

The Effect of Macroeconomic Variables on the Profitability of Islamic Commercial Banks in Indonesia

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Abstract

Islamic banks as a form of banking that operates based on sharia principles, are expected to show superior financial performance when compared to interest-based conventional banks. This study aims to determine the effect of inflation, JUB, and PUAS on the profitability of Indonesian Islamic Commercial Banks. The method used in this research is a deductive quantitative method, with the Vector Autoregressive (VAR) Vector Error Correction Model (VECM) approach and the E-Views 12 test tool. The data used in this study used secondary data with time series data from the period January 2013 to April 2023, where ROA was used as an independent variable and Inflation, Money Supply, and Islamic Interbank Money Market became the dependent variable. As for the results of this study, in the long term, the variables of Inflation and JUB have a significant and negative effect on the Return on Assets (ROA) of Indonesian Islamic Commercial Banks, while the Islamic Interbank Money Market (PUAS) variable does not have a significant and negative effect on the Return on Assets (ROA) of Indonesian Islamic Commercial Banks. In the short term, the variables of Inflation, Money Supply (JUB), and the Islamic Interbank Money Market (PUAS) do not have a significant and negative influence on the Return on Assets (ROA) of Indonesian Islamic Commercial Banks.

Keywords: Profitability, Macroeconomic Variable, Vector Error Correction Model

Introduction

Economics growth is crucial for assessing the economic progress of a country within a certain period. Economic growth reflects the extent to which economic activity can provide additional income for the population, improve living standards, and meet growing needs without lowering the prevailing standard of living.¹ Banking has a big role in the economic world as an intermediary institution or financial intermediary in the movement of the economy.² In 1992, banks in Indonesia began implementing the Sharia banking system with the principle of profit sharing.³ Then in 1998 banking policy adheres to a dual banking system (Dual

¹ Ichsan Hamidi, et. al., "Investment, ZIS Funds, Mudharabah Financing and Economic Growth in Indonesia", *Islamic Economics Journal*, Vol. 10, No. 01, (2024), p. 66.

² Sumadi, "Menakar Dampak Fenomena Pandemi Covid-19 terhadap Perbankan Syariah," *Jurnal Hukum Ekonomi Syariah*, No. 1, (2020), p. 145.

³ Ali Syukron, "Dinamika Perkembangan Perbankan Syariah di Indonesia," *Jurnal Ekonomi dan Hukum Islam*, Vol. 3, No. 2 (2013), p. 28.

Banking System).⁴ This is proven in Law Number 10 of 1998 concerning banking which explains that banking in Indonesia has two systems, namely conventional banking and Sharia banking (Dual Banking System). Since the implementation of this system, the financial performance of conventional banking has experienced very good and positive developments.⁵ Meanwhile, the financial performance of Islamic commercial banks is still lagging behind conventional banking.⁶ Since the arrival of the Covid-19 pandemic, the conventional banking sector has in Indonesia experienced a significant negative impact. Banks play an important role in the economy because they can facilitate domestic and global trade.⁷ The performance of companies operating in the fields of property, tourism, manufacturing, automotive finance, and MSMEs has had a negative impact during the Covid-19 pandemic. However, behind the decline in the financial sector, there is still a sector that has stable financial performance, namely Sharia Banking, and according to research conducted by M. Zen Nasruddin Fajri, *et. al.* (2022), the Covid-19 pandemic does not affect the profitability of Sharia banking in Indonesia.⁸ Therefore, even though it is in the Covid-19 pandemic situation, Sharia banking can grow and develop even though it has relatively small risks compared to the sector other.

Boosting a nation's economic growth is essential for development, but environmental protection must become one of the top priorities for consideration during the process.⁹ Sharia banks as financial intermediary institutions are expected to show good financial performance compared to interest-based banks. To assess a bank's financial performance, it can be assessed through its level of profitability, namely using the Return on Assets (ROA) profitability measure. The greater the ROA, the better the financial performance, the greater the level of return on assets.¹⁰ On the other hand, banking profitability performance, especially ROA (Return on Assets), is also influenced by movements in the money supply. The money supply is a factor for the monetary balance of the public's demand for money (Money Demand).¹¹ In the financial market determined by Bank Indonesia, one of the ways to control the money supply is through buying and selling securities, so that it can affect fluctuations in ROA (Return on Assets).

⁴ Arivatu Ni'mati Rahmatika, "Dual Banking System di Indonesia," *At-Tahdzib: Jurnal Studi Islam dan Muamalah*, Vol. 2, No. 2 (2014), p. 135.

⁵ Renniawaty Siringoringo, "Karakteristik dan Fungsi Intermediasi Perbankan di Indonesia," *Bulletin of Monetary Economics and Banking Pengendalian Moneter di Indonesia*, Vol. 11, No. 4, (2010).

⁶ Suryani Suryani, "Sistem Perbankan Islam di Indonesia: Sejarah dan Prospek Pengembangan," *Muqtasid: Jurnal Ekonomi dan Perbankan Syariah*, Vol. 3, No. 1 (2012), p. 111.

⁷ Ayuunseh Retno Harini, *et. al.*, "Do Macroeconomics Variables Affect Deposits in Shariah Banks?," *Islamic Economics Journal*, Vol. 10, No. 01, (2024).

⁸ Mohammad Zen Nasrudin Fajri, *et. al.*, "The Effect Covid-19 and Sectoral Financing on Islamic Bank Profitability in Indonesia," *Journal of Islamic Economic Laws*, Vol. 5, No. 1 (2022), p. 48.

⁹ Mohammad Zen Nasrudin Fajri, *et. al.* "The Nexus Between Financial Development and Carbon Emission in OIC Countries," *Islamic Economics Journal*, Vol. 10, No. 01, (2024).

¹⁰ Ayu Yanita Sahara, "Analisis Pengaruh Inflasi, Suku Bunga BI, dan Produk Domestik Bruto terhadap Return on Asset (ROA) Bank Syariah di Indonesia," *Jurnal Ilmu Manajemen*, Vol. 1 (2013), p. 149.

¹¹ Sakinah Rachman and Sri Herianingrum, "Pengaruh Instrumen Sertifikat Bank Indonesia (SBI), Pasar Uang Antar Bank (PUAB), Sertifikat Bank Indonesia Syariah (SBIS), Pasar Uang Antar Bank Syariah (PUAS) terhadap M2 di Indonesia Periode 2009-2016," *Jurnal Ekonomi Syariah Teori dan Terapan*, Vol. 5, No. 1 (2019), p. 78.

A high growth rate of money supply in society will result in a high inflation growth rate, while a low money supply growth rate will result in a low inflation growth rate as well. High inflation will result in people's purchasing power decreasing and the size of the inflation rate can affect the financial performance of companies and banks, especially profitability.¹² If the inflation rate is controlled then it can become the final target in the monetary policy carried out by the Bank Indonesia.

Apart from that, Bank Indonesia to support its goal, namely to maintain the stability of banking liquidity and the value of the rupiah, Bank Indonesia carries out monetary control through Sharia Monetary Operations (OMS), one of which is the Sharia Interbank Money Market (PUAS). The Sharia Interbank Money Market (PUAS) is one of the macroeconomic variables that has an important role in Sharia banking liquidity.

Inflation is an economic phenomenon in a country that cannot be avoided.¹³ Research on the influence of inflation and money supply on the profitability of Islamic commercial banks, especially return on assets, has been carried out quite a lot. However, only Syarief Gerald Prasetya Waluyo¹⁴ used the VECM method but that was carried out in the 2010-2019 period. Meanwhile, there is only one that has examined the influence of the Islamic interbank money market on the return on assets of Islamic commercial banks which was carried out by Rismadiana,¹⁵ using the VECM method but that was carried out in the 2014-2018 period and there has been no further analysis in the most recent period. new with the VECM method. This research fills this gap so that it can strengthen this research.

Methodology

This research applies a quantitative research approach that is deductive, where the methodology used involves the use of the VAR (Vector Autoregressive) / VECM (Vector Error Correction Model) approach as one of the analysis methods. Within the framework of this research, the test tool used to process and analyze data is E-views 12.

A method used by researchers is the Vector Autoregressive (VAR) model. The data used is time series data with many variables. This multi-variant time series data can be method with the VAR (Vector Autoregressive) model which is an extension of the ARIMA method.¹⁶ The process of forming a VAR method is a regression equation model that uses time series data related to stationarity and cointegration between the variables in it.

¹² Siwu Hanly Manuela Langi Theodores , Masinambow Vecky, "Analisis Pengaruh Suku Bunga Jumlah Uang Beredar Kurs terhadap Inflasi Indonesia", Vol. 14, No. 2, (2014).

¹³ Muhammad Nur Efendi, et. al., "Madiun City Government Economic Policy Strategy: Islamic Economics Perspective", *Islamic Economics Journal*, Vol. 09, No. 02, (2023).

¹⁴ Syarief Gerald Prasetya Waluyo, "Profitability Response of Sharia Banking on Macroeconomic Variable Conjunctions in Indonesia With Vector Error Correction Model (VECM) Approach," *Advances in Economics, Business and Management Research*, No. 198 (2021), p. 125.

¹⁵ Marina Ledyasha Rismadiana, "Instrumen Moneter Syariah terhadap Kinerja dan Likuiditas Bank Umum Syariah di Indonesia Periode 2014-2018" (Universitas Islam Negeri Syarif Hidayatullah, 2019).

¹⁶ Sean M. Montgomery, "Behavior Dependent Coordination of Multiple Theta Dipoles in the Hippocampus", *The Journal of Neuroscience*, Vol. 29, No. 5 (2009), p. 90.

In this study, researchers took data published by the official website of Bank Indonesia (www.bi.go.id) taking inflation data, Money Supply (MS) and SIMM, the official website of the Financial Services Authority (www.ojk.go.id) taking Return on Asset (ROA) data, as well as additional data obtained through journals and reference books. The data used in this study are time series data from 2013 to 2023. The data used is monthly data with 124 data.

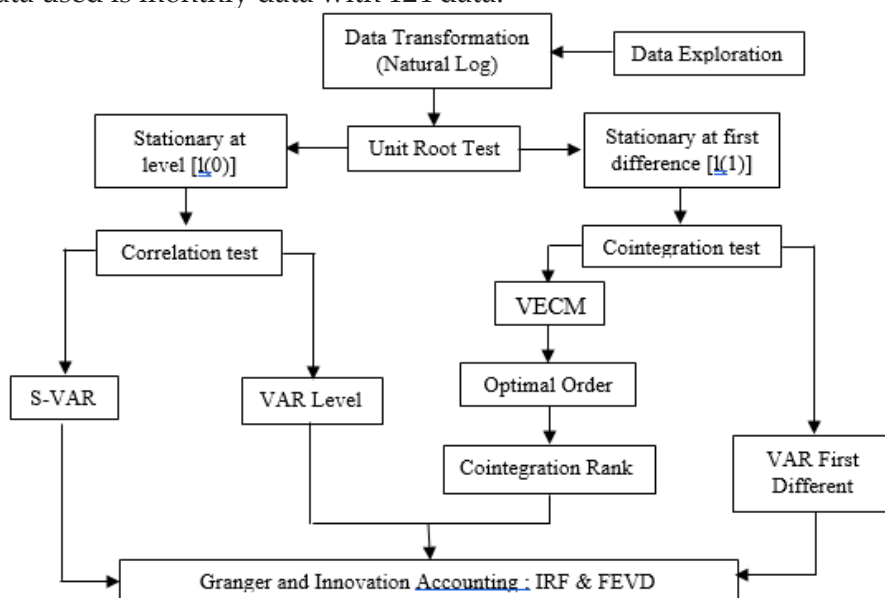


Figure 1. VAR and VECM Framework

Literature Review

Profitability of Sharia Commercial Banks

The performance of the Sharia banking system, which is built on the principle of profit sharing, offers a system that is profitable for the profitability of the bank and society. They also emphasize aspects of fairness in transactions and investments that prioritize the values of brotherhood and togetherness in production and avoid speculative financial transactions.¹⁷

Profitability is the Company's ability to generate profits and is measured using profitability ratios. According to research by Philip Molyneux and John Thornton (1992),¹⁸ bank profitability is influenced by factors related to management decisions and macroeconomic conditions. In this research, it is also revealed that bank size has a positive effect on profitability, while capital adequacy and asset quality have a negative effect on profitability. In addition, according to M. Kabir Hassan (2002), the level of bank profitability is influenced by several internal factors as well as external factors. Some of these factors are bank characteristics, macro indicators, taxation, financial structure, asset quality, capital, and liquidity.¹⁹

¹⁷ Salman Al Parisi, "Determinan Kinerja Keuangan Bank Umum Syariah di Indonesia," *IKONOMIKA: Journal of Islamic Economics and Business*, Vol. 2, No. 1 (2017), p. 48.

¹⁸ Philip Molyneux and John Thornton, "Determinants of European Bank Profitability: A Note," *Journal of Banking and Finance*, Vol. 16, No. 4 (1992), p. 1173.

¹⁹ M. Ghafur Wibowo and Anto, "Faktor-Faktor Penentu Tingkat Profitabilitas Bank Umum

Inflation

According to research by Ivo Sabrina, Fitri Yenti, and Amamil Husni, inflation can cause a decline in the purchasing power of monetary assets due to being unfair to other people.²⁰ In terms of monetary assets, if inflation occurs continuously and is accompanied by continuous high lifting, it will influence customers who make financing in banking. Customers will fail to pay the installments they make because the price of goods increases relatively while the income they receive is relatively the same. If customers are unable to repay or pay the installments they make, this will of course affect banking income.

Customers who are unable to pay off financing made in banking can of course affect the income made therein, although it will not significantly affect Sharia banking because Sharia banking uses the concept of profit sharing, so inflation cannot necessarily affect the profitability of Sharia commercial banks. Research conducted by Elfin Taufiqurrasyid²¹ shows that inflation simultaneously does not have a significant effect on the ROA of Islamic commercial banks, but in other research, it is stated that inflation has a positive and significant influence on the return on assets of Islamic commercial banks.²²

Money Supply (JUB)

The money supply is the total value of money in the hands of the public, consisting of currency and demand deposits. while money in the hands of banks is not counted as money in circulation.²³ The amount of money in circulation has an influence on the level of bank profitability. In banking, when the money supply increases, interest rates also increase.²⁴ But this condition does not necessarily apply to sharia banking which uses fees that do not follow interest rates. Because the fees are determined based on a ratio system and there is an agreement between the customer and the sharia bank, the increase in the money supply can increase demand for financing from sharia banks, the fees are determined based on the ratio system and the agreement between the customer and the sharia bank.

According to research Syarief Gerald Prasetya Waluyo²⁵ an increase in the money supply is followed by an increase in inflation and interest rates. And in his

Syariah di Indonesia," *La Riba*, Vol. 6, No. 6 (2012), p. 150.

²⁰ Ivo Sabrina, Fitri Yenti, and Amamil Husni, "Pengaruh Variabel Ekonomi Makro Nilai Tukar Rupiah dan Inflasi terhadap Profitabilitas Bank Umum Syariah di Indonesia," *AL-ITTIFAQ: Jurnal Ekonomi Syariah*, Vol. 1, No. 1 (2021), p. 52.

²¹ Elfin Taufiqurrasyid and Nana Diana, "Analisis Pengaruh Inflasi, Suku Bunga terhadap Tingkat Return on Asset pada Bank Umum Syariah di Indonesia Periode 2015-2020," *Jurnal Pendidikan Tambusai*, Vol. 7 No. 2 (2023), p. 15258.

²² Amirus Sodik, "Analisis Pengaruh Inflasi, Produk Domestic Bruto dan Jumlah Uang Beredar terhadap Return on Asset Bank Syariah," *Equilibrium: Jurnal Ekonomi Syariah*, Vol. 2, No. 2 (2014), p. 228.

²³ Mandala Manurung Prathama Rhardja, *Teori Ekonomi Makro: Suatu Pengantar*, Ed. 4, (Jakarta: Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia, 2008).

²⁴ Nadia Putri Aulia and Esy Nur Aisyah, "Analysis of the Influence of Financing, Inflation, and the Amount of Money Supply on the Profitability of Syariah Bank in Indonesia", Vol. 7, No. 2 (2023), p. 279.

²⁵ Syarief Gerald Prasetya Waluyo, "Profitability Response of Sharia Banking on Macroeconomic Variable Conjunctions in Indonesia With Vector Error Correction Model (VECM) Approach."

research it is said that the money supply has a negative influence on profitability. And on the other hand, according to researchers Koniah²⁶ the money supply has a negative influence on Return on Assets of Islamic commercial banks.

Sharia Interbank Money Market (PUAS)

Sharia Interbank Money Market (PUAS) is a short-term investment activity in rupiah between market participants based on Sharia principles. The Sharia Interbank Money Market or what is called PUAS is a funding source originating from fellow Sharia banks to meet liquidity needs between Sharia banks²⁷ and is the main instrument used before the issuance of SBIS. This is because the auction process at PUAS is much easier and can be done every day so that there is more liquidity from PUAS. To increase the efficiency of fund management, banks carry out business activities based on Sharia principles. In a PUAS transaction there will be a demand and supply of funds, where both parties reach an agreement on two things, including the price or yield in PUAS and the volume of what is being transacted.²⁸ The PUAS yield rate is a banking liquidity instrument that will influence the financing issued by a Sharia bank. The higher the PUAS yield, the volume of PUAS transactions will increase, because Sharia banking allocates more funds to investing in PUAS rather than channeling it into financing.²⁹

Result and Discussion

Stationary Test

The stationarity testing method uses the ADF (Augmented Dicket Fuller) Test with a profitability value level of 0.05 or 5%. The data used will be said to be stationary if the profitability value level is lower than 0.05 ($p\text{-value} < \alpha = 5\%$), and conversely the data will be said to be non-stationary if the profitability value level is higher than 0.05 ($p\text{-value} > \alpha = 5\%$). As a result of the stationarity test, it was found that these variables did not have stationarity at level level.

²⁶ Binti Koniah, "Pengaruh Jumlah Uang Beredar terhadap Profitabilitas Bank Umum Syariah di Indonesia Tahun 2011-2021," *Jurnal Bintang Manajemen*, Vol. 1 No. 2 (2023), p. 228.

²⁷ Solikin M. Juhro, *Ekonomi Moneter Islam Suatu Pengantar* (Depok: Rajawali Press, 2020).

²⁸ Adinda Madani and Tika Widiastuti, "The Impact of Islamic Monetary Operations and Aggregate Financing on Economic Growth in Indonesia (2010-2020)," *Jurnal Ekonomi dan Bisnis Islam (Journal of Islamic Economics and Business)*, Vol. 7, No. 2 (2021), p. 185.

²⁹ Evan Hamzah Muchtar and Siti Najma, "Aplikasi Sistem Keuangan Syariah pada Pasar Uang," *Jurnal Asy-Syukriyyah*, Vol. 20, No.1 (2019), p. 18.

Table 1. Stationarity Data Inflation

Null Hypothesis : D(INFLASI) has a unit root			
Exogenous : Constant			
Lag Length : 0 (Automatic - based on SIC, maxlag = 12)			
		t-Statistic	Prob.*
Augmented Dickey-Fullet test statistic		-8.670290	0.0000
Test critical values :	1% level	-3.484653	
	5% level	-2.885249	
	10% level	-2.579491	

*Source: Eviews 12***Table 2. Stationarity Data Money Supply**

Null Hypothesis : D(LN_MS) has a unit root			
Exogenous : Constant			
Lag Length : 2 (Automatic - based on SIC, maxlag = 12)			
		t-Statistic	Prob.*
Augmented Dickey-Fullet test statistic		-10.74716	0.0000
Test critical values :	1% level	-3.485586	
	5% level	-2.885654	
	10% level	-2.579708	

*Source: Eviews 12***Table 3. Stationarity Data Sharia Interbank Money Market**

Null Hypothesis : D(LN_SIMM) has a unit root			
Exogenous : Constant			
Lag Length : 1 (Automatic - based on SIC, maxlag = 12)			
		t-Statistic	Prob.*
Augmented Dickey-Fullet test statistic		-13.29845	0.0000
Test critical values:	1% level	-3.485115	
	5% level	-2.88545	
	10% level	-2.579598	

*Source: Eviews 12***Table 4. Stationarity Data Return on Asset (ROA)**

Null Hypothesis : D(ROA) has a unit root			
Exogenous : Constant			
Lag Length : 1 (Automatic - based on SIC, maxlag = 12)			
		t-Statistic	Prob.*
Augmented Dickey-Fullet test statistic		-10.21538	0.0000
Test critical values:	1% level	-3.485115	
	5% level	-2.88545	
	10% level	-2.579598	

*Source: Eviews 12***Optimal Lag Test**

This test was carried out with the aim of determining the most appropriate and optimal amount of lag to develop an effective VAR model. Based on the results

of the lag test above using the smallest value of several criteria, namely Likelihood Ratio (LR), Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwarz Information Criterion (SC), or Hannan Quinnon Criterion (HQ), we get the second lag.

Table 5. Lag Optimum

Optimum Lag Test Result						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-352.3788	NA	0.005778	6.197892	6.293368*	6.236645
1	-318.8009	64.23605	0.004257	5.892189	6.369569	6.085955
2	-293.4662	46.70386	0.003623*	5.729847*	6.589131	6.078626
3	-286.5472	12.27377	0.004254	5.887777	7.128964	6.391569
4	-276.2528	17.54526	0.004721	5.987005	7.610095	6.645809
5	-269.7397	10.64746	0.005611	6.151995	8.156989	6.965812
6	-248.3781	33.43560*	0.005172	6.058749	8.445647	7.027579
7	-243.53	7.251072	0.006382	6.252695	9.021496	7.376538
8	-231.8248	16.69262	0.007028	6.327387	9.478092	7.606243

Source: Eviews 12

Cointegration Test

The cointegration test is used to determine whether there is a long-term level between variables that are stationary to a similar degree. The test results above show that there is a cointegration relationship in the data above. This is caused by the trace statistical value being greater than the critical value. So, the test can be continued with long-term testing, namely VECM.

Table 6. Cointegration Test

Unrestricted Cointegration Rank Test (Trace)					
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**	Conclusion
None *	0.294405	75.83811	54.07904	0.0002	Cointegration
At most 1	0.14985	33.6438	35.19275	0.0728	Not Cointegration
At most 2	0.071604	14.0004	20.26184	0.2894	Not Cointegration
At most 3	0.040563	5.010423	9.164546	0.2823	Not Cointegration

Trace test indicates 1 cointegration eqn (s) at the 0.05 level

*denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: Eviews 12

VECM Estimate

Based on the VECM estimation results above, in the long term, the inflation variable has an estimated value of -2.87008 which is greater than in the t-table 1.97, which means that the Inflation variable has a significant influence with a negative relationship on ROA (Return on Assets) of Sharia Commercial Banks (BUS). The PUAS variable (Sharia Interbank Money Market) has an estimated value of 1.96354 which is smaller than in the t-table 1.97, which means that the PUAS variable does not have a significant positive effect on ROA (Return on Assets) of Sharia

Commercial Banks (BUS). Meanwhile, the variable JUB (Money Circulation) has an estimated value of -6.71226 which is greater than the t-table 1.97, which means it has a significant influence with a negative relationship on ROA (Return on Assets) of Sharia Commercial Banks (BUS).

Table 7. VECM Estimate

Cointegrating Eq:	CointEq1
ROA(-1)	1
INFLASI(-1)	-0.439974 (0.15330) [-2.87008]**
LN_MS(-1)	-7.078542 (1.05457) [-6.71226]**
LN_SIMM(-1)	0.810598 (0.41283) [1.96354]
C	104.4557 (16.0906) [1.96354]
Error Correction:	D(ROA)
CointEq1	-0.016941 (0.01339) [-1.26488]
D(ROA(-1))	-0.110145 (0.09089) [-1.21182]
D(ROA(-2))	-0.236732 (0.09088) [-2.60495]
D(INFLASI(-1))	-0.008301 (0.04198) [-0.19771]
D(INFLASI(-2))	-0.024157 (0.04167) [-0.57968]
D(LN_MS(-1))	-0.074196 (0.07900) [-0.93914]
D(LN_MS(-2))	-0.034356 (0.05672) [-0.60567]
D(LN_SIMM(-1))	-0.010759 (0.02747) [-0.39161]
D(LN_SIMM(-2))	-0.024828 (0.02660) [-0.93328]

Source: Eviews 12

Meanwhile, based on the VECM estimation results above with a t-table of 1.97, the inflation variable in the short term in the first and second periods ahead has an

estimated value of -0.19771 and -0.57968, which means it does not have a significant and negative influence on the ROA (Return on Assets) of Sharia Commercial Banks (BUS). The PUAS (Sharia Interbank Money Market) variable in the short term in the first and second periods ahead has an estimated VECM value of -0.31961 and -0.93328, which means this variable does not have a significant influence on the ROA (Return on Assets) of Sharia Commercial Banks (BUS). Meanwhile, the variable JUB (Money Circulation) in the short term in the first and second periods ahead has an estimated value of -0.93914 and 0.39161, which means that this variable does not have a significant influence on the ROA (Return on Assets) of Sharia Commercial Banks (BUS).

IRF Test

IRF analysis was carried out to determine the influence of Macroeconomic Variables on the Profitability of Islamic Commercial Banks. Based on the results of the VECM test, the inflation and money market variables between Sharia banks have a negative trend, while the money supply variable has a positive trend over the next 60 periods.

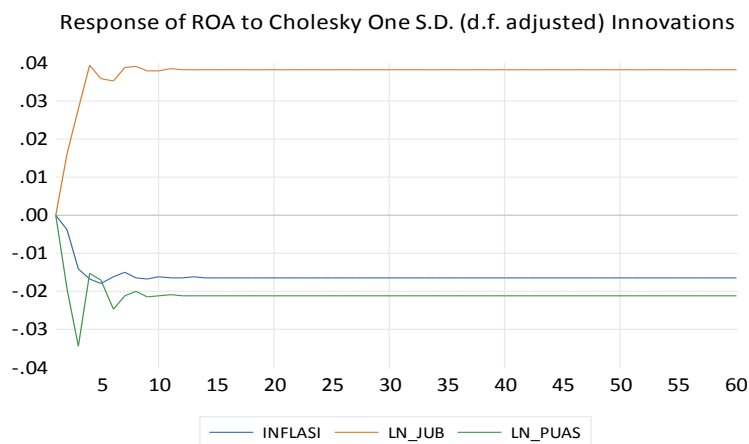


Figure 2. IRF Test

FEVD Test

FEVD aims to understand the extent to which each shock originates from variables that influence Return on Assets of Sharia Commercial Banks which play a role in their contribution in percentage form.

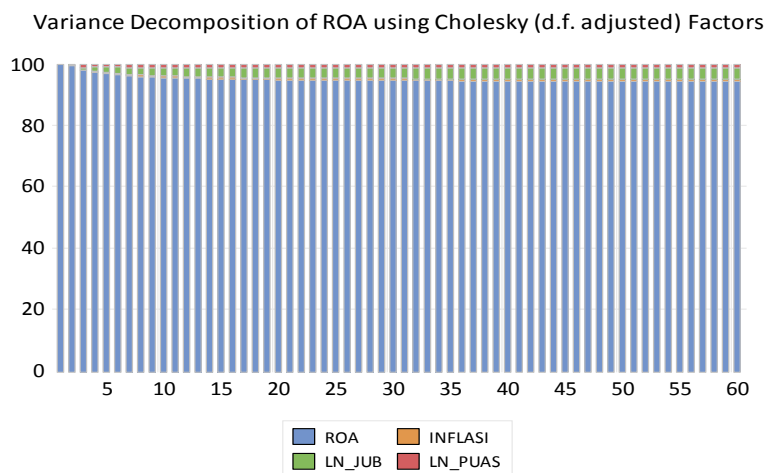


Figure 3. FEVD Test

From the FEVD results above, it can be seen how much influence the research variables have on Return on Assets of Sharia Commercial Banks. Entering the first period the Return on Asset variable is significantly influenced by the variable itself at 100%. Other variables that influence Return on Assets in percentage are inflation of 0.014%, PUAS of 0.34%, and JUB of 0.23%. Entering the 60th period, the contribution of each variable experiences changes in Return on Assets. The effect of Return on Assets on the variables themselves is 94.3%, for inflation, it is 0.70%, PUAS is 1.21% and JUB is 3.76%.

The Effect of Inflation on the Profitability of Sharia Commercial Banks

Based on the VECM test carried out above, the Inflation variable in the long term has a negative and significant influence on the ROA (Return on Asset) variable and in the short term the Inflation variable does not have a significant negative influence on the Return On Assets (ROA). The long-term VECM estimation results in the inflation variable have results that are by the hypothesis carried out, in other words, H_1 is accepted. These results are in line with the research by Nadzifah and Sriyana, 2020³⁰ which states that it has a significant effect in a negative direction, as well as research by Syarief Gerald Prasetya Waluyo, 2021³¹ which states that inflation has a negative effect on the return on assets of Islamic commercial banks. This can be concluded that even though inflation has increased which causes an increase in interest rates, it will not necessarily reduce the level of profitability of Sharia Commercial Banks. An increase in the Inflation rate indicates an increase in the price of goods, which can cause a depreciation in the value of the currency due to the increase in the price of the goods. This is one of the advantages of sharia banking which applies the concept of profit sharing and is not based on the prevailing interest rates. Islamic banking shows an adequate level of resilience to the negative

³⁰ Annafsun Nadzifah and Jaka Sriyana, "Analisis Pengaruh Inflasi, Kurs, BI Rate, PDB dan Kinerja Internal Bank terhadap Profitabilitas pada Perbankan Syariah dan Konvensional," *Jurnal Manajemen dan Bisnis Indonesia*, Vol. 6, No. 1 (2020), p. 79–87.

³¹ Syarief Gerald Prasetya Waluyo, "Profitability Response of Sharia Banking on Macroeconomic Variable Conjunctions in Indonesia With Vector Error Correction Model (VECM) Approach."

impact of inflation because the negative impact does not substantially reduce the amount of deposits and savings in banks.

The Effect of the Money Supply (JUB) on the Profitability of Sharia Commercial Banks

The results of the Long-term VECM estimation in the money supply variable have results that are by the hypothesis carried out, in other words, H_1 is accepted. These results are in line with research by Aulia and Aisyah, 2023³² which states that the amount of money in circulation affects the profitability of Sharia Commercial Banks (BUS), and by research Kusuma, 2018³³ which states that the amount of money in circulation has a significant negative influence on return on assets Sharia Commercial Bank (BUS).

It can be concluded that in banking when the money supply increases and interest rates decrease, this will affect the level of economic investment in conventional banking. Increased investment will affect bank operational activities, but this condition does not necessarily apply to Sharia banking which uses fees that do not follow interest rates. Because the fees are determined based on a ratio system and there is an agreement between the customer and the Sharia bank, the increase in the money supply can increase demand for financing from sharia banks, the fees are determined based on the ratio system and the agreement between the customer and the Sharia bank.

The Influence of the Sharia Interbank Money Market (PUAS) on the Profitability of Sharia Commercial Banks

Based on the results of the VECM test carried out on the Sharia Interbank Money Market (PUAS) variable in the short term it does not have a significant and negative influence on the Return on Assets (ROA) variable, while in the long term, the Sharia Interbank Money Market (PUAS) variable does not have a significant and positive influence on Return on Assets.

The long-term VECM estimation results in the Islamic interbank money market (PUAS) variable have inconsistent hypothesis results, in other words, H_3 is rejected. This is because no research matches the results of this research. After all, researchers rarely examine this variable in conjunction with the return on assets variable. On the other hand, it can be concluded that the Sharia Interbank Money Market (PUAS) variable in the short term and long term does not have a significant direct impact on the profitability of Islamic commercial banks because the Sharia interbank money market is a short-term investment activity between market participants based on sharia principles. Suppose the Islamic interbank money market (PUAS) experiences an increase. In that case, it does not necessarily mean that the Return on Assets (ROA)

³² Aulia and Aisyah, "Analysis of the Influence of Financing, Inflation, and the Amount of Money Supply on the Profitability of Syariah Bank in Indonesia."

³³ Dedy Fahrul Rahman, Dimas Bagus Wiranata Kusuma, "Analysis of the Impact of Selected Macroeconomic Indicators on Islamic Banks Profitability Indonesia," *International Journal of Economics, Business, and Management Research*, Vol. 2 No. 8 (2018), p. 142.

from Sharia Commercial Banks will also increase because Islamic commercial banks have variables that can influence various things, including long-term financing. On the other hand, there has not been much research on this variable, so it does not have results from previous research.

Conclusion

Based on the research that has been carried out above by looking at the influence of Inflation, Money Supply, and the Sharia Interbank Money Market (SIMM) on the Profitability of Sharia Commercial Banks from 2013 to 2023 using the Vector Error Correction Model (VECM) analysis, the conclusions are as follows: Variables In the short term, inflation has no significant and negative effect on Return on Assets (ROA) of Sharia Commercial Banks, while in the long term the inflation variable has a significant negative effect on Return on Assets (ROA) of Sharia Commercial Banks. The Money Supply variable in the short term has no significant and negative effect on the Return on Assets (ROA) of Sharia Commercial Banks, while in the long term, the Money Supply variable has a significant negative effect on the Return on Assets (ROA) of Sharia Commercial Banks. Commercial banks. The Sharia Interbank Money Market (SIMM) variable in the short term has no significant and negative effect on the Return on Assets (ROA) of Sharia Commercial Banks, while in the long term the Sharia Interbank Money Market (SIMM) variable has no significant and negative effect, positive effect on Return on Assets (ROA).

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