Indonesia Periode 2019-2023. *Seiko : Journal of Management & Business.* 8 (2): 91-102.

Hasanudin, H. 2025. The Dynamics of Composite Stock Price Index Market: A Review of Key Economic Factors. *Jurnal Fokus Manajemen Bisnis.* 15 (1): 70-83.

Husna, U., F. Ariyanto, and P. M. Purnama. 2025. Analisis Metode Rantai Markov untuk Memprediksi Status Pasien di Pusat Kesehatan Masyarakat (Puskesmas) Guluk-guluk Kabupaten Sumenep. *Alpha Epsilon Journal (AEJ).* 1 (1): 30-33.

Kementerian Koordinator Bidang Perekonomian Republik Indonesia. 2025. Laporan Pasar Harian.

Kinanty, C. S., S. Subanti, and Y. Susanti. 2023. Pengaruh Tingkat Inflasi, BI Rate, Nilai Tukar Rupiah-Dollar dan Jumlah Uang Beredar terhadap Indeks Harga Saham Gabungan dengan Pendekatan Error Correction Model (ECM). In *Seminar Nasional Lppm Ummat.* 2: 528-538.

Kurniawati, R., and K. Khairunnisa. 2020. Analisis Faktor Makroekonomi yang Berpengaruh terhadap Indeks Harga Saham Gabungan (IHSG) Tahun 2010-2018. *Jurnal Ilmiah Manajemen, Ekonomi, & Akuntansi (MEA).* 4 (3): 1662-1684.

Kuswanto, H., P. E. P. Utomo, U. Khaira, and A. Waladi. 2025. Prediksi Nilai Ekspor Migas Indonesia Menggunakan Metode SARIMA dan LSTM. *Satesi: Jurnal Sains Teknologi dan Sistem Informasi.* 5 (1): 69-79.

MN, N., and V. Permatasari. 2016. Dampak Variabel Makroekonomi dan Indeks Saham Global terhadap Indeks Harga LQ45 di Bursa Efek Indonesia. *Jurnal Ekonomi.* 21 (03): 309-324.

Mustafa, M. S., J. F. K. Lisa, and M. M. Ali. 2025. The Impact of IT-driven Real-Time Analytics on Strategic Business Decision-making in the Digital Economy. *Frontiers in Applied Engineering and Technology.* 2 (01): 30-39.

Nabiilah, I. A., U. Hartono, and N. A. Haryono. 2024. Analisis Kointegrasi Indeks Saham Filipina PSEI, Indeks Saham Malaysia KLCI, Indeks Saham AS DJIA dan Variabel Makroekonomi dengan IHSG. *JIMEA | Jurnal Ilmiah MEA (Manajemen, Ekonomi, dan Akuntansi).* 8 (1): 528-557.

Nasution, M. R., R. Rujiman, and A. A. Tanjung. 2023. Analysis of the Effect of World Crude Oil Prices, Exchange Rates, Inflation, Dow Jones Industrial Average, and the Nikkei 225 Index on the Composite Stock Price Index. *Quantitative Economics and Management Studies (QEMS).* 4 (4): 764-772.

Ningsih, M. M., and I. Waspada. 2018. Pengaruh BI Rate dan Inflasi terhadap Indeks Harga Saham Gabungan (Studi pada Indeks Properti, Real Estate, dan Building Construction, di BEI Periode 2013 - 2017). *Jurnal Manajerial.* 3 (5): 247-258.

Nwaeze, C., and U. N. Ireokwu. 2024. Human Capital Investment and Sustainable Economic Growth in Nigeria: A VECM Approach. *International Journal of Innovative Finance and Economics Research.* 12 (1): 247-262.

Octavia, S. B. 2022. Pengaruh Kurs Rupiah, Harga Emas Dunia dan Harga Minyak Dunia terhadap Indeks Harga Saham Gabungan. *SIMBA: Seminar Inovasi Manajemen, Bisnis dan Akuntansi 4.* 1 (2): 73-82.

Priyana, E., Hidayatullah, and D. Rosaria. 2024. Analisis Pengaruh Harga Minyak Dunia, Nilai Tukar Rupiah, Inflasi dan Suku Bunga SBI terhadap Indeks Harga Saham Gabungan (IHSG). *Journal of Management and Innovation Entrepreunership (JMIE).* 1 (4): 963-975.

Putri, F. A., Nurman, A. P. Aslam, A. Ramli, and Anwar. 2025. Penggunaan Capital Asset Pricing Model (CAPM) untuk Menilai Kelayakan Investasi pada Saham Indeks IDX30 di Bursa Efek Indonesia (BEI) Tahun 2019-2023. *Jurnal Manajemen dan Bisnis Ekonomi.* 3 (2): 01-17.

Putri, S. D., and A. Fadila. 2023. Revitalisasi Pasar Saham: Menyelusuri Dampak Makroekonomi dan Indeks Global. *Procuratio: Jurnal Ilmiah Manajemen.* 11 (4): 382-395.

Rambe, N. H., W. A. Pratomo, and S. Suhaimi. 2025. Analisis Faktor-faktor yang Mempengaruhi Inflasi di Negara ASEAN. *Jurnal Samudra Ekonomi dan Bisnis.* 16 (2): 274-284.

Rante, E., and C. M. Wakarmamu. 2024. Analisis Pengaruh Inflasi, Suku Bunga Bank Indonesia dan Nilai Tukar terhadap Indeks Harga Saham Gabungan di Bursa Efek Indonesia Periode 2014-2023. *Jurnal Ilmiah Nusantara.* 1 (3): 105-119.

Ranto, S. R. 2019. Pengaruh Jangka Pendek dan Jangka Panjang Variabel Makro Ekonomi terhadap IHSG di Bursa Efek Indonesia dengan Pendekatan Error Correction Model (ECM). *Jurnal Derivat: Jurnal Matematika dan Pendidikan Matematika.* 6 (1): 12-24.

Renaldo, N., B. Wijaya, A. T. Junaedi, S. Suhardjo, and Y. Yusrizal. 2024. Gold, Oil Prices, Exchange Rates, Dow Jones, and Inflation on Future Jakarta Composite Index. *Kurs : Jurnal Akuntansi, Kewirausahaan dan Bisnis.* 9 (1): 108-122.

Sasongko, G., and M. Athoillah. 2025. The Impact of Monetary Policy on Stock Price Index Movement. *Journal of Development Economic and Social Studies.* 4 (1): 61-76.

Sejati, G., and E. Wijaya. 2021. Analisis Pengaruh Makroekonomi dan Indeks Global terhadap IHSG (Januari 2016 - Mei 2021). *Prosiding Biema : Business Management, Economic, and Accounting National Seminar.* 2 (2): 125-140.

Sultan, and M. A. Samsuddin. 2025. Analisis Hubungan Kausalitas Inflasi, IPM, Kemiskinan, dan Pengangguran di Provinsi Nusa Tenggara Timur. *IDENTIK: Jurnal Ilmu Ekonomi, Pendidikan dan Teknik.* 02 (03): 84-90.

Sumantri, F., and U. Latifah. 2021. Analisa Pengaruh Marko Ekonomi terhadap Indeks Harga Saham Gabungan Periode 2015-2019. *Dialektika : Jurnal Ekonomi dan Ilmu Sosial.* 6 (2): 11-21.

Tampubolon, K. M., H. M. R. Sembel, and J. Sidharta. 2021. Pengaruh Inflasi, Suku Bunga, Perubahan Nilai Tukar dan Pertumbuhan Produk Domestik Bruto terhadap Indeks Harga Saham Gabungan (IHSG) (Studi pada Bursa Efek Indonesia Periode Tahun 2010-2019). *Fundamental Management Journal.* 6 (1): 66-90.

Tasiman, T., and R. Reskino. 2024. Pengaruh Kebijakan Utang dan Pertumbuhan

Penjualan terhadap Profitabilitas Perusahaan dengan Kebijakan Dividen sebagai Variabel Moderasi. *JEAM : Jurnal Ekonomi Akuntansi dan Manajemen.* 23 (1): 39-53.

Widyaningrum, T., and F. R. Lubis. 2024. Pengaruh Variabel Makro Ekonomi terhadap Nilai Tukar Rupiah di Indonesia. *Jurnal Genesis Indonesia (JGI).*

Xiang, S. T., D. Pathmanathan, and K. T. Hsuen. 2024. Enhancing Stock Price Data Analysis Through Variants of Principal Component Analysis. *Journal of Quality Measurement and Analysis.* 20 (3): 89-107.