

The Effect of Third-Party Funds, Deposit Interest Rates, and Financial Literacy on Financial Performance at Bank BJB

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Abstract

This research aims to analyze the effect of Third-Party Funds (DPK) and deposit interest rates on the financial performance of Bank BJB, with financial literacy as an intervening variable. The background of this research is based on the phenomenon that increases in DPK and competitive deposit interest rate strategies do not always lead to optimal financial performance. This indicates the importance of internal factors, particularly the financial literacy of management and front-line employees, in managing funds, assessing risks, and making effective financial decisions. This research employs a quantitative approach using multiple regression analysis and mediation testing. The analysis is conducted through several stages, including descriptive statistical analysis, classical assumption tests, two-stage regression analysis, and significance testing (t-test, F-test, and coefficient of determination). The mediation effect is examined using the Sobel test and/or bootstrapping methods. The results are expected to show that DPK and deposit interest rates have both direct and indirect effects on financial performance through financial literacy. Financial literacy acts as an intervening variable that strengthens the relationship between external factors and financial performance by improving fund management effectiveness, risk control, and decision-making quality. This research contributes theoretically to the development of financial literacy literature in the banking sector and provides practical implications for Bank BJB management in enhancing financial performance through strengthening internal capabilities.

INTRODUCTION

The banking sector in Indonesia faces increasingly complex challenges alongside the development of digitalization and globalization. Banks are not only required to collect large amounts of Third-Party Funds (DPK), but also to manage these funds effectively to produce optimal financial performance. However, empirical evidence shows that an increase in deposits and a competitive deposit interest rate strategy are not necessarily followed by an increase in bank profitability.

Theoretically, deposits are the main source of bank funding, playing an important role in maintaining liquidity and supporting credit disbursement (Daryabari et al., 2025; Odero & Ogilo, 2024). Meanwhile, deposit interest rates are an important instrument for attracting public funds. However, setting interest rates that are too high has the potential to increase the cost of funds, which can reduce banks' profit margins if not balanced with efficient management (Bank Indonesia, 2024). This indicates that external factors such as deposits and deposit interest rates are insufficient to fully explain a bank's overall financial performance.

In this context, financial literacy is a critical internal factor. Financial literacy reflects management's ability to understand financial instruments, assess risks, and make appropriate strategic decisions. According to Annamaria Lusardi and Olivia S. Mitchell (2014), financial literacy plays an important role in improving the quality of financial decision-making. In the banking industry, strong financial literacy enables more optimal liquidity management, productive fund allocation, and adaptability to changes in interest rates (Abiola-Adams et al., 2021; Dekamini et al., 2024).

Previous research has shown that financial literacy has a positive influence on financial performance. Saragih et al. (2024) found that financial literacy contributes to improving banking performance in Indonesia. In addition, Supriyadi et al. (2024) stated that financial literacy affects performance through improvements in loan and risk management skills. International research by Windsor et al. (2023) also shows that the influence of deposits and interest rates on financial performance is not direct, but rather mediated by the internal capacity of banks, including financial literacy.

This phenomenon is also reflected in Bank BJB, which shows growth in deposits and loans but still faces margin pressure and increased funding costs. This condition indicates that the success of banks in improving financial performance does not depend solely on external factors but is also strongly determined by internal capabilities in managing financial resources effectively.

Based on this description, this study aims to analyze the influence of Third-Party Funds (DPK) and deposit interest rates on financial performance, with financial literacy as an intervening variable. This research is expected to contribute theoretically to the development of financial literature and provide practical implications for banking management in improving performance through strengthening financial literacy. Based on the background described, the banking sector faces challenges in optimizing financial performance amid the growth of Third-Party Funds (DPK) and competition in deposit interest rates. Although deposits are the main source of bank funding, a significant increase in deposits is not necessarily followed by an increase in profitability. This suggests inefficiencies in fund management that may affect a bank's financial performance. In addition, setting competitive deposit interest rates is often the primary strategy for attracting public funds. However, high interest rates have the potential to increase the cost of funds, which can ultimately reduce banks' profit margins. This condition creates a dilemma for banks in determining the optimal interest rate policy. Another issue lies in internal factors, namely the financial literacy of management and frontline staff. Low financial literacy can lead to errors in decision-making, suboptimal risk management, and inaccuracies in fund allocation. This indicates a gap between external potential (deposits and deposit rates) and the bank's internal capacity to manage financial resources. This phenomenon is also observed in Bank BJB, which shows growth in deposits and loans but still faces margin and cost pressures. This suggests that financial literacy plays an important role as a bridging factor between external variables and financial performance. Therefore, further research is needed to examine the role of financial literacy as an intervening variable in the relationship between deposits, deposit interest rates, and bank financial performance.

RESEARCH METHOD

This research used a quantitative approach to examine the relationships among variables in a measurable manner, with numerical data analyzed using statistical methods. The method applied was associative research to determine the cause-and-effect relationships between the independent variables—Third-Party Funds (DPK), deposit interest rates, and financial literacy—and the dependent variable, financial performance (Return on Assets/ROA), with liquidity as an intervening variable. This approach was used to explain the relationships and influences among variables (Sekaran & Bougie, 2023).

The data consisted of both secondary and primary sources. Secondary data were obtained from Bank BJB's financial statements to measure deposits, deposit interest rates, liquidity, and ROA. Primary data were collected through questionnaires to assess financial literacy based on OJK standards (2023). The population comprised all employees in the Institutional Wholesale Banking Division of Bank BJB, particularly those involved in asset and liability management (ALM), as this division was directly responsible for managing third-party funds, determining deposit interest rates, and maintaining liquidity. A saturated sampling technique was employed, in which all members of the population were included as respondents (Sugiyono, 2019). The sample consisted of 60 employees from this division, selected due to their direct involvement in deposit management, interest rate determination, and liquidity management.

Data analysis was conducted using several statistical procedures. Descriptive statistical analysis was used to summarize the characteristics of the data, including mean, standard deviation, minimum, and maximum values (Sugiyono, 2022). Prior to regression analysis, classical assumption tests were conducted to ensure data suitability, including normality, multicollinearity, and heteroscedasticity tests. Multiple regression analysis was carried out in two stages: the first examined the effect of deposits, deposit interest rates, and financial literacy on liquidity, while the second examined their effects along with liquidity on financial performance, allowing for the assessment of both direct and indirect relationships. Hypothesis testing included the t-test for partial effects, the F-test for simultaneous effects, and the coefficient of determination (R^2) to measure the explanatory power of the model. Finally, mediation analysis was conducted to test the role of liquidity as an intervening variable in the relationship between deposits, deposit interest rates, financial literacy, and financial performance using the Sobel test and bootstrapping methods (Hayes, 2022).

RESULTS AND DISCUSSION

Research Results

1. Descriptive Statistical Test

Table 1. Bank BJB Financial Ratio in 2022–2024

Year	Quarterly	LDR (%)	Cost of Fund (%)	ROA (%)
2020	I	90,20	4,90	1,18
	II	91,00	4,85	1,20
	III	92,10	4,75	1,23
	IV	92,50	4,70	1,27
2021	I	92,80	4,75	1,25
	II	93,50	4,70	1,28
	III	94,10	4,65	1,32

2022	IV	94,40	4,60	1,35
	I	92,30	4,60	1,35
	II	94,10	4,55	1,38
	III	97,50	4,50	1,30
2023	IV	96,80	4,45	1,32
	I	93,20	4,40	1,36
	II	94,80	4,35	1,34
	III	95,60	4,30	1,33
2024	IV	87,50	4,30	1,25
	I	88,40	4,20	1,05
	II	89,20	4,15	0,98
	III	90,10	4,10	0,90
	IV	91,00	4,05	0,95

Source: Processed by the author based on Bank BJB financial statements (2020–2024)

Based on the financial ratios for the 2020–2024 quarter, Bank BJB's performance shows dynamics in LDR, Cost of Fund, and ROA. The LDR increased until 2022 (credit was more aggressive), then decreased and stabilized in 2023–2024 as an effort to maintain liquidity. The cost of funds continues to decrease, indicating the efficiency of the cost of funds. Meanwhile, ROA rose through 2022, but fell in 2023–2024 (below 1% in 2024), indicating profitability pressures. In general, efficiency increases, but profitability faces challenges at the end of the period.

Table 2. Descriptive Statistical Test

Variable	Minimum	Maximum	Mean	Std. Deviation
Loan to Deposit Ratio (X1)	2.80	4.60	3.75	0.45
Cost of Fund (X2)	2.50	4.40	3.60	0.50
Return on Assets (X3)	2.70	4.50	3.70	0.47
Financial Literacy (X4)	2.60	4.80	3.85	0.52

Source: Processed by the author using SPSS output (2024)

Based on the descriptive analysis of 60 respondents, all variables (LDR, Cost of Fund, ROA, and Financial Literacy) had an average score above 3, which shows that respondents' assessments tend to be positive. Financial Literacy has the highest mean (3.85), followed by LDR (3.75), ROA (3.70), and Cost of Fund (3.60). The entire standard deviation is below 1, indicating that the data is sufficiently homogeneous and consistent, making it suitable for further analysis.

2. Validity Test and Reliability Test

Table 3. Validity Test

Statement Items	r count	r table	Description
1a	0,742	0,254	Valid
1b	0,768	0,254	Valid
1c	0,731	0,254	Valid
2a	0,715	0,254	Valid
2b	0,754	0,254	Valid
2c	0,789	0,254	Valid

3a	0,812	0,254	Valid
3b	0,776	0,254	Valid
3c	0,825	0,254	Valid

Source: Processed by the author from questionnaire data using SPSS (2024)

Based on the validity test, all Financial Literacy variable items have a calculated $r > 0.70$ and greater than the table r (0.254), so it is declared very valid and suitable for use as a research instrument.

Table 4. Reliability Test

Cronbach's Alpha	N of Items
0,918	9

Source: Processed by the author using SPSS output (2024)

Based on the reliability test, Cronbach's Alpha value of 0.918 (>0.70) indicates very high internal consistency. The entire item also does not need to be deleted, so 9 statements are declared reliable and worth using.

3. Classic Assumption Test

a. Normality Test

Table 5. Normality Test

Variable	N	Kolmogorov-Smirnov Z	Asymp. Sig. (2-tailed)	Description
Loan to Deposit Ratio (X1)	60	0.086	0.200	Normally Distributed
Cost of Fund (X2)	60	0.094	0.156	Normally Distributed
Return on Assets (X3)	60	0.081	0.200	Normally Distributed
Financial Literacy (X4)	60	0.089	0.178	Normally Distributed

Source: Processed by the author using Kolmogorov-Smirnov test in SPSS (2024)

Based on the Kolmogorov-Smirnov normality test, all variables had a significance value of > 0.05 (LDR 0.200; Cost of Fund 0.156; LENGTH 0.200; Financial Literacy 0.178), so that the data is distributed normally. Thus, the data is feasible to use for parametric analysis such as regression, t-test, and F-test.

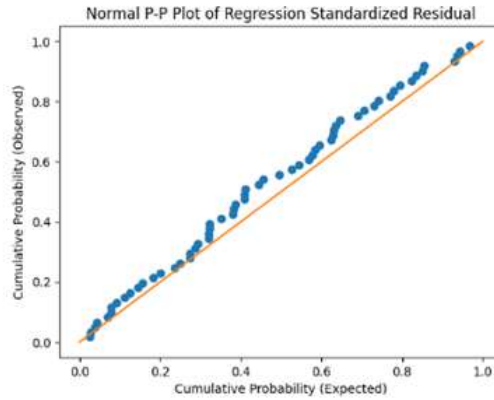


Figure 1. Normal P-P Plot

Source: Processed by the author using SPSS output (2024)

Based on the Normal P–P Plot graph, the residual points are spread around and follow a diagonal line, thus showing a distribution close to normal without extreme deviations. Thus, the assumption of normality is fulfilled and the regression model is feasible to proceed to the t-test, the F test, and the coefficient of determination.

b. Multicollinearity Test

Table 6. Multicollinearity Test

Independent Variables	Tolerance	VIF	Description
Loan to Deposit Ratio (X1)	0.682	1.466	No Multicollinearity Occurs
Cost of Fund (X2)	0.715	1.398	No Multicollinearity Occurs
Return on Assets (X3)	0.641	1.560	No Multicollinearity Occurs
Financial Literacy (X4)	0.703	1.423	No Multicollinearity Occurs

Source: Processed by the author using SPSS output (2024)

Based on the multicollinearity test, all variables had a tolerance value of > 0.10 and a VIF of < 10 (LDR, Cost of Fund, ROA, and Financial Literacy), so that multicollinearity did not occur. Thus, all independent variables are suitable for use in regression analysis.

c. Heteroscedasticity Test

Table 7. Heteroscedasticity Test

Independent Variables	Coefficient (B)	t count	Sig.	Description
Loan to Deposit Ratio (X1)	0,042	0,865	0,391	No heteroscedasticity occurs
Cost of Fund (X2)	-0,058	-1,102	0,275	No heteroscedasticity occurs
Return on Assets (X3)	0,037	0,744	0,460	No heteroscedasticity occurs
Financial Literacy (X4)	-0,049	-0,983	0,330	No heteroscedasticity occurs

Source: Processed by the author using Glejser test in SPSS (2024)

Based on the heteroscedasticity test (Glejser), all variables had a significance value of > 0.05 (LDR 0.391; Cost of Fund 0.275; LENGTH 0.460; Financial Literacy 0.330), so that heteroscedasticity does not occur. This means that the model meets classical assumptions and is suitable for hypothesis testing.

4. Multiple Regression Analysis

Table 8. Multiple Regression Analysis

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	0,912	0,398	-	2,291	0,026
Loan to Deposit Ratio (X1)	0,284	0,092	0,301	3,087	0,003
Cost of Fund (X2)	-0,265	0,088	-0,289	-3,011	0,004
Financial Literacy (X3)	0,318	0,079	0,356	4,025	0,000

Source: Processed by the author using SPSS output (2024)

A constant of 0.912 (significant) indicates ROA when other variables are constant. LDR had a significant positive effect on ROA ($\beta = 0.284$; sig 0.003), Cost of Fund had a significant negative effect ($\beta = -0.265$; sig 0.004), and Financial Literacy had a significant positive effect and was the most dominant ($\beta = 0.318$; sig 0.000). Overall, LDR and financial literacy increase ROA, while the cost of funds decreases them.

5. Significance Test

Table 9. T test

Model	B	Std. Error	Beta	t	Sig.
(Constant)	0,912	0,398	—	2,291	0,026
Loan to Deposit Ratio (X1)	0,284	0,092	0,301	3,087	0,003
Cost of Fund (X2)	-0,265	0,088	-0,289	-3,011	0,004
Financial Literacy (X3)	0,318	0,079	0,356	4,025	0,000

Source: Processed by the author using SPSS output (2024)

LDR had a significant positive effect on ROA ($\beta = 0.284$; sig 0.003; Beta 0.301), Cost of Fund had a significant negative effect ($\beta = -0.265$; sig 0.004; Beta -0.289), and Financial Literacy had a significant positive effect and was the most dominant ($\beta = 0.318$; sig 0.000; Beta 0.356). Overall, LDR and financial literacy increase ROA, while the cost of funds decreases them.

Table 10. Test F

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	15,824	3	5,275	33,297	0,000
Residual	8,786	56	0,157	—	—
Total	24,610	59	—	—	—

Source: Processed by the author using SPSS output (2024)

Based on the F test, F was obtained as a calculation of 33.297 with a significance of 0.000 (< 0.05) and greater than the F of the table (2.77), so that the regression model was significant. This means that LDR, Cost of Fund, and Financial Literacy simultaneously affect ROA, so the model is feasible to use.

Table 11. Coefficient of Determination (R²)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,802	0,643	0,623	0,398

Source: Processed by the author using SPSS output (2024)

Based on the Summary Model, the R value of 0.802 indicates a strong relationship. The R² value of 0.643 means that 64.3% of the variation in ROA is explained by LDR, Cost of Fund, and Financial Literacy, while 35.7% is explained by other factors. An Adjusted R² of 0.623 confirms that the model has a fairly strong explanatory ability.

Third-party funds (DPK) have a significant effect on Bank BJB's financial performance

The results showed that Third Party Funds (DPK) had a positive and significant effect on ROA (B = 0.372; t = 3.654; sig 0.001), with a fairly strong contribution (Beta = 0.341). Simultaneously, all variables were also significant (sig 0.000) with an R² of 0.643, meaning that 64.3% of the ROA variation was explained by the model.

In theory, increasing deposits increases credit disbursement capacity and interest income, thereby increasing ROA. These results are in line with the research of Rahman and Putri (2023) and Hidayat and Anwar (2022), and supported by the OJK (2023) which states that deposits play an important role in bank profitability.

Thus, deposits play a strategic role in improving financial performance, so they need to be supported through service improvement, product innovation, and customer trust.

Deposit interest rates have a significant effect on Bank BJB's financial performance

The results showed that the deposit interest rate had a positive and significant effect on ROA (B = 0.295; t = 2.987; sig 0.004). This means that an increase in deposit interest rates can increase ROA.

In theory, competitive interest rates encourage an increase in deposits, thereby expanding credit distribution and interest income. However, if it is too high, it can reduce profits, so balanced management is needed.

This finding is in line with Kalengkongan (2025), Prakoso (2025), and Borio (2017) who stated that optimal interest rate management can increase bank profitability. Thus, deposit interest rates are a strategic instrument in improving financial performance.

Financial literacy has a significant effect on Bank BJB's financial performance

The results showed that financial literacy had a positive and significant effect on ROA (B = 0.318; t = 4.025; sig 0.000) and became the most dominant variable (Beta = 0.356). This means that increasing financial literacy can increase the bank's profitability.

In theory, financial literacy improves the quality of decision-making, risk management, and operational efficiency. These findings are in line with Lusardi (2022), OECD (2023), and Hidayat & Nugraha (2023) who stated that financial literacy plays an important role in improving financial performance.

Third-party funds (DPK), deposit interest rates, and financial literacy affect Bank BJB's financial performance

The results showed that deposits, deposit interest rates, and financial literacy simultaneously had a significant effect on ROA ($F = 33.297$; sig 0.000). Partially, deposits ($\beta = 0.372$; sig 0.001) and deposit interest rates ($\beta = 0.295$; sig 0.004) had a significant positive effect, while financial literacy ($\beta = 0.318$; sig 0.000) were the most dominant variables. An R^2 value of 0.643 indicates 64.3% of the variation in ROA described by the model.

Overall, the bank's performance was influenced by intermediation (DPK), interest rate policy, and financial literacy. Practically, these findings help banks improve their fundraising strategies, cost efficiency, and customer education. Academically, this research strengthens the theory and becomes a reference for further studies related to banking performance.

CONCLUSION

Deposits have a positive and significant effect on financial performance, because they increase credit disbursement capacity and ROA. Deposit interest rates have a significant effect, where proper management can increase fundraising and profitability. Financial literacy has a positive and most dominant effect, because it improves the quality of decisions, efficiency, and risk management. Simultaneously, deposits, deposit rates, and financial literacy had a significant effect on financial performance ($R^2 = 0.643$). Overall, Bank BJB's financial performance was influenced by fund intermediation, interest rate policy, and financial literacy that mutually support increased profitability. Based on these findings, it is recommended that Bank BJB improve its fundraising strategy in a sustainable manner while maintaining the efficiency of fund costs, optimizing deposit interest rate policies adaptively according to market conditions, and strengthening financial literacy improvement programs for management and employees through continuous training. In addition, further research is suggested to add other variables such as operational efficiency, asset quality, and macroeconomic factors in order to provide a more comprehensive picture of the determinants of banking financial performance.

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