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Analysis of the Influence of Islamic Investment in the Capital Market on Economic Growth in Indonesia

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Abstract: This study analyzes the influence of Islamic investment in the capital market on Indonesia's economic growth, focusing on three main instruments, namely Islamic stocks, Islamic mutual funds, and corporate sukuk, while employing inflation as a control variable. Using a quantitative approach with quarterly time series data from 2011 to 2024, this research applies the Vector Error Correction Model (VECM) to capture both long-run relationships and short-run dynamics among the variables. The results show that Islamic mutual funds have a positive and significant effect on Gross Domestic Product (GDP) in the long term, with the highest contribution reaching 28 percent, whereas Islamic stocks exhibit a significant negative effect. Corporate sukuk are found to have no significant impact on GDP, possibly due to their relatively small market share. Inflation as a control variable shows no significant effect during the study period. These findings indicate that not all Islamic investment instruments positively affect economic growth, underscoring the need for massive improvement in Islamic

Abstrak: Penelitian ini menganalisis pengaruh investasi syariah di pasar modal terhadap pertumbuhan ekonomi Indonesia, dengan fokus pada tiga instrumen utama yaitu saham syariah, reksa dana syariah, dan sukuk korporasi, serta menempatkan inflasi sebagai variabel kontrol. Menggunakan pendekatan kuantitatif dengan data time series triwulanan dari tahun 2011 hingga 2024, penelitian ini menerapkan model Vector Error Correction Model (VECM) untuk menangkap hubungan jangka panjang dan dinamika jangka pendek antar variabel. Hasil analisis menunjukkan bahwa reksa dana syariah memiliki pengaruh positif dan signifikan terhadap Produk Domestik Bruto (PDB) dalam jangka panjang dengan kontribusi tertinggi mencapai 28 persen, sementara saham syariah justru menunjukkan pengaruh negatif dan signifikan. Adapun sukuk korporasi tidak terbukti memiliki pengaruh signifikan terhadap PDB, kemungkinan karena pangsa pasarnya yang masih relatif kecil. Inflasi sebagai variabel kontrol tidak menunjukkan pengaruh signifikan selama periode penelitian. Temuan ini mengindikasikan bahwa tidak semua instrumen investasi syariah berdampak positif terhadap

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financial literacy to shift investors from short-term speculative patterns toward long-term productive investment in the real sector. This study is limited to three capital market instruments and the 2011–2024 period; thus, future research is encouraged to expand the scope of instruments, extend the observation period, and employ alternative proxies to gain a more comprehensive understanding.

Keywords: Islamic Investment; Gross Domestic Product (GDP); Islamic Stocks; Islamic Mutual Funds; Corporate Sukuk; Inflation.

pertumbuhan ekonomi, sehingga diperlukan penguatan literasi keuangan syariah secara masif agar investor beralih dari pola spekulasi jangka pendek menuju investasi jangka panjang yang produktif di sektor riil. Penelitian ini terbatas pada tiga instrumen pasar modal dan periode 2011-2024, sehingga penelitian mendatang disarankan untuk memperluas cakupan instrumen, memperpanjang periode pengamatan, serta menggunakan proksi alternatif guna memperoleh pemahaman yang lebih komprehensif.

Kata Kunci: Investasi Syariah; Produk Domestik Bruto (PDB); Saham Syariah; Reksa Dana Syariah; Sukuk Korporasi; Inflasi

A. Introduction

Economic growth is a primary indicator of a country's development success (Karlina, 2017). To promote economic growth, it is essential to understand the factors that play a fundamental role, one of which is capital accumulation. The neoclassical Solow growth theory posits that capital and labor, with technological progress as an exogenous factor, are the principal determinants of economic growth (Mankiw, 2022; Todaro & Smith, 2011). The labor factor encompasses two dimensions: quantity, reflected in population growth, and quality, reflected in educational attainment. The capital factor, meanwhile, is formed through the mechanisms of saving and investment (Todaro & Smith, 2011). On the other hand, endogenous growth theory emphasizes the importance of investment not only in physical capital but also in human capital and technology, so that technology is no longer treated as exogenous as in Solow's framework (Todaro & Smith, 2011). In essence, both theories underscore the critical role of investment in capital formation to enhance economic growth, as articulated by

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Harrod–Domar, who argues that investment plays a key role in building the capital stock (Todaro & Smith, 2011).

According to Kecskes (2016) one of the strategic components supporting investment in the modern economy is inseparable from the role of the capital market. The capital market serves as a venue for trading various long-term financial instruments that are linked to public offerings and transactions (Atichasari et al., 2023). It functions as a financial intermediary between surplus units and the productive sector (Tandelilin, 2018). From the finance–growth nexus perspective, a well-developed financial system accelerates capital accumulation, lowers transaction costs, and improves the efficiency of resource allocation (Rajabi & Muhammad, 2014). Rajabi & Muhammad (2014) note that improvements in the quantity, quality, and efficiency of financial intermediation services—commonly referred to as financial development and involving the interaction of various activities and institutions—can move in tandem with economic growth. Accordingly, developing countries pay close attention to the development and deepening of their financial sectors to accelerate poverty alleviation and pursue economic growth (Kazak & Okka, 2022). Building on this concept, strengthening the capital market is expected to promote investment, productivity, and long-term economic growth (Mankiw, 2022; Tandelilin, 2018). The capital market acts as a catalyst that drives the real sector through the expansion of productive capacity (Apriliansah & Suyatno, 2024). This productive capacity is reflected in a region's Gross Domestic Product (GDP) (Irijanto & Lestari, 2022), and the value of GDP serves as a measure of a country's economic growth (Auliyatussaa'dah et al., 2021). Anderson (1990) assumes that investment is positively related to GDP, and vice versa (Irijanto & Lestari, 2022).

Investment itself has evolved more broadly in line with the growing awareness of Islamic principles and ethics in economic activities, particularly in countries with Muslim-majority populations such as Indonesia. Public awareness of the need to apply Islamic principles in economic activity has given rise to Islamic investment, and Indonesia officially launched its Islamic capital market in mid-March 2003 to serve

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Muslim investors. This Islamic capital market trades a range of long-term financial products, including Islamic stocks, Islamic mutual funds, and corporate sukuk. These products offer investment options aligned with Islamic teachings: free from riba, avoiding gharar or excessive speculation, and excluding prohibited activities (Atichasari et al., 2023). The availability of Shariah-compliant products provides an alternative for investors who believe that conventional products contain forbidden elements (Fauzan & Suhendro, 2018).

Globally, the Islamic finance sector has continued to grow rapidly despite economic recessions. The 2023 Indonesian Islamic Finance Development Report notes that total global Islamic financial assets increased by 11 percent in 2022 to USD 4.5 billion ((Otoritas Jasa Keuangan (OJK), 2023)). Indonesia, which ranks among the countries with the largest Islamic finance industries, has also recorded substantial expansion, particularly in its capital market. In 2023, Indonesia was ranked third in the Islamic Finance Development Indicator, with the value of Islamic securities growing 7.43 percent year-on-year (Otoritas Jasa Keuangan (OJK), 2023). The Indonesian government actively develops the Islamic finance ecosystem through various policies and regulations, positioning it as a key pillar of the national economic structure (Otoritas Jasa Keuangan (Otoritas Jasa Keuangan (OJK), 2023).

The following data show a significant increase in both the number and the value of Islamic securities.

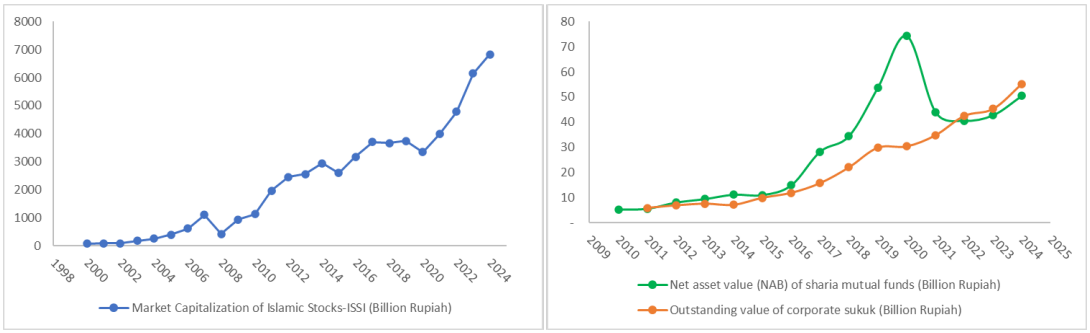

Figure 1. Growth in the Value of Islamic Securities in the Islamic Capital Market (Source: Compiled from OJK data (Departemen Pengelolaan Data dan Statistik – OJK) - https://ojk.go.id/)

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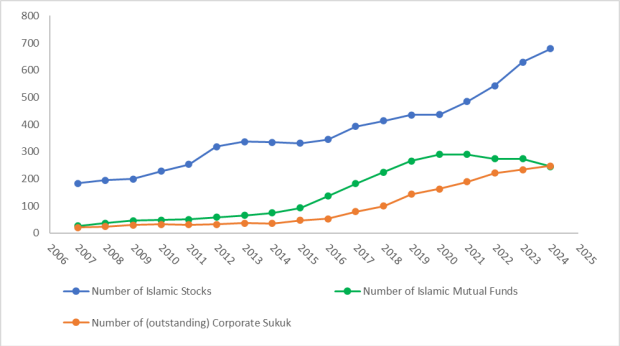

Figure 2. Growth in the Number of Islamic Securities in the Islamic Capital Market
(source: Compiled from OJK data (Departemen Pengelolaan Data dan Statistik – OJK) - https://ojk.go.id/)

The significant growth of Islamic securities and their potential for further expansion raise the crucial question of the extent to which the development of capital-market instruments focused on Islamic investment can substantially drive economic growth in Indonesia. Although the economic literature has firmly established a positive linear relationship between financial sector development and economic growth, the empirical evidence on Islamic capital markets is still evolving and reveals considerable complexity. Rajabi & Muhammad (2014) observe that stock markets in Islamic countries, despite their potential, often face challenges such as relatively small market capitalization, low liquidity, and high volatility. These conditions can limit the role of the capital market as a driver of real economic growth. Some studies have even found that stock market capitalization (including Islamic stocks) may exert a negative effect or contribute only marginally to GDP under certain conditions (Fathurrahman & Al-Islami, 2022).

Based on the above background, this study aims to examine the influence of the main Islamic investment instruments—Islamic stocks (X1), Islamic mutual funds (X2), and corporate sukuk (X3)—on Indonesia's economic growth (GDP) (Y), with inflation (X4) included as a control variable. The data are quarterly observations spanning 2011 to 2024, and the analysis uses the Vector Autoregression (VAR) approach to capture

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both long-run relationships and short-run dynamics among the variables. The findings are expected to provide policy implications for developing the Islamic capital market as an instrument of economic growth.

B. Research Method

1. Research Approach and Type of Research Data

This study adopts a quantitative approach using time series analysis to examine the influence of Islamic investment variables and macroeconomic variables on Indonesia's economic growth, as illustrated in the figure below.

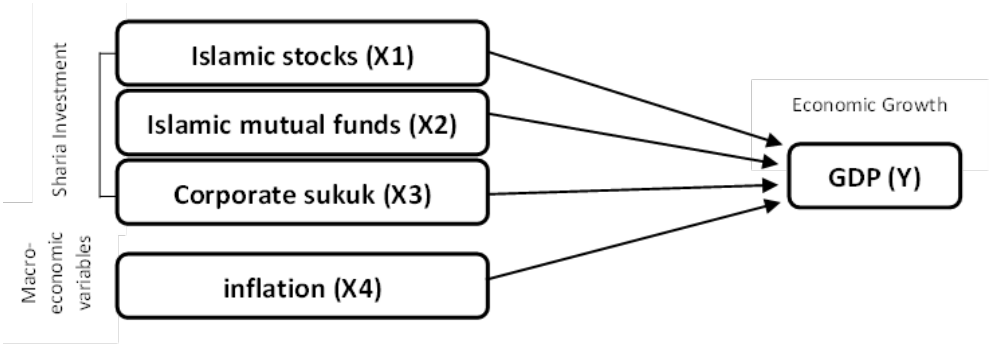

Figure 3. Research Design

The data used in this study are secondary data compiled by parties other than the researcher. The data sources include the websites of Bank Indonesia (BI), the Central Bureau of Statistics (BPS), and the Financial Services Authority (OJK), supplemented by additional sources such as reports, books, journals, scientific articles, and other relevant documents. The study period runs from 2011 to 2024 on a quarterly basis, yielding a total of 56 time-series observations. Data analysis is performed using EViews 12, an econometric software package specifically designed for time-series data processing.

2. Operational Definition of Variables

The research variables and their operational definitions are presented in the following table:

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Table 1. Definition of Variables

Variabel	Definition	Unit/ Period	Source
GDP (Y)	The value of Gross Domestic Product (GDP) at constant prices based on expenditure approach from 2011 to 2024, representing economic growth.	IDR Trillion / Quarterly	Central Bureau of Statistics (Badan Pusat Statistik (BPS), n.d.)
Islamic Stocks (X1)	Market capitalization of the Islamic stock index listed (ISSI) on the Indonesia Stock Exchange (BEI).	IDR Trillion / Quarterly	Financial Services Authority (Otoritas Jasa Keuangan (OJK), n.d.)
Islamic mutual funds (X2)	Net asset value (NAB) of islamic mutual funds	IDR Trillion / Quarterly	OJK
Corporate Sukuk (X3)	Outstanding value of corporate sukuk	IDR Trillion / Quarterly	OJK
Inflation (X4)	Annual inflation rate (yoy) published by BPS, as a control variable.	Persentasge / Quarterly	Central Bank of Indonesia (Bank Indonesia (BI), n.d.)

3. Data Analysis Technique

To estimate the time-series data in this study, the Vector Autoregression (VAR) model is employed. VAR is a multivariate time-series analysis method used to examine the dynamic relationships among several interdependent variables over time, in which each variable is treated as endogenous and is influenced by its own past values and the past values of the other variables (Widarjono, 2016). The analytical stages of this method include the stationarity test, optimal lag selection, stability test, cointegration test, VAR/VECM estimation, Granger causality, Impulse Response Function, and Variance Decomposition. This method is suitable for examining systems of interdependent variables without having to specify a priori which variables are endogenous and which are exogenous.

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C. Results and Discussion

1. Research Results

1.1. Stationarity Test

The stationarity test is the initial step in estimating a VAR model. Its purpose is to ensure that the data exhibit constant statistical properties over time (i.e., contain no unit root) so that the econometric results are valid and not misleading (non-spurious). The test is conducted using the Augmented Dickey-Fuller (ADF) procedure at an alpha (α) of 5 percent. The results of the stationarity test are presented below.

Table 1. Stationarity Test

Variable	Significance at the level	Significance at the first difference (FD)	Result
GDP (Y)	0.9736	0.0383	Stationary
Islamic Stocks (X1)	0.9727	0.0000	Stationary
Islamic Mutual Funds (X2)	0.6515	0.0000	Stationary
Corporate Sukuk (X3)	0.9998	0.0000	Stationary
Inflation (X4)	0.1776	0.0001	Stationary

(source: data processed using EViews 12, 2025)

The stationarity test results show that none of the five variables is stationary at the level. Accordingly, the stationarity test is extended to the first difference. All variables are found to be stationary at the 5 percent significance level after first differencing. Consequently, a cointegration test becomes an essential part of the analysis (Basuki & Prawoto, 2015).

1.2. Optimum Lag Selection

The optimal lag test is conducted to determine the most appropriate lag length for the time-series model after the data have been confirmed stationary. The main purpose of lag selection is to ensure that the model is free from autocorrelation and produces stable estimates. The results of the optimal lag selection are presented below.

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Table 2. Optimum Lag Selection

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-984.9231	NA	4.98e+10	38.82051	39.00991*	38.89289*
1	-974.1562	19.00027	8.75e+10	39.37868	40.51504	39.81292
2	-931.7306	66.55008*	4.55e+10*	38.69532*	40.77866	39.49142
3	-913.0761	25.60421	6.29e+10	38.94416	41.97447	40.10213
4	-884.1660	34.01183	6.27e+10	38.79082	42.76811	40.31066

(source: data processed using EViews 12, 2025)

Based on the analysis, lag 2 is selected as the optimal lag because it is supported by the majority of the criteria. The highest LR value (66.55008) at lag 2 indicates that adding lags up to the second order is statistically significant. In addition, the FPE and AIC also reach their optimal values at lag 2 (4.55e+10 and 38.69532), indicating that the two-lag model produces more accurate and more efficient forecasts.

1.3. Stability Test

The stability test in a VAR model is a critical procedure for determining the validity of the estimation results. An unstable model yields inaccurate predictions and misleading interpretations. The principal method for testing stability is to analyze the Inverse Roots of the AR Characteristic Polynomial; a model is considered stable when all inverse roots lie within the unit circle (i.e., their absolute values are less than 1).

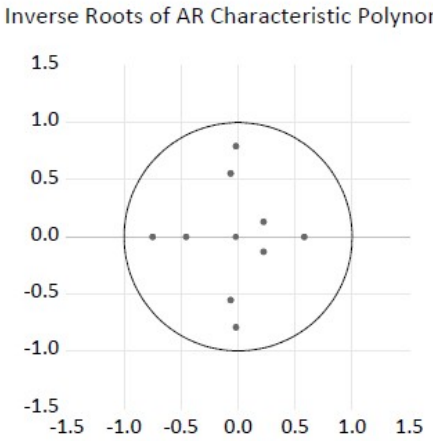

Figure 3. Stability Test
(source: data processed using EViews 12, 2025)

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The analysis shows that all inverse roots lie within the unit circle. This result indicates that the VAR model satisfies the stability requirement, which provides the mathematical foundation for ensuring the consistency of the analytical results.

1.4. Cointegration Test

The cointegration test is used to identify long-run relationships among non-stationary variables at the level (Widarjono, 2016). Cointegration is tested using Johansen's procedure because of its capacity to handle the complexity of multivariate variable relationships. The Johansen test confirms the presence of a cointegrating relationship when the trace statistic and the max-eigen statistic are significantly larger than the 5 percent critical value.

Table 3. Cointegration Test

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.752433	141.2802	69.81889	0.0000
At most 1 *	0.459758	68.68432	47.85613	0.0002
At most 2 *	0.306212	36.66594	29.79707	0.0069
At most 3 *	0.167992	17.65534	15.49471	0.0233
At most 4 *	0.144109	8.091829	3.841465	0.0044

Trace test indicates 5 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.752433	72.59589	33.87687	0.0000
At most 1 *	0.459758	32.01838	27.58434	0.0126
At most 2	0.306212	19.01060	21.13162	0.0965
At most 3	0.167992	9.563509	14.26460	0.2422
At most 4 *	0.144109	8.091829	3.841465	0.0044

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

(source: data processed using EViews, 2025)

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According to the cointegration test results, the test statistics (trace and max-eigen) exceed the 5 percent critical values (with p-values < 0.05), leading to rejection of H_0 and confirming the presence of cointegrating relationships. Both the trace statistic and the max-eigen statistic exceed the 0.05 critical values under the hypotheses of none, at most 1, and at most 2 cointegrating equations, as shown in the table above. The findings indicate the presence of two cointegrating relationships in the model. The Trace Test suggests five cointegrating relationships (because all null hypotheses up to at most 4 are rejected), whereas the Max-Eigen Test confirms two cointegrating relationships (with rejections only up to at most 1). Based on these results, the VECM is the appropriate model for analyzing the relationships among the variables.

1.5. VECM Estimation

According to Widarjono (2016), when the data are stationary after differencing but not at the level, and the cointegration test indicates the presence of cointegration, a Vector Error Correction Model (VECM) can be developed. Given the cointegration findings and the data that are stationary at the first difference, the VECM is selected for this study.

The VECM estimation results showing the influence of Islamic Stocks, Islamic Mutual Funds, Corporate Sukuk, and Inflation on real GDP are as follows.

D(Y,2) = - 2.74696586485*(D(Y(-1)) - 0.045993319078*D(X1(-1)) + 1.85927882806*D(X2(-1)) - 3.20707631422*D(X3(-1)) + 1.07150434491*D(X4(-1)) - 20.7158405004) + 1.20695064591*D(Y(-1),2) + 0.421045585035*D(Y(-2),2) - 0.100992494708*D(X1(-1),2) - 0.0449211722975*D(X1(-2),2) + 4.23341222658*D(X2(-1),2) + 2.14099202499*D(X2(-2),2) + 0.135413651572*D(X3(-1),2) + 5.20617086416*D(X3(-2),2) + 1.67724332559*D(X4(-1),2) + 0.899060291802*D(X4(-2),2) + 1.38789320162

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Table 4. Long-Run Relationship of The VECM Results

Variable	Coefficient	Std. Error	t-statistik	Significance (α=5%)
X1(-1)	-0.045993	0.01078	[-4.26850]	Significant |t-stat| > 2.008
X2(-1)	1.859.279	0.47828	[3.90378]	Significant |t-stat| > 2.008
X3(-1)	-3.207.076	195.649	[-1.63919]	Not significant |t-stat| ≤ 2.008
X4(-1)	1.071.504	290.551	[-0.36878]	Not significant |t-stat| ≤ 2.008

(source: data processed using E-views 12, 2025)

The VECM results at the 5 percent significance level, with t-statistics exceeding the t-table value of 2.008, indicate that, in the long run, Islamic Stocks (X1) and Islamic Mutual Funds (X2) significantly affect real GDP (Y), whereas Corporate Sukuk (X3) and Inflation (X4) do not.

Table 5. Short-Term Relationship of The VECM Results

Variable	Coefficient	Std. Error	t-statistik	Significance (α=5%)
X1(-1)	-0.100992	0.02950	[-3.42332]	Significant |t-stat| > 2.008
X1(-2)	-0.044921	0.02038	[-2.20401]	Significant |t-stat| > 2.008
X2(-1)	4.233.412	0.99230	[4.26625]	Significant |t-stat| > 2.008
X2(-2)	2.140.992	0.85425	[2.50629]	Significant |t-stat| > 2.008
X3(-1)	0.135414	3.17932	[0.04259]	Not significant |t-stat| ≤ 2.008
X3(-2)	5.206171	3.35147	[1.55340]	Not significant |t-stat| ≤ 2.008
X4(-1)	1.677243	4.31056	[0.38910]	Not significant |t-stat| ≤ 2.008
X4(-2)	0.899060	4.31569	[0.20832]	Not significant |t-stat| ≤ 2.008

(source: data processed with E-views 12, 2025)

At the 5 percent significance level, Islamic Stocks (X1) and Islamic Mutual Funds (X2), which exhibit negative relationships at lag 1 and lag 2, significantly affect real GDP (Y). T-statistics exceeding the t-table value (2.008) indicate a significant impact. Real GDP (Y) is not affected by the other variables at lags 1 and 2; these other variables are Corporate Sukuk (X3) and Inflation (X4).

1.6. Impulse Response

The Impulse Response Function (IRF) analysis aims to explain how a variable responds to unexpected shocks arising from disturbances (e) (Widarjono, 2016). The

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IRF also indicates how long the effect of such shocks persists (Basuki & Prawoto, 2015). The figure below presents the impulse responses, showing how GDP reacts to shocks from GDP itself (Y) and the other variables (X1 through X4).

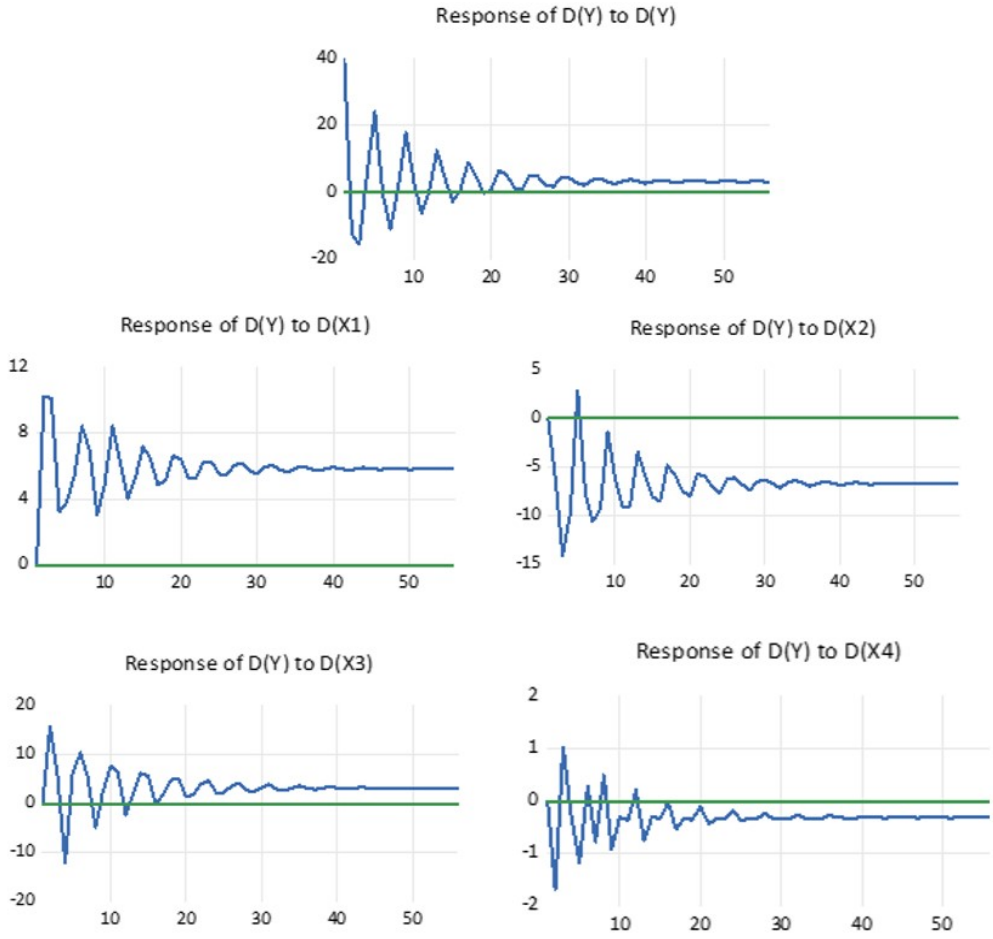

Figure 4. Impulse Response
(source: data processed using E-views 12, 2025)

According to the impulse response results, GDP growth (D(Y)) shows varying responses to shocks from the five variables (GDP itself, Islamic Stocks, Islamic Mutual Funds, Corporate Sukuk, and Inflation). A shock to GDP itself triggers large fluctuations initially but eventually stabilizes around zero. A shock to Islamic Stocks (D(X1)) exerts a positive and sustained effect on GDP. Conversely, Islamic Mutual Funds (D(X2)) produce a persistent negative effect. Corporate Sukuk (D(X3)) have a

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positive but short-lived effect, while Inflation (D(X4)) produces a small, quickly dissipating negative effect. Overall, the Islamic investment variables generate fluctuating shocks that begin to subside and stabilize approximately between periods 35 and 56.

1.7. Variance Decomposition

Variance Decomposition shows the extent to which fluctuations in a variable originate from shocks (unexpected changes) to the variable itself. The remainder is explained by shocks from the other endogenous variables in the system. Variance decomposition is useful for understanding the proportional contribution of each source of shock to the dynamics of the observed variable (Basuki & Prawoto, 2015).

Table 6. Variance Decomposition

Variance Decomposition of D(Y): Period	S.E.	D(Y)	D(X1)	D(X2)	D(X3)	D(X4)
1	39.47942	100.0000	0.000000	0.000000	0.000000	0.000000
2	45.87926	81.56629	4.971404	1.772086	11.55799	0.132234
3	51.78247	72.98846	7.689715	8.787820	10.39176	0.142244
4	54.50124	67.13797	7.287356	11.12136	14.32129	0.132024
5	60.04210	71.33688	6.401791	9.386457	12.72748	0.147396
6	61.64305	67.68705	6.852532	10.47593	14.84263	0.141858
7	64.28859	65.14446	8.007605	12.35480	14.34795	0.145178
8	65.53835	62.75882	8.823593	13.89328	14.37918	0.145130
9	68.02835	65.06747	8.388514	12.93241	13.45864	0.152970
10	68.98213	63.47533	8.657275	13.39187	14.32468	0.150850
11	70.64609	61.32087	9.665108	14.42765	14.43992	0.146453
12	71.54382	59.79935	10.21935	15.64721	14.19049	0.143597
13	72.83870	60.61948	10.16420	15.32122	13.74546	0.149644
14	73.66249	59.67436	10.44144	15.61219	14.12405	0.147970
15	74.71101	58.14968	11.07621	16.34770	14.28055	0.145860
16	75.47090	56.98732	11.58063	17.29444	13.99466	0.142947
17	76.32176	57.07750	11.72932	17.31258	13.73567	0.144924
18	77.03810	56.46996	11.96258	17.56509	13.85837	0.143992
19	77.84391	55.30912	12.43866	18.11680	13.99221	0.143218
20	78.53589	54.34624	12.88625	18.85150	13.77510	0.140906
21	79.21091	54.10580	13.10886	19.04686	13.59694	0.141534
22	79.87129	53.62012	13.33193	19.29068	13.61619	0.141068
23	80.56458	52.72343	13.70914	19.72342	13.70344	0.140583
24	81.20972	51.90955	14.09020	20.30415	13.55724	0.138857
25	81.81897	51.52322	14.33894	20.57526	13.42364	0.138937

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26	82.43998	51.08570	14.55684	20.81942	13.39948	0.138563
27	83.07397	50.37756	14.86508	21.17519	13.44395	0.138219
28	83.68706	49.68166	15.19104	21.64222	13.34811	0.136964
29	84.26834	49.24443	15.43941	21.93493	13.24448	0.136750
30	84.86032	48.83098	15.65044	22.17902	13.20315	0.136411
31	85.45967	48.25230	15.91166	22.48247	13.21745	0.136122
32	86.04848	47.65395	16.19221	22.86601	13.15263	0.135200
33	86.61388	47.21269	16.42766	23.15359	13.07119	0.134864
34	87.18440	46.81721	16.63002	23.39326	13.02498	0.134536
35	87.75983	46.32806	16.85766	23.66003	13.01998	0.134261
36	88.32905	45.81011	17.10141	23.98207	12.97284	0.133570
37	88.88217	45.38660	17.31946	24.25254	12.90820	0.133197
38	89.43587	45.00959	17.51129	24.48360	12.86264	0.132873
39	89.99266	44.58392	17.71385	24.72340	12.84623	0.132604
40	90.54537	44.13139	17.92811	24.99958	12.80884	0.132069
41	91.08706	43.73486	18.12789	25.24883	12.75673	0.131699
42	91.62674	43.37806	18.30806	25.46832	12.71417	0.131383
43	92.16794	42.99919	18.49103	25.68702	12.69164	0.131117
44	92.70618	42.59963	18.68155	25.92847	12.65966	0.130688
45	93.23670	42.23284	18.86391	26.15620	12.61671	0.130339
46	93.76407	41.89743	19.03205	26.36253	12.57796	0.130035
47	94.29166	41.55481	19.19900	26.56377	12.55264	0.129775
48	94.81689	41.19819	19.37022	26.77832	12.52386	0.129417
49	95.33649	40.86071	19.53668	26.98596	12.48756	0.129095
50	95.85264	40.54697	19.69298	27.17860	12.45264	0.128807
51	96.36804	40.23378	19.84636	27.36475	12.42655	0.128556
52	96.88136	39.91230	20.00162	27.55793	12.39990	0.128247
53	97.39041	39.60219	20.15391	27.74752	12.36844	0.127953
54	97.89609	39.30966	20.29893	27.92668	12.33705	0.127683
55	98.40038	39.02132	20.44049	28.09941	12.31134	0.127442
56	98.90273	38.72896	20.58235	28.27517	12.28634	0.127169

(source: data processed using E-views 12, 2025)

In the initial periods (periods 1 and 2), the internal role of GDP accounts for a very large share—more than 80 percent—but declines over time, whereas the other variables cumulatively contribute less than 20 percent (very small). In subsequent periods (up to period 30), the internal contribution of GDP continues to decline, while the contributions of Islamic Stocks and Islamic Mutual Funds increase, with Islamic Mutual Funds eventually exhibiting a larger contribution than Islamic Stocks. The contributions of Corporate Sukuk and Inflation tend to decline and remain small. From period 40 to period 56, GDP closes with a contribution of approximately 39 percent, the contribution of Islamic Mutual Funds strengthens to about 28 percent, followed by Islamic Stocks at

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approximately 20 percent. Corporate Sukuk, although declining, remains relatively stable at around 12 percent, while Inflation has a very small contribution from the outset and continues to decline toward zero.

1.8. Granger Causality Test

The Granger causality test aims to identify causal relationships among the endogenous variables in a VAR system (Basuki & Prawoto, 2015; Widarjono, 2016). In this study, the causality test is used to determine whether Islamic Stocks, Islamic Mutual Funds, Corporate Sukuk, and Inflation are causally related to GDP. The results of the Granger causality test are presented below.

Table 7. Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
X1 does not Granger Cause Y	54	2.13720	0.1289
Y does not Granger Cause X1		1.43090	0.2489
X2 does not Granger Cause Y	54	0.79732	0.4563
Y does not Granger Cause X2		2.14847	0.1275
X3 does not Granger Cause Y	54	1.01987	0.3682
Y does not Granger Cause X3		2.24947	0.1162
X4 does not Granger Cause Y	54	0.03568	0.9650
Y does not Granger Cause X4		1.45795	0.2426
X2 does not Granger Cause X1	54	0.07050	0.9320
X1 does not Granger Cause X2		0.67626	0.5132
X3 does not Granger Cause X1	54	2.22337	0.1191
X1 does not Granger Cause X3		2.12388	0.1304
X4 does not Granger Cause X1	54	0.10762	0.8982
X1 does not Granger Cause X4		0.80711	0.4520
X3 does not Granger Cause X2	54	1.29055	0.2843
X2 does not Granger Cause X3		0.67698	0.5128
X4 does not Granger Cause X2	54	0.48926	0.6160
X2 does not Granger Cause X4		1.88526	0.1626
X4 does not Granger Cause X3	54	0.68024	0.5112
X3 does not Granger Cause X4		1.40342	0.2555

(source: data processed using E-views 12, 2025)

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Based on the Granger causality test, no statistically significant Granger causal relationship is found at the 5 percent significance level between the Islamic investment variables and inflation, on the one hand, and GDP on the other, or in the reverse direction. This indicates that, in the short run (within the optimal lag of 2 quarters), there is no statistical evidence that any of these variables directly affects or predicts the others.

2. Discussion

2.1. Effect of Islamic Stocks on Economic Growth

Based on the VECM estimation, the coefficient of Islamic Stocks (X1) in the cointegrating equation is negative (-0.045993) and statistically significant (t-statistic: -4.26850), indicating that in the long run, an increase in Islamic stocks exerts a negative effect on GDP. This finding aligns with Fajar & Rahmini (2022) and Putri & Yudiantoro (2023), who report that Islamic stocks have a significant negative effect on economic growth, attributing this to limited literacy regarding Islamic investment products, which reduces investor interest in trading Islamic securities relative to conventional stocks. This result differs from Fathurrahman & Al-Islami (2022), who find that although stocks have a negative effect, it is not statistically significant for economic growth. That negative effect is attributed to price instability in Islamic stocks, which affects returns and economic growth. A different result is also reported by Rajabi & Muhammad (2014), who find a significant positive effect of Islamic stock market development on economic growth in 10 Asian Islamic countries, whereas the present study finds a significant negative effect in the Indonesian context for the 2011–2024 period. Nevertheless, Rajabi & Muhammad (2014) explicitly note that Islamic capital markets exhibit high volatility and remain in an immature stage. The high volatility and immaturity of the Islamic stock market highlighted by Rajabi & Muhammad (2014), may explain the negative findings of this study. Investors tend to focus on short-term price movements (selling when prices are high) rather than investing in productive long-term projects in the real sector, which weakens the link to economic growth.

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Consequently, increases in Islamic stock market capitalization are not accompanied by expansion of production in the real sector, ultimately producing a negative effect on GDP.

The Impulse Response Function (IRF) shows that GDP's response to shocks in Islamic stocks tends to be fluctuating. Meanwhile, the variance decomposition shows that the contribution of Islamic stocks to GDP variation increases gradually from about 4.97 percent in period 2 to roughly 20 percent in period 56. Although the contribution increases, it remains lower than that of Islamic mutual funds (28 percent), indicating that Islamic stock capitalization is not the primary driver of GDP. This reinforces the VECM finding that the influence of Islamic stocks on economic growth is negative and not dominant.

The Granger causality test indicates no direct causal relationship between Islamic stocks and GDP (F-statistic: 2.13720; probability: 0.1289; α = 5 percent). This finding confirms that, in the short run (within the optimal lag of 2 quarters), Islamic stocks are not statistically a cause of GDP fluctuations. This does not contradict the long-run VECM finding of a significant negative effect, because a long-run equilibrium relationship may exist without short-run causality being significant. In other words, although there is statistically a long-run equilibrium between Islamic stocks and GDP, in the short run Islamic stocks do not exhibit predictive power for changes in GDP.

2.2. Effect of Islamic Mutual Funds on Economic Growth

Based on the positive coefficient (+1.859279) in the cointegrating equation, the analytical findings show that Islamic mutual funds (X2) significantly and positively affect GDP in the long run. This result is consistent with Sari & Widiyanti (2018), who demonstrate that mutual funds have a positive and significant effect on economic growth in both the long and short run. Similarly, Prayoga et al. (2024) find that Islamic mutual funds have a significant positive effect on economic growth in the long run. Nurhidayah et al. (2022) and Auliyatussaa'dah et al. (2021) likewise report that Islamic mutual funds contribute positively to Indonesia's economic development. These

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findings suggest that investment in Islamic mutual funds channels funds to productive sectors, which in turn stimulates economic activity and fosters sustainable growth consistent with Islamic principles.

The IRF results show a different response, in which a shock to Islamic mutual funds produces a negative effect on GDP in the short run. The contradiction between the VECM result (significant positive) and the IRF result (negative) indicates that, although Islamic mutual funds statistically promote economic growth in the long run, the transmission to the real sector may experience an initial negative shock before reaching long-run equilibrium.

Furthermore, the variance decomposition analysis reveals that the contribution of Islamic mutual funds to GDP variation increases significantly from 1.77 percent (period 2) to 28.28 percent (period 56). This is the largest contribution among the Islamic investment variables (Islamic stocks at 20 percent and corporate sukuk at 12 percent). The rising contribution indicates that, over time, Islamic mutual funds become an increasingly important factor in explaining variations in economic growth, underscoring their role as a long-run driver of the economy.

However, the Granger causality test (Table 8) shows no direct causal relationship between Islamic mutual funds and GDP (F-statistic: 0.79732; probability: 0.4563). This result does not contradict the long-run cointegration findings; rather, it reflects the time lag between investment in Islamic mutual funds and its effects on the real economy.

2.3. Effect of Corporate Sukuk on Economic Growth

In the cointegrating equation, corporate sukuk (X3) display a negative coefficient (-3.207076) that is not statistically significant (t-statistic: -1.63919; p-value > 0.05). This indicates that, individually, corporate sukuk do not have a significant effect on Indonesia's GDP in the long run. Although the Johansen cointegration test indicates the existence of cointegrating relationships in the system as a whole, the specific contribution of corporate sukuk to GDP cannot be statistically demonstrated. This lack of significance may reflect the fact that the corporate sukuk market is still in a

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developmental stage or its size is not yet large enough to exert a significant macroeconomic impact. Marsi & Wardani (2020) similarly find that sukuk have not exhibited a significant effect on economic growth in either the short or the long run. Nevertheless, other studies on the impact of sukuk on GDP growth report mixed results. Hasil penelitian oleh Prayoga et al. (2024) find that sukuk do not have a significant short-run effect on economic growth but have a beneficial long-run effect.

The IRF analysis shows that GDP's response to shocks in corporate sukuk (X3) is fluctuating. There are periods in which the effect is positive (for example, period 2: 15.59759), as well as periods with a negative response. This fluctuation may indicate that, although corporate sukuk channel funds to investment, the efficiency and speed of transmission to the real economy remain inconsistent.

The variance decomposition analysis shows that the contribution of corporate sukuk to GDP variation is relatively stable, ranging from about 11 percent to 13 percent across periods. This figure is lower than the contribution of Islamic mutual funds (28 percent) and Islamic stocks (20 percent), but higher than that of inflation (close to 0 percent). Descriptively, corporate sukuk make a non-negligible contribution to explaining fluctuations in economic growth, even though they are statistically not significant.

The Granger causality test finds no direct causal relationship between corporate sukuk and GDP (F-statistic: 1.01987; probability: 0.3682), confirming that corporate sukuk are not a primary trigger of GDP fluctuations in the short run.

2.4. Effect of Inflation on Economic Growth

In the cointegrating equation, inflation (X4) displays a positive coefficient (1.071504) that is not statistically significant (t-statistic: -0.36878). This indicates that inflation does not have a significant effect on Indonesia's GDP in the long run. A similar result is reported by Prayoga et al. (2024), who find that inflation does not significantly affect economic growth in either the short or long run.

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The IRF analysis shows that inflation has a negative effect on GDP in some periods (for example, period 5: -1.179862). Nevertheless, inflation's contribution in the variance decomposition is very small, ranging from only 0.13 percent to 0.14 percent. This confirms that inflation is not a dominant factor in explaining GDP fluctuations in Indonesia during the study period. The small negative effect likely arises because, although inflation fluctuates, its magnitude is not large enough to generate shocks capable of substantially altering the direction of economic growth.

The Granger causality test does not indicate a significant causal relationship between inflation and GDP (F-statistic: 0.03568; probability: 0.9650). This further strengthens the argument that inflation does not play a strong direct role in influencing economic growth. The lack of significance is likely due to the relatively well-controlled inflation rate during the study period. When inflation remains within reasonable bounds, its impact on investment, consumption, and production decisions tends to be minimal, so a clear causal relationship does not emerge.

D. Conclusion

Based on the results of the analysis, the influence of Islamic investment in the capital market on Indonesia's economic growth during 2011–2024 varies across instruments. Islamic stocks are shown to have a significant negative effect on Gross Domestic Product (GDP) in the long run, due to the high volatility and immaturity of the market, which lead investors to engage in short-term speculation rather than investing in the real sector; in the short run, Islamic stocks exhibit no causal relationship with GDP. In contrast, Islamic mutual funds have a significant positive effect on GDP in the long run, with the highest contribution reaching 28 percent, although the transmission of this effect requires a time lag, and in the short run there is no causal relationship either. Corporate sukuk are not shown to have a significant effect on GDP in either the short or the long run—possibly because of their still-small market share—although descriptively they contribute approximately 12 percent to GDP variation.

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Meanwhile, inflation, as a control variable, does not show a significant effect on GDP in the long run, with a very small contribution, reflecting that the inflation rate was relatively well-controlled during the study period.

Based on these findings, a policy implication that the Financial Services Authority and capital-market participants may consider is the massive and continuous strengthening of Islamic financial literacy. Improved literacy is expected to shape more rational investor behavior—shifting from short-term speculation in Islamic stocks toward productive long-term investment in the real sector—while simultaneously enhancing public understanding of, and interest in, Islamic mutual funds, which have been shown to contribute positively to economic growth, and corporate sukuk, which still have considerable potential for development. With strong literacy, investors will not only understand the mechanics of trading but also recognize the importance of allocating funds to productive instruments that have tangible effects on the national economy.

This study acknowledges several limitations. First, the analysis focuses on only three Islamic investment instruments in the capital market (Islamic stocks, Islamic mutual funds, and corporate sukuk) and uses inflation as a control variable, so it does not cover other Islamic financial instruments such as sovereign sukuk and Islamic insurance, nor Islamic banking instruments. Second, the study period from 2011 to 2024 may not fully capture longer-run dynamics. Third, the proxies for each variable are limited in scope. Future research is therefore encouraged to broaden the set of variables and instruments, extend the observation period, and use a wider range of alternative proxies in order to develop a more comprehensive understanding of the relationship between Islamic investment and economic growth in Indonesia.

E. Bibliography

Apriliansah, L., & Suyatno. (2024). Analisis Pengaruh Investasi Terhadap Pertumbuhan Ekonomi Analysis Of The Effect Of Investment On Economic Growth. *JICN:*

Al-Sharf
Jurnal Ekonomi Islam
Vol. 7, No. 2 (2026) || ISSN 2723-5440 (Online)

Jurnal Intelek Dan Cendekiawan Nusantara, *1(2)*. https://jicnusantara.com/index.php/jicn

Atichasari, A. S., Kristanti, K., Febrianti, F., & Wulandari, S. S. (2023). Shariah Stocks, Sukuk, and Shariah Mutual Funds on the Economic Growth of Indonesia: The Role of Exchange Rate. *International Journal of Current Science Research and Review*, *06*(08). https://doi.org/10.47191/ijcsrr/V6-i8-08

Auliyatussaa'dah, N., Irma Handayani, D., & Farekha. (2021). Pengaruh Saham dan Reksadana Syariah Terhadap Pertumbuhan Ekonomi Indonesia Tahun 2013-2019. In *JIEF-Journal of Islamic Economics and Finance* (Vol. 1). http://e-journal.iainpekalongan.ac.id/index.php/jief/issue/current

Badan Pusat Statistik (BPS). (n.d.). *PDB Triwulanan Atas Dasar Harga Konstan menurut Pengeluaran*. Retrieved June 14, 2025, from https://www.bps.go.id/id/statistics-table/2/MTk1NiMy/-seri-2010--2--pdb-triwulanan-atas-dasar-harga-konstan-menurut-pengeluaran--milyar-rupiah-.html

Bank Indonesia (BI). (n.d.). *Data Inflasi*. Retrieved June 14, 2025, from https://www.bi.go.id/id/statistik/indikator/data-inflasi.aspx

Basuki, A. T., & Prawoto, N. (2015). *Analisis Regresi Dalam Penelitian Ekonomi dan Bisnis*. Rajagrafindo Persada.

Departemen Pengelolaan Data dan Statistik – OJK. (n.d.). *Perkembangan Efek Syariah Indonesia (Saham Syariah, Reksa Dana Syariah, dan Sukuk Korporasi)*. Retrieved June 14, 2025, from https://ojk.go.id/id/kanal/syariah/data-dan-statistik/saham-syariah/Default.aspx

Fajar, F., & Rahmini, N. (2022). Kontribusi Saham Syariah, Sukuk, Reksadana Syariah dan Saham Konvensional Terhadap Pertumbuhan Ekonomi Nasional. *Syntax Idea*, *4*(1). https://doi.org/10.36418/syntax

Fathurrahman, A., & Al-Islami, H. (2022). Pengaruh Pasar Modal Syariah Terhadap Pertumbuhan Ekonomi Nasional: Pendekatan Metode Vector Error Correction Model (VECM). *Jurnal Tabarru' : Islamic Banking and Finance*, *6*(1), 2023. https://doi.org/https://doi.org/10.25299/jtb.2023.vol6(1).12883

Fauzan, M., & Suhendro, D. (2018). Peran Pasar Modal Syariah Dalam Mendorong Laju Pertumbuhan Ekonomi di Indonesia. *Dalam Prosiding SENDI_U 2018*, 521–533.

Al-Sharf
Jurnal Ekonomi Islam
Vol. 7, No. 2 (2026) || ISSN 2723-5440 (Online)

Irijanto, T. T., & Lestari, D. M. (2022). Peran Investasi, Utang Luar Negeri, dan Inflasi Bagi Pertumbuhan Ekonomi Indonesia. *Jurnal Riset Ilmu Ekonomi*, *2 (1)*, 38–46. https://doi.org/https://doi.org/10.23969/jrie.v2i1.26

Karlina, B. (2017). Pengaruh Tingkat Inflasi, Indeks Harga Konsumen Terhadap PDB di Indonesia Pada Tahun 2011-2015. *Jurnal Ekonomika Dan Manajemen*, *6(1)*.

Kazak, H., & Okka, O. (2022). Islamic Finance-Growth Nexus: Evidence from Malaysia. *Economica: Jurnal Ekonomi Islam*, *13*, 1–23. https://doi.org/https://doi.org/10.21580/economica.2022.13.1.9517

Mankiw, N. G. (2022). *Macroeconomics 11th edition by N. Gregory Mankiw* (11th ed.). Worth Publisher Macmillan Learning.

Marsi, G. G., & Wardani, D. T. K. (2020). The Influence of Sharia Capital Market, Sharia Bonds (Sukuk), and BI Rate on Gross Domestic Products (GDP) in Indonesia. *Journal of Economics Research and Social Sciences*, *4*(2), 149–162. https://doi.org/10.18196/jerss.v4i2.10156

Naylul Kirom, & Ani Faujiah. (2024). Pengaruh Sukuk, Saham Syariah dan Reksadana Syariah terhadap Pertumbuhan Ekonomi Nasional Tahun 2018-2023. *Journal of Management and Creative Business*, *2*(4), 321–340. https://doi.org/10.30640/jmcbus.v2i4.3313

Nurhidayah, D., Hidayati, A. N., & Habib, M. A. F. (2022). Pengaruh Inflasi, Saham Syariah, Sukuk dan Reksadana Syariah terhadap Pertumbuhan Ekonomi Nasional Tahun 2013-2020 The Influence of Inflation, Sharia Stock, Sukuk and Sharia Mutual Funds on National Economic Growth in 2013-2020. *Jurnal Sinar Manajemen*, *09*, 158–169. https://doi.org/https://doi.org/10.56338/jsm.v9i1.2435

Otoritas Jasa Keuangan (OJK). (n.d.). *Kapitalisasi Pasar Indeks Syariah di Bursa Efek Indonesia*. Retrieved June 14, 2025, from https://ojk.go.id/id/kanal/syariah/data-dan-statistik/saham-syariah/Documents/Pages/Statistik-Saham-Syariah---Desember-2024/STATISTIK%20SAHAM%20SYARIAH%20DESEMBER%202024.pdf

Otoritas Jasa Keuangan (OJK). (2023). *Laporan Perkembangan Keuangan Syariah Indonesia 2023: Momentum Akselerasi Pertumbuhan Keuangan Syariah Nasional Sebagai Tindak Lanjut Penerbitan UU PPSK*. www.ojk.go.id

Al-Sharf
Jurnal Ekonomi Islam
Vol. 7, No. 2 (2026) || ISSN 2723-5440 (Online)

Prayoga, S. W., Akhmad, A., Iqbal, F., & Susanto, M. (2024). Pengaruh Pasar Modal Syariah dan Makroekonomi terhadap Pertumbuhan Ekonomi Indonesia Menggunakan Vector Error Correction Model. *JIEF-Journal of Islamic Economics and Finance*, *4(2)*. https://doi.org/https://doi.org/10.28918/jief.v4i2.8546

Putri, N. C. W., & Yudiantoro, D. (2023). Pengaruh Obligasi Syariah (Sukuk), Reksadana Syariah, dan Saham Syariah Terhadap Pertumbuhan Ekonomi di Indonesia Tahun 2015 – 2020. *Ekonomis: Journal of Economics and Business*, *7*(1), 429. https://doi.org/10.33087/ekonomis.v7i1.828

Rajabi, E., & Muhammad, J. (2014). The Stock Markets, Banks and Growth Nexus: Asian Islamic Countries. *Economic Notes*, *43*(2), 137–165. https://doi.org/10.1111/ecno.12022

Sari, N., & Widiyanti, M. (2018). THE IMPACT OF ISLAMIC CAPITAL MARKET DEVELOPMENT ON ECONOMIC GROWTH: THE CASE OF INDONESIA. *Journal of Smart Economic Growth*, *3*(2). https://mail.jseg.ro/index.php/jseg/article/view/43

Tandelilin, E. (2018). *Pasar Modal: Manajemen Portofolio dan Investasi*. PT Kanisius. https://books.google.co.id/books?hl=id&lr=&id=EcjnEAAAQBAJ&oi=fnd&pg=PR5&dq=portofolio+investasi+pasar+modal&ots=gbvaaUCSHH&sig=OGelFhU00fqoS-qF2s764hz1gss&redir_esc=y#v=onepage&q=portofolio%20investasi%20pasar%20modal&f=false

Todaro, M. P., & Smith, S. C. (2011). *Pembangunan Ekonomi Jilid 1* (11th ed.). Penerbit Erlangga.

Widarjono, A. (2016). *Ekonometrika Pengantar dan Aplikasinya Disertai Panduan EViews*. UPP STIM YKPN.