The Influence of Money Supply, Inflation and Rupiah Exchange Rate on Murabahah Financing Margins PT. Indonesian Sharia Bank 2013-2022

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ARTICLE INFORMATION	ABSTRAK
	Penelitian ini bertujuan untuk mengetahui pengaruh Pengaruh Jumlah Uang Beredar, Inflasi dan Kurs Rupiah Terhadap Margin Pembiayaan Murabahah pada Bank Syariah Indonesia di seluruh Indonesia dari tahun 2013-2022. Jenis penelitian yang dilakukan adalah penelitian kuantitatif. Metode yang digunakan dalam penelitian ini menggunakan analisis Vector Auto Regression model VECM dan alat data yang diproses menggunakan Eviews 10. Data yang digunakan adalah data sekunder yang diambil melalui website resmi Badan Pusat Statistik (BPS) dalam kurun waktu 10 (sepuluh) tahun dari tahun 2013-2022. Berdasarkan dari hasil penelitian diketahui hasil uji Vector Error Correction Model (VECM) penelitian ini bahwa hanya variabel Jumlah Uang Beredar dan Kurs Rupiah yang memiliki dampak positif dan signifikan, sedangkan pengaruh variabel Inflasi terhadap Margin Pembiayaan Murabahah (Studi Kasus Bank Syariah Indonesia Tahun 2013-2022) dalam jangka pendek memberikan dampak yang positif dan tidak signifikan. Pengaruh Jumlah Uang Beredar dan Inflasi terhadap Margin Pembiayaan Murabahah memiliki dampak positif dan signifikan, sedangkan pengaruh variabel Kurs Rupiah terhadap Margin Pembiayaan Murabahah Tahun 2013-2022 dalam jangka panjang memberikan dampak yang negative dan tidak signifikan. Kata Kunci: Jumlah Uang Beredar, Inflasi, Kurs Rupiah,VAR.

ABSTRACT

This research aims to determine the influence of the Money Supply, Inflation and Rupiah Exchange Rate on Murabahah Financing Margins in Indonesian Sharia Banks throughout Indonesia from 2013-2022. The type of research carried out is quantitative research. The method used in this research uses Vector Auto Regression analysis using the VECM model and data tools processed using Eviews 10. The data used is secondary data taken via the official website of the Central Statistics Agency (BPS) within a period of 10 (ten) years from 2013 -2022. Based on the research results, it is known from the Vector Error Correction Model (VECM) test results

of this research that only the Money Supply and Rupiah Exchange variables have a positive and significant impact, while the influence of the Inflation variable on the Murabahah Financing Margin (Indonesian Sharia Bank Case Study 2013-2022) in the short term has a positive and insignificant impact. The influence of Money Supply and Inflation on Murabahah Financing Margins has a positive and significant impact, while the influence of the Rupiah Exchange rate variable on Murabahah Financing Margins for 2013-2022 in the long term has a negative and insignificant impact.

Introduction

Financial literacy is the capacity to make financial decisions with confidence, improve the financial well-being of individuals and society, and engage in the economy by having a solid understanding of financial ideas and dangers(Arif & Imsar, 2021). When compared with other financing products, murabahah financing products are estimated to have a fairly large and significant portion in sharia banking. This is because murabahah financing uses a careful and low-risk system(Budiman & Hasanah, 2023). There are two factors that determine the margin level, namely external influences in the form of monetary policy such as inflation, interest rates, exchange rates, and so on(Asri, 2020). Based on the 1998 economic crisis, it can be concluded that inflation affected Indonesian banking conditions. When products and services frequently experience constant price increases over a certain period of time, this is known as inflation(Hadad et al., 2020). There are three factors that can usually be associated with price increases, namely the amount of money in circulation, its circulation, and the amount of money traded(Sulistyawati et al., 2020).

Rising inflation can impact the costs of products and services and the purchasing power of money. Since the purchase price of goods for financing may rise, inflation-driven price adjustments may impact murabahah financing margins. Interest rates also have the ability to influence the money supply besides inflation(Safa et al., 2022). The government and central bank jointly announce and publish this interest rate policy. Rising inflation can impact the costs of products and services and the purchasing power of money. Since the purchase price of goods for financing may rise, inflation-driven price adjustments may impact murabahah financing margins. In 2022, inflation will increase but it will not affect customers in making refunds to the bank because the margin level will increase in 2022 compared to 2021, so this raises a problem that is worth researching.

The money supply is one of the elements that influences inflation. Money is something that cannot be separated from the economic existence of a country. As the amount of money used in society increases, inflation will increase. Demand for Murabahah Financing can increase as the amount of money in circulation increases. As strong demand provides room for higher margin increases. An increase in the money supply will reduce people's ability to take credit from conventional banks, which will also reduce demand for credit. This provides financing opportunities through sharia banking. In 2022, the Money Supply will increase, but the number of requests for Murabahah Financing will not increase, so the Murabahah Margin will experience a decrease, which will result in the margin

level in 2020 being lower than in 2019, making it a problem worthy of research.

The Rupiah exchange rate is used as the domestic currency while the US dollar is the foreign currency in this study. The decline in currency value will have an impact on increasing non-performing financing (NPF) and lead to a liquidity crisis in both conventional and sharia banking. Exchange rate fluctuations have the potential to cause economic shocks. Because exchange rate fluctuations have the potential to affect economic stability, this also has a very important role. Additionally, currency exchange rates make international transactions easier(Sulistyawati et al., 2020). Fluctuations in the Rupiah exchange rate against other currencies can also have an impact on Murabahah Financing margins. If the rupiah depreciates, the cost of importing goods for murabahah financing may increase and affect margins. The Rupiah exchange rate increased in 2017, but the capital system in sharia banks had no effect on this increase because the margin level in 2017 remained higher than in 2016, giving rise to problems that need to be researched.

Literature Review

A. Margins

Sharia banking functions as a channel for capital with the aim of generating income for sharia banks. Banks receive income from various sources, including trade, services, investments, and so on. Islamic banking will promote this income stream to customers so that they can save money in the bank. Margin income is the income generated by sharia banking from purchasing and selling financing(Wilda et al., 2020). Margin is money paid by customers to Islamic banks as profits from buying and selling transactions carried out by both parties(Ekawat, Khiaroh, 2019). Margin financing can be done as a fixed percentage of the product purchase price or as a lump sum. Margin payments are made all at once

they cannot be made on a monthly or term basis(Ramadhani & Wardana, 2021).

B. Murabaha Financing

Murabahah is a sale and purchase contract for goods where the seller and customer agree on the terms and conditions and the seller states the price to the buyer (Ismail, 2016). The sharia banking product that is most in demand in sharia banking business activities is murabahah which is based on buying and selling. The contract for buying and selling goods is known as murabahah which contains the purchase price and profit (margin) agreed between the buyer and seller. This contract is an example of a natural certainty contract because the required level of profit (i.e. the profit to be obtained) is determined in the murabahah. Murabahah can be done by order or without request(Lilia Afriani and Muhammad Lathief Ilhamy, 2023). The following are the conditions for carrying out a murabahah transaction(Dwijayanty, 2017):

1) The seller will provide the capital price to the consumer.
2) The terms of the contract are valid and enforceable.
3) Usury free
4) Notify clients if products have physical defects.
5) Be open and honest with customers both directly and through debt

C. Amount of Money in Circulation

According to Raharja and Manurung, the entire amount of money in circulation is the amount of money in circulation available to society. In a technical sense, money that is actually in the hands of the general public is said to be money in circulation.

On its official website, www.bi.go.id, Bank Indonesia describes the money supply as the commitment of the Central Bank, Commercial Banks and Rural Banks to the domestic private sector as well as the central government and the community. Liabilities that

are components of money in circulation include currency (other than Commercial Banks and Rural Banks), quasi money, demand deposits, domestic private securities (except shares issued by the monetary system), and domestic private securities, with a term a maximum of one year.

There are two characteristics for determining the money supply: broad (M2) and narrow (M1). M1 includes state-owned funds and current accounts, which are usually worth rupiah. M2 consists of securities issued by the monetary system which are owned by the domestic private sector and have a maximum balance, as well as quasi-money such as savings, deposits, current accounts in foreign currency, as well as rupiah and foreign currency (currency) with a one year or certain period of time. . There are three definitions of money supply, namely:

a) Money in the Narrow Meaning (M1)

What is meant by "money in circulation" (M1) is a combination of demand deposits and currency, which includes banknotes and coins. In a narrow sense, money consists of demand deposits held by the public, companies and governments in addition to the currency in circulation.

$$M1 = C + DD$$

Where:

M1 = Money supply in the narrow sense

C = Currency (currency money)

DD= Demand Deposits (demand deposits)

b) Money Circulating in the Broadest Sense (M2)

Demand deposits, quasi money and circulating money in the broadest sense (M2) are money circulating throughout society. Time deposits,

savings and foreign exchange (savings) accounts owned by domestic private individuals are quasi-money.

$$M2 = M1 + T$$

Where:

M2 = Money supply in a broad sense

M1 = Money supply in the narrow sense

T = Quasi Money

c) Circulating Money in the Broadest Meaning (M3)

The amount of money in circulation in the broadest sense (M2) and time deposits held by non-bank financial institutions is called money in circulation in the broadest sense (M3).

$$M3 = M2 + TDLKBB$$

Where:

M3 = Money supply in the broadest sense

M2 = Money supply in a broad sense

TDLKBB = Time Deposit at non-bank financial institutions.

D. **Inflation**

A country's economy often experiences inflation(Christianingrum & Syafri, 2019), which is caused by a continuous increase in the average prices of various commodities over a predetermined period of time. Weak trade balance and competitiveness are two impacts of inflation that may have an impact on exports. Exports and inflation have a negative relationship. Exports generally tend to decrease in response to rising inflation because rising prices of goods generally result in higher production costs of exported goods. According to different theories, an increase in inflation will result in a decrease in exports because commodities and services become less

competitive due to increases in the prices of goods and services produced and supplied. According to(Harahap & Sugianto, 2023)Inflation is defined as a situation in which the value of money decreases or depreciates, and is characterized by a tendency to increase the prices of accessible products and services.

E. Rupiah Exchange Rate

"The number of pounds received for each dollar" is the exchange rate. The value of a country's currency that is measured, compared, or expressed in another country's currency is known as the currency exchange rate. There are two types of currency exchange rates: buying rate and selling rate. There are usually two types of transactions that occur when exchanging currency online, through a foreign exchange dealer, or through a bank through purchase transactions and sales transactions. For example, we have to spend IDR 9,500 for every US dollar we want to buy. Meanwhile, for selling US dollars, we get IDR 9,000 for every US dollar. For banks and foreign currency traders, the profit margin is the difference between the selling rate and the buying rate (spread). The price of a currency against another country's currency, such as the value of the rupiah after being converted to US dollars, is another definition of exchange rate.

Method

This research uses quantitative methodology with an associative research strategy. This quantitative research uses a causality approach, namely the procedure for determining the relationship between the independent variable and the dependent variable that supports the hypothesis. The types and procedures used in this research aim to identify the influence of the independent variable on the dependent variable. The dependent variable in this research is Murabahah Financing Margin while the independent variables are Money Supply, Inflation, and Rupiah Exchange Rate. The location of this research is the official Authority/Services/Finance (OJK) website which

has been published in the publication report on the official website of the Central Statistics Agency www.bps.go.id or Statistics///Banking//Syariah (SPS) and the official BSI website. The type of data used in this research is Time Series data, namely secondary data originating from the Central Statistics Agency, OJK, and BI reports regarding variables X and Y originating from BSI's annual financial reports for 2013–2022.

The data analysis technique in this research uses VAR which aims to assess the long-term and short-term effects of a dependent variable (Murabahah Financing Margin) based on independent variables (Money Supply, Inflation and Rupiah Exchange Rate). Vector Auto Regression (VAR) was used to analyze the collected data, with the help of Eviews software. VAR comes in three forms: VAR, VARD, and VECM. If all variable data is flat and stable, VAR is used. If there is no cointegration in the data of the variables and all variables are stationary after being integrated at the same level, then VARD is used which is a variation of VAR. The VECM model is used when there is cointegration but all variables are integrated at the same level which is used such as the stationarity test, ideal lag determination, model analysis, Granger causality test, IRF test, and Variance Decomposition test are the steps in carrying out VECM analysis.

Result and Discussion

A. Description of Research Data
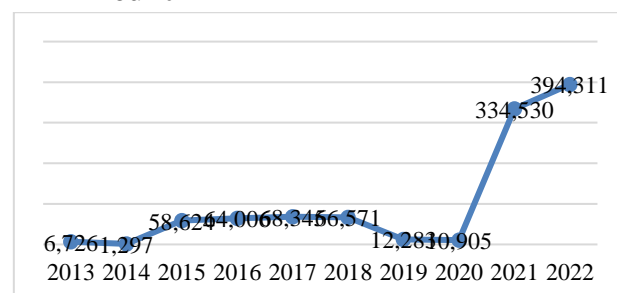##### 1) Murabahah Financing Margin Amount

Figure 1. 1 Total Murabahah Financing Margin
Source: Secondary data processed, 2024

Sharia banks can set murabahah margin levels that are competitive with conventional bank credit interest rates in order to increase market share so that sharia banks increasingly attract the interest of consumers who want to carry out Murabahah financing.at a Sharia bank. The large mark-up caused by the need for Islamic banks to generate real profits, inflation, current interest rates, monetary policy, the marketability of murabahah goods, and the expected level of profit from these goods are the causes of the increase in the total Murabahah Financing Margin. Although good predictions help prevent bank losses due to interest rate fluctuations, inaccurate predictions can cause bank losses due to changes in interest rates.

Murabahah financing is essentially defined as sales with additional profit (margin) above the acquisition cost. The level of murabahah margin charged by Islamic banks to their customers will have a direct influence on the amount of money generated through murabahah financing. This margin determination is intended to anticipate the emergence of defaults, predict the emergence of failures or bottlenecks from customers in order to prevent losses. Sharia banks handle the process of identifying profits in murabahah transactions as a whole. However, in reality, this has sparked debate because some groups argue that the margin requirements for murabahah financing in Islamic banks are still quite high.(Linanda, 2021).
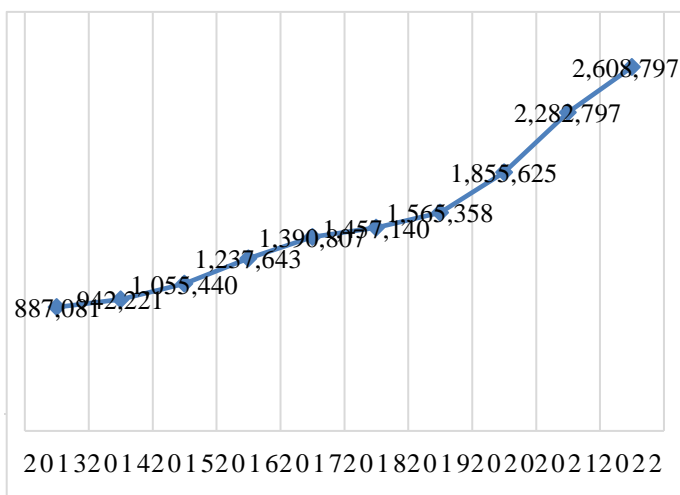
2) Development of the Money Supply

The money supply is the total amount of money in the economy. Money in circulation in the narrow sense (M1) consists of currency (paper money and coins) and demand deposits (checks and demand deposits). Meanwhile, money in circulation in a broad sense (M2) includes M1 plus quasi money(Herania et al., 2022). Movements in the money supply can be explained by several factors such as monetary policy, inflation rate, interest rates, and economic growth. The increase in prices caused by an imbalance in the amount of merchandise and money circulating in society will have an impact on the high amount of money in circulation. Non-cash payments are widely used. The convenience of non-cash transactions can reduce transaction costs and ultimately spur economic growth, and is a factor that encourages people to use it more often. In addition to facilitating transactions, the availability of non-cash payment options can encourage higher levels of spending. Consumption growth will ultimately influence national income growth and can stimulate an increase in demand for money.
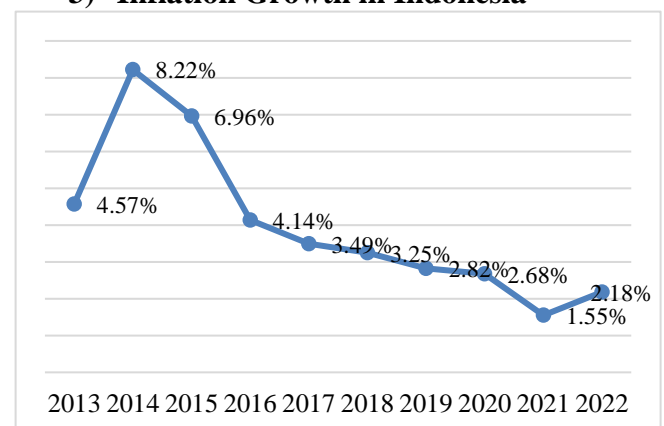
3) Inflation Growth in Indonesia

Figure 1. 3 Inflation Growth
Source: Secondary data processed, 2024

Inflation is a condition where there is a

general and continuous increase in the prices of goods and services on the market. According to experts, inflation can be interpreted as a process of increasing the prices of goods and services continuously over a relatively long period of time. This is caused by excessive growth in demand or a decrease in the supply of goods and services in the market. Prices will rise due to inflationary pressure on wages. The high propensity to shop is triggered by ever-increasing inflation, especially in the luxury goods and basic necessities groups. As a result, there is more money in society. As a result, inflation will disrupt the way money works, especially the ability to save, make prepayments and count money. It can also be said that an increase in the inflation rate will affect demand and the amount of money circulating in society(Ramadhani & Wardana, 2021).

4) Development of the Rupiah Exchange Rate in Indonesia

13,391 13,307 13,384 14,246 14,146 14,573 14,311 14,870
11,878
10,451

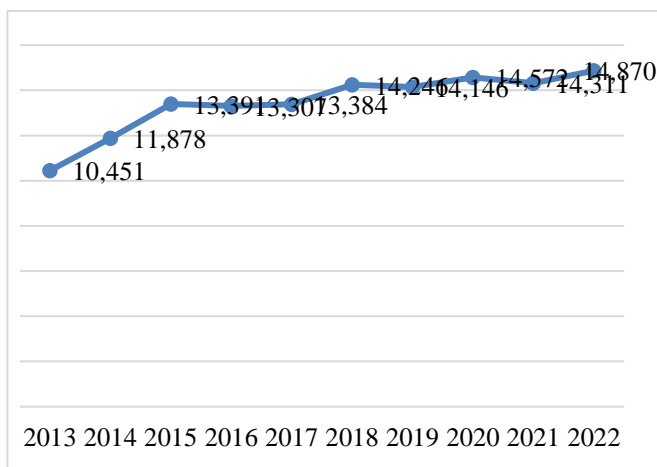2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

Figure 1. 4 Developments in the Rupiah Exchange Rate
Source: Secondary data processed, 2024

Depreciation of the local currency has an impact on financing problems because it can cause capital to flee from within the country because the Rupiah exchange rate is too low compared to other currencies. Demand for dollars will increase in response to strengthening the dollar exchange rate. Devaluation of the exchange rate will put pressure on large bank debtors whose commercial operations

actually depend on the dollar exchange rate, thereby increasing the possibility of default or bad credit. So the risk of non-performing loans will increase in response to an increase in the dollar exchange rate or a decrease in the value of the Rupiah. The rupiah exchange rate is the number of rupiah needed to buy one US$ (US Dollar). Supply and demand, or market mechanisms, move exchange rates. Because a decline in the value of the domestic currency can result in higher import financing, which can increase production costs, there is a strong correlation between the level of the domestic currency exchange rate and non-performing loans. Therefore, the exchange rate level has a significant influence on the debtor's business and needs to be managed to prevent fluctuations in non-performing loans.

B. Statistical Testing Analysis
1) Data Stationarity Test Results

One of the procedures carried out is estimating an economic model by utilizing the results of testing stationary data. The stationarity or not of a VAR model can be ascertained using the ADF (Augmented Dickey Fuller) test.

Table 1.1 Augmented Dickey Fuller (ADF) Test Results

Variable	Unit Root Test In	ADF Test Statistics	Probability
JUB	2stDifference	-12.16436	0.0000
INFLATION	2stDifference	-11.72051	0.0000
RUPIAH EXCHANGE	2stDifference	-12.25057	0.0000
AMOUNT OF MURABAHAH	2stDifference	-12.16673	0.0000

FINANCING MARGINS			

Source: Data Processed Results Using Eviews 10

Based on the results of the stationarity test (ADF), the variable in the research, namely the Murabahah Financing Margin variable, passed at the 2nd difference level. The Money Supply variable does not pass at the level level, but passes at the 2nd difference level. The Inflation variable passes at the 2nd difference level. The Rupiah Exchange Variable does not pass at the level level, but passes at the 2nd difference level. So all variables, both dependent and independent, pass the Augmented Dickey Fuller (ADF) Test.

2) Determination of Optimal Lag

Table 1.2 Optimal Lag Test Results

Lag	LogL	L.R	FPE	AIC	S.C	HQ
0	-4048.325	NA	1.43e+25	69.27052	69.36495	69.30886
1	-2914.197	2171.323	7.13e+16	50.15721	50.62938*	50.34891
2	-2885,786	52.45087*	5.77e+16*	49.94506*	50.79496	50.29011*
3	-2873.658	21.56072	6.18e+16	50.01125	51.23888	50.50965

Source: Data Processed Results Using Eviews 10

Researchers use optimal lag 2 based on the optimal lag test which uses AIC criteria. Because as shown in the table above, the small criterion of the Akaike Information Criterion (AIC) is 49,945.006 and the one with the most symbols (*) is located at lag 2 (two). So, the recommended optimal lag length is lag 2.

3) Cointegration Test

Table 1.3 Cointegration Test Results

Unrestricted Cointegration Rank Test (Trace)
Included observations: 117 after adjustments

Hypothesized No. of CE(s)	Eigenvalues	Trace Statistics	0.05 Critical Value
None *	0.223318	54.66371	47.85613
At most 1	0.153202	25.09490	29.79707
At most 2	0.044389	5.638544	15.49471
At most 3	0.002784	0.326182	3.841466

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
Unrestricted Cointegration Rank Test (Maximum Eigenvalu

Source: Data processed by researchers, 2024

With a significance level of 5%, it can be seen from the table above that the trace statistic value is higher than the critical value. This shows that the null hypothesis of cointegration confirming its existence is accepted. Thus, it can be said that there is a long-term relationship between variables and they are mutually cointegrated. If cointegration occurs, VAR in the form of VECM will then be used. The VECM Var Test is the next step in this research because the Cointegration Test Results in Table 1.3 show that there are Cointegration Results.

4) Vector Auto Error Correction Model (VECM) Test Results

Table 1.4 Vector Error Correction Model (VECM) Test Results

Source: Data processed by researchers, 2024

Variable	Coefficient	t-statistics	t-table	Information
Short-term				
Money Supply	1,474.02	2,188,601		Significant
Inflation	1,406.39	1,622,239	1,657.98	Not significant
Rupiah Exchange Rate	1,362.34	2,052,605		Significant
Long-term				
Money Supply	5,990,805	3,817.68		Significant
Inflation	1,297,022	5,361.85	1,657.98	Significant
Rupiah Exchange Rate	-0900.321	-2,509.11		Not significant

Based on the table above, the Money Supply affects the Murabahah Financing Margin positively and significantly in the long term. This shows that the Murabahah Financing Margin of 3,817.68 will increase with every one unit increase in the Money Supply. Likewise, the Murabahah Financing Margin is influenced positively and significantly by the Inflation variable. This means that for every one unit increase in inflation, the Murabahah Financing Margin will increase by 5,361.85. Because the calculated t value is smaller than the t table, the Rupiah exchange rate has a negative and insignificant long-term impact on the Murabahah Financing Margin of -2,509.11. In this short-term analysis, the Money Supply and Rupiah Exchange variables have a significant influence, but inflation has a positive influence but is not significant because the inflation t-statistic value is smaller than the t-table value.

5) Granger Causality Test

Table 1.5 Granger Causality Test Results

Pairwise Granger Causality Tests
Date: 03/19/24 Time: 23:27

Null Hypothesis:	Obs	F-Statistics	Prob.
Inflation does not Granger Cause the Money Supply	117	2.30184	0.0811
Money Supply does not Granger Causes of Inflation		3.45192	0.0191
The exchange rate does not Granger Cause the Money Supply	117	1.99605	0.1188
Money Supply does not Granger Cause Exchange rate		1.86849	0.1391
Amount of Murabahah Financing Margin does not Granger Cause Amount of Money in Circulation	117	0.00089	1,0000
Money Supply does not Granger Cause Amount of Murabahah Financing Margin		0.05556	0.9827
The exchange rate does not Granger Cause Inflation	117	3.92685	0.0105
Inflation does not Granger Cause Exchange Rates		0.68833	0.5610
Murabahah Financing Margin Amount does not Granger Cause Inflation	117	0.27662	0.8422
Inflation does not Granger Cause Amount Murabahah Financing Margin		0.17901	0.9104
Murabahah Financing Margin Amount does not Granger Cause Exchange Rates	117	1.02959	0.3825
Exchange rate does not Granger Cause Amount Murabahah Financing Margin		0.38451	0.7644

Source: Data processed by researchers, 2024

From the results obtained above, it is known that those who have a causal relationship in the Granger Causality Test are:

1. The amount of money in circulation has a

causal relationship with inflation

2. The Rupiah exchange rate has a causal relationship with inflation

This is because the probability value is smaller than the alpha value of 0.05. So testing the Granger Causality Test above can determine the causal relationship as follows:

a.   Based on the results of the Granger causality test table between inflation and the money supply, the inflation variable is not significant for the money supply because the probability value is greater than the alpha level (0.05). This is in line with research.(A. Mahendra, 2016)that the money supply variable has no real (significant) effect on the Indonesian inflation variable. However, the amount of money in circulation is significant on the inflation variable because the probability value is smaller than the alpha value (0.05). This is in line with scientific research(Safa et al., 2022)Based on the results of the t test, it was found that the money supply variable had a significant influence on inflation. With this it can be concluded that there is causality or a unidirectional relationship between the Money Supply and Inflation.

b.   Based on the results of the Granger causality test table between the Rupiah exchange rate and the money supply, the Rupiah exchange rate variable is not significant for the money supply because the probability value is greater than the alpha level (0.05). This is in line with research.(Aprileven, 2017)based on the results of the partial test and the second significance test, the exchange rate has a positive and insignificant effect on the amount of money circulating in society. Likewise, the money supply is not significant to the variable Rupiah exchange rate because the probability value is greater than the alpha value (0.05). This is in accordance with research conducted by(Marina & K, 2016)The research results show that the money supply variable simultaneously does not have a significant

effect on the rupiah exchange rate in Indonesia.With this it can be concluded that there is no causality or unidirectional relationship between the Money Supply and the Rupiah Exchange Rate.

c.Based on the results of the Granger causality test table between the Murabahah Financing Margin and the Money Supply, the Murabahah Financing Margin variable is not significant to the Money Supply because the probability value is greater than the alpha level (0.05). This is in accordance with research conducted by(Haikal Muhammad, 2020)which states that Margin has a negative and insignificant effect on the money supply.Likewise, the Money Supply is not significant for the Murabahah Financing Margin variable because the probability value is greater than the alpha value (0.05). This is in accordance with research conducted by(Sofiani, 2020)which states that inflation and the money supply have a negative and insignificant effect on the murabahah margin.With this it can be concluded that there is no causality or unidirectional relationship between the Money Supply and the Murabahah Financing Margin.

d. Based on the results of the Granger causality test table between the Rupiah exchange rate and inflation, the Rupiah exchange rate variable is significant for inflation because the probability value is lower than the alpha level (0.05). This is in accordance with research conducted by(Faizin, 2020) Based on the results of the cointegration test, it can be concluded that the rupiah exchange rate and inflation significantly influence each other in the long term.However, inflation is not significant for the Rupiah exchange rate variable because the probability value is greater than the alpha value (0.05). This is in accordance with research(Marina & K, 2016)inflation is not significant to the exchange rate as per the quantity theory of

economic activity. With this it can be concluded that there is causality or a unidirectional relationship between inflation and the Rupiah exchange rate.

e. Based on the results of the Granger causality test table between the total Murabahah Financing Margin and Inflation, the variable Murabahah Financing Margin Amount is not significant for inflation because the probability value is greater than the alpha level (0.05). This is in line with research conducted (Zainuri, 2018) which shows that the murabahah margin in Sharia banks is not significant to inflation. Likewise, inflation is not significant for the Murabahah Financing Margin variable because the probability value is greater than the alpha value (0.05). This is in line with research(Yusri, 2020)inflation does not directly have a significant effect on murabahah financing margin income. With this it can be concluded that there is no causality or unidirectional relationship between Inflation and the Total Murabahah Financing Margin.

f. Based on the results of the Granger causality test table between the total murabahah financing margin and the Rupiah exchange rate, the variable total murabahah financing margin is not significant to the rupiah exchange rate because the probability value is greater than the alpha level (0.05). This is in accordance with research(Puspitaloka Dian, 2019)which states that the profit margin on mureabahah financing is not significant to the exchange rate. Likewise, the Rupiah Exchange rate variable is not significant for the Murabahah Financing Margin variable because the probability value is greater than the alpha value (0.05). This is in accordance with scientific work researched by(Ramadhani & Wardana, 2021)which states that the exchange rate has no/significant effect on the amount of margin on murabahah financing.With this it can be concluded that

there is no causality or unidirectional relationship between the Murabahah Financing Margin Amount and the Rupiah Exchange Rate.

6) Impulse Response Function (IRF) Test Results

a. The results of the impulse response function (IRF) analysis of the Total Murabahah Financing Margin on the Total Murabahah Financing Margin show that the variables that most influence (> alpha 0.05) the Total Murabahah Financing Margin are as follows:

1. Inflation, positive value of 0.73%

2. The Rupiah exchange rate is positive at 1.02%

3. Total Murabahah Financing Margin is positive at 33.7%

4. The Money Supply has a negative value of -0.15%

If we look at the response of the Total Murabahah Financing Margin to the Total Murabahah Financing Margin, Money Supply, Inflation and Rupiah Exchange Rate, the response shows fluctuating variables. And quantitatively, the results of the analysis show that in the 1st period, the Total Murabahah Financing Margin only responded to shocks from the Total Murabahah Financing Margin of (12.82059) and is positive. Then in the 2nd period the Murabahah Financing Margin Number responds to shocks successively according to the size, namely the Money Supply (0.177010), Inflation (-0.007935), and Rupiah Exchange Rate (0.087793).

b. The results of the Impulse Response Function (IRF) analysis of the Money Supply on the Murabahah Financing Margin show that the variables that influence the Money Supply (> alpha 0.05) are as follows:

1) The Money Supply has a positive value of 10.5%

2) The Rupiah exchange rate is negative at -1.03%
3) Inflation is negative at -1.28%
4) Total Murabahah Financing Margin is negative at -6.09%

If we look at the response of the Money Supply to the Total Murabahah Financing Margin, Money Supply, Inflation and Rupiah Exchange Rate, the response shows fluctuating variables. And quantitatively shown in table 4.7, namely the results of the analysis show that in the 1st period, the Money Supply only responded to shocks from the Money Supply amount of (3,945,270) and is positive. Furthermore, in the second period capital growth responded to shocks successively according to the magnitude, namely the money supply (5,132,513), inflation (-29,473.59), and the rupiah exchange rate (-85,161.86).

c. The results of impulse response function (IRF) analysis on Inflation on Murabahah Financing Margins show that the variables that influence Inflation are as follows:

1) The Money Supply has a positive value of 0.50%

2) Total Murabahah Financing Margin has a positive value of 0.01%

3) Inflation has a negative value of -0.06%

4) The Rupiah exchange rate has a negative value of 0.09%

If we look at the inflation response to the total Murabahah Financing Margin, Money Supply, Inflation and Rupiah Exchange rate, the response shows fluctuating variables. And quantitatively shown in table 4.8, namely the results of the analysis show that in the 1st period, inflation only responded to shocks from inflation of (0.090855) and is positive. Then in the second period, inflation responds to shocks successively according to the magnitude, namely the Money Supply (0.021665), Inflation (0.103015) and Rupiah Exchange Rate (0.002720).

d. Based on the results of impulse response function (IRF) analysis, the following variables are known to have an impact on the Rupiah exchange rate:

1) The positive percentage of inflation is 9.24%.

2) There is a positive value of 65.19% of the Rupiah exchange rate.

3) The Money Supply is at -21.6%, which is negative.

4) The total negative murabahah financing margin is -24.15%.

If we look at the response of the Rupiah exchange rate to total Murabahah financing margins, money supply, inflation and Rupiah exchange rate, the responses show fluctuating variables. And quantitatively shown in table 4.9, namely the results of the analysis show that in the 1st period, the Rupiah exchange rate only responded to shocks from the Rupiah exchange rate of (46.09791) and is positive. Then in the 2nd periodRupiah Exchange Raterespond to shocks successively according to their magnitude, namely the Money Supply (-63.63174), Inflation (26.84934), and Rupiah Exchange Rate (57.51272).

7) **Variance Decomposition (VD) Test Results**
a. **Murabahah Financing Margin Amount**

The results of the variance decomposition analysis show that the forecast error variance is the total Murabahah Financing Margin. In the first period, it is determined by the total Murabahah Financing Margin itself of 100%. Furthermore, in the second period and onwards the influence of different decreased by 99.99%. In the final period, the influence of different Murabahah Financing Margins decreased to 99.86%. The variable that makes the largest contribution to the total Murabahah Financing Margin is the Rupiah Exchange variable of 0.08%. In the final period, each of them contributed, namely Total Money Supply of 0.01%, Inflation of 0.03%, Rupiah Exchange Rate of 0.08% and Total Murabahah Financing Margin of 99.86%.

The results of the Variance Decomposition test analysis show that the Total Murabahah

Financing Margin which functions as the dependent variable as the final target variable is the Total Murabahah Financing Margin variable of 99.86%. Meanwhile, the JUB variable is 0.01%, inflation is 0.03% and the Rupiah exchange rate is 0.08%. These results can be believed that changes in the Total Murabahah Financing Margin are the result or effect of changes in the Total Murabahah Financing Margin or vice versa.

b. Money Supply

The results of the variance decomposition analysis show that the forecast error variance is the amount of money in circulation. In the first period, it was determined by the Money Supply itself at 97%. Furthermore, in the second period and onwards the influence of different increased by 97.13%. In the final period, the influence of the different money supply rose to 97.30%. In the final period, each of them contributed, namely Total Money Circulation of 97.30%, Inflation of 1.35%, Rupiah Exchange Rate of 0.88% and Total Murabahah Financing Margin of 0.46%.

The results of the Variance Decomposition test analysis show that the amount of money in circulation which functions as an independent variable as the final target of the variable amount of money in circulation is 97.30%. Meanwhile, the inflation variable is 1.35% and the Rupiah exchange rate is 0.88%. This result can be believed that changes in the Money Supply are the result or effect of changes in the Murabahah Financing Margin Number or vice versa.

c. Inflation

The results of the variance decomposition analysis show that the forecast error variance is from inflation. In the first period, inflation itself was determined at 28.97%. Furthermore, in the second period and onwards the influence of different increased by 33.41%. The variable

that makes the largest contribution to the Total Murabahah Financing Margin is the Money Supply variable of 94.25%. In the final period the effect of differential inflation rose to 97.30%. In the final period, each of them contributed, namely Total Money Circulation of 94.25%, Inflation of 1.82%, Rupiah Exchange Rate of 3.09% and Total Murabahah Financing Margin of 0.82%.

The results of the Variance Decomposition test analysis show that inflation functions as an independent variable as the final target for the variable Money Circulation of 94.25%. Meanwhile, the inflation variable is 1.82% and the Rupiah exchange rate is 3.09%. This result can be believed that changes in inflation are the result or effect of changes in the total Murabahah Financing Margin or vice versa.

d. Rupiah Exchange Rate

The results of the variance decomposition analysis show that the forecast error variance is the Rupiah exchange rate. In the first period it was determined by the Rupiah exchange rate itself at 40.14%. Furthermore, in the second period and onwards the influence of different decreased by 38.44%. In the final period the influence of the Rupiah exchange rate difference rose to 61.58%. In the final period, each of them contributed, namely Total Money Circulation of 22.81%, Inflation of 3.77%, Rupiah Exchange Rate of 61.58% and Total Murabahah Financing Margin of 11.81%.

The results of the Variance Decomposition test analysis show that the Rupiah Exchange rate which functions as an independent variable as the final target of the Money Circulation variable is 22.81%. Meanwhile, the inflation variable is 3.77% and the Rupiah exchange rate is 61.58%. These results can be believed to mean that changes in the Rupiah exchange rate are the result or effect of changes in the Murabahah Financing Margin Amount or vice versa.

Based on the test results carried out using the Eviews 10 application, the Vector Error Correction Model (VECM) results show that the Money Supply variable has a positive and significant influence on the Murabahah Financing Margin. This means that for every one unit increase in the Money Supply there will also be an increase in the Murabahah Financing Margin of 5.990805. Likewise, the Inflation variable has a positive and significant influence on the Murabahah Financing Margin, which means that for every one unit increase in Inflation there will also be an increase in the Murabahah Financing Margin by 1.297022. Meanwhile, the Rupiah exchange rate in the long term has a negative and insignificant influence on the Murabahah Financing Margin because the t-calculated value is smaller than the t-table. In this short-term analysis, the Money Supply and Rupiah Exchange variables have a significant influence, but inflation has a positive but not significant influence.

1. The Effect of Money Supply on Murabahah Financing Margins (Case Study of Indonesian Sharia Banks 2013-2022)

From the results of the Granger causality test table between the Money Circulation and the Murabahah Financing Margin, the variable Money Circulation is not significant with the Murabahah Financing Margin because the probability value is greater than the alpha level (0.05) of 0.9827. This is in accordance with research conducted by(Haikal Muhammad, 2020)which states that Margin has a negative and insignificant effect on the money supply.Meanwhile, the Murabahah Financing Margin variable is not significant with the Money Supply variable because the probability value is greater than the alpha value (0.05) of 1.0000. This is in accordance with research conducted by(Sofiani, 2020)which states that inflation and the money supply have a negative and insignificant effect on the murabahah margin.With this it can be concluded that there is no causality or reciprocal relationship

between the Money Supply and the Murabahah Financing Margin.

Based on the results of the impulse response function test, it can be seen that the Money Supply responded positively in the first period at 3,945,270 to the Murabahah Financing Margin with a fluctuating response and an unstable response until the end of the period.

From the results carried out using the variance decomposition test tool, it shows that the amount of money in circulation has the ability to influence the Murabahah Financing Margin from the beginning to the end of the observation. The contribution of the money supply in influencing the Murabahah Financing Margin tends to decrease until the end of the observation, starting from the second period at 2.8%, which then decreases until the end of the period at 0.46%. This shows that the role of the money supply does not affect the Murabahah Financing Margin within a period of 10 years.

2. The Effect of Inflation on Murabahah Financing Margins (Case Study of Indonesian Sharia Banks 2013-2022)

From the results of the Granger causality test table between inflation and the Murabahah Financing Margin, the Inflation variable is not significant with the Murabahah Financing Margin because the probability value is greater than the alpha level (0.05) of 0.9104. This is in line with research(Yusri, 2020)inflation does not directly have a significant effect on Murabahah Financing Margin income. On the other hand, the Murabahah Financing Margin variable is not significant with the Inflation variable because the probability value is greater than the alpha value (0.05) of 0.8422. This is in line with research conducted (Zainuri, 2018) which shows that the murabahah margin in Sharia banks is not significant to inflation. With this it can be concluded that there is no causality or reciprocal relationship between inflation and Murabahah financing margins.

Based on the results of the impulse response function test, it can be seen that

inflation responded positively in the first period at 0.090855 in the Murabahah Financing Margin with a fluctuating response and an unstable response until the end of the period.

From the results carried out using the variance decomposition test tool, it shows that inflation has the ability to influence the Murabahah Financing Margin from the beginning to the end of the observation. The contribution of inflation in influencing the Murabahah Financing Margin tends to increase until the end of the observation, starting from the second period at % and then decreasing until the end of the period at 0.82%. This shows that the role of inflation does not affect the Murabahah Financing Margin within a period of 10 years.

3. The Influence of the Rupiah Exchange Rate on Murabahah Financing Margins (Bank Case Study Indonesian Sharia 2013-2022)

From the results of the Granger causality test table between the Rupiah Exchange Rate and the Murabahah Financing Margin, the Rupiah Exchange Rate variable is not significant with the Murabahah Financing Margin because the probability value is greater than the alpha level (0.05) of 0.7644. This is in accordance with research(Puspitaloka Dian, 2019)which states that the profit margin on mureabahah financing is not significant to the exchange rate. On the other hand, the Murabahah Financing Margin variable is not significant with the Rupiah Exchange variable because the probability value is greater than the alpha value (0.05) of 0.3825. This is in accordance with scientific work researched by(Ramadhani & Wardana, 2021)which states that the exchange rate has no/significant effect on the amount of margin on murabahah financing.With this it can be concluded that there is no causality or reciprocal relationship between the Rupiah Exchange Rate and the Murabahah Financing Margin.

Based on the results of the impulse response function test, it can be seen that the Rupiah exchange rate responded positively in the first period by 46.09791 to the Murabahah Financing Margin with a fluctuating response and an unstable response until the end of the period.

From the results carried out using the variance decomposition test tool, it shows that the Rupiah exchange rate has the ability to influence the Murabahah Financing Margin from the beginning to the end of the observation. The contribution of the Rupiah exchange rate in influencing the Murabahah Financing Margin tends to increase until the end of the observation, starting from the second period at 38.44%, which then increases until the end of the period at 61.58%. This shows that the role of the Rupiah exchange rate is quite influencing the Murabahah Financing Margin over a 10 year period.

Conclusion

Based on the results of discussion and analysis of research data regarding the Influence of Money Supply, Inflation and Rupiah Exchange Rate on Murabahah Financing Margins (Case Study of PT. Bank Syariah Indonesia 2013-2022), it can be concluded that by analyzing the VAR method with the variance decomposition test model in alpha 5% using the Eviews 10 analysis application tool. Shows that the variables Money Circulation, Inflation and Rupiah Exchange rate have variance in influencing the Murabahah Financing Margin as an indicator. To find out the problem that was stated at the beginning, the author made research results with the following details:

Based on the results of the Vector Error Correction Model, it shows that:

1. On the short-term influence between the

variables Money Supply, Inflation and Rupiah Exchange Rate on Murabahah Financing Margins (Case Study of PT. Bank Syariah Indonesia 2013-2022) can be seen from the VECM estimation test, the conclusion is: Only the Money Supply and Rupiah Exchange variables are has a positive and significant impact.

2. The short-term influence between the variables Money Supply, Inflation and the Rupiah Exchange Rate on the Murabahah Financing Margin (Case Study of PT. Bank Syariah Indonesia 2013-2022) can be seen from the VECM estimation test, namely the influence of the Inflation variable on the Murabahah Financing Margin in the short term has an impact which is positive and not significant.

3. On the long-term influence of variables, the influence of the money supply, inflation and the Rupiah exchange rate on the Murabahah financing margin (case study of PT. Bank Syariah Indonesia 2013-2022) can be seen from the VECM estimation test, the conclusion is: The effect of the money supply and inflation on the financing margin Murabahah has a positive and significant impact.

4. On the long-term influence of the variable Influence of Money Supply, Inflation and Rupiah Exchange Rate on Murabahah Financing Margins (Case Study of PT. Bank Syariah Indonesia 2013-2022) can be seen from the VECM estimation test, namely the influence of the Rupiah Exchange Variable on Murabahah Financing Margins 2013-2022 In the long term, it has a negative and insignificant impact.

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References

A. Mahendra. (2016). Analysis of the Effect of Money Supply. Jrak, 2(1), 1–12.

Aprileven, PH (2017). The Influence of Economic Factors on Inflation Mediated by the Money Supply. Economics Development Analysis Journal, 4(1), 32–41.

Arif, N. Al, & Imsar. (2021). The Influence of Financial Literacy, Subjective Norms, and Lifestyle on the Consumptive Behavior of UIN SU Medan Students Using Electronic Money with Self-Control as Moderation. Journal of Islamic Education Management, 2(1), 57–72. https://doi.org/10.47476/manageria.v4i1.2293

Asri, AR (2020). The Influence of Financing To Deposit Ratio (FDR), Return On Assets (ROA), Bank Indonesia Interest Rate (Bi rate), and Inflation FEB Student Scientific Journal. Department of Economics, Faculty of Economics and Business, Brawijaya University.

Budiman, MA, & Hasanah, NI (2023). The Influence of Sharia Financing Risk and Good Corporate Governance on the Profitability of Sharia Commercial Banks in Indonesia. Iqtisaduna Journal, 8(2), 272–286. https://doi.org/10.24252/iqtisaduna.v8i2.31772

Christianingrum, R., & Syafri, RA (2019). Factors Affecting Core Inflation in Indonesia. Budget Journal, 4(2), 19–40. https://jurnal.dpr.go.id/

Dwijayanty, R. (2017). The Impact of Macroeconomic Variables on the Demand for Sharia Banking Murabahah Financing. Journal of Accounting and Finance Research, 5(1), 1349–1356. https://doi.org/10.17509/jrak.v5i1.6735

Ekawat, Khiaroh, AS (2019). Factors That Influence Murabahah Margin Levels in the Sharia Banking Industry for the 2012-2017 Period. IV, 5, 105.

Faizin, M. (2020). Analysis of the relationship between exchange rates and inflation. Accountability, 17(2), 314–319. http://journal.feb.unmul.ac.id/index.php/AKUNTABEL

Hadad, MD, Santoso, W., & Arianto, B. (2020). Early Indicators of a Banking Crisis. International Forestry Review, 5(2), 2003–2003.

Haikal Muhammad. (2020). Thesis: The Influence of Money Supply, Rupiah Exchange Rate and Margin on Murabahah Financing of PT Bank Aceh Syariah. 1–23.

Harahap, MI, & Sugianto. (2023). The Influence of Inflation, Interest Rates and Sharia Bank Financing on Indonesian Exports. Journal of

Accounting and Business Research, 23(2), 73–81.

Herania, AJ, Period, E., Ekonomi, F., & Brawijaya, U. (2022). The Influence of the Money Supply, Interest Rates and Exchange Rates on the Inflation Rate in Indonesia Using the Path Analysis Approach for the Period 2010Q1 2020Q4. 1(2), 230–243.

Lilia Afriani and Muhammad Lathief Ilhamy. (2023). Implementation of Cross Selling in Increasing Customer Loyalty in Banking. Journal of Science, Economics and Management (JIKEM), 3(2), 5277–5288.

Linanda, P. (2021). Factors Affecting Murabahah Financing Margins in Sharia Banks (Case Study of Sharia Commercial Banks for the 2009-2015 Period). 218–229.

Marina, M., & K, A. (2016). Analysis of the Influence of the Inflation Rate and Money Supply on the Rupiah Exchange Rate in Indonesia. Economics, Social, and Development Studies, 3(1), 1–16.

Puspitaloka Dian. (2019). Thesis on the Influence of Exchange Rates, Inflation and Profit Margins on Murabahah Financing, Case Study of Bank Syariah Mandiri. 46–67.

Ramadhani, E., & Wardana, G. K. (2021). The Influence of Inflation, Bi 7 Day Repo Rate and Exchange Rates on Sharia Banking Murabahah Financing Margins. Masharif Al-Syariah Journal: Journal of Sharia Economics and Banking, 6(3), 755. https://doi.org/10.30651/jms.v6i3.9755

Safa, A., Reza, R., Firdaus, & Riyadi, R. (2022). The Effect of Money Supply and Interest Rates and Government Expenditures on Inflation. Prospect Journal: Social and Economic Sciences Education, 4(2), 62–70. https://doi.org/10.30872/prospek.v4i2.2234

Sofiani, N. (2020). Thesis-The Effect of Bank Indonesia Interest Rate Inflation on Murabahah Financing Margins in Sharia Banking 2017-2019.

Sulistyawati, AI, Santoso, A. ., & Kurniawan, R. . (2020). Exploring the influencing factors of Murabahah financing. Al Tijarah, 6(2), 83. https://doi.org/10.21111/tijarah.v6i2.4795

Wilda, Z., Semaun, S., & Arqam. (2020). The Influence of Non-Performing Financing for Mudharabah and Murabahah Financing on the Profitability Level of Bank Xxx Syariah. BANCO: Journal of Islamic Management and Banking, 2(1), 1–20. https://doi.org/10.35905/banco.v2i1.1346

Yusri, AZ and D. (2020). Analysis of the Influence of the BI Rate and Inflation on Murabahah Margin Income with Non-Performing Financing as an Intervening Variable. Journal of Educational Sciences, 7(2), 809–820.