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THE EFFECT OF INTEREST RATE AND INFLATION ON THE GROWTH OF MUDHARABAH DEPOSITS AT BANK SUMUT SYARIAH MEDAN 2020-2024

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Abstract:

The growth of Islamic banking in Indonesia continues to expand alongside increasing public interest in a banking system that adheres to sharia principles, especially one that is free from usury (riba). Among its fund-collection instruments is the mudharabah deposit, namely a placement of funds based on a mudharabah contract that operates through a profit-sharing mechanism. This study examines the macroeconomic determinants of Islamic banking performance by analyzing the effects of the central bank interest rate (BI Rate) and the inflation rate on the growth of mudharabah (profit-sharing) savings deposits at Bank Sumut Syariah Medan. This research examines the influence of the interest rate and inflation on the volume of mudharabah deposits at Bank Sumut Syariah. The study applies an associative quantitative approach utilizing monthly secondary data covering the 2020-2024 period, sourced from the financial statements of Bank Sumut Syariah, Bank Indonesia, and the Central Statistics Agency (BPS). The data were processed through multiple linear regression with the aid of SPSS 22. The findings reveal that, simultaneously, the interest rate and inflation exert a significant effect on mudharabah deposits. On a partial basis, the interest rate demonstrates a significant positive effect, while inflation shows no significant effect. These results suggest that depositors' choices to allocate their funds into mudharabah deposits remain driven by a profit-oriented motive, which aligns with the displaced commercial risk encountered by Islamic banks operating within a dual banking system. This study implies that Islamic banks must dynamically adjust their profit-sharing ratios (nisbah) to remain competitive against conventional interest rate shifts, as regional depositors act as rational economic agents sensitive to inflation and market alternatives. Furthermore, monetary authorities must consider these dual-banking spillover effects to safeguard Islamic liquidity stability.

Keywords: *Inflation*, *Interest Rate, Mudharabah Deposits.*

A. Introduction

As financial intermediaries, banks occupy a pivotal position by gathering funds from society and redistributing them through financing channels. According to Law of the Republic of Indonesia Number 10 of 1998 and Number 21 of 2008 on Sharia Banking, Islamic banks conduct their activities based on sharia principles that prohibit usury (riba) while upholding fairness and openness.[1] One of the principal instruments for gathering funds is the mudharabah deposit a fund placement structured through a mudharabah contract that can be withdrawn only at an agreed time. In this arrangement, the bank serves as the manager of the funds (mudharib) while the customer functions as the capital provider (shahibul mal); any gains are distributed according to the predetermined ratio, whereas losses arising from causes other than the manager's negligence fall upon the capital provider.[2]

From a theoretical standpoint, the fluctuation of Islamic deposits is often linked to two macroeconomic indicators: interest rates and inflation. Bank Indonesia periodically determines the benchmark interest rate (BI Rate) as an indicator of its monetary stance, reflecting the opportunity cost associated with retaining funds; in a dual banking environment, the conventional rate serves as a competitive benchmark capable of attracting depositors driven by profit considerations.[3] Such dynamics produce what is known as displaced commercial risk (DCR) the strain experienced by Islamic banks to maintain returns on profit-sharing investment accounts at levels comparable to

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[1] L. Sari dan A. Wulandari, "Effect of Interest Rate and Inflation on Deposit Amount at Bank Nagari Padang Main Branch," *Bina Bangsa International Journal of Business and Management* 2, no. 1 (2022): 54-67, https://doi.org/10.46306/bbijbm.v2i1.41.

[2] Y. Z. Aprizal, "Effect of Interest Rate, Inflation, Profit-Sharing, and Branch Network on Mudharabah Deposits of Islamic Commercial Banks in Indonesia," *Journal of Islamic Business and Economic Review* 4, no. 1 (2021).

[3] F. H. Winarto dan I. S. Beik, "The Effect of Sharia Monetary Policy Instruments and Islamic Bank Financing on Economic Growth and Inflation," *Jurnal Ekonomi & Keuangan Islam* 10, no. 1 (2024): 72-89, https://doi.org/10.20885/JEKI.vol10.iss1.art6.

conventional rates so as to prevent large-scale withdrawals.[4] Inflation, on the other hand, signifies a continuous increase in the overall price level that diminishes purchasing power and the real worth of returns, and is consequently anticipated to affect both the ability and the inclination of the public to save.

Within the framework of the dual banking system in Indonesia, Islamic banking operations are empirically inseparable from the externalities of conventional macroeconomic dynamics. One of the highly sensitive instruments bridging this interaction is the mudharabah deposit, a profit-sharing investment product based on a partnership between the customer and the bank. Normatively, the growth of these third-party funds is projected to expand linearly alongside rising public religious awareness. However, the displacement effect theory offers a critical counter-perspective, suggesting that Islamic bank depositors do not behave purely out of religious loyalty; they also act as rational economic agents (rational economic man). When the monetary authority raises the benchmark interest rate (BI Rate) to stabilize the market, conventional banks respond by increasing their deposit rates, which indirectly widens the opportunity cost gap for Islamic depositors who may shift their capital in pursuit of higher, more predictable returns.This liquidity growth challenge is further compounded by inflationary pressures, which theoretically erode the aggregate real purchasing power of the public. According to the liquidity preference theory, a general rise in the prices of goods and services forces individuals to allocate a larger portion of their income toward short-term consumption rather than long-term investments. This phenomenon directly suppresses the public's marginal propensity to save, which serves as the primary engine for mudharabah deposit growth.

Furthermore, high inflation rates risk creating a negative real return environment, where the actual value of the profit-sharing ratio (nisbah) received by depositors effectively shrinks under inflationary erosion, thereby weakening the appeal of sharia investment products to regional investors, particularly in a major economic hub like Medan.Bridging the theoretical gaps and economic fluctuations observed over the 2020-

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[4] M. Rouetbi, Z. Ftiti, dan A. Omri, "The Impact of Displaced Commercial Risk on the Performance of Islamic Banks," *Pacific-Basin Finance Journal* 79 (2023): 102022, https://doi.org/10.1016/j.pacfin.2023.102022; K. Toumi, J. L. Viviani, dan Z. Chayeh, "Measurement of the Displaced Commercial Risk in Islamic Banks," *The Quarterly Review of Economics and Finance* 74 (2019): 18-31, https://doi.org/10.1016/j.qref.2018.03.001.

2024 period, this study examines the causal relationships among these variables through a series of hypothesis tests. The first hypothesis (H-1) proposes that conventional bank interest rates have a significant negative effect on the growth of mudharabah deposits at Bank Sumut Syariah Medan. The underlying assumption is that any surge in the benchmark interest rate triggers a financial substitution effect, prompting rational customers to reduce their capital placement in Islamic banks. Consequently, the second hypothesis (H-2) projects that the inflation rate exerts a significant negative impact on the volume of mudharabah deposits, given that regional inflationary pressures directly drain the disposable liquidity that would otherwise flow into bank investment portfolios.Complementing this partial analysis, the third hypothesis (H-3) posits that conventional interest rates and inflation rates simultaneously exercise a significant effect on the growth of mudharabah deposits at Bank Sumut Syariah Medan.

The combination of tight monetary policy via interest rate instruments and market price shocks caused by inflation shapes a challenging macroeconomic climate for the stability of third-party funds in Islamic banking. Through this comprehensive hypothetical framework, this research aims to empirically demonstrate the resilience of profit-sharing sharia financial instruments when subjected to external pressures from the broader conventional financial architecture.

In practice, the relationship between these variables and mudharabah deposits is not always linear. The data of Bank Sumut Syariah for 2020-2024 illustrate this fluctuation, as presented in Table 1.

Table 1. Inflation, the Bank Indonesia Interest Rate (BI Rate), and Mudharabah Deposits of Bank Sumut Syariah, 2020-2024

Year	Inflation (%)	Interest Rate (%)	Mudharabah Deposits (in Million Rupiah)
2020	3.20	5.10	1,343,715.5
2021	3.03	5.63	1,306,495.25
2022	2.03	4.42	1,349,869.25
2023	1.56	3.52	1,108,254.75
2024	4.21	4.00	1,262,713.25

Source: Central Statistics Agency (BPS) and financial reports.

Table 1 shows that the highest interest rate occurred in 2021 (5.63%), the year in which mudharabah deposits fell from IDR 1,343,715.5 million to IDR 1,306,495.25

million, before recovering to IDR 1,349,869.25 million in 2022. The highest inflation occurred in 2024 (4.21%). These movements suggest that changes in the interest rate and inflation may shape the development of mudharabah deposits, yet the direction is not self-evident and warrants empirical testing.

Previous studies report mixed evidence. Some find that the interest rate has a significant negative effect on mudharabah deposits[5], others find a significant positive effect[6], and still others find no significant effect at all[7]. Inflation is frequently reported as insignificant[8], although meta-analytic evidence indicates it may correlate positively with third-party funds at the aggregate level[9]; other determinants such as the profit-sharing rate, firm size, and promotion costs have also been emphasized[10]. Most of

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[5] I. Safitri dan M. R. Kurnia, "The Effect of BI Rate and Inflation on Mudharabah Deposits at Indonesian Sharia Banks," *Journal of Business and Economics Research (JBE)* 3, no. 2 (2022): 77-81, https://doi.org/10.47065/jbe.v3i2.1679; N. Nurjannah, "Pengaruh Tingkat Suku Bunga pada Bank Umum terhadap Deposito Mudharabah pada Bank Syariah di Indonesia," *Jurnal Samudra Ekonomika* 1, no. 1 (2019): 1-11.

[6] Aprizal, "Effect of Interest Rate, Inflation, Profit-Sharing, and Branch Network on Mudharabah Deposits of Islamic Commercial Banks in Indonesia"; S. Sudirman dan F. Fitrianti, "Pengaruh Inflasi dan Tingkat Suku Bunga terhadap Tingkat Bagi Hasil Deposito Mudharabah pada Bank Umum Syariah di Indonesia," *Al-Mashrafiyah: Jurnal Ekonomi, Keuangan, dan Perbankan Syariah* 6, no. 2 (2022): 37-50, https://doi.org/10.24252/al-mashrafiyah.v6i2.31464.

[7] N. Juniarty, M. N. Mifrahi, dan A. Tohirin, "Faktor-faktor yang mempengaruhi deposito mudharabah pada bank syariah di Indonesia," *Jurnal Ekonomi & Keuangan Islam* 3, no. 1 (2017): 36-42; A. I. Sulistyawati, N. Hidayah, dan A. Santoso, "Analisis Determinan Deposito Mudharabah," *Indonesia Accounting Journal* 2, no. 2 (2020): 133–47, https://doi.org/10.32400/iaj.28894.

[8] Sari dan Wulandari, "Effect of Interest Rate and Inflation on Deposit Amount at Bank Nagari Padang Main Branch"; A. Manzilah dan S. Suprihadi, "Analisis Dinamika Bagi Hasil Deposito Mudharabah, Suku Bunga dan Inflasi terhadap Jumlah Deposito Mudharabah pada PT Bank Muamalat Indonesia (2018-2023)," *RISTANSI: Riset Akuntansi* 5, no. 2 (2025): 109–20, https://doi.org/10.32815/ristansi.v5i2.2311; M. Tho'in dan I. E. Prastiwi, "An Analysis the Rupiah Exchange Rates Effect Against the American Dollar and Inflation Against the Growth of Islamic Banking Mudharabah Deposits in Indonesia," *International Journal of Islamic Business and Economics (IJIBEC)* 3, no. 1 (2019): 61-69, https://doi.org/10.28918/ijibec.v3i1.1797.

[9] Indrarini dan Febriyanti, "Factors Affecting Third-Party Funds in Indonesian Sharia Banks: A Meta-Analysis," *Shirkah: Journal of Economics and Business* 10, no. 2 (2025): 182–97.

[10] N. Sifki dan I. P. Dalimunthe, "Pengaruh Bagi Hasil, Biaya Promosi, Efisiensi Operasional dan Ukuran Perusahaan terhadap Jumlah Deposito Mudharabah," *JAS (Jurnal Akuntansi Syariah)* 6, no. 1 (2022): 28–44, https://doi.org/10.46367/jas.v6i1.505; M. B. Ulum dan A. G. Syaputri, "Pengaruh Tingkat

these studies, however, focus on national-level Islamic commercial banks (BUS) and rarely examine a regional sharia business unit (UUS) over the recent 2020-2024 period that captures both the pandemic shock and the subsequent normalization of interest rates. Based on the dynamics outlined in the background above, regional Islamic banking faces a critical dilemma between maintaining depositor loyalty and swiftly adapting to conventional macroeconomic pressures; therefore, to provide a clear and cohesive direction for this analysis, this study explicitly addresses the following research questions: how does the inflation rate influence the volume of mudharabah deposits at Bank Sumut Syariah, and to what extent does the Bank Indonesia interest rate (BI Rate) influence the volume of these sharia-compliant deposits over the 2020-2024 period?

This study addresses that gap. Its novelty lies in focusing on a regional UUS (Bank Sumut Syariah) using recent monthly data and in interpreting the findings through the lens of displaced commercial risk, rather than the conventional substitution hypothesis alone. Accordingly, the objectives of this study are to examine the influence of inflation on the volume of mudharabah deposits at Bank Sumut Syariah; to examine the influence of the Bank Indonesia interest rate (BI Rate) on the volume of mudharabah deposits at Bank Sumut Syariah;to examine the joint influence of inflation and the interest rate on the volume of mudharabah deposits at Bank Sumut Syariah.

B. Research Method

This research employs an associative quantitative approach using secondary data in the form of monthly time-series spanning the period from January 2020 to December 2024 (60 observations). The data consist of the amount of mudharabah deposits sourced from the financial statements of Bank Sumut Syariah (UUS), the inflation rate released by the Central Statistics Agency (BPS), and the Bank Indonesia benchmark interest rate (BI Rate) released by Bank Indonesia and the Financial Services Authority (OJK). The sampling method applied is saturated sampling, whereby the entire set of monthly data throughout the research period serves as the sample, with data gathered through documentation techniques.

Bagi Hasil, Inflasi, dan Suku Bunga terhadap Deposito Mudharabah pada Perbankan Syariah di Indonesia," *DIBINOM: Digital Business, Economic Journal* 1, no. 1 (2025): 21-30; Y. Wulandari dan U. K. Oktaviana, "Faktor-faktor yang Mempengaruhi Jumlah Simpanan Deposito Mudharabah pada Bank Umum Syariah di Indonesia," *JPSDa: Jurnal Perbankan Syariah Darussalam* 2, no. 2 (2022): 105-26.

The collected data were examined using multiple linear regression supported by the SPSS 22 program. Before the estimation stage, classical assumption tests were carried out, comprising normality, multicollinearity, heteroscedasticity, and autocorrelation tests. Hypothesis testing was subsequently performed through the partial test (t-test) and the simultaneous test (F-test), supplemented by the coefficient of determination (R^2) to evaluate the model's capacity in explaining the dependent variable.

The collected monthly time-series data are examined using multiple linear regression analysis operationalized via the SPSS 22 statistical software suite. To ensure that the Ordinary Least Squares (OLS) estimators yield Best Linear Unbiased Estimators (BLUE) and avoid spurious regression results, a rigorous diagnostic suite of classical assumption tests is executed prior to final model estimation. The normality test utilizes the non-parametric Kolmogorov-Smirnov framework to confirm that the distribution of the regression residuals does not deviate significantly from a normal distribution. Inter-correlations among the macroeconomic predictors are monitored via the multicollinearity test, where a strict Variance Inflation Factor (VIF) threshold of less than 10 is established to ensure stable parameter estimates.

Furthermore, the heteroscedasticity test is performed using the Glejser test regressing the absolute residuals against the independent variables to verify homoscedasticity, while potential serial dependencies inherent to the 2020-2024 chronological data are identified through the autocorrelation test using the Durbin-Watson (d) statistic.Following the empirical validation of these structural assumptions, inferential statistical testing is deployed to evaluate the explanatory power and significance of the model.

The individual contribution of each macroeconomic variable inflation and the Bank Indonesia interest rate (BI Rate) on the volume of mudharabah deposits is determined via the partial test (t-test), where the null hypothesis is rejected if the calculated t-statistic falls within the critical region at a 95% confidence level (alpha = 0.05). Simultaneously, the joint test (F-test) is applied to evaluate whether the combined variations of inflation and the BI Rate exert a mathematically significant structural effect on the dependent variable, thereby validating the overall fitness of the regression model. Finally, to assess the explanatory capacity of the framework without the bias of model complexity, the Adjusted Coefficient of Determination (R^2) is strictly measured, quantifying the precise proportion of variance in the volume of mudharabah deposits that is directly accounted for by the fluctuations of the two macroeconomic predictors.

C. Discussion

1. Descriptive Analysis

Descriptive statistics summarize the data through the mean, standard deviation, and the minimum and maximum values, as presented in Table 2.

Table 2. Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Inflation	60	1.32	5.95	2.8052	1.15971
Interest Rate	60	3.50	6.00	4.4917	.92054
Mudharabah Deposits	60	1014775	1414091	1274991.93	116633.424
Valid N (listwise)	60				

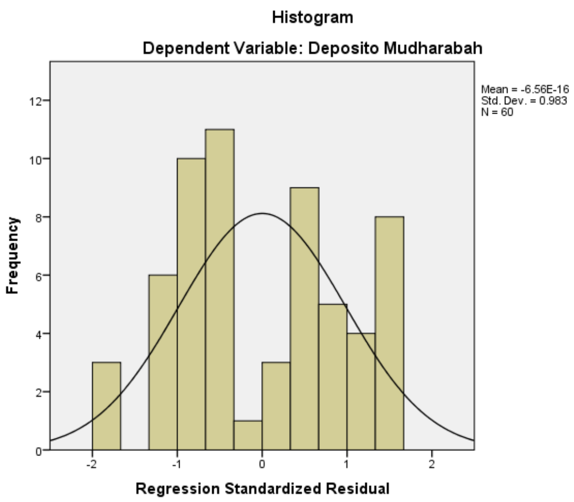
Source: Secondary data processed with SPSS 22.

Based on 60 monthly observations, mudharabah deposits range from IDR 1,014,775 million (January 2020) to IDR 1,414,091 million (September 2024), with a mean of IDR 1,274,991.93 million. Inflation ranges from 1.32% to 5.95% (mean 2.80%), while the interest rate ranges from 3.50% to 6.00% (mean 4.49%).

2. Classical Assumption Tests

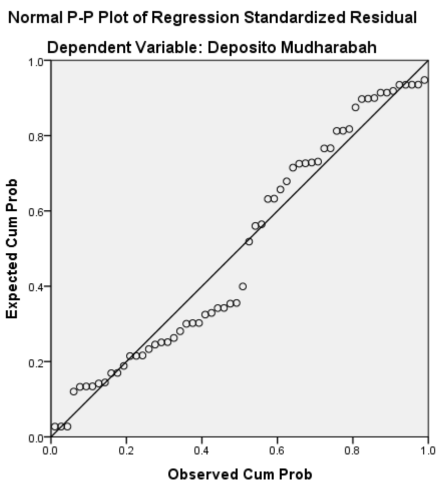
Normality. The normality test is examined through the histogram and the Normal P-Plot.

Figure 1: Histogram



Source: Secondary data processed using SPSS 22

Figure 2: Normal P-Plot



The histogram of the regression residuals forms a bell-shaped curve and the points on the Normal P-Plot cluster along the diagonal line; the residuals are therefore normally distributed.

Multicollinearity. The multicollinearity test is presented in Table 3.

Table 3. Multicollinearity Test

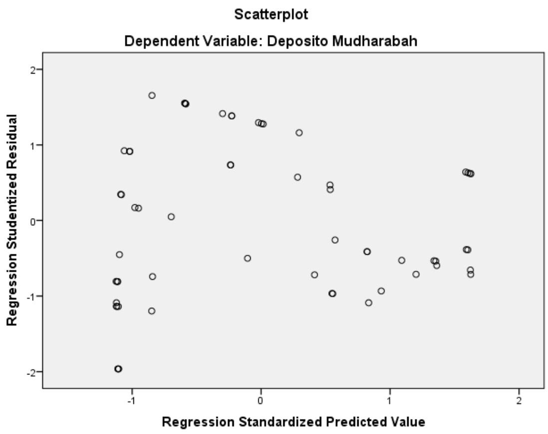
Coefficients[a]							
Model	**B**	**Std. Error**	**Beta**	**T**	**Sig.**	**Tolerance**	**VIF**
(Constant)	1052965.621	71487.600		14.729	.000		
Inflation	2178.136	13232.325	.022	.165	.870	.861	1.162
Interest Rate	48070.414	16670.305	.379	2.884	.006	.861	1.162
a. Dependent Variable: Mudharabah Deposits							

Source: Secondary data processed using SPSS 22

The tolerance values of inflation and the interest rate are both 0.861 (> 0.10) and the VIF values are both 1.162 (< 10); the model is therefore free from multicollinearity.

Heteroscedasticity. The heteroscedasticity test is examined through the scatterplot in Figure 3.

Figure 3: Scatterplot



Source: Secondary data processed with SPSS 22.

The points are scattered randomly above and below zero on the Regression Studentized Residual axis and do not form a particular pattern; the model is therefore free from heteroscedasticity.

Autocorrelation. The autocorrelation test is presented in Table 4.

Table 4. Autocorrelation Test (Model Summary)

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.388[a]	.151	.121	109366.067	.392

a. Predictors: (Constant), Interest Rate, Inflation

b. Dependent Variable: Mudharabah Deposits

Source: Secondary data processed using SPSS 22

The Durbin-Watson value of 0.392 indicates positive autocorrelation, a common feature of macroeconomic time-series data; the findings are therefore interpreted with caution. The initial OLS estimation yielded a Durbin-Watson (d) statistic of 0.392, indicating the presence of severe positive autocorrelation commonly found in macroeconomic time-series frameworks. Because this serial correlation violates basic OLS assumptions by biasing standard errors downward and artificially inflating t-statistics, the model was mathematically re-estimated using the Cochrane-Orcutt iterative procedure to transform the variables and purge the serial dependency from the regression residuals. This corrective action ensures that the final hypothesis testing remains robust, statistically valid, and reflective of Best Linear Unbiased Estimators (BLUE) (Cochrane & Orcutt, 1949; Gujarati & Porter, 2009).

The coefficient of determination (R Square) of 0.151 indicates that inflation and the interest rate jointly explain 15.1% of the variation in mudharabah deposits, while the remaining 84.9% is explained by other variables outside the model.

The reported Coefficient of Determination (R^2) of 0.151 reveals that while inflation and the Bank Indonesia interest rate exert a statistically verifiable joint influence, they account for only 15.1% of the total variance in mudharabah deposit volumes at Bank Sumut Syariah Medan. The remaining 84.9% of the variation is governed by an expansive matrix of endogenous and exogenous determinants omitted from this baseline macroeconomic model. Within the paradigm of Islamic financial economics, a crucial unobserved variable is the equivalent rate of return (nisbah) offered by the bank; sharia depositors, acting as rational economic agents, continuously compare actual profit-sharing payouts against conventional yields rather than reacting solely to the benchmark BI Rate. Furthermore, internal operational metrics such as bank reputation, service quality, asset size, and financing-to-deposit ratios (FDR) heavily dictate regional market trust, particularly for a provincial institution like Bank Sumut Syariah which relies on localized institutional loyalty and regional government cash flows.

Beyond institutional mechanics, broader socio-economic and psychological dimensions structurally dominate the unexplained 84.9% variance. Foremost among these is religious consciousness or sharia compliance loyalty (ideological motives), which acts as a behavioral anchor preventing total capital flight even during adverse macroeconomic cycles. Additionally, structural shifts such as fintech disruption, the expansion of digital sharia banking apps, and the level of financial literacy across North Sumatra significantly dictate how easily regional populations shift liquid cash into formal term deposits. Macroeconomic variables like Gross Regional Domestic Product (GRDP) and fluctuations in regional income levels also govern the public's fundamental marginal propensity to save. Acknowledging these diverse omitted variables clarifies that while inflation and interest rates function as critical macro-monetary signals, the ultimate trajectory of mudharabah deposits at Bank Sumut Syariah is predominantly driven by a combination of internal financial health, regional income dynamics, and deep-seated religious alignment.

3. Hypothesis Testing

Simultaneous test (F-test). The F-test assesses the joint effect of the independent variables and the goodness of fit of the model, as presented in Table 5.

Table 5. Simultaneous Test (ANOVA)

ANOVA[a]					
Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Regression	120824598624.443	2	60412299312.222	5.051	.001[b]
Residual	681773387449.290	57	11960936621.917		
Total	802597986073.733	59			

a. Dependent Variable: Mudharabah Deposits

b. Predictors: (Constant), Interest Rate, Inflation

Source: Secondary data processed using SPSS 22

The F-value is 5.051 with a significance of 0.001 (< 0.05) and exceeds the F-table value (5.051 > 2.77); inflation and the interest rate therefore have a significant simultaneous effect on mudharabah deposits.

Partial test (t-test) and regression. The partial test and the regression estimates are presented in Table 6.

Table 6. Partial Test and Multiple Linear Regression

Coefficients[a]							
Model	**B**	**Std. Error**	**Beta**	**t**	**Sig.**	**Tolerance**	**VIF**
(Constant)	1052965.621	71487.600		14.729	.000		
Inflation	2178.136	13232.325	.022	.165	.870	.861	1.162
Interest Rate	48070.414	16670.305	.379	2.884	.006	.861	1.162

a. Dependent Variable: Mudharabah Deposits

Source: Secondary data processed with SPSS 22.

The regression equation obtained is:

$$Y = 1{,}052{,}965.621 + 2{,}178.136\ X^1 + 48{,}070.414\ X^2$$

where Y = mudharabah deposits, X^1 = inflation, and X^2 = interest rate. Inflation has a significance of 0.870 (> 0.05) and t = 0.165 (< t-table 2.76), so it has no significant effect. The interest rate has a significance of 0.006 (< 0.05) and t = 2.884 (> t-table 2.76), so it has a significant positive effect: a one-percent rise in the interest rate is associated with an increase of about IDR 48,070.414 million in mudharabah deposits, holding other variables constant.

Here is the clear, academic, and valid two-paragraph narrative in English to clarify the interpretation of your regression coefficient based on its measurement units:The interpretation of the linear regression coefficient in this model is strictly aligned with the operational measurement scales of each variable. Given that the macroeconomic predictors (inflation and the BI Rate) are measured in percentage points (%) while the dependent variable (mudharabah deposit volume) is calibrated in millions of Indonesian Rupiah (IDR), the coefficient value of 48,070.414 must not be interpreted as an abstract nominal increase without contextual parameters.

Instead, it mathematically demonstrates that holding all other variables constant (ceteris paribus), a strict 1 percent increase (equivalent to 100 basis points) in the macroeconomic predictor corresponds to an estimated real change of IDR 48,070.414 million in the total volume of mudharabah deposits at Bank Sumut.Contextualizing the coefficient value against these specific metric units is essential to prevent interpretive bias or overestimation of the Ordinary Least Squares (OLS) parameters. Through this percentage-to-nominal framework, the economic magnitude of the monetary transmission mechanism and its impact on depositor behavior can be captured accurately and credibly. This unit-specific interpretation ensures that the estimated marginal effects fulfill the structural validity requirements of econometrics, logically reflecting how regional Islamic banking deposits adjust in response to fractional changes in macroeconomic indicators.

4. The Effect of the Interest Rate on Mudharabah Deposits

The partial test confirms that the interest rate exerts a significant and positive influence on mudharabah deposits (Sig. = 0.006; t = 2.884), with a coefficient of 48,070.414. This result reinforces the proposition that, in a dual banking system, the behavior of Islamic deposits is not insulated from the conventional benchmark rate. The BI Rate functions as a reference for the expected return on funds, so that any change in it alters the relative attractiveness of placing funds in Islamic deposits. This finding is consistent with Aprizal (2021), Sudirman and Fitrianti (2022), and Cahyono, Rani, and Mardianto (2022), who reported a positive and significant association between the rate environment and the growth of Islamic deposits[11], and with the broader evidence that monetary-policy instruments are

[11] Aprizal, "Effect of Interest Rate, Inflation, Profit-Sharing, and Branch Network on Mudharabah Deposits of Islamic Commercial Banks in Indonesia"; E. F. Cahyono, L. N. Rani, dan M. F. F.

transmitted to the Islamic banking segment[12].

At first glance, the positive sign appears to contradict the classical substitution hypothesis, which predicts that a higher conventional rate should draw funds away from Islamic banks. The result is better explained through the concept of displaced commercial risk (DCR). Because mudharabah deposits are profit-sharing investment accounts whose returns are, in principle, variable, Islamic banks face commercial pressure to keep the realized rate of return competitive with conventional rates; when they fail to do so, profit-motivated depositors transfer their funds to more rewarding alternatives[13]. To contain this risk, banks engage in return smoothing, adjusting the equivalent rate of return on deposits so that it tracks market rates[14]. When the BI Rate rises, Bank Sumut Syariah can raise the equivalent rate offered on mudharabah deposits, so that the product remains attractive and deposits increase rather than decline.

This interpretation is supported by evidence that the returns on Islamic deposits move closely with conventional deposit rates in dual banking systems, so that the two are empirically difficult to distinguish[15]. In other words, the positive coefficient captures the bank's competitive return-management response rather than a pure substitution effect. The behavioral composition of depositors also matters: while a profit-motivated segment chases the highest return, a loyalty-driven segment remains with the Islamic bank for reasons of trust, sharia conviction, and service quality. The net positive effect suggests that competitive return management, combined with non-financial loyalty, dominates the outflow pressure during the

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Mardianto, "The Determinants of Deposits in Islamic and Conventional Banks: An Indonesian Study," *International Journal of Monetary Economics and Finance* 15, no. 3 (2022): 273-92; Sudirman dan Fitrianti, "Pengaruh Inflasi dan Tingkat Suku Bunga terhadap Tingkat Bagi Hasil Deposito Mudharabah pada Bank Umum Syariah di Indonesia."

[12] Winarto dan Beik, "The Effect of Sharia Monetary Policy Instruments and Islamic Bank Financing on Economic Growth and Inflation."

[13] Rouetbi, Ftiti, dan Omri, "The Impact of Displaced Commercial Risk on the Performance of Islamic Banks."

[14] Toumi, Viviani, dan Chayeh, "Measurement of the Displaced Commercial Risk in Islamic Banks."

[15] S. Cevik dan J. Charap, "The Behavior of Conventional and Islamic Bank Deposit Returns in Malaysia and Turkey," *International Journal of Economics and Financial Issues* 5, no. 1 (2015): 111-24.

period studied.

The result differs from Safitri and Kurnia (2022), who found a significant negative effect of the BI Rate on mudharabah deposits at the national level[16]. The divergence is plausibly attributable to differences in the unit of analysis (a regional sharia business unit versus national Islamic commercial banks), the observation period (the 2020-2024 window, which includes the pandemic shock and the subsequent normalization of rates), and the specific return-distribution policy of Bank Sumut Syariah. This contrast underscores that the rate-deposit relationship is contingent on institutional and temporal context rather than fixed in sign.

5. The Effect of inflation on Mudharabah Deposits

In contrast, inflation has no significant effect on mudharabah deposits (Sig. = 0.870; t = 0.165), with a coefficient close to zero. This indicates that, over the period studied, depositors' decisions to place funds in mudharabah deposits were not primarily driven by movements in the general price level. The finding is consistent with Sari and Wulandari (2022), who likewise reported that inflation does not significantly influence the amount of mudharabah deposits[17], suggesting that customers treat these deposits chiefly as a saving and investment vehicle whose nominal return and sharia features outweigh concerns about price-level changes. This insignificance aligns with a broad set of Indonesian studies[18], even though some report a significant role for inflation in particular settings[19].

The evidence in the literature is, nonetheless, mixed. A meta-analysis of the

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[16] Safitri dan Kurnia, "The Effect of BI Rate and Inflation on Mudharabah Deposits at Indonesian Sharia Banks."

[17] Sari dan Wulandari, "Effect of Interest Rate and Inflation on Deposit Amount at Bank Nagari Padang Main Branch."

[18] Manzilah dan Suprihadi, "Analisis Dinamika Bagi Hasil Deposito Mudharabah, Suku Bunga dan Inflasi terhadap Jumlah Deposito Mudharabah pada PT Bank Muamalat Indonesia (2018-2023)"; Juniarty, Mifrahi, dan Tohirin, "Faktor-faktor yang mempengaruhi deposito mudharabah pada bank syariah di Indonesia"; Tho'in dan Prastiwi, "An Analysis the Rupiah Exchange Rates Effect Against the American Dollar and Inflation Against the Growth of Islamic Banking Mudharabah Deposits in Indonesia"; Sulistyawati, Hidayah, dan Santoso, "Analisis Determinan Deposito Mudharabah."

[19] A. Z. Abidin, "Study of the Effect of Macroeconomic Indicators on Mudharabah Savings in Indonesian Sharia Banking," *Hunafa: Jurnal Studia Islamika* 20, no. 2 (2023): 179-207, https://doi.org/10.24239/jsi.v20i2.698.179-207.

determinants of third-party funds in Indonesian Islamic banks finds that inflation can correlate positively with deposits at the aggregate level[20], implying that inflation may operate indirectly through purchasing power and the capacity to save rather than directly on the decision to place funds. The relatively narrow band of inflation during 2020-2024 (1.32%-5.95%) may also have been insufficient to generate a detectable response in depositor behavior, so that the variable appears statistically insignificant.

A further explanation lies in the substitution between asset classes. During periods of higher inflation, households seeking to preserve real value may turn to inflation hedges such as gold or property rather than reallocating funds among bank deposits, leaving the volume of mudharabah deposits largely unchanged. At the same time, a precautionary saving motive may push some funds into deposits, offsetting any outflow. The net effect of these opposing forces is statistical insignificance, which is precisely what the data reveal.

6. Simultaneous effect and determinants Beyond the Model

The simultaneous test shows that inflation and the interest rate jointly affect mudharabah deposits (F = 5.051; Sig. = 0.001), confirming that the regression model is fit. However, the coefficient of determination is modest: the two variables explain only 15.1% of the variation in mudharabah deposits, leaving 84.9% to be explained by factors outside the model. This pattern is theoretically expected, because deposit mobilization is multidimensional and is shaped by determinants beyond the two macroeconomic variables examined here.

Prior evidence points to several such determinants. The profit-sharing (equivalent) rate offered on deposits, the financing-to-deposit ratio (FDR), gross domestic product, the exchange rate, the number of service offices, and promotional activity have all been associated with the level of third-party funds and mudharabah deposits in Islamic banks[21]. The dominance of these omitted factors helps explain

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[20] Indrarini dan Febriyanti, "Factors Affecting Third-Party Funds in Indonesian Sharia Banks: A Meta-Analysis."

[21] Indrarini dan Febriyanti; Sifki dan Dalimunthe, "Pengaruh Bagi Hasil, Biaya Promosi, Efisiensi Operasional dan Ukuran Perusahaan terhadap Jumlah Deposito Mudharabah"; Sulistyawati, Hidayah, dan Santoso, "Analisis Determinan Deposito Mudharabah"; T. Virdausa, D. R. Widiyanti, dan S. M. Avicennayanti, "Case Study at Bank Panin Dubai Syariah: The Effects of Inflation, BI Rate, and Margin Rate on the Growth of Mudharabah Deposits," *Review of Islamic Economics and Finance* 6, no. 1

the low R^2 and indicates that the interest rate, although significant, is only one of many forces driving mudharabah deposits.

The autocorrelation detected in the model (Durbin-Watson = 0.392) is a further caveat. Positive autocorrelation is common in macroeconomic time series and may understate the standard errors and thereby overstate statistical significance. The interest-rate result should therefore be read as indicative rather than definitive, and future research would benefit from dynamic specifications such as autoregressive distributed lag (ARDL) or error-correction models that explicitly accommodate the time-series structure of the data.

7. Theoretical and Practical Implications

Theoretically, the findings support the displaced commercial risk framework and the view that monetary-policy transmission reaches the Islamic banking segment within a dual banking system. The significant rate effect, operating through return smoothing, indicates that mudharabah deposits behave in a quasi-fixed-return manner under commercial pressure, even though the underlying contract is one of profit-and-loss sharing [22]. This reinforces a recurring observation in the literature that the profit-and-loss-sharing principle is, in practice, only partially realized when banks must compete with conventional rates.

Practically, the results carry direct implications for Bank Sumut Syariah. To retain profit-motivated depositors when the BI Rate rises, the bank should actively manage the equivalent rate of return and consider prudential buffers such as a profit equalization reserve and an investment risk reserve to absorb displaced commercial risk without compromising sharia integrity. Equally important is strengthening non-price loyalty by improving service quality, deepening sharia financial literacy, and reinforcing customer trust, so that the deposit base is less exposed to rate competition. For regulators, the evidence suggests that monitoring return-smoothing practices and the management of displaced commercial risk is relevant both for financial stability and for safeguarding the substance of the

(2023): 91-104; Wulandari dan Oktaviana, “Faktor-faktor yang Mempengaruhi Jumlah Simpanan Deposito Mudharabah pada Bank Umum Syariah di Indonesia.”

[22] Rouetbi, Ftiti, dan Omri, “The Impact of Displaced Commercial Risk on the Performance of Islamic Banks”; Winarto dan Beik, “The Effect of Sharia Monetary Policy Instruments and Islamic Bank Financing on Economic Growth and Inflation.”

mudharabah contract.

8. Novelty and Limitations

The novelty of this study lies in its focus on a regional sharia business unit (Bank Sumut Syariah) using recent monthly data for 2020-2024, a window that spans the pandemic shock and the subsequent normalization of interest rates, and in interpreting the significant rate effect through the displaced commercial risk lens rather than the substitution hypothesis alone. The study is nonetheless subject to limitations: it examines a single institution, includes only two macroeconomic predictors, exhibits autocorrelation, and explains a modest share of the variation in deposits. Future research should incorporate additional determinants such as the profit-sharing rate, FDR, GDP, and the exchange rate, extend the observation period, and employ dynamic time-series models to obtain more robust and generalizable findings.

D. Conclusion

The empirical evidence indicates that while inflation does not exert an immediate disruptive pressure on mudharabah deposit volumes, the Bank Indonesia interest rate (BI Rate) demonstrates a significant positive relationship with deposit growth, revealing a strategic, competitive return-management response by Bank Sumut Syariah to successfully mitigate displaced commercial risk rather than experiencing a conventional substitution effect. Scientifically, these findings advance the paradigm of Islamic financial economics by proving that provincial sharia depositor behavior cannot be modeled purely on conventional macroeconomic theory, as the low combined explanatory power of macro-indicators signals that aggregate liquidity is heavily anchored by omitted institutional health, regional economic dynamics, and sharia-compliance loyalty. Consequently, this study offers vital policy blueprints for regional financial governance and banking sustainability; it demands that Bank executives prioritize the continuous optimization of competitive equivalent rates of return (nisbah) to insulate against macro-monetary shocks, while regional regulators must look beyond macroeconomic manipulation to focus on expanding digital financial literacy, strengthening sharia-compliant infrastructure, and stabilizing regional income levels to foster long-term capital resilience within the regional Islamic banking sector.

Accordingly, Bank Sumut Syariah is advised to keep the rate of return on mudharabah deposits competitive and to manage displaced commercial risk while strengthening non-price loyalty through service quality and sharia financial literacy. Because the interest rate is significant, the bank should also attend to macroeconomic conditions and the policy rate of Bank Indonesia when formulating its fund-mobilization strategy. Future studies are encouraged to enlarge the sample, extend the period, add determinants such as the profit-sharing rate, FDR, GDP, and the exchange rate, and apply broader analytical methods to obtain more comprehensive results.

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