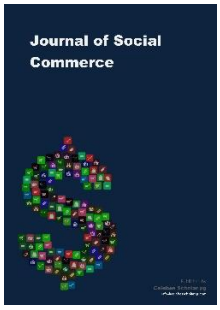

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Sectoral Market Sensitivities to Macroeconomic Signals and Global Moderators in a Digitally Shifting Investment Landscape

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Abstract

This paper will look into the effects of rupiah exchange rate, inflation and interest rates on the composite stock price index (IHSG), as well as the nine sectoral indices in the Indonesian financial market. Since the behavior of the market is being increasingly defined by wider systemic factors, the analysis introduces the money supply and the Dow Jones Industrial Average (DJIA) index; which acts as moderating variables; that either alleviates or reduces the extent or orientation of these macroeconomic relationships. The quantitative study design was selected that implies the use of multiple regression and Moderated Regression Analysis (MRA) with monthly data collected in the period between January 2019 and December 2023. The findings show that the macroeconomic variations are not evenly spread in all sectors. The inflationary pressure and exchange rate changes are sector specific whereas interest rate movements mostly put pressure on the downward side particularly in capital-intensive sectors. The tempering influence of liquidity and international sentiment is also created to be highly considerable showing that the receiving of a macroeconomic message is not only a factor of investor response but also a factor of the interpretive condition under which it is conveyed.

Introduction

The rate at which a market behaviour to macroeconomic fluctuations has become crucial in a recent scholarship and policies debates. This correlation is particularly relevant in the developing economies because the local monetary policies get intertwined with the international investor sentiment. Although asset valuation is always affected by the impact of the exchange-rates, inflationary pressures, or variations in the interest rates, due to the influence of the algorithmic trading and step-up connectivity, in the form of digitalization, the responses to various sectors have become become much heterogeneous. Empirical evidence, according to Eldomiaty et al. (2020) and Wong (2022), shows that uncertainty in such macroeconomic variables can result in mixed sector results, contingent on costs compositions, foreign-exchange selections, and responsiveness to prices.

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The need to change the policy in the context of the COVID-19 pandemic also demonstrates the extent to which global market indicators can be simultaneously tuned in such a way as to drive an industry-specific index. The increase in the BI benchmark rate to 5.75 percent in anticipation of the 15 percent depreciation of the Indonesian rupiah against the US dollar, and inflation rate of 5.95 percent in 2022, which was the highest in nearly a decade (Bank Indonesia, 2022). At the same time, the crisis in energy markets and cuts in global supply of commodities were enhanced by the turbulence caused by supply-chain shocks and geopolitical tensions, which include the RussiaUkraine war. Industries that had large capital outlay, or dominated by imports like the finance and infrastructure industries, had higher equity-price volatility. In comparison, export-focused industries, in particular energy, enjoyed a better world prices of commodities and favorable exchange-rate regime (Umoru te al., 2023; Ismail, 2023). Based on the recent empirical research, we can point out that macroeconomic shocks have heterogeneous effects on different national economies, and recent research (Bhargava & Konku, 2023) proves that the mechanism of transmission of this type of shock is dependent not only on the type of the shock but also on the industry structure of the local economy.

Nevertheless, the available literature still tends to view the equities market as a monolithic collection, thus concealing the heterogeneity of sectors at a microstructural level. The current tendency in the market behaviour points at the differentiation of the investors between industries, analysed through the lens of their ability to hedge against inflation, the interest-rate volatility absorption, and the use of currency fluctuations. Zhang (2011) also highlight this fact noting that in China, interest rate changes create disproportionate effects in the environmental classes of technology, manufacturing, and energy. One can draw parallels with the MENA region through Moussa & Delhoumi (2022) who report asymmetric impacts of interest and exchange-rate shocks on the performance of the sectors. Comprehensively, these results indicate that capital markets have come to react using complex, sector-specific channels especially on landscapes characterized by accelerated turnover of digitization and instrumentation of democratization of finance (Francisca, 2025; Sutton, 2025; Łasak & Williams, 2023).

Moreover, external moderating effects exercise an increasingly strong influence on emerging markets; examples of such influencing factors include world investor sentiment, which, in general, is being measured by that or another Index, e.g. the DJIA. The DJIA index is not only used as a barometer of the US economy, it is a proxy on world investor confidence and hence, when it turns, the effects of movement are often transferred to less developed markets which are becoming more and more a part of the global capital market (Liu et al., 2023; Soltani & Boujelbène Abbes, 2025; McGough & Berry, 2022; Olanrewaju, 2025). According to Eldomiaty et al. (2020) and Aryasta & Artini (2019), the correlation in the movements of the capital market in Indonesia and the international benchmarks is high, especially during the periods of market turbulence. Their evidence means that their DJIA variation is more than just being sometimes emotional but does act as basis of capital-allocation in Indonesian exchange. The current study is an extension of that begun by Moizz & Akhtar (2024) that proves that the international market nomenclatures are becoming dominant in passing on the national macroeconomic through the behavioral revaluation of the pricing in the sectors. Such a dynamics is particularly relevant right at the moment when financial information distribution and investor platforms are increasingly made algorithmic and globally interconnected (Challa, 2025; Oyeniyi et al., 2024; Sarin et al., 2024; Das, 2023). One of the less studied aspects in the macro-financial nexus is the effect of domestic monetary liquidity, here transformed into the money supply, which is used in this analysis. This has been suggested by increasing evidence that liquidity enhances not only trading but also increases the magnification of market responses to macro-economic variables. Sheikh et al. (2020) claim that high levels of money

supply may also increase the sensitivity of investors to the announcements of both inflation and interest rates, and these results are the strongest in emerging economies, where intense liquidity shocks often go hand in hand with price fluctuations. Pícha (2017) also argues that stress in the stock market returns do not occur uniformly across sectors and therefore sectoral asymmetries have an endogenous part fuelled by the money supply. Mahpudin (2020) finds that, in the Indonesian setting, monetary growth will not always induce the financial instruments to react similarly and Aryasta & Artini (2019) identify that the monetary supply shock tends to attenuate the notions of investors about the macroeconomic signals on the big picture. As such this paper not only explores the cost-free impacts of the three variables inflation, interest rates, and the exchange rates, but further probes into the circumstance under which the said impacts are either reinforced or inhibited with liquidity flows and international sentiment.

Theoretical Framework

The main conceptual framework underlying this research is the Efficient Market Hypothesis (EMH), formulated by Fama (1970). The semi-strong form of EMH assumes that all information published to the public is inherently and immediately reflected in asset prices in the capital market. This spectrum of public information includes historical price data as well as announcements of macroeconomic variables, such as exchange rate fluctuations, inflation rates, benchmark interest rates, aggregate money supply, and global market index movements. This research adopts the EMH framework to analyze the response mechanism of sectoral stock markets in Indonesia to the dissemination of various macroeconomic and global information.

The relationship between the exchange rate and the stock price index

According to the semi-strong form of EMH, an efficient market will react to public information such as exchange rate fluctuations. Different reactions across sectors indicate that the market not only reacts but also interprets the implications of the information specifically for each sector. The weakening of the Rupiah (public information) is interpreted by the market as good news for export-oriented companies because their revenues will be greater in Rupiah (Thorbecke, 2021; Aprinthasari et al., 2022). Conversely, for companies whose costs are dominated by import components, the weakening of the Rupiah is bad news. The market's ability to efficiently distinguish the impact of the same information and reflect it in different stock prices across sectors is a reflection of market efficiency.

Research (El-Diftar, 2023; Aryasta & Artini, 2019; Mohnot et al., 2024) proves a significant positive relationship between exchange rates and stock prices. Several other studies (Bhargava & Konku, 2023; Chancharat & Suwannapak, 2024; Moussa & Delhoumi, 2022; Wong, 2022; Moizz & Akhtar, 2024) found a significant negative relationship between exchange rates and stock prices. This is different from research (Mahpudin, 2020) which shows that there is no significant impact between exchange rates and stock prices.

H1: There is a significant relationship between the exchange rate and the stock price index.

The relationship between inflation and stock price index

From an EMH perspective, investors respond differently to information about rising inflation depending on the characteristics of the sector. An efficient market will assess which sectors can pass on the rising costs to consumers (have pricing power) and have the potential to be a hedge against inflation. In sectors such as Energy or Healthcare, investors anticipate that the company's profitability will be maintained, so their stock prices react positively. Conversely, for sectors that are sensitive to consumer purchasing power or have large project costs (such as Infrastructure), the market efficiently predicts that inflation will depress company performance.

Therefore, their stock prices react negatively. The market's ability to "price" the different impacts of inflation is a reflection of semi-strong form market efficiency.

Research Moizz & Akhtar (2024) Mahpudin (2020) found that inflation has a significant positive interaction with stock prices. Several other studies (Eldomiaty et al., 2020; Mohnot et al., 2024) found a significant negative relationship between inflation variables and stock prices. Meanwhile, a study Aryasta & Artini (2019) revealed that inflation has an insignificant negative interaction with stock prices. Different from the study Jahidah et al. (2024) Sheikh et al. (2020) who found no significant relationship between inflation and stock prices.

H2: There is a significant relationship between inflation and the stock price index.

The relationship between interest rates and stock price indexes

The increase in the benchmark interest rate is very clear public information, and the market reacts rationally and quickly. An efficient market will immediately reflect two main implications of the interest rate increase: (1) the cost of capital for companies increases, potentially depressing profits, and (2) safer alternative investment instruments (such as deposits and bonds) become more attractive. Both of these factors logically reduce the attractiveness of stocks and cause prices to fall. This rapid and uniform reaction across many sectors suggests that the interest rate information has been fully reflected in stock prices, in line with the EMH prediction.

Research Eldomiaty et al. (2020) found that interest rates have a significant positive relationship with stock prices. And studies (Jahidah et al., 2024; Moussa & Delhoumi, 2022; Yaro et al., 2021; Sheikh et al., 2020; Moizz & Akhtar, 2024) showed a significant negative relationship. Meanwhile, research Aryasta & Artini (2019) found that interest rates have an insignificant negative interaction. This is different from research conducted by Mahpudin, (2020) which showed no significant impact between interest rates and stock prices.

H3: There is a significant relationship between interest rates and the stock price index.

The role of the money supply as a moderating variable

Money Supply is not seen as an isolated piece of information, but rather as a contextual factor that influences the liquidity conditions of the market. In the EMH framework, liquid markets allow information to be reflected in prices more quickly and efficiently. When the money supply is high, liquidity in the market is abundant. This can amplify (moderate) the market's reaction to other information (such as inflation or interest rates) because investors have more capital to make transactions based on that information. Thus, the money supply does not disprove the EMH but rather acts as a catalyst that influences the speed and magnitude of price adjustments predicted by the EMH.

The study Moizz & Akhtar (2024) Sheikh et al. (2020) Mahpudin (2020) Pícha (2017) stated that the amount of money in circulation has a significant positive relationship with stock prices.

H4: There is a significant relationship between the amount of money in circulation and the stock price index.

The role of the Dow Jones index as a moderating variable

The EMH concept in the modern era must consider the global flow of information. The Indonesian capital market is not a closed system. Information from the DJIA movement is the publicly available global market sentiment. When the DJIA shows a positive trend, it creates an optimistic sentiment that can strengthen the positive response of the domestic market to good news or weaken the negative response to bad news. This suggests that the Indonesian market efficiently integrates signals from the global market into its price formation process.

H5: There is a significant relationship between the Dow Jones index and the stock price index.

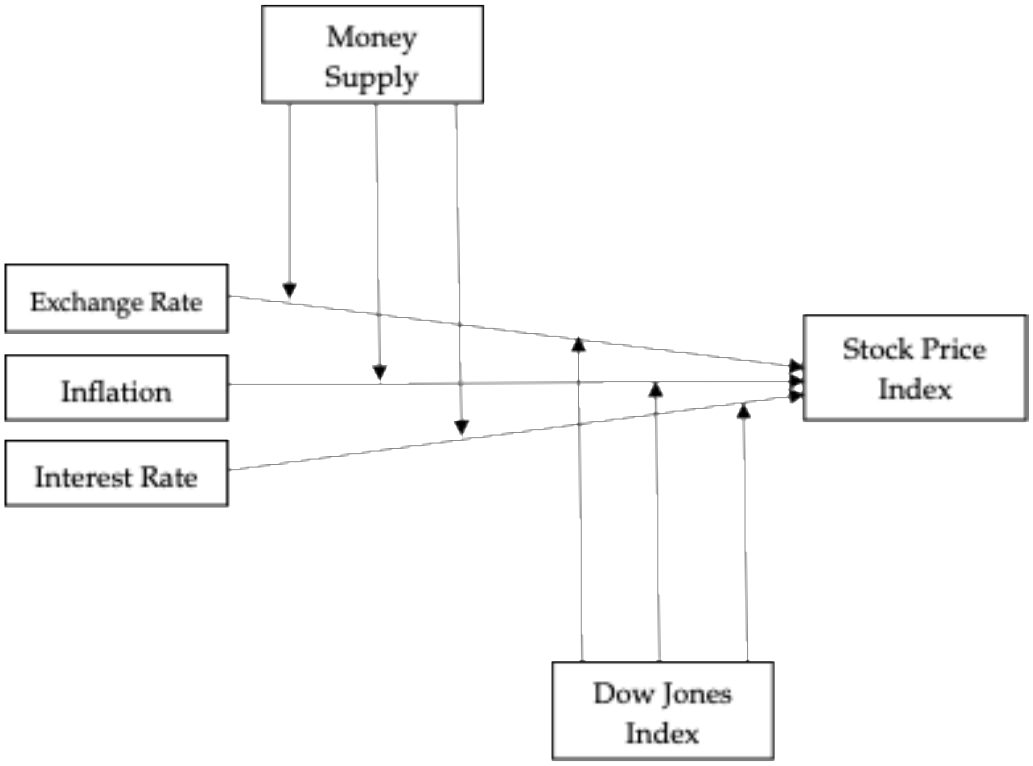

Figure 1. Conceptual Design

This finding supports the argument that in the context of a globalized market, the semi-strong form efficiency of the EMH concept also includes the processing of relevant international information. Studies Aryasta & Artini (2019) found a significant positive relationship between the Dow Jones Index and stock prices.

Methods

This current study uses the quantitative explanatory research design in order to examine how macroeconomic factors impact stock performance in different sectors of Indonesia economy. It also looks at the moderation factor of international indicators with the aim of identifying the relationship between the dynamics of economies in different countries with the effects of international markets. The explanatory character of the design indicates a desire to test formulated hypotheses and to empirically test the response of financial market to the public macroeconomic signals based on semi-strong form of the Efficient Market Hypothesis. The framework adopts a set of assumptions that all the stocks information such as the exchange rates, interest and inflation rates are factored into stock prices in a time and logical way as they are publicly disclosed. Since the financial markets do not react to the economic indicators in a consistent way, it is deemed significant to have the existence of sectoral difference.

Data for 36-months covering January 2019 to December 2023 will be analysed monthly. Such a period of time is methodologically important since it embodies structural changes in both national and international economies. It includes both the blow to the economy produced by the COVID-19 pandemic as well as the policy interventions that ensued. The five year timeframe therefore offers a more representative analysis of the business cycle on the behaviour of finance. The sample constitutes the Composite Stock Price Index (IHSG), and the nine sectoral indices that are a good representation of important elements of the Indonesian stock

market, consisting of energy, basic materials, consumer cyclical, consumer non-cyclical, infrastructure, financial, industrial, technology, and healthcare. Saturated sampling method is used where all the available observations made in the time are considered. The method does not omit data and gives maximum accuracy of the inferences.

The research instruments used are as follows:

Table 1. Research instruments

Variables	Definition	Proxy
Stock Price Index	The stock price index is a reflection of the movement and changes in a company's stock price since it was first traded until a certain time. (Sunariyah, 2003:122).	$P_t = \frac{SPd,t}{CPId,t}$ (Wong, 2022)
Rupiah Exchange Rate (X1)	Exchange Rate is a certain currency that can be exchanged for one unit of another country's currency. (Ekananda, 2019)	$Kurs = \frac{Kurs\ t - Kurs\ t-1}{Kurs\ t-1}$x 100% (Hady, 2001 and Hamdi, 2020)
Inflation (X2)	Inflation is an increase in the price of goods and occurs because demand increases more than the supply of goods in the market. (Sukirno, 2004:333)	Inf $lasi = \frac{IHKt - IHKt-1}{IHKt-1}$x 100% (Rahardja, 2014)
Interest Rate (X3)	In the context of investment, the interest rate level is often used as a reference by investors to determine how much return they want to achieve from investment assets. (Tandenlilin, 2010:214)	$BI\ rate = \frac{BI\ rate\ t - BI\ rate\ t-1}{BI\ rate\ t-1}$x100% (Mishkhin, 2022)
Money Supply (M1)	The Money Supply is the total amount of money available and used by the public in a country's economic system at a specific time.	JUB = $\frac{JUB\ t - JUB\ t-1}{JUB\ t-1}$x100% (Kusumawati, 2017)
Dow Jones Index (M2)	In the United States (US), the Dow Jones Industrial Average is the largest and oldest stock index, introduced in 1896.	$DJIA = \frac{DJIAt - DJIAt-1}{DJIAt-1}$x 100% (Hartono, 2017)

The data that is used in the current research is secondary in nature. The values of stock index and the Dow Jones Industrial Average index are acquired at Investing.com website, whereas macroeconomic variables, that is, rupiah exchange rate, inflation rate, interest rate, and money supply are acquired at the home page of the Central Bureau of Statistics (bps.go.id). The choice of these sources is based on the fact that they fit with the data, which is used by market players and policy makers. They are highly reliable and, as such, ensure that the interpretation made is pegged on the practical scenario that governs the conduct of investors.

Before any statistical modeling, the data is checked in detail to ensure that it meets the assumptions of classical linear model. Residual normal has been researched to verify that parametric estimation is reasonable. The factor Multicollinearity is checked by the indexes of the Variance Inflation and Tolerance that should confirm that no independent values are too strongly related in a way that they can skew the results. Glejser test is undertaken to check whether the heteroscedasticity is correct as the residuals have the same variance at all levels of predictors. The Durbin-Watson statistic is used to examine the level of autocorrelation that is

a crucial element when dealing with time-series data. It is through these tests that the statistical strength of the regression models are ensured.

The modelling steps will involve first applying a multiple linear regression model to test the direct impacts of rupiah exchange rate, inflation and interest rate on the IHSG and individual sectoral indices. At this stage, it is possible to determine the target areas that react best to which macroeconomic variable. The second step embraces the Moderated Regression Analysis where it seeks to determine whether the money supply and DJIA index influence the strength or direction of the relationship developed in the first stage. The development of interaction terms is possible among every macroeconomic indicator and the moderators. This design also allows the researcher to find out whether the responses of the market are conditional with the level of liquidity or world sentiment bouts. The application of moderation is congruent with the financial market theory, since it is stated that the external factors tend to affect the interpretation of the major indicators of the economics by the investors.

Results and Discussion

An estimation of the sectoral stock indexes reaction to macroeconomic variables is more than mere assessment of the coefficients or the levels of significance. It mandates an interpretation of how financial sectors intake and convey changes in the economic indicators in different liquidity settings and investor sentiment around the world. The data tabulated in this section indicates a composite behavior of the Indonesian capital market in a time of turbulence, adjustments and re-calibration. Every regression result not only comprises of a statistical result but also indicates the behavior pattern of capital as it shifts between sectors in an attempt to adapt to the inflationary trends, interest rates control and currency volatility. The evidence of this is that the factors of macroeconomics are not uniformly working in different industries when analyzed by the sectoral differentiation approach. Rather, they are dealing with the structural characteristics of every industry, capital intensity, an export dependency, consumer exposure, and condensed sensitivity. These responses are also influenced by the availability of moderating forces like money supply and international mood that is expressed through DJIA index which determines the availability of economic signals and how the processing approach will occur in the transaction of valuation adjustment. These stratified patterns of influence are underscored by the subsequent findings and provide more details on how cumulative effects of the sectoral indices in Indonesia unveil the additional depth of the macroeconomic transmission within the financial landscape that is increasingly subjected to the effects of digital incorporation and global signals.

Table 2. Normality Test

	Asymp. Sig. (2-tailed)
IHSG	0.200
Energy Index	0.039
Basic Material Index	0.200
Consumer Cyclical Index	0.200
Consumer Non-Cyclical Index	0.200
Infrastructure Index	0.197
Financial Index	0.200
Industrial Index	0.081
Technology Index	0,000
Healthcare Index	0.200

Based on the results of the normality test, most of the sectoral indices show a residue distribution that is close to the normality. This comprises the IHSG, Basic Materials, Consumer Cyclical, Consumer Non-Cyclical, Financial, Healthcare, Infrastructure and Industrial indices. Their values of significance are more than the normal bar and that makes the assumption of regression correct and makes parametric statistical tests on such sectors possible. But then, two of the sectors, Energy and Technology report an asymptotic significance that is lower than the acceptable range. This indicates that their distributions of residuals are not normally distributed, possibly as a result of structural volatility, cyclical forces, or speedy digitalisation of those sectors. Such deviations do not refute the regression models but is an indication that patterns of behavior exhibited by investors or exogenous shocks are introducing nonlinear or asymmetric response patterns which may be examined further with a robust or non-parametric approach in future studies.

Table 3. Multicollinearity Test

	TOLERANCE			**VIF**		
	Exchange rate	**Inflation**	**Interest rate**	**Exchange rate**	**Inflation**	**Interest rate**
IHSG	0.273	0.551	0.344	3,659	1,815	2,906
Energy Index	0.273	0.551	0.344	3,659	1,815	2,906
Basic Material Index	0.273	0.551	0.344	3,659	1,815	2,906
Consumer Cyclical Index	0.273	0.551	0.344	3,659	1,815	2,906
Consumer Non-Cyclical Index	0.273	0.551	0.344	3,659	1,815	2,906
Infrastructure Index	0.273	0.551	0.344	3,659	1,815	2,906
Financial Index	0.273	0.551	0.344	3,659	1,815	2,906
Industrial Index	0.273	0.551	0.344	3,659	1,815	2,906
Technology Index	0.273	0.551	0.344	3,659	1,815	2,906
Healthcare Index	0.273	0.551	0.344	3,659	1,815	2,906

With the multicollinearity diagnostics on all sectors, the VIF values are much below the widely considered value of ten and the tolerance values are beyond the separation value of 0.1. This finding shows the independence of the relationship of the independent variables- exchange rate, inflation and interest rate- in the regression model. What it implies is that all the macroeconomic factors play a distinct explanatory role without exaggerating the standard errors of the estimates. This is especially essential in a model which aims at disaggregating concomitant effects in economic sectors. The lack of multicollinearity is also an indication that investors do not consider change in interest rates, inflation and the value of the currency as a single economic indication in their effort to allocate capital in sectoral terms. The stability of these diagnostics improves the interpretability of the regression coefficients and proves the assumed relationships may be regarded as a valid representations of the underlying financial behavior.

Table 4. Heteroscedasticity Test

	n	**R Square**	**c^2 count**	**< c^2 table**
IHSG	36	0.138	4,968	49.801885
Energy Index	36	0.265	9.54	49.801885
Basic Material Index	36	0.214	7,704	49.801885
Consumer Cyclical Index	36	0.325	11.7	49.801885
Consumer Non-Cyclical Index	36	0.491	17,676	49.801885
Infrastructure Index	36	0.375	13.5	49.801885

Financial Index	36	0.348	12,528	49.801885
Industrial Index	36	0.054	1,944	49.801885
Technology Index	36	0.751	27,036	49.801885
Healthcare Index	36	0.261	9,396	49.801885

As demonstrated by the heteroscedasticity test, the statistics of chi-square in all the sectors are less than the value of the critical table. Such consistent outcome proves homoscedasticity and indicates that variance in the residuals is independent of different levels of the independent variables. This necessity is explained by the fact that such stability will guarantee that the results of the model will not become overproportionally inaccurate when the value of macroeconomic figures rises or falls. It also indicates that the correlations which exist between variables are not dependent on time periods and the responses that investors make due to fluctuation in inflation, interest rates and the direction of exchange rates on the rates at which they are moved do not change depending on the magnitude of movements. Practically, this result increases the validity of the trustworthiness of the inferences of the model and validates the stability of the sectoral sensitivity trends that have been discovered during the later phases of the analysis.

Table 5. Autocorrelation Test

	Durbin-Watson
IHSG	1,883
Energy Index	2,246
Basic Material Index	1,800
Consumer Cyclical Index	2,299
Consumer Non-Cyclical Index	0.444
Infrastructure Index	1,984
Financial Index	1,736
Industrial Index	1,885
Technology Index	1,800
Healthcare Index	1,988

This is the case because, on the autocorrelation test based on Durbin-Watson statistic, eight of the ten indices lie in the acceptable region and therefore there is no indication of serial correlation in the residuals. These groups are IHSG, Energy, Basic Materials, Consumer Cyclical, Infrastructure, Financials, Industrials and Technology. The zero autocorrelation on these sectors will mean that responses by investors on the macroeconomic variables will not be delayed and/or systematic over a period of time. But Consumer Non-Cyclical sector is taking a huge deviation in this trend, which indicates the possibilities of autocorrelated error terms. This finding means that historical shocks or choice in this industry still enjoys an effect on current values. The given behavior can be an indicator of the delay of the regulation, lag in prices-altering, or institutional inertia in investments. This would be addressed by either the use of differencing methods or introduction of lagged variables in future models.

Table 6. Multiple Regression Analysis Test

	(Constant)	**Rupiah exchange rate**	**Inflation**	**Interest rate**
IHSG	6,215	0.262	0.087	-0.010
Energy Index	-9,673	1,633	0.522	0.490
Basic Material Index	-2,953	1,082	0.021	-0.239
Cyclical Index	7,007	-0.027	0.100	-0.077
Non-Cyclical Index	2,491	0.411	-0.024	0.110

Infrastructure Index	-24,569	3,313	-0.126	-0.181
Financial Index	9,148	-0.183	0.073	-0.129
Industrial Index	4,374	0.267	0.198	-0.084
Technology Index	7,909	0.217	0.310	-1,109
Healthcare Index	9,213	-0.221	0.104	0.048

Unravelling the multiple regressions gives an insight into the factoid indicators of stock indices in the different sectors show a different and even contradictory behavior concerning the three commonly used macroeconomic variables. Exchange rate, as an example of it, positively influences, among others, those industries like Energy, Industrial, Technology, Consumer Non-Cyclical, and Basic Materials. The two sectors are likely to gain following depreciation of currency since their orientation is towards exports or import substitution patterns. In contrast, the same have adverse impacts on the Consumer Cyclical, Financials, and Healthcare, subsidiary more dependent on imports or subject to the rising and lowering of capital costs. The inflation indicator is experiencing a somewhat bullish effect in the majority of sectors, which is a positive indication that investors are anticipating the Energy, Industrials and Healthcare companies to sustain the margins or transfer the expense to the consumers. The effects regarding interest rates are more subtle. These Sectors that are mostly affected by negative coefficients are Finance, Infrastructure and Basic Materials all of which are affected by increased cost of borrowing or less capital flow with an increase in interest rates. On the other hand, there are also the sectors that exhibit sudden strong results against expectations like in Energy and Consumer Non-Cyclical and these results have been attributed to the repositioning of investors or the mechanism of commodity pricing responses during monetary tightening phases.

Table 7. Coefficient of Determination

	Adjusted R Square
IHSG	0.555
Energy Index	0.853
Basic Material Index	0.144
Consumer Cyclical Index	0.241
Consumer Non-Cyclical Index	0.365
Infrastructure Index	0.123
Financial Index	0.229
Industrial Index	0.770
Technology Index	0.208
Healthcare Index	0.715

The adjusted R-squared can show the sectors that are better covered by the macroeconomic model. There is the highest explained variance in Energy sector and next is the Industrial and Healthcare indices. These outcomes mean that any type of movement in these areas is very much in line with the macroeconomic indicators, which reflects a strong sign of economic exposure and dependency on any changes in policy. Conversely, Infrastructure, Basic Materials have the lowest adjusted R-squared values, implying the presence of other sector-specific factors, which have an impact on their price dynamics, that is not reflected in the model. These could include regulatory shifts, long project cycles, or geopolitical influences. The IHSG sits in a moderate range, confirming that while macroeconomic indicators play a significant role in driving aggregate market behavior, they do not capture the full complexity of sectoral reactivity, especially under rapidly evolving digital or external demand conditions.

Table 8. Simultaneous Test (F Test)

	F	Sig.
IHSG	15,565	0,000
Energy Index	68,666	0,000
Basic Material Index	2,969	0.047
Cyclical Index	4,698	0.008
Non-Cyclical Index	7,717	0.001
Infrastructure Index	2,642	0.066
Financial Index	4,465	0.010
Industrial Index	39,967	0,000
Technology Index	4,071	0.015
Healthcare Index	30,296	0,000

Results of the simultaneous F-test indicate that the model is significant in all but 2 sectors and hence there is significance in the joint leveled effect of the three macroeconomic factors on stock price indexes. There are strong joint significance in sectors like Energy, Healthcare, Technology and Industrial and Consumer Non-Cyclical. What this indicates is that investors make their decisions in these sectors based on a macroeconomic evaluation and not individual signals. In the case of Infrastructure sector, there is, however, a lack of substantial joint responsiveness. This can indicate organisational inflexibility, cumbersome projects or protection against immediate changes in finance. These findings show the non-homogeneous penetration of macroeconomic information across the sectors and suggest the necessity of utilizing the stratified approaches in reading the financial conduct in regulated or capital-intensive sectors.

Table 9. T-test

	Exchange rate		Inflation		Interest rate	
	t	Sig.	t	Sig.	t	Sig.
IHSG	0.652	0.519	4,559	0,000	-0.197	0.845
Energy Index	1,079	0.289	7,234	0,000	2,536	0.016
Basic Material Index	1,681	0.103	0.694	0.493	-2,913	0.006
Cyclical Index	-0.043	0.966	3,290	0.002	-0.940	0.354
Non-Cyclical Index	1,088	0.285	-1,321	0.196	2,284	0.029
Infrastructure Index	2,571	0.015	-2,045	0.049	-1,098	0.281
Financial Index	-0.362	0.720	3,038	0.005	-1,992	0.055
Industrial Index	0.547	0.588	8,479	0,000	-1,352	0.186
Technology Index	0.062	0.951	1,868	0.071	-2,499	0.018
Healthcare Index	-0.696	0.491	6,850	0,000	1,187	0.244

The results obtained based on t-test offer more details, which estimate the significance of each of the macroeconomic variables independently. The most continuously prominent issue turns out to be inflation, especially in such areas as Energy, Healthcare, and Industrials. It implies that these are industry sectors with channels of pricing or transferring costs sufficiently to seriously contest valuation strategies with inflation. Interest rates reflect a high degree of interest in Energy, Consumer Non-Cyclical and Technology sectors which means that these are the industries which are more susceptible to the costs of capital or investor switches in the case of a tight monetary policy. The exchange rate has an important impact only on the Infrastructure sector, where the long-term projects and imported materials are possible to be affected by the fluctuation of the currency. These trends indicate that the investors are associating macroeconomic factors with operational aspects of any industry and their responses are based on both financial configuration and strategic strategy in the economy as a whole.

Table 10. MRA test

Stock Price Index	Sig.					
	X1*M1	**X1*M2**	**X2*M1**	**X2*M2**	**X3*M1**	**X3*M2**
IHSG	0.006	0.386	0.319	0.025	0.002	0,000
Energy Sector	0.057	0.562	0.001	0,000	0.110	0.335
Basic Material Sector	0.010	0.031	0.866	0.023	0.110	0.011
Consumer Cyclical Sector	0.894	0.460	0.696	0.059	0.919	0,000
Consumer Non-Cyclical Sector	0.090	0.611	0.897	0.044	0.021	0,000
Infrastructure Sector	0.012	0.040	0.003	0.879	0.003	0.004
Financial Sector	0.315	0.234	0.674	0.090	0.430	0,000
Industrial Sector	0.645	0.492	0,000	0.084	0.350	0.002
Technology Sector	0.010	0.096	0.276	0.007	0.031	0,000
Healthcare Sector	0.027	0.178	0.001	0.598	0.035	0.540

The moderate regression analysis outcome brings a shift in this work in that they capture the manner in which macroeconomic signals are not ingested wholesome but filtered, transformed, and most of the time enhanced by the state of liquidity origins in a country, and what is going on in the global markets. Presence of interaction terms among the main independent variables, which are exchange rate, inflation and interest rate, and the two moderators, money supply (M1) and the Dow Jones Industrial Average (DJIA, or M2), prove that stock price dynamics are not fixed responses to economic indicators. They are rather emergent products of a two-layered interpretive system that assumes that investors cannot react to the economic fundamentals until ascertaining the broader financial context. This is the mark of a more behaviorally flexible and interdependent digital investment regime, in which liquidity and sentiment no longer form a background but become driving forces in terms of valuation reasoning.

Starting with the IHSG, the relationship between the interest rate and the two moderating variables is significantly strong. The impact of the money supply on the association between interest rates and the IHSG implies that domestic liquidity decisively determines whether tightening of the monetary policy would result into a contraction of capital or repositioning of capital. In a time when money supply is already sustained, increase of interest rates may not bring forth bearish reactions. Rather, high availability of liquidity will likely tempt investors to seek more dynamic rebalancing efforts, keeping markets in high-yield markets active. The modifying effect of the DJIA validates the fact that investor response would be equally influenced by conditions in the global markets. The unfavorable connotations of the increasing domestic rates seem not so serious when the international mood is rather optimistic, which is suggested by the upward trend in the DJIA. This supports the notion that in the globalized market capital does not simply respond to those signals that are localized but is pursued within the schema of a comparative sentiment where the notion of the signal of the opportunity is readjusted in realtime.

Energy sector is an interesting trend. Such meaningful interactions between inflation and the two moderators imply that the sector valuation is determined not only by pressures of domestic costs and commodity cycles but also by the perceived context of these cues. Inflation is also not necessarily regarded as a risk when liquidity is high; rather, it is viewed as a profit taking moment in the energy markets where the markets have a measure of exposure to the export process. Excessive money supply can enable the companies working in this sphere to capture the short term shocks whereas investors will perceive the gains that are indeed linked to inflation as evidence of healthier margins. On the same note, in cases where the DJIA indicates

a good outlook in the world, energy stocks gain a disproportionate reward. In this instance, investors expect a bigger demand of energy internationally, and this does support capital inflow into the sector despite the growing costs of inputs. This process is characteristic of industries at the border of international supply chains and national political change, which are two times susceptible to the mediated impact.

The sector which exhibits a more intricate type of an interaction framework is Basic Materials. All the macroeconomic variables, exchange rate, as well as inflation and interest rate, are considerably controlled by money supply and DJIA. The trend is an indication of the sectoral embeddedness into the cycle of the global trade as well as the domestic industrial cycles. When the exchange rates move positively against the DJIA, then this is a indication that depreciation only signals favorable movement in case the global projections on growth prospects are kept intact. Flip-side, in the case where domestic liquidity is characterized by high levels, cost increases caused by inflation in materials sector do not invariably raise adverse investor responses. This means that liquidity protects against cost zigzagging and enables companies to shift prices or exploit inventories in a smarter way. Besides, the fact that interest rates bred by M1 and M2 is at a low level shows that whenever this sector reaches capital-intensive scale, it becomes economically viable only in case monetary conditions and investor mood are in line with each other.

The Consumer Cyclical and Consumer Non-Cyclical sectors provide prospects on how the monetary environment influences an investors response to demand side macroeconomic factors. The only path to moderation to be of any importance in the cyclical sector is interaction between the interest rates and money supply. This implies that even at times when monetary conditions are tightening, there is still opportunity by investors to invest in cyclical consumption stocks provided that there are enough liquidity. A more complex valuation structure can be seen with the fact that there is serious moderation in the non-cyclical sector which includes interest rates, but not only, but also inflation through both M1 and through M2. These sectors can be regarded as defensive when uncertainty prevails but it also needs the backing of investors on a global and local front. When the DJIA is trending positive even inflation in sectors dealing with staples is not seen as a problem area possibly due to the opinion that since the world is less subject to consumer fluctuations the cost side weaknesses will be nullified. The synergy of the interest rates and liquidity in this segment highlights the credit circuit role in facilitating concurrent consumer activity and stock performance, especially in online-empowered retail delivery chains.

The outcome of the MRA in the Infrastructure sector is very symmetrical. The three macroeconomic variables all interact very strongly with the moderators. Such systemic moderation points up the exposure of the sector to long-duration capital, the sensitivity of the sector to the conditions of domestic funding, and the sensitivity of the sector to the transnational sentiment. Infrastructure developments are capital intensive and need predictability in their projections, i.e., the increased interest rates or currency uncertainty would only discourage investing further unless it is in a low-liquidity or high-volatility global economy. Even the pressures of interest rates do not feel like a burden in themselves when liquidity is high and DJIA signs up under its radar. Such findings lead to the conclusion that capital allocation in industries where constant commitment and planning are needed is sentiment driven.

A high level of moderation of interest rate impact on money supply has been indicated in the Financial sector. Although this is not the first time this has been observed due to the major part that interest margins play in financial performance, the outcome confirms that the availability of liquidity dictates whether an increase in interest rates either promotes or degenerates the profitability of banks. On ultra-liquid markets, the increase in rates can boost both the net

interest income and not strangle credit demand. The lack of notable DJIA damping means that the influence of investors in this sector is dominated in terms of being domestically based with foreign preferences given some less extent as domestic credit prospects and monetary motives.

The relevance of the moderation based on DJIA becomes rather telling in regards to both of the Technology and Healthcare sectors. These are areas that valuation is likely to be in future profits and innovation cycle. The sensitivity of DJIA to interest rates in both sectors posits in the idea that the sentiment around the globe is the main focus of interpreting the domestic tightening of the monetary rates by investors. When capital markets seen to be strong again, investors are more ready to ignore any near-term increases in rates and concentrate rather on the longer-term development stories. The tempered rate of money supply of inflation between the two industries depicts that price pressures are not the deciding factor unless there is a restriction in the flow of capital. The arena of liquidity abundance seems to be more on the speculative and future-looking investment on technology and health, in line with synergetic patterns of stampede of platform-based equity market and algorithm-guided investment choices.

The results of the MRA in general show that macroeconomic variables have their influence but it is not always the case as this depends on the overall structure of the market. The importance of those interactions across sectors proves that market players do not react one-sidedly to inflation, interest rates, or exchange rates. They shape their decisions based on the conditions of liquidity, which defines the viability of a transaction and the sentiment born standards of perceived opportunity and risk. This layered responsiveness underscores the need to rethink traditional linear models of market behavior. In a digitally shifting investment landscape, where investors operate with greater speed, data access, and interconnectedness, the role of moderating variables becomes essential to understanding how capital moves, reallocates, or resists revaluation in response to macroeconomic change.

Table 11. Summary of Hypotheses Testing Results

	Statement	Result
H1	Exchange rate significantly affects stock price indices	Partially Supported
H2	Inflation significantly affects stock price indices	Strongly Supported
H3	Interest rate significantly affects stock price indices	Strongly Supported
H4	Money supply significantly moderates macroeconomic effects	Supported
H5	DJIA significantly moderates macroeconomic effects	Supported

As a confirmation of the correspondence of the theoretical framework and an empirical analysis, hypothesis testing results are summarized in Table 11. The regression and moderated interaction models were run at the sector level to find out which hypothesis was true. The results are in point: although, the impact of exchange rate, inflation, and interest rates can be considered strong, it is not evenly distributed and commonly is determined by the background liquidity state and world markets mood. This strata responsiveness justifies the application of moderation, and underlines the take in this research of sector disaggregation.

There are Sectoral Sensitivities within an Adaptive Investment Ecosystem

The results of this article necessitate the reconsideration of the response of the sectoral indices to the macro-economic strains in a radical way. What is found, however, through the empirical analysis, is not a statistical dispersion of difference, but a stratified capital practice that indicates more profound interpretive mechanism within the market. The investors have stopped making use of raw macroeconomic indicators only. The contextual cues contained in liquidity states and global tone indicators are influencing them to an even greater degree. This is an emerging rationality that requires us to depart with rigid causal modelling and recall the

hermeneutical space that investors utilize when dealing with a large variety of market cues. That capital market is not as much a passive absorbent of macro data as it is a responder whose valuation comes together as an active filter at the same time on what the macro data say and what it deems putative. This sentiment is confirmed by the studies by Zhao et al. (2023) showing how collateralization strategies and liquidity-induced interpretation affect current market conditions, making decisions about allocations.

The effects of inflation on the various sectors of the economy establishes that the behavior of investors is no more defined by generalized assumptions. In certain industries including energy and basic materials, inflation is not regarded as a disincentive but a structural possibility. Such sectors have predisposed nature of supply- rigidity, course of export or critical consumption, which enables the sector to utilize the inflationary circumstances to boost the revenue inflow. This confirms conclusions by Zenchenko et al. (2022), according to which sectoral positioning preconditions the monetization or punishment of inflation. On the same note, Mann (2025) show that industries that lie within commodity cycles are prone to inflation-linked valuation trends, especially in the conditions of persistent liquidity. These observations represent the shift away from classical cost jump perspective of inflation towards the perceived elasticity of margin and market power. These dynamics authenticate behavioral turnout where Bernanke et al. (1999) observed that due to the purchasing power driven inflation responsiveness is fast becoming a property of investors to relational mappings within the cost structure and its value realization in sector-specific relationship.

There is a further deviation of traditional monetary expectations such as the behavior of rates of interest in this system. Although a tendency towards rate increases may be linked to the contraction in investments and causing valuation pressure prevalent in industries, this work reveals that not all industries seem to respond accordingly. The effects of interest rate change can be resistant or even positive on some industries, especially where the dominant narratives of institutional credibility, financial discipline or commitments to future growth persist. This is compatible with the findings of Stiglitz (2015) who found that investors are habitually reading in the modest rate increases as portents of macroeconomic tightening but not necessarily financial tightening. This logic can be observed in healthcare and technology sectors especially since the investors tend to express their preferences towards forward value perception at the expense of short-term sensitivity. These spheres that flourish not only on their inherent robustness, but also on their being part of the long-horizon narratives which are regularly justified by movements movements whose advances movements confirm or claim to venerate, instead of fear. Still, Taffler et al. (2017) believe that the monetary signals currently play the role of narrative signals in the sentiment-sensitive sectors, which once again confirms the notion that the interpretation made by the investors usually overpowers the mechanical calculations of costs.

There is even more dimension to this given the complexity of exchange rate dynamics. Other industries especially those regarding performance in exports or world commodity chains are likely to react well to depreciation of the currency. On the contrary, industries that depend on imported goods or that are heavily financed defend themselves. This non-coincidence is not an exception. It incorporates asymmetrical structures wherein diverse industries internalise movements in an exchange rate. Due to these conditions, Bhargava & Konku (2023) note that capital rotation becomes the natural response of the investor since the shift in currency indicates redistributive prospects instead of uniform risk. This meaning has been confirmed by research by Chancharat & Suwannapak (2024), who demonstrate that the relative exposure of the sector is not significantly predictive of sector-specific currency sensitivity compared to perceptions of a net advantage of changes in relative prices. Where the memory of investors is connected to past periods of volatility and central bank response, exchange rate effects are likely to be re-

processed through anticipative reasoning. Whether the depreciation is seen as expansionary or restraining is determined by the capability to hedge, reposition, and projection of benefits standing out in the trading of goods.

More importantly, two moderating effects of domestic money supply and international sentiment become the main influencer of macro-economic effects and their direction and magnitude. Such moderators are not Simple coefficient adjusters. They also radically change an interpretive framework in terms of which macroeconomic data are judged. In a liquidity rich situation, conventional limit created by inflation or interest rate increase is reduced. Investors interpret negative indicators with the prism of accommodation and recovery, which permits longer-term deployment to an area that would experience contraction without the investors. Moizz & Akhtar (2024) attest to the fact that monetary surplus changes the perceived elasticity of sectoral balance sheets and allows ignoring risk tolerance and time deferring adjustment of capital. According to Pícha (2017), liquidity does not only facilitate volume, but it also determines the level of valuations by reshaping the way financial risks are absorbed.

In the same way, the foreign mood as reflected in the DJIA index serves as a reference point in investor confidence especially in the high forward exposure or cross border capital intensive operations. This international signal gives a frame of reference by which the local state of affairs is measured against and influences the interpretation of local data. The research illustrates international markets are often self-sufficient when it comes to domestic-risk concerns and the optimism is usually reached in the case of technology, industrials and the infrastructure sector. The trend is consistent with the contagion literature, especially Lall (2002), Jia (2019), who find that the foreign benchmarks tend to crowd out the domestic fundamentals when forming the industry-specific sentiment. The findings of these authors support the importance of narrative spillovers and external validation in the emerging market asset pricing and this paper is an empirical backing of their point of view in such a framework.

The facts and figures dispute the perception that macro-level impact on capital markets are universal or linear. It instead espouses a structurally adaptive perspective of valuation where dynamics of a sector, financial framework and interpretive conditioning are at work in unison. Indonesian market provides a perfect illustration on discrepancy in policy signals absorption subject to structural exposure, liquidity cycling and international narrative congruence. It validates the theoretical changes advocated by Pagliaro (2025) and Ayadi et al. (2025) that create the reconsideration of a market efficiency as a behaviorally conditioned process. Semi-strong efficiency model has remained same in form but has changed in contents. Processing information does not happen within a vacuum anymore. It is constructed using the community memory, risk propensity, and the computer systems using which it is relayed and performed.

In this respect, the interpretation of sectors as the units of interpretation obtains particular relevance. Capital is no longer flowing across asset classes alike. It decides, switches and turns depending on changing judgments of the dynamics of economic signals in the context of the environment of liquidity and sentiment. According to Olanrewaju (2025), developing market sectoral responsiveness has more to do with institutional learning and behavioral adjustment than the direct exposure indicators. This paper confirms that track. Digitalized sectors, platform-oriented sectors or sectors featuring transparency to global investments are those most likely to interpret the macro signals differently than their backward-factoring peers since they are indexed along expectation curves. Van Loo (2022) have demonstrated that in systems such as those deemed to be influenced ever more strongly by both the architecture of digital markets and algorithm-driven authority, the burden of macroeconomic information hinges not only on whether it is useful or not: it depends on whether it supports the existing narrative of strategic possibility.

Thus, the importance of this research is not only the ability to demonstrate the variable reaction in which sector but also to demonstrate that this reaction is composed of layered and sensitive to context pathways. The macroeconomic variables do not work independently of each other. Liquidity and worldwide mood mediate them, exaggerate them, or reduce them, and re-define the manner in which capital responds and where it indicates its preference in the direction of movement. By so doing, this paper adds to the body of literature, which perceives markets as cognitive/narrative systems rather than mechanical reactors. Such ramifications are significant in policy, portfolio strategy and theory modelling. Further studies should go more than explanatory regressions by considering behavioral latency, platform effects, and international coherence signals models. The results here give practical ground-zero to that more fundamental theoretical development.

Conclusion

The outcomes of our research support the growing complications dealing with the processing of macroeconomic signals in sector capitals systems inside Indonesia. Instead of reacting in the same way, investors perceive variables including exchange rate, inflation and interest rates using a multi layered framework of expectation, liquidity conditions and external sentiment frames. These results confirm the theoretical stand that financial markets serve not only as the destination of economic information but also as the adaptational mechanisms where the valuation is processed through contextual frameworks and prognostic logistics. The proofs establish beyond a reasonable doubt that capital does not respond in same fashion in sectors. It shuffles, reassigns and redistributes on sector exposure, monetary depth and international consistency pointers. The existence of substantial moderation factors of money supply and DJIA index demonstrates becoming more important of conditional mechanisms in capital behavior. These variables are not taking place in the fringes. They redefine the way macroeconomic indicators are intercepted and implemented. The liquidity provisions tend to change the tolerance of investors to inflation and interest rates and international sentiment benchmarks as a reference is either an enhancing or a neutralizing domestic risk. Such interdependence of domestic macro indicators with globe market cues is correct in proving the fact that financial valuation is getting constructed in cross-contextual situations more and more.

The findings indicate that there is a need to have sector-based investment approach that takes into account the direct consequences of the economic variables as well as the interpretive context within which the variables are embedded. The investors with an awareness of the sector and systematic specifics will be at a better place to negotiate volatility and capitalize on the sectors that show some grit during the policy changes or a strain in the world economy. To the policymakers, the varying responsiveness of individual sectors implies that the macro economic is to be brutally fine-tuned. When measuring monetary and fiscal policy, there is a need to understand the fact that various sectors react to fluctuations in interest rates, exchange rates, and inflationary pressure differently and their reactions are moderated by the existing availability of liquidity and public opinion. Experimental evidence thus points to the fact that sectoral heterogeneity and moderating processes should not be left as collateral parts in the modeling process. Such an argument demands a broad theoretical frame that could encompass the changing curves of the interpretation of capital and the increased importance of the digitally imbedded global responsive nature of investment behaviours. The offered methodological structure and empirical findings can be used to explore the dynamics in question more in detail, which proves the imperativeness of a conceptual redefinition of financial responsiveness as a dynamic interplay of structural pointers and context-specific interpretation.

References

Aprinthasari, M. N., Soesilowati, E., & Khafid, M. (2022). Competitiveness Analysis and Factors Affecting Indonesian Crude Palm Oil Exports in The International Market. *Journal of Economic Education*, *11*(1), 66-79.

Aryasta, I. N., & Artini, L. S. (2019). The effects of indonesian macroeconomic indicators and global stock price index on the composite stock prices index in Indonesia. *International Journal of Scientific and Research Publications*, *9*(6), 479-483. https://doi.org/10.29322/ijsrp.9.06.2019.p9069

Ayadi, E., Ben Mbarek, N., & Chaabouni, I. (2025). From Optimism to Recalibration: The Temporal Dynamics of Market Reactions to Women's Board Appointments in Saudi Arabia. *Journal of Risk and Financial Management*, *18*(7), 369. https://doi.org/10.3390/jrfm18070369

Bernanke, B. S., Gertler, M., & Gilchrist, S. (1999). The financial accelerator in a quantitative business cycle framework. *Handbook of macroeconomics*, *1*, 1341-1393.

Bhargava, V., & Konku, D. (2023). Impact of exchange rate fluctuations on US stock market returns. *Managerial Finance*, *49* (10), 1535–1557. https://doi.org/10.1108/MF-08-2022-0387

Challa, S. R. (2025). Advancements in Digital Brokerage and Algorithmic Trading: The Evolution of Investment Platforms in a Data Driven Financial Ecosystem. *Advances in Consumer Research*, *2*(1).

Chancharat, S., & Suwannapak, S. (2024). The dynamic relationship between ASEAN+6 exchange rates and stock markets: application of the ARDL model. *Journal of Asian Business and Economic Studies*, *31* (5), 365–377. https://doi.org/10.1108/JABES-01-2024-0026

Das, A. (2023). Developing dynamic digital capabilities in micro-multinationals through platform ecosystems: Assessing the role of trust in algorithmic smart contracts. *Journal of International Entrepreneurship*, *21*(2), 157-179.

Ekananda, M. (2019). Ekonometrika dasar: untuk penelitian bidang ekonomi, sosial dan bisnis. disertai contoh latihan eviews, stata dan SPSS.

El-Diftar, D. (2023). The impact of exchange rates on stock market performance of the Emerging 7. *Journal of Capital Markets Studies*, *7* (2), 125–139. https://doi.org/10.1108/JCMS-03-2023-0005

Eldomiaty, T., Saeed, Y., Hammam, R., & AboulSoud, S. (2020). The associations between stock prices, inflation rates, and interest rates are still persistent: Empirical evidence from stock duration model. *Journal of Economics, Finance and Administrative Science*, *25* (49), 149–161. https://doi.org/10.1108/JEFAS-10-2018-0105

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The journal of Finance*, *25*(2), 383-417. https://doi.org/10.2307/2325486

Francisca, A. Y. (2025). Optimizing debt capital markets through quantitative risk models: enhancing financial stability and SME growth in the US. *International Journal of Research Publication and Reviews*, *6*(4), 4858-74.

Hady, H. (2001). International Economics: International Financial Theory and Policy. *Erlangga. Jakarta*.

Hartono, J. (2017). Portfolio theory and investment analysis. *Yogyakarta: bpfe*, *5*(2).

Ismail, M. (2023). *Exchange Rate Exposure of Emerging Market Multinational Firms Pre vs. Post-global Crisis of 2008*. Southern New Hampshire University.

Jahidah, N., Arraniri, I., Komarudin, MN, & Fauzan, AI (2024). The Influence of Inflation, Interest Rates, and Financial Performance on LQ45 Index Share Prices in 2019-2023. *International Journal of Administration, Business & Organization*, *5* (2), 87–96. https://doi.org/10.61242/ijabo.24.411

Jia, W. (2019). *The Implications of International Patent and Firm Collaboration on Economic Performance* (Doctoral dissertation, Brandeis University, International Business School).

Lall, S. (2002). FDI and development: research issues in the emerging context. *Foreign Direct Investment*, 339-359. http://dx.doi.org/10.4324/9780203469699.ch19

Łasak, P., & Williams, J. (2023). *Digital Transformation and the Economics of Banking*. Routledge/WW Norton.

Liu, Y., Zhang, J., Guo, N., & Liu, J. (2023). Investor sentiment contagion and network connectedness: Evidence from China and other international stock markets. *The Manchester School*, *91*(6), 587-613. https://doi.org/10.1016/j.jjimei.2025.100337

Mahpudin, E. (2020). The Effect of Macroeconomics on Stock Price Index in the Republic of China. *International Journal of Economics and Business Administration*, *VIII* (Issue 3), 228–236. https://doi.org/10.35808/ijeba/511

Mann, W. (2025). Navigating the New Macro Landscape: Systematic Approaches to Alpha Generation in an Era of Geopolitical Uncertainty. *Available at SSRN 5279491*. http://dx.doi.org/10.2139/ssrn.5279491

McGough, T., & Berry, J. (2022). Real estate risk, yield modelling and market sentiment: The impact on pricing in European office markets. *Journal of European Real Estate Research*, *15*(2), 179-191. http://dx.doi.org/10.1108/JERER-06-2020-0032

Mohnot, R., Banerjee, A., Ballaj, H., & Sarker, T. (2024). Re-examining asymmetric dynamics in the relationship between macroeconomic variables and stock market indices: empirical evidence from Malaysia. *Journal of Risk Finance*, *25* (1), 19–34. https://doi.org/10.1108/JRF-09-2023-0216

Moizz, A., & Akhtar, S. M. J. (2024). Dynamic linkages between the monetary policy variables and the stock market in the presence of structural breaks: evidence from India. *Asian Journal of Economics and Banking*. https://doi.org/10.1108/ajeb-01-2024-0005

Moussa, F., & Delhoumi, E. (2022). The asymmetric impact of interest and exchange rate on the stock market index: evidence from the MENA region. *International Journal of Emerging Markets*, *17* (10), 2510–2528. https://doi.org/10.1108/IJOEM-01-2020-0089

Olanrewaju, A. (2025). Evaluating Post-Quantitative Easing Monetary Transmission Mechanisms on Liquidity Risk in Emerging Market Banking Systems. *International Research Journal of Modernization in Engineering Technology and Science*, 2582-5208. http://dx.doi.org/10.56726/IRJMETS74117

Oyeniyi, L. D., Ugochukwu, C. E., & Mhlongo, N. Z. (2024). Analyzing the impact of algorithmic trading on stock market behavior: A comprehensive review. *World*

Journal of Advanced Engineering Technology and Sciences, *11*(2), 437-453. https://doi.org/10.30574/wjaets.2024.11.2.0136

Pagliaro, A. (2025). Artificial Intelligence vs. Efficient Markets: A Critical Reassessment of Predictive Models in the Big Data Era. *Electronics (2079-9292)*, *14*(9). https://doi.org/10.3390/electronics14091721

Pícha, V. (2017). Effect of money supply on the stock market. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*.

Sadono Sukirno. (2011). *Macroeconomics Introductory Theory* (3rd ed.). Rajawali Pers.

Sarin, S., Singh, S. K., Kumar, S., Goyal, S., Gupta, B. B., Alhalabi, W., & Arya, V. (2024). Unleashing the Power of Multi-Agent Reinforcement Learning for Algorithmic Trading in the Digital Financial Frontier and Enterprise Information Systems. *Computers, Materials & Continua*, *80*(2). http://dx.doi.org/10.32604/cmc.2024.051599

Sheikh, U.A., Asad, M., Israr, A., Tabash, M.I., & Ahmed, Z. (2020). Symmetrical cointegrating relationship between money supply, interest rates, consumer price index, terroristic disruptions, and Karachi stock exchange: Does the global financial crisis matter? *Cogent Economics and Finance*, *8* (1). https://doi.org/10.1080/23322039.2020.1838689

Soltani, H., & Boujelbène Abbes, M. (2025). The spillover effects among financial stress, investor sentiment, and GCC stock markets: evidence under the bearish and bullish market states. *Journal of Chinese Economic and Business Studies*, *23*(1), 1-25. http://dx.doi.org/10.1080/14765284.2024.2404278

Stiglitz, J. E. (2015). Macroeconomic fluctuations, inequality, and human development. In *Macroeconomics and human development* (pp. 31-58). Routledge. http://dx.doi.org/10.1080/19452829.2011.643098

Sutton, C. V. (2025). *Navigating Financial Turbulence With Confidence: Preparing for Future Market Challenges, Crashes & Crises*. NuovoNova Ltd.

Taffler, R. J., Spence, C., & Eshraghi, A. (2017). Emotional economic man: Calculation and anxiety in fund management. *Accounting, Organizations and Society*, *61*, 53-67. http://dx.doi.org/10.1016/j.aos.2017.07.003

Thorbecke, W. (2021). The weak rupiah: catching the tailwinds and avoiding the shoals. *Journal of Social and Economic Development*, *23*(Suppl 3), 521-539. https://doi.org/10.1007/s40847-020-00111-3

Umoru, D., Akpoviroro, O. N., & Effiong, S. E. (2023). Causes of Exchange Rate Volatility,". *Asian Journal of Economics, Business and Accounting*, *23*(20), 26-60. https://doi.org/10.9734/ajeba/2023/v23i201091

Van Loo, R. (2022). Inflation, Market Failures, and Algorithms. *S. Cal. L. Rev.*, *96*, 825.

Wong, H. T. (2022). The impact of real exchange rates on real stock prices. *Journal of Economics, Finance and Administrative Science*, *27*(54), 262-276. https://doi.org/10.1108/JEFAS-03-2021-0011

Yaro, I. B., Ogbu, U. I., & Ato, O. V. (2021). Effect of Interest Rate, Exchange Rate and Inflation Rate on Stock Returns: Evidence from Listed Firms in the Nigerian Stock Exchange. *The International Journal of Business & Management*, *9*(4). https://doi.org/10.24940/theijbm/2021/v9/i4/bm2104-006

Zenchenko, S., Strielkowski, W., Smutka, L., Vacek, T., Radyukova, Y., & Sutyagin, V. (2022). Monetization of the Economies as a Priority of the New Monetary Policy in the Face of Economic Sanctions. *Journal of Risk and Financial Management*, *15*(3), 140. https://doi.org/10.3390/jrfm15030140

Zhang, Z. (2011). Energy and environmental policy in China: Towards a low-carbon economy. In *Energy and Environmental Policy in China*. Edward Elgar Publishing.

Zhao, L., Polukarov, M., & Ventre, C. (2023, November). Liquidity and solvency risks in financial networks. In *Proceedings of the Fourth ACM International Conference on AI in Finance* (pp. 210-218). http://dx.doi.org/10.1145/3604237.3626840