JIESBI: Journal of Islamic Economics and Business Ethics
ISSN: 3047-311X (e) & 3064-4585 (p)
Vol. 2, No. 2, 2025, pp. 144-169
Doi: 10.24235/jiesbiv1i3

Measuring Investment Fund Health Against Total Asset Growth in Islamic Insurance Companies in Indonesia

Ramadhani Irma Tripalupi[1*] Siti Asma' Binti Mohd Rosdi [2]
[1] Sunan Gunung Djati State Islamic University, Bandung, Indonesia
[2] Sultan Idris Education University, Malaysia

ABSTRACT

The mechanism of fund management in sharia insurance includes fund distribution allocation, namely *tabarru'* (donation) funds and saving funds, which are integral parts in carrying out sharia insurance management. Regulation No. 11/PMK.010/2011 concerning the finncial health of Sharia insurance companies outlines of the health of Sharia insurance companies includes two things, namely the financial health of *tabarru'* funds and company funds, with distinct solvency limits for each. The solvency limit for *tabarru'* funds is 30%, while for company funds, it is 70%. The purpose of this study is to examine the impact of the allocation of Islamic insurance fund assets, including *mudharabah* (profit-sharing) deposits, government *sukuk* (Islamic bonds), corporate *sukuk*, and Islamic mutual funds, on the asset growth of Islamic insurance funds in Indonesia. This study used quantitative methodology by utilizing Vector Autoregression (VAR) and Ordinary Least Squares (OLS) to analyze a data series covering the period from January 2017 to April 2025. The findings of the ordinary least squares (OLS) analysis indicated that the proportion of funds invested in Islamic mutual funds, government sukuk, corporate sukuk, and *mudharabah* deposits has a substantial and positive impact on the growth of Islamic insurance assets. In addition, the findings from VAR indicated that a positive and statistically significant short-term relationship exists exclusively with government *sukuk* and its impact on the growth of Islamic insurance assets. To optimize the allocation of investment funds for investors and stakeholders, government and corporate *sukuk* are viable considerations, supported by impulse response function and variance decomposition analyses.

ARTICLE INFO

Keywords:
Investment Fund
Islamic Insurance Company
Financial Health
Total Asset Growth

Dates:
Received 04 March 2025
Revised 20 April, 2025
Accepted 21 May, 2025
Published 02 June, 2024

* Corresponding Author at Sunan Gunung Djati State Islamic University, Bandung, Indonesia
E-mail address: ramadhaniirmatripalupi@uinsgd.ac.id

INTRODUCTION

The fund management mechanism in sharia insurance has an allocation of fund distribution, namely *tabarru'* (donation) funds and savings funds, which are integral in carrying out sharia insurance management. One indication of a trusted insurance company is a company that has good financial health. An insurance company is said to be healthy if it has met a solvency level of at least 120%, which applies to conventional insurance. The regulation governing the financial health of sharia insurance No: 11.PMK.010.2011 concerning the scope of sharia insurance company health involves two aspects: the financial health of *tabarru'* funds and company funds. Each has a specific solvency limit: 30% for *tabarru'* funds and 70% for company funds (Hendra, 2021).

Insurance companies that have an RBC of more than 30% will attract more public attention because the public believes that they are placing their funds in the right company. The determination of the RBC value is expected to protect the interests of customers and can guarantee adequate capital in the insurance company, and avoid risks that can harm customers due to deviations in the management of the wealth and liabilities of the insurance company concerned. The measurement of the financial health of sharia insurance companies is different from the conventional insurance (Priyana et al., 2022). There are two types of measurement of the health of *tabarru'* funds, the first is financial health from the level of solvency and the measurement of financial health other than the level of solvency which is reflected in several ratios such as in the Bapepam-LK Regulation Number: PER-06/BL/2012, which includes five ratios consisting of the liquidity ratio, the ratio of investment balance with liabilities, the net investment return ratio, the claim burden ratio, and the ratio of changes in *tabarru'* funds. Measurement based on the solvency level is reflected in the risk-based capital (RBC) of *tabarru'* funds. These ratios are characteristic of Sharia insurance companies because they are very different from other financial institutions. Sharia insurance companies not only achieve the predetermined health level but also seek profit from the results of managing existing funds (Nasution et al., 2019).

Indonesia's Muslim population was expected to reach 240.62 million by 2023. This number represents 86.7% of the country's total population of 277.53 million people. Even though Indonesia is home to the second-largest Muslim population in the world, this contrasts sharply with the country's low rate of Islamic financial literacy, which stands at just 9.14%.

However, the Islamic finance industry in Indonesia has experienced significant growth in recent years, particularly in the areas of Islamic investment and insurance. In terms of contribution income, the role of Islamic life insurance in Indonesia is getting bigger, indicated by the market share of the contribution of Islamic life insurance sales reaching 11.8% in 2024. The market share jumped significantly, where the contribution of Islamic life insurance only reached 5.8% 5 years ago (Syah Aji & Kurniasih, 2015).

This growth indicates that Islamic insurance is an alternative system in the insurance sector in Indonesia. Takaful or Islamic Insurance is a system that provides risk protection based on Islamic principles, which distinguishes itself from conventional insurance by the avoidance of forbidden elements of *riba* (usury), *gharar* (excessive uncertainty), and *maysir* (gambling). Therefore, ensuring that everyone has access to the advantages and protections that will make them feel safe, secure, and free from harm is one of the main objectives of Islamic law (Kismawadi, 2024). One thing that can be improved is the execution of investments and business decisions that are compliant with Islamic law. Participants' premium payments in takaful contracts are split into two accounts: one is for the participant's savings, and the other is for the *tabarru`* (gift) fund (Widarjono et al., 2022). The funds in the first account will be invested by the takaful operator into any appropriate Sharia-compliant securities. Investing operations are particularly important. For many insurers, the difference between the interest cost of insurance liabilities and the return on assets is their primary source of income. Insurers accumulate substantial amounts of money due to the delay between premium collection and claim payout, which they subsequently invest and utilize to generate investment income (Rahmawati et al., 2024).

This is why investment income is important to insurers. Moreover, to stay profitable and efficient, the majority of insurers rely on investment income or the resolution of claims rather than revenue from a variety of sources. Therefore, the task of the investment manager of an Islamic insurance company is to manage the company's investment funds with an optimal portfolio for each investment instrument they manage to achieve the return target set by the company. In Indonesia, due to increasing complaints about fraud related to Investment-Linked Insurance Products (PAYDI) to the Financial Services Authority (OJK) annually since 2024, there were three insurance companies whose customers complained to the OJK, namely AIA, Prudential, and AXA Mandiri. In total, 260 PAYDI customers complained

about their cases to the OJK. OJK Regulation (POJK) Number 6 of 2023 was issued regarding the second amendment to POJK Number 72/POJK.05/2016. OJK explained that the adjustments to the POJK in question aimed to maintain the company's financial health and optimize investment performance (Nasution, 2022).

Moreover, on 11 July 2024, OJK issued a new regulation, PJOK Number 11 of 2023 requires Insurance and Reinsurance Companies to separate Islamic Insurance Units into new Islamic Insurance Companies or other Islamic Insurance Companies that have obtained business permits. This allocation investment limit provision can encourage Islamic insurance companies to be more vigilant in placing investments by considering the Islamic insurance company's capital capacity to bear investment risks (Rahmani, 2020). However, earnings and income from investments are an important long-term source of capital. The research results indicate that the coefficient of investment income indicates that the investment income is positively related to EAR (Effective Annual Interest Rate) and ETR (Effective Tax Rate). Several studies on investment in the growth of assets of Islamic insurance companies usually use the total investment portfolio and investment returns. Presented that investment results had a positive and significant effect on the growth of assets of Islamic insurance companies in Indonesia (Safitri & Suprayogi, 2017).

It was found that investment growth had a significant negative impact on the growth of Islamic Life Insurance assets in Indonesia. Based on the Indonesian Insurance Roadmap (2023-2027) and the results of research conducted by the OJK research team, the main factors taken into consideration in insurance investment allocation are risk factors (69%) and investment returns (21%). This result is reinforced by the allocation of Islamic life insurance investment to Islamic stock, which decreased by 10% from 2018 to 2022. According to Maldonado-Castro et al. (2024), factors affecting the investment growth of Indonesian Islamic insurance were the yield of *mudharabah* and the Industrial Production Index (IPI), which had a positive impact on it. This study addresses a research gap in the field, focusing on the underexplored topic of investment allocation and its impact on total asset growth.

The lack of specific research on investment fund allocation, particularly the correlation between portfolio investment and total asset growth, prompted this investigation. The main objective of this study is to examine how Islamic asset allocation can yield the most optimal portfolio value for the growth of Islamic insurance assets in Indonesia. For Muslims,

conventional insurance is not coherent with Islamic principles. Firstly, the contract between the insurer and the insured contains some degree of avoidable uncertainty. Secondly, the insurance contract per se is riba since the investment made by the insurance companies involves the element of riba. Thirdly, the excessive element of *gharar* can lead to *maysir* or gambling. *Takaful* is a financial transaction based on the principles of cooperation *(ta'awun), mudharabah* (profit-sharing*)*, and *tabarru'* (donation) whereby the *takaful* operator and participants or the beneficiaries share profits made on the contribution. Islamic insurance is an innovative modern approach to dealing with demand for an instrument that can reduce one's exposure to certain types of risk (Saleh et al., 2020).

Insurance in general is a product that was developed out of people's desire for security and stability and is intended to safeguard people and businesses against certain events. Meanwhile, Takaful is a system of Islamic insurance based on the principle of cooperation *(ta'awun)* and donation *(tabarru')*, where the risk is shared collectively and voluntarily by the group of participants. Islamic insurance companies, as one of the financial institutions that manage large amounts of public funds, are very dependent on the success of managing investments to realize the company's goals (Ha et al., 2024). To realize this goal, it is necessary to form an integrated investment collection to obtain investment profits, which is called a portfolio. According to Rahman et al. (2024), a portfolio is defined as an investment made across a variety of financial instruments, also known as diversification. The main objective of forming an investment portfolio is to obtain optimal results with minimal risk according to fatwa No.21/DSN-MUI/X/2001.

Islamic insurance companies must make investments, as they are responsible for the cash collected from participants. To maximize investment returns, the investment fund must be administered by Islamic rules. Islamic investment instruments and fatwas from DSN-MUI (National Sharia Council – Indonesian Ulema Council). Islamic deposits, also known as Islamic deposits, are funds entrusted by consumers to Islamic banks or other financial institutions operating under Islamic rules. They are often organized on the concept of *mudharabah*, which entails a partnership between the bank and the customer, with the bank serving as manager and the customer providing capital. Based on the MUI Fatwa Number 03/DSN-MUI/IV/ 2000, the provisions of Islamic bank deposits are customers acting as *shahibul maal* (fund owners) and banks acting as *mudharib* (fund managers). Banks can carry out various types of

investment by Islamic principles and develop them. Capital must be stated in clear amounts in cash and not accounts receivable. Distribution of profits must be stated in the form of a ratio and stated in the agreement. Banks, acting as the *mudharib* cover all operational costs taken from the profits earned (Ling, 2012).

The Bank cannot reduce the portion of the profit ratio agreed upon without the consent of the customer. Research has revealed that Islamic deposit portfolios had a positive and significant effect on Islamic insurance assets. Based on the DSN-MUI Fatwa No. 32/DSN-MUI/IX/2002, *sukuk* (Islamic bonds) are a long-term security based on Islamic principles issued by issuers to Islamic bondholders which require the issuer to pay income to Islamic bondholders in the form of profit sharing or margin or fees, as well as repay the bond funds when maturity. According to the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), *sukuk* are a certificate of equal value representing an undivided share in the ownership of tangible assets, results, and services, certain project assets from specific investment activities (Tyllianakis et al., 2022). Sukuk is classified into two categories, in the type of issuer, those are government issuers called sovereign *sukuk* and corporate *sukuk*.

According to Potet et al., (2021), mutual funds, as a form of pooled fund management, invest in policies that comply with Islamic principles. Islamic mutual funds abstain from investing in financial instruments issued by entities that contravene Islamic law through their management or products. Examples of such entities include alcoholic beverage factories, swine farming industries, financial services that employ usury systems, or businesses that partake in unethical practices. Furthermore, according to the DSN MUI Fatwa Number 20/DSN-MUI/IV/2001 concerning Investment Implementation Guidelines for Islamic Mutual Funds, Islamic mutual funds are mutual funds that operate according to the provisions of Islamic principles either in the form of a contract between the investor as the *shahibul maal* (owner of capital/property) and investment manager acting on their behalf.

Studies have shown that Islamic mutual fund portfolios had a positive and significant effect on Islamic insurance assets. Despite the authority's longstanding implementation of investment risk mitigation measures, insurance companies must still contemplate the risk associated with capital market investment allocation, given the highly sensitive nature of stock prices to external sentiment. Elevated levels of stock price volatility will ultimately expose insurance companies to heightened risks regarding their liquidity and solvency. This tabarru

fund will be used to help others who experience disaster. The claim funds provided are taken from the tabarru' fund account that has been intended by all participants when they become sharia insurance participants, for the benefit of charity funds or mutual assistance funds. Fund management in insurance terms is the way an insurance company works in managing premium funds that have been collected by investing them in other financial institutions to obtain optimal results. In sharia insurance, in managing funds must be in accordance with Islamic law, namely by completely eliminating the possibility of elements of *gharar* (uncertainty), *maisir* (gambling), and usury (Fatchul et al., 2024).

Investment activities in the capital market with high levels of risk are feared to deeply impact the ability of insurance companies to settle their obligations to their customers. The demands for sharia insurance companies to achieve optimal profits will be limited by the provisions in meeting the solvency level of *tabarru'* funds, either in the form of capital or assets that must be owned by the company to overcome the risk of increasingly high liabilities, so that investment management will be less efficient and tend to choose low-risk investments. This can affect its profitability. Insurance companies obtain funds from various sources, which are then processed by the company to obtain results from managing the funds. The funds come from the total investment or assets it owns and from the capital or equity embedded in the company (Nafi', 2022).

METHOD, DATA, AND ANALYSIS

This study was conducted among Islamic Insurance companies in Indonesia. This study was like quantitative research based on tangible data measured in numbers and frequently employs statistical methods for analysis (Sugiono, 2016). The study gathered data on all Islamic Insurance Assets and Investment Portfolios, including Islamic Deposits, Corporate *Sukuk*, Sovereign Sukuk, and Islamic Mutual Funds. The study used E-Views 12 Student Version with the Vector Autoregression (VAR) model to analyze time-series data from January 2016 to April 2023, retrieved from the Financial Services Authority (OJK) data set. To assist the research, data was collected using the Documentation technique, which included archives, books, documents, and report material.

Data Analysis Technique

This research was tested using the Vector Autoregression (VAR) analysis method, VAR was first proposed. The advantage of the VAR method compared to other regression methods is that all variables are interconnected, so there is no need to position variables in dependent and independent positions (Lütkepohl, 2007). Another advantage of the VAR analysis method is that it can determine which variables have a dominant influence in the long term. Apart from that, this analysis method can also determine the existence of reciprocal relationships between related variables (Watson, 1993).

VAR makes all variables endogenous and reduces their distributed lag. In general, the regression equation model in VAR can be written as follows:

$$Yt = A0 + A1Yt-1 + A2Yt-2 + \cdots + ApYt-p + st$$

With:

p = Number of variables in the equation system

k = Number of lags in the equation system

Yt = Vector of dependent variables *(Y1t, Y2t, ..., Ynt)* with size n x 1,

A0 = Intercept vector with size n x 1,

Ai = Parameter matrix with size n x n, for each i = 1, 2, ..., p,

εt = Residual vector *(ε1t, ε2t, ..., εnt)* with size n x 1.

Data Stationarity Test

The stationarity test or unit root test is carried out to find out whether the related variables contain unit root elements. According to Altagi (2007), if the data used contains unit root elements, it will be difficult to estimate a model because the data trend tends to fluctuate around the average value. Therefore, researchers must test the stationarity of the data using the Summary Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests.

Determining the Optimal Lag

This test was carried out to form a good VAR model by selecting the optimum lag length. Determining the lag length (order) to be used in the VAR model can be determined using the Akaike Information Criterion (AIC), Schwarz Information Criterion (SC), or Hannan-Quinn Criterion (HQ). The lag that will be selected in this research model is the model with the

smallest value because if there is too much lag length, it will increase the degree of freedom, so a smaller lag is recommended to reduce the specification error (Toda & Phillips, 1995).

Impulse Response Function (IRF)

According to Sims (1980), the best way to characterize the dynamic structure in a model is to analyze the response of the model (system) to shocks. IRF can do this by showing how each endogenous variable responds over time to shocks and other endogenous variables. In other words, IRF can measure the magnitude of the shock (innovation) to other variables and the variable itself.

Variance Decomposition (VD)

The method that can be used to see how changes in a variable are indicated by changes in variance error, which are influenced by other variables, is Variance Decompositions (VD). This method can characterize the dynamic structure in the VAR model. With this method, the strengths and weaknesses of each variable can also be seen in influencing other variables over a long period (Freeman, 2017).

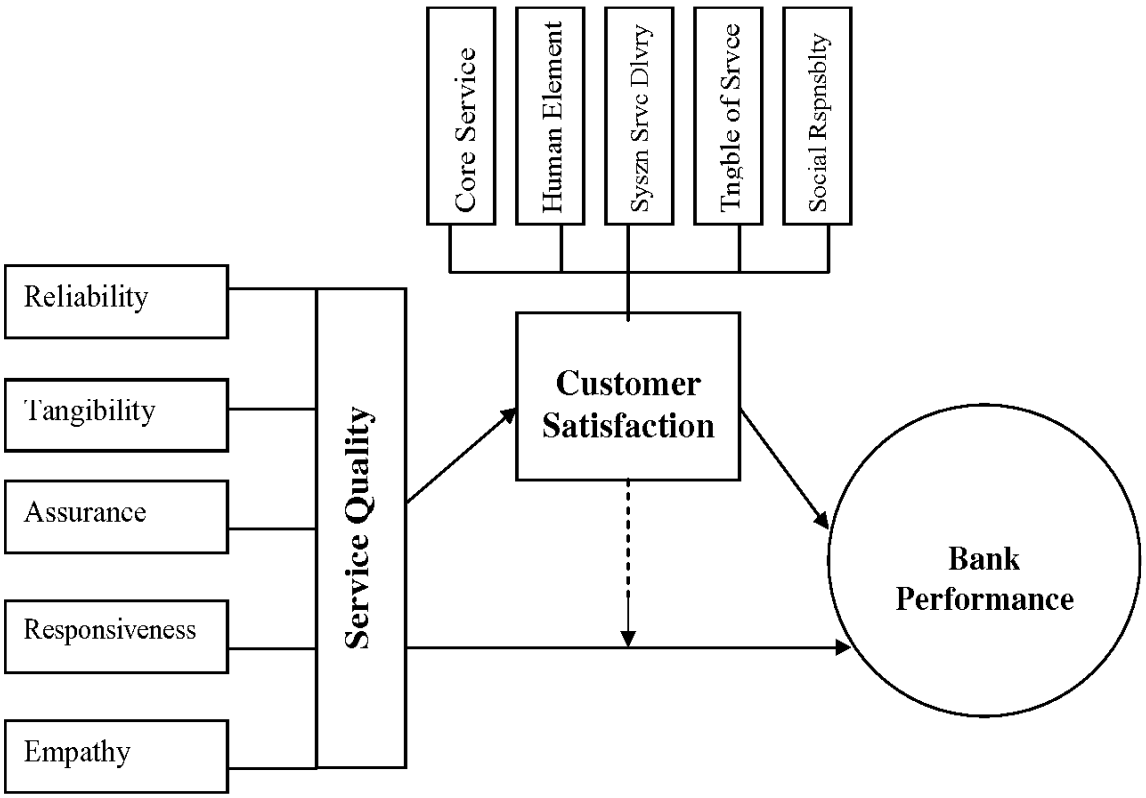

Figure1. Conceptual Framework for Measuring the health of Islamic Insurance

Source: Author, 2025

RESULT AND DISCUSSION

Stationarity Test

The first step in analyzing time series data is to conduct a stationarity test to determine whether the tested variables are stationary or not. Stationary tests are carried out with unit root tests using Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) at the level so that stationary data is obtained. With the assumption that if the probability <0.05 = indicates stationary data. Conversely, if the result of the probability is> 0.05 = indicates non-stationary data. The following are the results of the stationary test (summary) with several suggested methods.

Table 1. Stationarity Test Results

Lag	LogL	LR	FPE	AIC	SC	HQ
0	739.6228	NA	2.14E-14	-17.28524	-17.14156	-17.22745
1	1164.827	790.3789*	1.74e-18*	-26.70180*	-25.83969*	-26.35504*
2	1183.425	32.38309	2.04E-18	-26.55118	-24.97064	-25.91544
3	1200.426	27.60134	2.50E-18	-26.36296	-24.06400	-25.43825

Source: E-Views 12 SV Results, 2025

Based on Table 1, the stationary test results show that the data has been stationary at the level. Furthermore, based on the ADF and PP methods, the results show that all data are stationary. All suggested methods show significant results at the level with results smaller than 0.05. This research will use the VAR method, which is more recommended if the data has been stationary at the level.

Optimal Lag

In the VAR and VECM approaches, lag length is very sensitive in determining the results. Determining the optimal lag length aims to determine the length of the period of influence of a variable on its past variables and other endogenous variables. In determining the optimal lag length, it is recommended to use a relatively smaller lag length. To determine the optimal lag length, it can be seen from several criteria, namely: Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwarz Information Criterion (SC), and Hannan-Quinn Information Criterion (HQ). The optimal lag length test results can be seen in the following table.

Stability Test

After determining the optimal lag, the next step is to see if the lag value that has been determined is stable in the model. The stability test is important so that the variable composition forms a stable model. The following are the results of the stability test in this study.

Table 2. VAR Model Stability Test Results

Root	Modulus
0.943961 - 0.016970i	0.944114
0.943961 + 0.016970i	0.944114
0.753540 - 0.049711i	0.755178
0.753540 + 0.049711i	0.755178
0.506773	0.506773

Source: E-Views 12 SV Results, 2025

In Table 2, the VAR model is considered stable if all modulus values of the characteristic roots are < 1, and unstable if the modulus value is at a radius > 1. In the stability test results above, the largest modulus value is 0.944114, which is smaller than 1.

Granger Causality

The next step is to conduct a Granger Causality test. The Granger Causality test is conducted to determine the causal relationship between groups of variables. Causal relationships, both one-way and two-way, can be tested with the Granger Causality test. The following are the results of the Granger Causality test in this study.

Table 3. Granger Causality Test Results

Null Hypothesis:	F-Statistic	Prob.
DPST > ASET	0.61831	0.4339
ASET > DPST	3.92638	0.0508
SKUK > ASET	1.33135	0.2518
ASET > SKUK	5.05976	0.0271*
SBSN > ASET	6.00533	0.0163*
ASET > SBSN	0.17773	0.6744
RKDN > ASET	0.29745	0.5869
ASET > RKDN	23.9012	5.00E-06
SKUK > DPST	0.61523	0.4350
DPST > SKUK	0.45772	0.5006
SBSN > DPST	2.65323	0.1071

Null Hypothesis:	F-Statistic	Prob.
RKDN > DPST	8.38195	0.0048*
DPST > RKDN	0.54634	0.4619
SBSN > SKUK	6.02172	0.0162*
SKUK > SBSN	7.02971	0.0096*
RKDN > SKUK	1.51588	0.2217
SKUK > RKDN	2.81087	0.0973
RKDN > SBSN	0.67100	0.4150
SBSN > RKDN	13.9803	0.0003*

Source: E-Views 12 SV Results, 2025

In Table 3, based on the results of the Granger Causality test, there are 6 causal relationships. With the assumption that if the probability value is less then the significance level of 0.05, a causal relationship is indicated. The results that show a two-way relationship are SBSN and SKUK. In addition, some other causality test results only have a one-way relationship, such as ASET > SKUK, SBSN > ASET, RKDN > DPST, and SBSN > RKDN. All of them have probability values smaller than 0.05.

Ordinary Least Squares

Ordinary least squares (OLS) is a method used in statistics to estimate the parameters of linear regression models. OLS can provide simultaneous test results by focusing on the probability F-statistic. Simultaneous analysis is carried out to determine the effect of independent variables on the dependent variable together. With the provision of a significance value of 0.05, if the probability F-statistic result is smaller than the predetermined significance level, it can be concluded that together the independent variables affect the dependent variable.

Table 4. OLS Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.868049	0.279968	10.24419	0
DPST (-1)	0.123412	0.053370	2.312381	0.0233
SKUK (-1)	0.068799	0.021464	3.205247	0.0019
SBSN (-1)	0.169670	0.016197	10.47546	0.0000
RKDN (-1)	0.106465	0.022062	4.825667	0.0000
R-squared	0.964350	Mean dependent var		4.610507
Adjusted R-squared	0.962611	S.D. dependent var		0.053457
F-statistic	554.5281			
Prob(F-statistic)	0.0000			

Source: E-Views 12 SV Results, 2025

In the table 4 above, the probability F-statistic result is smaller than 0.05. OLS results use lag 1 for each independent variable, so it can be concluded that simultaneously, all independent variables have a significant effect on the dependent variable. These results are under the fifth hypothesis, namely, Corporate Sukuk, Islamic Deposit, Sovereign *Sukuk*, and Islamic Mutual Funds have a significant effect on Islamic Insurance Assets. In addition, the partial effect of each variable can be seen based on the probability result if it is smaller than 0.05 in linear regression. Variables that have probability results smaller than 0.05 are DPST, SKUK, SBSN, and RKDN. These results conclude that each variable partially has a positive and significant effect on the ASET variable.

Vector Autoregression (VAR)

The causality relationship in VAR is a causality relationship between two variables that can include the element of time. In the optimal lag selection section, it has been determined for the period according to lag 1, which means 1 period before the last period. Significance for the short term can be seen based on the results of the T-statistic value, Standard errors and T-statistics. If the T-statistic value is greater than 1.98, it can be concluded that the effect is significant on the dependent variable.

Table 5. VAR Estimation Results

	ASET
ASET (-1)	0.743512
	(0.07797)
	[9.53581]
DPST (-1)	0.006646
	(0.03884)
	[0.17112]
SKUK (-1)	0.013932
	(0.0159)
	[0.87619]
SBSN (-1)	0.040102
	(0.0176)
	[2.27857]
RKDN (-1)	0.012028
	(0.01817)
	[0.66187]
C	0.917179

	ASET
	[3.25828]
R-squared	0.983204
Adj. R-squared	0.982168
F-statistic	948.3417

Source: E-Views 12 SV Results, 2025

In the table 5, the results on ASET (-1) show a T-statistic value greater than 1.98, which means that ASET with 1 previous period has a positive and significant effect with a coefficient of 0.74. In addition, the T-statistic results on the SBSN (-1) variable also show a positive and significant effect on the ASET variable with a coefficient of 0.04. These results conclude that the ASET dependent variable is influenced by the ASET variable itself in the previous 1 period. Meanwhile, the only independent variable that has a significant effect in the previous 1 period is SBSN.

Table 6. Variance Decomposition of ASET

Period	S.E.	ASET	DPST	SKUK	SBSN	RKDN
1	0.007139	100	0	0	0	0
2	0.009163	98.94254	0.095456	0.048596	0.825226	0.088181
3	0.010379	96.85677	0.347347	0.197077	2.428870	0.169934
4	0.011245	94.02516	0.752890	0.482943	4.525314	0.213696
5	0.011930	90.6882	1.279718	0.928932	6.877608	0.225539
24	0.018164	47.20183	6.749822	17.09161	28.58334	0.373390
25	0.018316	46.42747	6.754141	17.61040	28.81670	0.391283
26	0.018457	45.72703	6.752110	18.09159	29.02062	0.408644
27	0.018586	45.09301	6.745136	18.53753	29.19890	0.425417
28	0.018706	44.51876	6.734380	18.95048	29.35482	0.441562
Cholesky Ordering: ASET DPST SKUK SBSN RKDN						

Source: E-Views 12 SV Results, 2025

Based on Table 6 above, the VD results show that the contribution to ASET at the beginning of the period is still dominated by the ASET variable itself. After 6 periods, other variables began to make a large contribution to ASET. In detail, the 28th period can be seen in the table above. The contribution of ASET to ASET itself was initially 100%, then began to decline until the 28th period by 44%. Furthermore, the contribution of the DPST variable is not too large because in the 28th period, it only contributed 6% to ASET. In addition, a large contribution is found in the SKUK and SBSN variables. Both contributed 18% and 29% in the 28th period to ASET. Finally, the RKDN variable does not seem to contribute, even though in the 28th period, RKDN has a contribution of 0.4% to ASET.

Measurement of Mediation Variable

The result of mediation variable showed in Figure 1

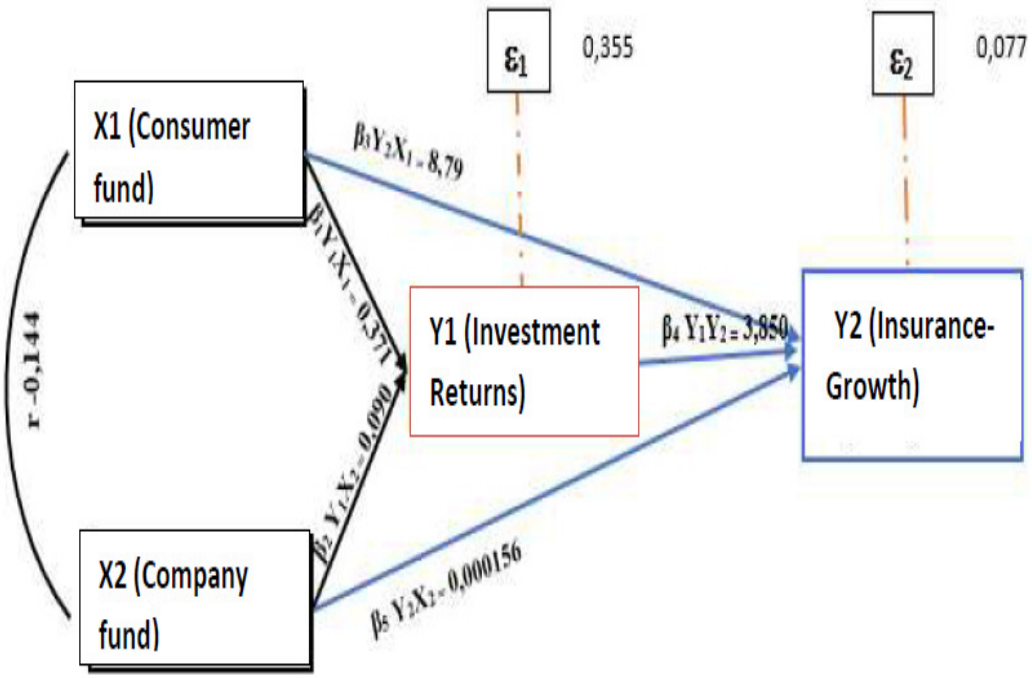

Figure 2. Path Diagram Model

Figure 2 showed the coefficient value of consumer fund to corporate growth directly was 8.791, while indirectly was 1.428. Hence, based on the coefficient value it can be said that the direct effect of consumer fund to corporate growth was better than its indirect effect. On the other hand, the coefficient value of corporate fund to corporate growth directly was 0,000156, while indirectly was 0.3465. Thus, the indirect effect of corporate funds was better than its direct effect.

DISCUSSION

The Effect of *Mudharabah* Deposit on Islamic Insurance Assets

Based on the results of the Ordinary Least Squares test, the effect of *mudharabah* deposit (DPST) has a positive and significant effect on Islamic insurance assets (ASET). The probability result of the *mudharabah* deposit is 0.02, which means it is smaller than the significance of 0.05. By the first hypothesis in this study, the *mudharabah* deposit has a positive and

significant effect on Islamic insurance assets. These results are in line with research by Oktaviani & Hendratmi (2020), which explains that the effect of *mudharabah* deposit has a positive and significant effect on Islamic insurance assets in Indonesia. In the Granger Causality test results, *mudharabah* deposit does not show any one-way or two-way relationship to Islamic insurance assets.

Then, in the VAR estimation with lag 1 for short-term effect, the *mudharabah* deposit also has no significant effect on Islamic insurance assets. In addition, *mudharabah* deposit still needs to be considered because it has a 6% contribution to Islamic insurance assets in the long run. Moreover, the IRF results on the response of Islamic insurance assets to *mudharabah* deposit shocks, although showing a decrease at the beginning of the period, began to increase again afterwards (Sukmaningrum et al., 2023). One of the allocations of the Islamic insurance portfolio is a *mudharabah* deposit. *Mudharabah* deposits do have a very high level of investment security, considering that investments in *mudharabah* deposits are usually made in large banks and financial institutions (Diana & Apriani, 2020). As stated by Maulina et al. (2023), consumers entrust money to Islamic banks or other financial institutions that follow Islamic law with *mudharabah* deposits, also referred to as Islamic deposits.

One of the products offered by Islamic banking is by using the *mudharabah* contract. In simple terms, the definition of *mudharabah* is a transaction of investment of funds from the fund owner *(shahibul maal)* to the fund manager *(mudharib)* to carry out certain business activities by sharia, with the sharing of business results between the two parties based on a previously agreed ratio (Faye et al., 2013). Among the products that use the profit-sharing principle in collecting funds are current accounts, savings, and deposits, as a source of funding for bank operations. Based on Law Number 10 of 1998 concerning amendments to Law Number 7 of 1992 concerning banking, what is meant by savings is savings whose withdrawals can only be made according to certain agreed conditions, but cannot be withdrawn by check, giro bill, or other instruments that are equated with that. What is meant by Sharia savings is savings that are run based on Sharia principles. In this case, the National Sharia Council (DSN) has issued a fatwa stating that the permitted savings are savings based on Islamic principles, namely *mudharabah* and *wadiah* (Ahmed, 2025).

The large Muslim population in Indonesia is a great opportunity for Islamic banks to reach as many customers as possible. This opportunity has been strengthened by the MUI

fatwa in January 2004 regarding the prohibition of bank interest. In carrying out its operations, several factors also influence customer decisions in choosing banking services, especially Islamic banking services. One of them is inflation, which is a continuous increase in the general prices from an economy. If inflation occurs, there is uncertainty in the macroeconomic conditions of a country, which causes people to use more of their funds for consumption. High prices and fixed income or income increasing by the amount of inflation mean that people do not have excess funds to be saved in the form of savings or invested (Bossman et al., 2022).

Mudharabah savings are savings that are run based on the *mudharabah* contract. As previously stated, *mudharabah* has two forms, namely *mudharabah mutlaqah* and *mudharabah muqayyadah*; the main difference between the two lies in the presence or absence of requirements given by the fund owner to the bank in managing his assets. In this case, the Islamic bank acts as *mudharib* (fund manager), while the customer acts as *shahibul maal* (fund owner). In its capacity as *mudharib*, the Islamic bank has the authority to carry out various kinds of businesses that do not conflict with sharia principles and develop them, including carrying out *mudharabah* contracts with other parties (Ahmed et al., 2024). However, on the other hand, the Islamic bank also has the nature of a trustee, which means that it must be careful and wise, have good intentions, and be responsible for everything that arises due to its mistakes or negligence. From the results of managing the *mudharabah* funds, the Islamic bank will share the profits with the fund owner according to the agreed ratio and stated in the account opening contract. In managing these funds, the bank is not responsible for losses that are not caused by its negligence (Katterbauer et al., 2022).

However, if mismanagement occurs, the bank is fully responsible for the losses. In managing *mudharabah* assets, the bank covers the operational costs of savings by using the profit ratio that is its right. In addition, the bank is not allowed to reduce the profit ratio of the savings customer without the consent of the person concerned. By applicable provisions, PPH for profit sharing on *mudharabah* savings is charged directly to the *mudharabah* savings account at the time of profit sharing calculation (Younis et al., 2024). Sharia banks will later pay profit sharing to customers at the end of each month, following the ratio that has been agreed upon when the *mudharabah* savings account is recorded. The profit sharing that will be received by customers will always change at the end of the month (Ismail, 2021). Changes in profit sharing are caused by fluctuations in Sharia bank income and fluctuations in

mudharabah savings funds. The legal basis for sharia banking products in the form of savings in Indonesian law is Law No. 10 of 1998 concerning amendments to Law No. 7 of 1992 concerning banking. Currently, specifically based on Law Number 21 of 2008 concerning Sharia banking products. Savings, as one of the fund collection products, also has a legal basis in PBI No. 9/19/PBI/2007 concerning the implementation of sharia principles in fund collection and fund distribution activities (Huang et al., 2020).

The Effect of Sovereign *Sukuk* on Islamic Insurance Assets

Based on the results of the Ordinary Least Squares test, the effect of sovereign sukuk (SBSN) has a positive and significant effect on Islamic insurance assets (ASET). The probability result of sovereign sukuk is 0.00, which means it is smaller than the significance of 0.05. Under the second hypothesis in this study, sovereign sukuk has a positive and significant effect on Islamic insurance assets. This is in line with research Sayadi & Setiawan, (2024) which explained that the effect of sovereign *sukuk* has a positive and significant effect on Islamic insurance assets in Indonesia. In the Granger Causality test results, sovereign *sukuk* shows a one-way relationship to Islamic insurance assets.

Furthermore, in the VAR estimation with lag 1 for short-term effects, sovereign *sukuk* has a positive and significant influence on Islamic insurance assets. In addition, sovereign *sukuk* needs to be an important factor because it has a contribution of up to 29% to Islamic insurance assets in the long run. Finally, the IRF results on the response of Islamic insurance assets to sovereign *sukuk* shocks show a rapid increase at the beginning of the period, This can be a reference for the optimization of investment portfolios for investors who want to follow the Islamic insurance investment portfolio (Abdullah, 2018). Sovereign *Sukuk* or State Islamic Securities (SBSN) are securities denominated in rupiah and foreign currencies based on Islamic principles issued by the Republic of Indonesia, either directly by the Government or through the SBSN Issuing Company, as evidence of participation in SBSN Assets, and must be paid or guaranteed payment of compensation and nominal value by the Republic of Indonesia, by the provisions of the agreement governing the issuance of the SBSN (Soemitra, 2017).

In addition, the outstanding value of Indonesia's sovereign *sukuk* has increased by 950 billion Rupiah over the past 10 years. The issuance of sovereign *sukuk* also aims to diversify

investments for investors. Based on the results of the Ordinary Least Squares test, the effect of corporate *sukuk* (SKUK) has a positive and significant effect on Islamic insurance assets (ASET). The probability result of *sukuk* is 0.0019, which means it is smaller than the significance of 0.05. Following the third hypothesis in this study, *sukuk* has a positive and significant effect on Islamic insurance assets (Baroroh, 2021). These results are in line with research by Nugraha et al., (2021), that explains the effect of *sukuk* has a positive and significant effect on Islamic insurance assets in Indonesia. In the Granger Causality test results, *Sukuk* shows a one-way relationship to Islamic insurance assets. The result showed the influence of Islamic insurance assets on *sukuk* investment. Furthermore, in the VAR estimation with lag 1 for short-term effects, sukuk does not have a significant influence on Islamic insurance assets. In addition, sukuk needs to be an important factor because it has a contribution of 18% to Islamic insurance assets in the long run. Finally, the IRF results on the response of Islamic insurance assets to *sukuk* shocks show a rapid increase at the beginning of the period.

Based on a statistical report by OJK Indonesia (2023), the outstanding value of corporate *sukuk* in Indonesia had reached 234 trillion Rupiah in December 2023. The rapid development of corporate *sukuk* in Indonesia is one of the investment instruments with large and promising returns. However, the potential for default from companies that issue *sukuk* remains the biggest fear of investors. *Sukuk* ratings can be a reference for investors in considering investment options in this investment instrument. Based on the results of the Ordinary Least Squares test, the influence of mutual funds (RKDN) has a positive and significant effect on Islamic insurance assets (ASET). The probability result of the *mudharabah* deposit is 0.00, which means it is smaller than the significance of 0.05. Per the fourth hypothesis in this study, mutual funds have a positive and significant effect on Islamic insurance assets. These results are in line explains the effect of *mudharabah* deposit is positive and has significant effect on Islamic insurance assets in Indonesia.

In the Granger Causality test results, mutual funds do not show any one-way or two-way relationship to Islamic insurance assets. Then, in the VAR estimation with lag 1 for short-term effects, mutual funds also do not have a significant influence on Islamic insurance assets. In addition, based on the Variance Decomposition results, mutual funds do not have a large contribution to Islamic insurance assets in the long run. Moreover, the IRF results on the response of Islamic insurance assets to mutual fund shocks, although showing an increase at

the beginning of the period, afterwards began to decline. Based on the definition, Islamic mutual funds are defined as a container that contains funds collected from several investors, which are then put together in a securities portfolio managed by investment managers to be invested by Islamic principles. Based on the OJK, (2023) in the Roadmap for the Development and Strengthening of Indonesian Insurance, the Islamic insurance investment portfolio in Indonesia has not added much to the investment portion of Islamic mutual fund instruments over the past 5 years.

Based on the Ordinary Least Squares test results, the Probability F-statistic shows a value of 0.00, which is smaller than the significance of 0.05. These results conclude that the effect of *mudharabah* deposits (DPST), sovereign *sukuk* (SBSN), *sukuk* (SKUK), and mutual funds (RKDN) together has a significant effect on Islamic insurance assets (ASET). Broadly speaking, all variables included in the investment portfolio in this study have a significant effect on Islamic insurance assets in Indonesia (Lasmiatun & Manteghi, 2025). One of the rapidly growing Islamic financial instruments is *sukuk*. Growing the investment sector using Islamic capital market instruments is one of the efforts that Indonesia can make to encourage the rate of economic growth in Indonesia. At present, the Islamic capital market sector is one of the investment sectors that is highly considered in Indonesia. The Islamic capital market is one of the most important investment instruments in the economy that occurs in Indonesia and in the world (Rahmanto et al., 2020).

The Islamic capital market is the same as banking as a medium that can be an intermediary for parties with excess funds and parties with a lack of capital. In the Islamic capital market, all countries in the world can become economic actors. At present, in Indonesia, the development of the Islamic capital market is very good and has experienced very rapid growth from year to year. This very rapid growth can be seen from the development of Islamic capital market instruments, namely Islamic stocks, *sukuk*, and Islamic mutual funds, which have experienced very rapid growth (Kholis & Afifah, 2022). This very rapid growth certainly has an impact on the development of the capital market in general and, of course, will also affect the economy in Indonesia (Alhammadi, 2023).

The Financial Services Authority (OJK), which has the task of regulating and supervising all financial services activities in Indonesia, includes both bank financial institutions and non-bank financial institutions such as capital markets, insurance, pension funds, and other

financial institutions. Various policies made and implemented by the Financial Services Authority (OJK) in the capital market, especially the sharia capital market, certainly have a very significant impact on the development of the sharia capital market and the Financial Services Authority (OJK) is also active in encouraging the development of sharia products in the Indonesian capital market. *Sukuk* and several other financial instruments come from the same history (Yesuf & Aassouli, 2020).

The instrument is used as an instrument for money growth by involving the activities of the community, who act as investors in the dynamics of the money market and become the basis for agreed investment profits or based on rent for property. *Sukuk* is a Sharia investment product by places the use of the right to own shares in fixed assets, benefits, and services, or a form of project fairness or a certain form of investment. The definition of sukuk in Bapepam-LK Regulation Number IX.A.13 defines a Sharia effect in the form of a certificate or proof of ownership that has the same value and represents an undivided part of the Sharia principles. *Sukuk* is similar to bonds but has different characteristics. If bonds are debt securities, then *sukuk* is proof of joint ownership of assets or projects that are being run. Claims of *sukuk* ownership are based on specific assets or projects, and *sukuk* funds are used for investment or financing of halal businesses (Supriyanti et al., 2025).

CONCLUSION AND SUGGESTION

Based on the results of the study, the authors found that the effect of the investment portfolio on *mudharabah* deposits, sovereign *sukuk, sukuk*, and mutual funds has a positive and significant effect on the growth of Islamic insurance assets in Indonesia. Furthermore, this study found that all independent variables simultaneously have a significant effect on the growth of Islamic insurance assets. These results conclude that the investment portfolio had influenced Islamic insurance firms a significant effect on the growth of Islamic insurance assets in Indonesia. In the results of the Granger Causality test and Vector Autoregression (VAR) test, only the sovereign *sukuk* portfolio has a significant influence on the growth of Islamic insurance assets. This result can be a consideration for stakeholders and investors in seeing the optimization of investment in the financial sector in Indonesia. In addition, sovereign *sukuk* and corporate *sukuk* are important factors in the growth of Islamic insurance assets, with a large contribution to the Variance Decomposition (VD) test results. Finally, a large

increase in the allocation of investment in *mudharabah* deposits can affect the increase in Islamic insurance assets, this is concluded based on the results of the Impulse Response Function (IRF) test in this study.

Based on the research that has been conducted, there are several limitations and concerns for further research in perfecting this research, because this research certainly has several shortcomings or limitations that need to be corrected. In terms of research variables, this study only uses investment portfolio variables in *mudharabah* deposits, sovereign *sukuk, sukuk*, and mutual funds as independent variables. Of course, this is still lacking because there are still other factors that can affect the growth of Islamic insurance assets in Indonesia. In addition, the scope of this research is too broad, as it uses data from OJK Indonesia, with a total of all Islamic insurance companies in Indonesia. Future research can use the same variables with more specific coverage of Islamic insurance companies and types of Islamic insurance companies, such as Islamic life insurance, Islamic general insurance, and Islamic reinsurance.

ACKNOWLEDGEMENTS

We would like to express our gratitude for the support from Sunan Gunung Djati State Islamic University, Bandung, during the research and writing of this paper. In addition, we would also like to express our gratitude to all informants and volunteer research teams who have provided information to strengthen the data of this study.

REFERENCE

Abdullah, Z. (2018). An analysis of factors affecting the investment growth of Indonesian Islamic insurance. *Journal of Islamic Economics Lariba*, *4*(2), 71–81.

Ahmed, F., Rahman, M. U., Rehman, H. M., Imran, M., Dunay, A., & Hossain, M. B. (2024). Corporate capital structure effects on corporate performance, pursuing a strategy of innovation in manufacturing companies. *Heliyon*, *10*(3), e24677. https://doi.org/10.1016/j.heliyon.2024.e24677

Ahmed, S. (2025). The fatal flaw of glocal solutions to Illicit financial flows. *Journal of Economic Criminology*, *7*(November 2024), 100116. https://doi.org/10.1016/j.jeconc.2024.100116

Altagi, B. H. B. (2007). A companion to teoretical econometrics. *A Companion to Theoretical Econometrics*, *14*(2), 655–677. https://doi.org/10.1111/b.9781405106764.2003.00036.x

Alhammadi, S. (2023), "Expanding financial inclusion in Indonesia through Takaful: Opportunities, challenges and sustainability". *Journal of Financial Reporting and Accounting*, Advance online publicationt. https://doi.org/10.1108/JFRA-05-2023-0256

Baroroh, H. (2021). Asset growth In Sharia insurance: Macroeconomic and internal factors of Sharia insurance companies in Indonesia. *Al-Amwal : Jurnal Ekonomi Dan Perbankan Syari'ah*, *13*(2), 227. https://doi.org/10.24235/amwal.v13i2.9018

Bossman, A., Owusu Junior, P., & Tiwari, A. K. (2022). Dynamic connectedness and spillovers between Islamic and conventional stock markets: time- and frequency-domain approach in the COVID-19 era. *Heliyon*, *8*(4), e09215. https://doi.org/10.1016/j.heliyon.2022.e09215

Diana, N., & Apriani, T. (2020). The effect of investments and risk-based capital (RBC) of Tabarru funds on company (case study of Sharia insurance in Indonesia for 2014-2019). *International Journal of Nusantara Islam*, *8*(1), 87–97. https://doi.org/10.15575/ijni.v8i1.8933

Fatchul, M. F. E. I., Uyun, S. E., & Khalida, N. D. (2024). Determinants of financial performance in influencing inclusivity of Sharia pension fund participants in Indonesia. *Jurnal Ekonomi, Bisnis & Entrepreneurship*, *18*(1), 262–282. https://doi.org/10.55208/jebe.v18i1.523

Faye, I., Triki, T., & Kangoye, T. (2013). The Islamic finance promises: Evidence from Africa. *Review of Development Finance*, *3*(3), 136–151. https://doi.org/10.1016/j.rdf.2013.08.003

Freeman, J. R. (2017). Vector autoregression and the study of politics. American Journal of Political Science, *22*(4), 842-877. https://www.jstor.org/stable/2111112

Ha, L. T., Bouteska, A., Sharif, T., & Abedin, M. Z. (2024). Dynamic interlinkages between carbon risk and volatility of green and renewable energy: A TVP-VAR analysis. *Research in International Business and Finance*, *69*, 102278. https://doi.org/10.1016/j.ribaf.2024.102278

Hendra, G. I. (2021). Determinants of financial stability of Islamic insurance companies listed on the Indonesian financial services authority. *Share: Jurnal Ekonomi Dan Keuangan Islam*, *10*(2), 253. https://doi.org/10.22373/share.v10i2.9098

Huang, W., Song, B., Liang, J., Niu, Q., Zeng, G., Shen, M., Deng, J., Luo, Y., Wen, X., & Zhang, Y. (2020). Jo u l Pre of. *Journal of Hazardous Materials*, *12*(2), 124187. https://doi.org/10.1016/j.heliyon.2024.e41579

Ismail, M. (2021). The magnitude of the investment yield of sharia insurance in Indonesia. *Accounting*, *7*(3), 497–506. https://doi.org/10.5267/j.ac.2021.1.009

Katterbauer, K., Syed, H., Cleenewerck, L., & Genc, S. Y. (2022). Robo-Sukuk pricing for Chinese equities. *Borsa Istanbul Review*, *22*(5), 854–860. https://doi.org/10.1016/j.bir.2022.06.002

Kholis, N., & Afifah, Y. N. (2022). Measuring financial efficiency of Insurance companies in Indonesia using stochastic frontier analysis approach. *Journal of Islamic Economics Lariba*, *8*(1), 196–212. https://doi.org/10.20885/jielariba.vol8.iss1.art12

Kismawadi, E.R. (2024). Analysis of key influencing factors on the financial performance of Jakarta Islamic Index 30 industrial firms. *Journal of Islamic Accounting and Business Research*. Advance online publication. https://doi.org/10.1108/JIABR-09-2023-0324

Lasmiatun, K. M. T., & Manteghi, N. (2025). The impact of artificial intelligence (AI) implementation on Islamic financial literacy and global economic changes in the banking world. *JIESBI: Journal of Islamic Economics and Business Ethics, 2*(1), 23–43. https://doi.org/10.24235/jiesbiv1i3

Ling, N. L. F. J. (2012). Analysis of factors and the impacts of sale and leaseback transactions. *Procedia - Social and Behavioral Sciences*, *36*, 502–510. https://doi.org/10.1016/j.sbspro.2012.03.055

Lütkepohl, H. (2007). Vector autoregressions. *A Companion to Theoretical Econometrics*, *15*(4), 678–699. https://doi.org/10.1002/9780470996249.ch33

Maldonado-Castro, J., Gallego-Losada, R., & Montero-Navarro, A. (2024). Mapping the intellectual structure of microfinance and women's empowerment: A bibliometric analysis. *Heliyon*, *10*(20), 39563. https://doi.org/10.1016/j.heliyon.2024.e39563

Maulina, R., Dhewanto, W., & Faturohman, T. (2023). The integration of Islamic social and commercial finance (IISCF): Systematic literature review, bibliometric analysis, conceptual framework, and future research opportunities. *Heliyon*, *9*(11), 34–50. https://doi.org/10.1016/j.heliyon.2023.e21612

Nafi' Hasbi, M. Z. (2022). The need for revitalizing zakah regulation toward productive zakah. *Al'Adalah*, *25*(2), 125–136. https://doi.org/10.35719/aladalah.v25i2.302

Nasution, Z. (2022). Sharia insurance efficiency in Indonesia and Malaysia using the stochastic frontier approach analysis. *Asian Journal of Islamic Management (AJIM)*, *3*(2), 123–136. https://doi.org/10.20885/ajim.vol3.iss2.art5

Nasution, Z., Adiba, E. M., & Abdulrahim, M. O. (2019). Comparison analysis of risk-based capital (RBC) performance and its effect on Islamic insurance profitability in Indonesia and Malaysia. *Al-Uqud : Journal of Islamic Economics*, *3*(2), 149. https://doi.org/10.26740/al-uqud.v3n2.p149-160

Nugraha, D. P., Prayudiawan, H., & Sudariswan, E. (2021). Are there relationships of investment, risk, and efficiency levels of financial performance in Sharia insurance in Indonesia ? Development of Sharia insurance companies. *Enrichment: Journal of Management*, *12*(1), 166–171.

OJK. (2023). *Peta Jalan Pengawasan Perilaku Pelaku Usaha Jasa Keuangan, Edukasi, dan Pelindungan Konsumen 2023-2027*. 1–83.

OJK Indonesia. (2023). *Statistik {Sukuk} {Syariah} - {Desember} 2023*.

Oktaviani, R. S., & Hendratmi, A. (2020). Financial performance differences analysis based on the early warning system on national private Sharia insurance companies and joint ventures in Indonesia. *International Journal of Innovation, Creativity and Change*, *11*(9), 666–680. www.ijicc.net

Potet, J., Beran, D., Ray, N., Alcoba, G., Habib, A. G., Iliyasu, G., Waldmann, B., Ralph, R., Faiz, M. A., Monteiro, W. M., de Almeida Gonçalves Sachett, J., di Fabio, J. L., Cortés, M. de los Á., Brown, N. I., & Williams, D. J. (2021). Access to antivenoms in the developing world: A multidisciplinary analysis. *Toxicon: X*, *12*(2), 32–54. https://doi.org/10.1016/j.toxcx.2021.100086

Priyana, I., Permanawati, V., & Saberina, S. (2022). Factors affecting the financial performance of Islamic insurance companies in Indonesia using surplus on contribution (SOC). *Turnover Intention Yang Dipengaruhi Oleh Job Insecurity Dan Job Motivation*, *9*(1), 33–43.

Rahman, M. H., Tanchangya, T., Rahman, J., Aktar, M. A., & Majumder, S. C. (2024). Corporate social responsibility and green financing behavior in Bangladesh: Towards sustainable tourism. *Innovation and Green Development*, *3*(3), 100133.

https://doi.org/10.1016/j.igd.2024.100133

Rahmani, S. (2020). Faktor-faktor kebijakan yang mempengaruhi tabungan *Mudharabah* pada perbankan syariah di Indonesia. *JPS (Jurnal Perbankan Syariah)*, *1*(2), 122–137. https://doi.org/10.46367/jps.v1i2.225

Rahmanto, D. N. A., Fasa, M. I., & Rijal, K. (2020). Source of funds and Islamic insurance growth: Investment returns as a mediation. *Al-Uqud : Journal of Islamic Economics*, *4*(1), 104. https://doi.org/10.26740/al-uqud.v4n1.p104-114

Rahmawati, I., Rifan, D. F., Suryanto, T., & Pramasha, R. R. (2024). The effect of total asset turnover and return on assets on company profit growth (study of mining companies listed on the Indonesian Sharia stock index (ISSI) for the 2017-2022 Period. *Al-Kharaj: Journal of Islamic Economic and Business*, *6*(1), 37–55. https://doi.org/10.24256/kharaj.v6i1.4971

Safitri, E. K., & Suprayogi, N. (2017). Analisis rasio kesehatan keuangan dana *Tabarru'* yang mempengaruhi profitabilitas pada asuransi syariah di Indonesia (Periode 2012-2014). *Jurnal Ekonomi Syariah Teori Dan Terapan*, *4*(1), 73. https://doi.org/10.20473/vol4iss20171pp73-88

Saleh, H., Surya, B., Ahmad, D. N. A., & Manda, D. (2020). The role of natural and human resources on economic growth and regional development: With discussion of open innovation dynamics. *Journal of Open Innovation: Technology, Market, and Complexity*, *6*(4), 1–23. https://doi.org/10.3390/joitmc6040103

Sayadi, M. H., & Setiawan, D. (2024). Influence of ownership structure and international operations on web-based environmental disclosure in the Asian mining industry. *Sustainable Futures*, *8*, 100275. https://doi.org/10.1016/j.sftr.2024.100275

Sims, C. A. (1980). Macroeconomics and Reality. *Econometrica*, *48*(1), 1.

Soemitra, A. (2017). *Bank & {Lembaga} {Keuangan} {Syariah}*. Prenada Media.

Sugiono. (2016). *Metode Penelitian Kuantitatif, Kualitatif dan R&D* (Issue April).

Sukmaningrum, P. S., Hendratmi, A., Shukor, S. binti A., Putri, M. R., & Gusti, R. P. (2023). Determinants of Sharia life insurance productivity in Indonesia. *Heliyon*, *9*(6), e16605. https://doi.org/10.1016/j.heliyon.2023.e16605

Supriyanti, S. S., Nofiana, D., & Pertiwi, G. (2025). *How do pancasila economics and Islamic economics relate to financial governance policies in Indonesia ? 2*(1), 1–22. https://doi.org/10.24235/jiesbiv1i3

Syah Aji, R. H., & Kurniasih, K. (2015). The intellectual capital effect on financial performances at Islamic insurance. *Al-Iqtishad: Jurnal Ilmu Ekonomi Syariah*, *7*(2), 181–196. https://doi.org/10.15408/aiq.v7i2.1696

Toda, H. Y., & Phillips, P. C. B. (2007). Vector autoregression and causality : a theoretical overview and simulation study. *Economic Review*, *February 2013*, 37–41.

Tyllianakis, E., Martin-Ortega, J., & Banwart, S. A. (2022). An approach to assess the world's potential for disaster risk reduction through nature-based solutions. *Environmental Science and Policy*, *136*, 599–608. https://doi.org/10.1016/j.envsci.2022.07.021

Watson, M. W. (1993). Vector autoregressions and cointegration. *Journal of Political Economy*, *121*(1), 127–185. http://www.princeton.edu/~mwatson/papers/Watson_hoe_1994.pdf

Widarjono, A., Wijayanti, D., & Suharto, S. (2022). Funding liquidity risk and asset risk of

Indonesian Islamic rural banks. *Cogent Economics and Finance*, *10*(1), 1–14. https://doi.org/10.1080/23322039.2022.2059911

Yesuf, A. J., & Aassouli, D. (2020). Exploring synergies and performance evaluation between Islamic funds and socially responsible investment (SRIs) in light of the Sustainable Development Goals (SDGs). *Heliyon*, *6*(8), e04562. https://doi.org/10.1016/j.heliyon.2020.e04562

Younis, I., Gupta, H., Du, A. M., Shah, W. U., & Hanif, W. (2024). Spillover dynamics in DeFi, G7 banks, and equity markets during global crises: A TVP-VAR analysis. *Research in International Business and Finance*, *70*(Part B), 102405. https://doi.org/10.1016/j.ribaf.2024.102405