# Comparison and Simulation of Riba-free Investment with Riba-based Investment on Real Sector Productivity in Indonesia

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## ARTICLE INFORMATION

## ABSTRACT

This study tries to simulate economic growth by using the interest rate as the calculated variable and without the interest rate as the calculated variable. In this study, two calculations were carried out and the first calculation was carried out by regression of Gross Domestic Real Gross as the dependent variable. Investment, consumption, and interest rates as independent variables. The second calculation is the same as the first calculation but omitted the interest rate. The results of comparing the forecasting results from the threshold autoregressive indicated that the interest that is used as the cost of capital has an impact on the instability of the real sector.

## INTRODUCTION

Islamic finance has experienced strong growth. The term Islamic finance covers all financial transactions and products according to the principles of the Qur'anic law, which presupposes the prohibition of interest, uncertainty, speculation, and the prohibition of investing in sectors deemed illegal (alcohol, tobacco, betting on games, etc.), as well as respecting profit-sharing principle (Tlemsani & Matthews, 2019; Wilantari, Widarni, & Bawono, 2021).

Islamic finance should prioritize "Islam" and social responsibility in investing. From this point of view, financing the development of Muslim countries, especially those located in poor areas of the planet, should be the main focus of the activities of Islamic financial institutions. While the growth of the Islamic banking and financial sector initially coincided with the income surplus of oil-exporting Islamic countries, more recently the globalization of the economy, liberalization of capital movements, and privatization paved the way for a much more significant degree. Islamic finance has become important, given its contribution to the world economy (Diomande, 2020). Outside of formal financial institutions, which experience more or less the same difficulty in penetrating the market as "conventional" financial institutions, other types of financial movement are more or less related to what is commonly called "Islamic finance". Sharia products are offered by traditional institutions, microfinance products are offered by more or less "formal" institutions, various products are managed by more or less well-known charities and religious institutions, and so on (Hashem & Giudici, 2016).

The Islamic finance model seems to present itself as a system that competes with the "conventional" financial system. The development of this model initially corresponded to the rise of political Islam, but really took off with the globalization of finance. Islamic funds, generated from profit and loss sharing, and investments in sectors with established legitimacy, now coexist with other "ethical" financial products. According to Putri, Christiana, Kalsum, Widya, and Justianti (2021), investment means a preparation made by someone to prepare for everything in the future, where the preparation can be done by investing (saving, managing money to be a business, or participating in insurance that is useful in the future). Therefore, it can be noted that this system is part of associative finance. However, this participatory finance proved difficult to implement neither the financial infrastructure nor the social structure was easy for it. Frightened by this difficulty, many companies deviate from the Orthodox pattern (Nobi et al., 2019). Driven by these events, Islamic finance was able, at the cost of questioning its principles and practices, to experience true growth. While the first ijtihad "attempts at interpretation" was characterized by a certain legalism and scholastic approach, the "revival" of Islamic finance focused on reinventing Islam's "moral economy", taking into account the principles that have long allowed Islam to adapt to the most diverse cultures (Hidayah et al., 2018).

The insertion of Islamic finance into the "global" economy appears to have reduced its "religious" specificity. The fact that today it generates most of its profits from commissions and service pricing (no longer, as in the past, from interest differentials between loans and deposits) has allowed it to bypass the fiqhi (right) debate. In addition, various financial innovations brought about by deregulation have facilitated the design and marketing of all kinds of "Islamic products". All classic financial products have been "deconstructed", we can break down the elements into as many products as needed to ensure their legality. The decline of

mainstream commercial banking for the benefit of investment banks and venture capital firms has widely promoted crowdfunding. Finally, the rapprochement of finance, industry, and distribution, as well as the broad integration of the finance profession, appear to be reviving the "bankless banker" world of the Islamic golden age (Alkhan & Hassan, 2021).

Islamic finance uses all its cogs, so much so that its capital now seems essential to the smooth running of the world economy. A symbol of the integration of Islamic finance into the global economy, there is even the "Dow Jones Islamic Market Index". Islamic product returns seem to reassure traditional investors. Islamic banks do not recognize bank interest. However, it offers profit sharing to bank customers. Of course, this concept is different from conventional banks that offer bank interest to their customers (Brahmana & You, 2021).

This study tries to simulate economic growth by using the interest rate as the calculated variable and without the interest rate as the calculated variable. In this study, two calculations were carried out where the first calculation was carried out by regression of Gross Domestic Real Gross as the dependent variable. Investment, consumption, and interest rates as independent variables. The second calculation is the same as the first calculation but omitted the interest rate. After the regression is done, forecasting is done to see the difference in economic growth with and without the interest rate variable.

## LITERATURE REVIEW

The function of Islamic banks is to participate in venture capital, provide loans for productive projects, and provide financial assistance for economic and social development. It is also responsible for creating and managing special funds for specific purposes, including funds to assist the Muslim community and to establish trust funds. Islamic banks are authorized to accept deposits and mobilize financial resources in accordance with the principles of Sharia law. This type of financing is based on the principle of profit-sharing (Qoyum et al., 2021).

Islamic banks provide financial capital to entrepreneurs. This type of financing is called a Mudarabah, a passive partnership contract similar to limited partnership operations in the traditional financial system. The bank (donor partner) does not have supervisory rights over project management. In the event of a failure, the capital loss is fully borne by the bank. In contrast to Mudarabah, in Musharakah, banks can intervene in project management. Based on the method of operation, this active partnership between entrepreneur and bank is similar to the joint ventures commonly encountered in traditional finance. In the event of a failure, losses are borne by all partners (minimum two) according to the capital contribution previously made by each (Hoque & Liu, 2021).

In buying and selling (Murabahah) in Islamic principles as part of the business. The sale must be instantaneous, the goods sold are halal and the price is clearly displayed and justified. This type of contract can also be used as a source of financing. In this case, Islamic banks act as financial intermediaries between buyers and sellers. As a result, banks buy goods for cash on behalf of customers and then resell them at an inflated price with a profit margin. Ijarah is like a financial lease or lease agreement. In contrast to Murabahah, this type of contract transfers the use of the goods, namely the right to use them, and not the entire property (Almsafir & Alsmadi, 2014).

In principle, Islam forbids interest. So in Islam, the economy is built not based on interest as a cost of capital. However, it establishes the principle of mutual assistance in developing the economy. Islamic banks act as owners of capital and cooperate with entrepreneurs to develop businesses and the economy (Alwi et al., 2021). From the Islamic point of view, there is the principle of profit-sharing which in this point of view is an investment point of view. Where banks invest in businesses in accordance with sharia principles, namely without interest on bank capital which is used as business capital. In addition to the investment, there are also shariah principles related to Islamic banking, namely helping transactions such as in Murabahah contracts or buying and selling. Where bank profits are based on buying and selling profits based on the level of agreement. In addition, there is the principle of leasing. Where the principle is related to consumption.

In contrast to Islamic banks, conventional banks or traditional banks make interest as a cost of capital. So the interest rate has an impact on the economy. Interest rates have an impact not only on the cost of capital associated with investments. But also the money supply associated with transactions that have an impact on prices. So indirectly interest rates also have an impact on consumption (Nguyen, 2021; Prabowo, Sulisnaningrum, & Harnani, 2021).

Based on the theory put forward by Keynes, there are three motives for asking for money, namely the precautionary motive, the speculative motive, and the transaction motive (Sasongko, Bawono, & Prabowo, 2021). Regarding the precautionary motive, it is assumed that people ask for money to be saved and to guard against urgent needs or predicted future needs. Regarding transaction motives, it is assumed that people ask for money for transaction needs or buying and selling. Regarding the speculative motive, it is assumed that people ask for money to be invested either in the form of savings in banks to earn bank interest or for investments in both paper assets and real assets with the aim of making a profit (Abor, Gyeke-Dako, & Fiador, 2019; Widarni, Drean, & Bawono, 2022).

In buying and selling transactions, there is a seller's motive for making a profit and a buyer's motive for consuming and or making a profit on what he bought, for example, the motive for making a profit by reselling. Regarding buying and selling transactions, there are investment motives and consumption motives. The deposit interest rate is the value of the interest rate given by the bank to provide benefits for people who keep their money in the bank. Of course, this affects people's decisions in choosing to save their money, either with precautionary motives or with speculative motives to earn profits from bank interest or not to save it for transaction needs to meet the needs of life or invest in the real sector to earn profits (Truong et al., 2021).

The concept of bank and bank interest is certainly very contrary to the concept of Islamic banking. In Islamic banks, interest is prohibited so in the Islamic banking system there is no bank interest. However, in the concept of Islamic banking, the benefits of bank customers and banks themselves come from business and/or investment profits (Bilgin et al., 2021). Islamic banks, of course, it is very different from conventional banks which impose interest including deposit rate interest. Islamic banks do not recognize bank interest. However, Islamic Banks offer the concept of profit sharing. Where the Islamic Bank as the customer's money manager gets a share of the profits from the investments made by the shariah bank and the customer also gets from the profit-sharing made by the shariah bank. So with the concept of Islamic Bank, the customer's profit in the form of profit-sharing

in nominal terms is not fixed. The amount of profit-sharing provided by Islamic banks adjusts the investment performance of Islamic banks.

## RESEARCH METHOD

In this study, we use the deposit interest rate as the basis for calculating the interest rate on the grounds that the deposit interest rate has an impact on people's decision-making in depositing their money or not so that it has an impact on the money supply based on Keynes theory. To see the real sector, we use the real gross domestic product as an indicator. To see the independent variables, we use final consumption expenditure as an indicator of community transactions that make up the consumption variable. And to see investment in the real sector, we use Net investment in non-financial assets with the reason that Net investment in non-financial assets focuses on calculating the total investment that enters the real sector, and this study focuses on comparing and simulating the impact of Islamic investment (Non-Base usury) with conventional investments that make bank interest a cost of capital. For the calculation of GDP and Interest rate, we use the current LCU where the focus of the calculation is the total value added given by the entire population in a country so that it can be used as a basis for calculations in conducting simulations and comparisons of the impact of Islamic investment and non-Islamic investment on the real sector. To perform estimates in simulating the impact of consumption, investment, and interest rates on economic growth, the threshold autoregressive estimation method is used with the following threshold autoregressive equation:

$$GDP_t = (\beta_0 + \beta_1 I_{t1} + \beta_2 IR_{t2}) + (\beta_3 + \beta_4 I_{t4} + \beta_5 IR_{t5}) \times @LOGIT \, \beta_6 GDP_{t6} + e_t$$

Where GDP is Real GDP, C01 is final consumption expenditure, I is a Net investment in non-financial assets, IR is the deposit interest rate, and C is a constant. The threshold autoregressive is calculated and forecasted as the impact of each independent variable on the dependent variable and is carried out twice to see the difference in GDP forecasting with and without the interest rate variable. The threshold autoregressive equation is as follows:

$$GDP_t = (\beta_0 + \beta_1 I_{t1}) \times @LOGIT \, \beta_2 GDP_{t2} + e_t$$

To see the direction of influence, autoregressive vector estimation is performed. With the autoregressive vector equation as follows:

$$C01_t = \beta_1 + \beta_1 GDP_{t1} + \beta_2 I_{t2} + \beta_3 IR_{t3} + e_t$$
$$GDP_t = \beta_1 + \beta_1 GDP_{t1} + \beta_2 I_{t2} + \beta_3 IR_{t3} + e_t$$
$$I_t = \beta_1 + \beta_1 GDP_{t1} + \beta_2 I_{t2} + \beta_3 IR_{t3} + e_t$$
$$IR_t = \beta_1 + \beta_1 GDP_{t1} + \beta_2 I_{t2} + \beta_3 IR_{t3} + e_t$$

All data are secondary data sourced from the world bank for the period 1990- 2020.

## RESULTS

To test the stationarity of the data, the data stationarity test is carried out in table 1 below:

**Table 1.** Stationarity Test

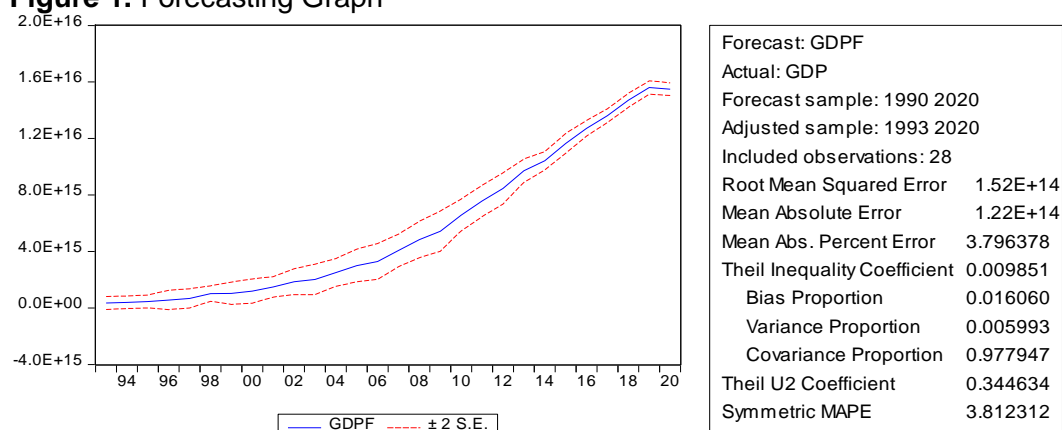| Method | | | Statistic | Prob.** |
|---|---|---|---|---|
| ADF - Fisher Chi-square | | | 66.3064 | 0 |
| ADF - Choi Z-stat | | | -6.66099 | 0 |
| Series | Prob. | Lag | Max Lag | Obs |
| D(C01,2) | 0 | 0 | 6 | 28 |
| D(GDP,2) | 0.0181 | 0 | 6 | 28 |
| D(I,2) | 0 | 1 | 6 | 27 |
| D(IR,2) | 0.0061 | 5 | 6 | 23 |

Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

**Table 2.** Estimated Results

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| | | | | |
| Threshold Variables (linear part) | | | | |
| | | | | |
| C01 | -277.9243 | 13219.06 | -0.021025 | 0.9834 |
| I | 1904.531 | 89434.41 | 0.021295 | 0.9832 |
| IR | 7.73E+15 | 3.69E+17 | 0.020944 | 0.9835 |
| | | | | |
| Threshold Variables (nonlinear part) | | | | |
| | | | | |
| C01 | 280.5581 | 13219.08 | 0.021224 | 0.9833 |
| I | -1910.695 | 89432.68 | -0.021365 | 0.9832 |
| IR | -7.80E+15 | 3.69E+17 | -0.021119 | 0.9834 |
| | | | | |
| Slopes | | | | |
| | | | | |
| SLOPE | 2.16E-16 | 6.56E-17 | 3.284959 | 0.0037 |
| | | | | |
| Thresholds | | | | |
| | | | | |
| THRESHOLD | -2.14E+16 | 2.27E+17 | -0.094462 | 0.9257 |
| | | | | |
| R-squared | 0.898605 | Mean dependent var | | 5.76E+15 |
| Adjusted R-squared | 0.898117 | S.D. dependent var | | 5.27E+15 |
| S.E. of regression | 2.28E+14 | Akaike info criterion | | 69.19767 |
| Sum squared resid | 1.04E+30 | Schwarz criterion | | 69.5783 |
| Log likelihood | -960.7674 | Hannan-Quinn criter. | | 69.31403 |
| Durbin-Watson stat | 1.07023 | | | |

From the estimation results, it can be seen that the t-statistic value with the coefficient value is greater than the coefficient value for all variables so that it can be indicated that all variables have a significant effect on gross domestic product. Forecasting the influence of the independent variable on the independent variable is presented in the forecasting graph in figure 1.

**Figure 1.** Forecasting Graph



| | |
|---|---|
| Forecast: GDPF | |
| Actual: GDP | |
| Forecast sample: 1990 2020 | |
| Adjusted sample: 1993 2020 | |
| Included observations: 28 | |
| Root Mean Squared Error | 1.52E+14 |
| Mean Absolute Error | 1.22E+14 |
| Mean Abs. Percent Error | 3.796378 |
| Theil Inequality Coefficient | 0.009851 |
| Bias Proportion | 0.016060 |
| Variance Proportion | 0.005993 |
| Covariance Proportion | 0.977947 |
| Theil U2 Coefficient | 0.344634 |
| Symmetric MAPE | 3.812312 |

To compare the forecasting results for investment and consumption variables with and without interest rates, a second estimate is made with the estimation results in table 3.
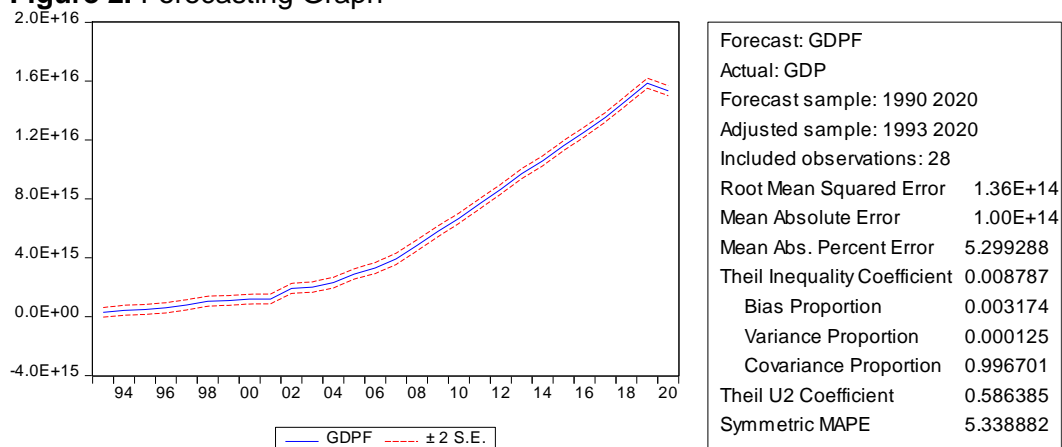
**Table 3.** Estimation Result

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| | | | | |
| Threshold Variables (linear part) | | | | |
| | | | | |
| C01 | -4.433325 | 9.573953 | -0.463061 | 0.6483 |
| I | 62.91122 | 74.88006 | 0.84016 | 0.4108 |
| C | 1.10E+16 | 2.37E+16 | 0.463854 | 0.6478 |
| | | | | |
| Threshold Variables (nonlinear part) | | | | |
| | | | | |
| C01 | 8.055636 | 9.550783 | 0.843453 | 0.409 |
| I | -63.71909 | 74.62528 | -0.853854 | 0.4033 |
| C | -2.01E+16 | 2.36E+16 | -0.849465 | 0.4057 |
| | | | | |
| Slopes | | | | |
| | | | | |
| SLOPE | 7.22E-16 | 2.88E-16 | 2.507162 | 0.0209 |
| | | | | |
| Thresholds | | | | |
| | | | | |
| THRESHOLD | -3.49E+14 | 2.87E+15 | -0.121548 | 0.9045 |
| | | | | |
| R-squared | 0.899246 | Mean dependent var | | 5.76E+15 |
| Adjusted R-squared | 0.898982 | S.D. dependent var | | 5.27E+15 |
| S.E. of regression | 1.68E+14 | Akaike info criterion | | 68.58278 |
| Sum squared resid | 5.64E+29 | Schwarz criterion | | 68.96341 |
| Log likelihood | -952.1589 | Hannan-Quinn criter. | | 68.69914 |
| F-statistic | 3786.264 | Durbin-Watson stat | | 1.73853 |
| Prob(F-statistic) | 0 | | | |

From the estimation results, it can be seen that the t-statistic value with the coefficient value is greater than the coefficient value for all variables so that it can be indicated that all variables have a significant effect on gross domestic product.

Forecasting the influence of the independent variable on the independent variable is presented in the forecasting graph in figure 2.

**Figure 2.** Forecasting Graph



| | |
|---|---|
| Forecast: GDPF | |
| Actual: GDP | |
| Forecast sample: 1990 2020 | |
| Adjusted sample: 1993 2020 | |
| Included observations: 28 | |
| Root Mean Squared Error | 1.36E+14 |
| Mean Absolute Error | 1.00E+14 |
| Mean Abs. Percent Error | 5.299288 |
| Theil Inequality Coefficient | 0.008787 |
| Bias Proportion | 0.003174 |
| Variance Proportion | 0.000125 |
| Covariance Proportion | 0.996701 |
| Theil U2 Coefficient | 0.586385 |
| Symmetric MAPE | 5.338882 |

When the interest rate factor is omitted there is a discrepancy in the forecasting chart. When observed, figure 1 in period 7 to period 20 tends to be bumpy or fluctuation occurs even though it has an uptrend. Figure 2 in period 7 to period 20 tends to be more stable when compared to figure 1. From the results of the comparison of forecasting using the interest rate variable and without using the interest rate variable, there are differences in influencing the real sector which is indicated by real GDP. The forecasting results indicate that when the interest rate is eliminated or invested without using the interest rate as the basis for the cost of capital, the real sector growth movement will be more stable. To see the direction of influence, an autoregressive vector estimation was carried out with the results in table 4.

**Table 4.** Autoregressive Vector Estimation

| | C01 | GDP | I | IR |
|---|---|---|---|---|
| C01(-1) | 0.766897 | 0.66268 | 0.041812 | 2.84E-14 |
| | -0.38261 | -1.18281 | -0.08558 | -1.80E-14 |
| | [ 2.00440] | [ 0.56026] | [ 0.48858] | [ 1.55150] |
| GDP(-1) | 0.266605 | 1.834567 | 0.041128 | -4.21E-15 |
| | -0.13 | -0.40189 | -0.02908 | -6.20E-15 |
| | [ 2.05078] | [ 4.56479] | [ 1.41442] | [-0.67749] |
| I(-1) | 0.441098 | 0.83511 | 0.152366 | -1.73E-14 |
| | -0.93805 | -2.89994 | -0.20981 | -4.50E-14 |
| | [ 0.47023] | [ 0.28797] | [ 0.72619] | [-0.38676] |
| IR(-1) | -4.93E+12 | -5.95E+12 | 3.50E+11 | 0.879006 |
| | -5.30E+12 | -1.60E+13 | 1.20E+12 | -0.25184 |
| | [-0.93553] | [-0.36537] | [ 0.29670] | [ 3.49031] |
| R-squared | 0.896469 | 0.997146 | 0.910334 | 0.649291 |
| Adj. R-squared | 0.895057 | 0.996005 | 0.874467 | 0.509008 |
| Sum sq. resids | 2.32E+29 | 2.22E+30 | 1.16E+28 | 530.0565 |
| S.E. equation | 1.08E+14 | 3.33E+14 | 2.41E+13 | 5.14809 |

| F-statistic | 705.5415 | 873.577 | 25.38112 | 4.628419 |
| Log likelihood | -972.7778 | -1005.508 | -929.3479 | -83.28169 |
| Akaike AIC | 67.70881 | 69.9661 | 64.71365 | 6.364255 |
| Schwarz SC | 6.81E+01 | 7.04E+01 | 65.13798 | 6.788588 |
| Mean dependent | 4.05E+15 | 5.57E+15 | 9.58E+13 | 11.94779 |
| S.D. dependent | 1.53E+15 | 5.27E+15 | 6.80E+13 | 7.35E+00 |

## DISCUSSION

From the results of the estimation of the significance of the variable, it can be known by comparing the t-statistic value with the coefficient value. And the direction of the variable is seen from the negative sign on the coefficient value as the negative direction and without the negative sign as the positive direction. There is an indication that previous consumption has a significant positive influence on current consumption with a T-statistic value of 2.00440 and a coefficient value of 0.766897. Consumption has an insignificant positive direction towards the real sector with a t-statistic value of 0.56026 and a coefficient value of 0.66268. Consumption has a significant positive effect on interest rates with a t-statistic value of 1.55150 and a coefficient value of 2.84E-14. GDP has a significant positive effect on consumption with a coefficient value of 0.266605 and a t-statistic value of 2.05078. GDP has a significant positive effect on GDP itself with a coefficient value of 1.834567 and a t-statistic value of 4.56479. GDP has a significant positive effect on investment with a coefficient value of 0.041128 and a t-statistic value of 1.41442. GDP has a significant negative effect on interest rates with a coefficient value of -4.21E-15 and a t-statistic value of -0.67749.

Investment has a significant positive effect on consumption with a coefficient value of 0.441098 and a t-statistic value of 0.47023. Investment has a significant positive effect on GDP with a coefficient value of 0.83511 and a t-statistic value of 0.28797. Investment has a significant positive effect on own investment with a coefficient value of 0.152366 and a t-statistic value of 0.72619. Investment has a significant negative effect on interest rates with a coefficient value of -.73E-14 and a t-statistic value of -0.38676.

The interest rate has an insignificant negative effect on consumption with a value of -4.93E+12 and a t-statistic value of -0.93553. The interest rate has an insignificant negative effect on GDP with a t-statistic value of -0.36537 and a coefficient value of -5.95E+12. No significant positive effect on investment with a coefficient value of 3.50E+11 and a t-statistic value of 0.29670. The interest rate has a significant positive effect on the interest rate itself.

Based on the estimation results, the direction of the influence of interest rates is negative for all variables except investment and the interest rate itself. Although not significant. However, the interest rate, apart from making growth in the real sector less stable, also has an impact as an obstacle to growth in the real sector with a negative influence, although not significant on all variables.

## CONCLUSIONS

From the results of comparing the forecasting results from the threshold autoregressive when the interest rate is entered and when the interest rate is not entered, it can be indicated that the interest that is used as the cost of capital has an impact on the instability of the real sector. And based on the results of the vector analysis of interest rates in a negative direction in the real sector and vice versa. So it can be concluded that the concept of Islamic banks that do not recognize interest rates as the cost of capital is indicated to be more stable in maintaining the real sector and more able to encourage the conventional financial system which makes interest as a cost of capital.

## REFERENCES

Abor, J. Y., Gyeke-Dako, A., & Fiador, V. O. (2019). *Money and Banking in Africa*. Berlin: Springer.

Alkhan, A. M., & Hassan, M. K. (2021). Does Islamic microfinance serve maqāsid al-shari'a? *Borsa Istanbul Review, 21*(1), 57-68. doi: 10.1016/j.bir.2020.07.002

Almsafir, M. K., & Alsmadi, A. (2014). Murabahah versus interest rate, the equilibrium relationship with macroeconomic variables in Jordanian economy: An ARDL approach. *Procedia-Social and Behavioral Sciences, 129*(5), 349-357. doi: 10.1016/j.sbspro.2014.03.687

Alwi, Z., Parmitasari, R. D. A., & Syariati, A. (2021). An assessment on Islamic banking ethics through some salient points in the prophetic tradition. *Heliyon, 7*(5), 1-9. doi: 10.1016/j.heliyon.2021.e07103

Bilgin, M. H., Danisman, G. O., Demir, E., & Tarazi, A. (2021). Economic uncertainty and bank stability: Conventional vs Islamic banking. *Journal of Financial Stability, 56*(10), 91-111.

Brahmana, R. K., & You, H. W. (2021). Do Muslim CEOs and Muslim stakeholders prefer Islamic debt financing? Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S1044028321000235

Diomande, O. (2020). Fundamentals of Islamic finance and easy access to credit. *Theoretical Economics Letters, 10*, 978-996. doi: 10.4236/tel.2020.104057

Hashem, S., & Giudici, P. (2016). Systemic risk of conventional and Islamic Banks: Comparison with graphical network models. *Applied Mathematics, 7*, 2079-2096. doi: 10.4236/am.2016.717166

Hidayah, N. N., Lowe, A., & Woods, M. (2018). Accounting and pseudo spirituality in Islamic financial institutions. *Critical Perspectives on Accounting, 61*(6), 22-37. doi: 10.1016/j.cpa.2018.09.002

Hoque, H., & Liu, H. (2021). Capital structure of Islamic banks: How different are they from conventional banks? *Global Finance Journal,* 1-48. doi: 10.1016/j.gfj.2021.100634

Nguyen, Q. K. (2021). Oversight of bank risk-taking by audit committees and Sharia committees: Conventional vs Islamic banks. *Heliyon, 7*(8), 1-11. doi: 10.1016/j.heliyon.2021.e07798

Nobi, K., Singh, M., & Aggarwal, A. (2019). Corporate attributes influencing the compliance of Islamic finance: Evidence from listed companies under shariah index in India. *Theoretical Economics Letters, 9*, 1744-1771. doi: 10.4236/tel.2019.96112

Prabowo, B. H., Sulisnaningrum, E., & Harnani, S. (2021). Financial crisis and usury in digital economic: Why major religion prohibit usury? Monetary

Studies In Asia 5. *Journal of Business and Finance in Emerging Markets, 4*(1), 27-46. doi: 10.32770/jbfem.vol427-46

Putri, L. P., Christiana, I., Kulsum, U., Widya, W., & Justianti, M. (2021). The influence of financial literacy on investment decisions during the pandemic. *Journal of International Conference Proceedings, 4*(2), 301-308. doi: 10.32535/jicp.v4i2.1253

Qoyum, A., Sakti, M. R. P., Thaker, H. M. T., & AlHashfi, R. U. (2021). Does the Islamic label indicate good environmental, social, and governance (ESG) performance? Evidence from sharia-compliant firms in Indonesia and Malaysia. Retrieved from https://www.researchgate.net/publication/352277770_Does_the_Islamic_La bel_Indicate_Good_Environmental_Social_and_Governance_ESG_Perfor mance_Evidence_from_Sharia-Compliant_Firms_in_Indonesia_and_Malaysia#pf1

Sasongko, B., Bawono, S., & Prabowo, B. H. (2021). The economic performance of china in trade war: The case study of three global economic crises in 1997–2020. *International Symposia in Economic Theory and Econometrics, 29*(2), 1-11. doi: 10.1108/S1571-03862021000029B022

Tlemsani, I., & Matthews, R. (2019). Conventional banks risk diversification: A case for Islamic finance. *Theoretical Economics Letters, 9*, 1967-1980. doi: 10.4236/tel.2019.96125

Truong, V. A., Lang, B., & Conroy, D. M. (2021). Are trust and consumption values important for buyers of organic food? A comparison of regular buyers, occasional buyers, and non-buyers. *Appetite, 161*(1), 105-123. doi: 10.1016/j.appet.2021.105123

Widarni, E. L., & Bawono, S. (2021). The comparation of foreign financial investment and human investment effect on economic in Indonesia base on macro economic point of view. *Estudios de Economia Aplicada, 39*(12), 1-14. doi: 10.25115/eea.v39i12.6006

Wilantari, R. N., Widarni, E. L., Bawono, S. (2021). Investment, deposit interest rates, and real sector performance: A case study of Islamic finance in Malaysia. *Muqtasid: Jurnal Ekonomi dan Perbankan Syariah, 12*(2), 144-154. doi: 10.18326/muqtasid.v12i2.144-154