

Digital Banking, Fintech Payment, and Fintech Lending Influence the Financial Performance of Conventional Banking

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Abstract

Background Problems: The rapid growth of financial technology (fintech) has transformed the operational landscape of conventional banking, reshaping how financial services are delivered and managed. **Introduction/Main Objectives:** This paper examines the relationship between digital banking, fintech payment, fintech lending, and the financial performance of conventional banks in Indonesia. **Methods:** Secondary data for the 2018–2022 period were collected from the Financial Services Authority (OJK), Bank Indonesia, and the Indonesia Stock Exchange (IDX) for this study, the study employs multiple regression analysis to evaluate how digital transformation affects profitability, efficiency, and competitiveness in the traditional banking sector. **Results:** The findings reveal that digital banking and fintech payment have a significant positive impact on bank performance, indicating that technology adoption enhances operational effectiveness and revenue diversification. Conversely, fintech lending exhibits a moderating influence by expanding credit accessibility while intensifying competition in loan markets. **Conclusion:** Overall, the results highlight that strategic bank–fintech collaboration and proactive digital adaptation are essential to achieving sustainable growth and maintaining competitive advantage in the era of financial digitalization.

Keywords: Conventional Banking, Digital Banking; Financial Performance; Financial Services Authority Fintech Lending; Fintech Payment

JEL Classification: E50; M40

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INTRODUCTION

Rapid digital technology advances have reshaped the global financial sector, particularly through digital banking and fintech innovations. The integration of technology into financial services has created new opportunities for efficiency, accessibility, and customer engagement. However, it has also introduced new challenges for conventional banking institutions that must adapt to remain competitive in an increasingly digital environment (Ozili P. K., 2022). In Indonesia, the transformation toward digital finance is further accelerated by the Financial Services Authority (Otoritas Jasa Keuangan/OJK), which plays a pivotal role in regulating and supervising both conventional and fintech-based financial entities (OJK., 2020).

Digital banking has emerged as a key driver of modernization in the financial sector, allowing banks to deliver services through mobile platforms, online channels, and integrated digital ecosystems. These innovations enhance service efficiency, expand financial inclusion, and strengthen customer retention (PwC., 2020). Meanwhile, the rise of fintech payment systems, such as e-wallets and digital payment gateways, has reshaped consumer behavior by offering more convenient, faster, and cost-effective transaction methods (KPMG, 2020).

In addition, fintech lending, often referred to as peer-to-peer (P2P) lending, has provided an alternative funding source for individuals and micro, small, and medium enterprises (MSMEs). This innovation complements traditional banking but also introduces competitive pressure, particularly in the retail and microfinance segments (Liu, 2020). The growing adoption of fintech services has led to a dynamic relationship between conventional banks and fintech firms, where both competition and collaboration coexist within the financial ecosystem.

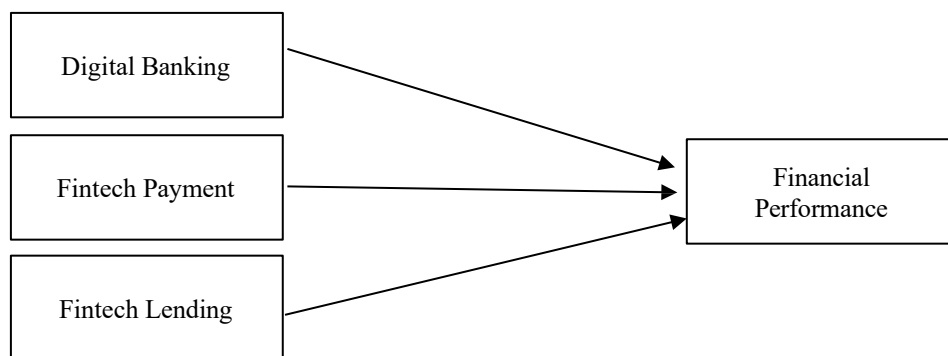


Figure 1. Research Model

RESEARCH METHOD

Using a causal–explanatory quantitative design, this research examines how digital banking, fintech payment, and fintech lending impact conventional banks’ financial performance in Indonesia. The study aims to assess how technological innovation within the financial sector affects variations in bank profitability and operational efficiency. The proposed model is constructed with reference to the Financial Services Authority (OJK) framework and prior empirical research on fintech integration and banking performance. (Ozili P. K., 2018) (Liu, 2020).

The study drew on secondary data sourced from the Financial Services Authority (OJK), Bank Indonesia, and IDX annual reports spanning 2018 to 2022. The collected data covered digital banking activities, fintech payment and lending volumes, as well as key financial performance measures, including ROA, ROE, and NIM. A total of 30 banks were chosen through purposive sampling, based on the completeness of their financial and digital transaction data throughout the study period.



Table 1. Definition Operational and Measurement of Variable

Variable	Definition Operational and Measurement
Digital Banking (DB)	Measured by the total value of digital transactions and the number of active digital banking users.
Fintech Payment (FP)	Measured by the transaction volume and value of digital payment platforms (e-wallets, payment gateways) registered under OJK.
Fintech Lending (FL)	Measured by the total lending disbursed by fintech lending platforms and the growth rate of active borrowers.
Financial Performance	Represented by financial ratios — Return on Assets (ROA), Return on Equity (ROE), and Net Interest Margin (NIM).

Source: Data processed by author from any references

Panel data regression analysis was conducted using both FEM and REM approaches. Subsequently, the Hausman test was performed to identify the most suitable model for the dataset. All statistical analyses were performed using EViews 12 and SPSS 26, with a significance level of 5% ($\alpha = 0.05$). The regression model is formulated as follows:

$$FPERF_{it} = \beta_0 + \beta_1 DB_{it} + \beta_2 FP_{it} + \beta_3 FL_{it} + \varepsilon_{it}$$

where:

$FPERF_{it}$ = Financial performance of bank i in year t

DB_{it} = Digital banking indicator

FP_{it} = Fintech payment indicator

FL_{it} = Fintech lending indicator

ε_{it} = Error term

Data validity was ensured by cross-verifying the figures from multiple official sources (OJK, BI, IDX), while reliability was tested through internal consistency checks and outlier analysis. To ensure the robustness and reliability of the regression model, diagnostic tests for multicollinearity, heteroscedasticity, and autocorrelation were conducted.

RESULTS AND DISCUSSION

Descriptive statistics were employed to summarize the characteristics of each variable for 25 conventional banks observed over the 2018–2022 period. The results are displayed in Table 2.

Table 2. Descriptive Statistics

Variable	N	Min.	Max	Mean	Std. Dev
Digital Banking (X1)	25	2.00	5.00	3.35	0.765
Fintech Payment (X2)	25	0.00	1.00	0.68	0.469
Fintech Lending (X3)	25	1.6	45.7	1.69	5.75
Financial Performance (Y)	25	0.00	299.00	36.77	42.20

Source: Processed data (OJK, 2022)

From Table 2, it can be seen that the mean value of Digital Banking (3.35) indicates a moderate level of digital adoption among conventional banks, meaning digital transformation has started but not yet fully optimized. Fintech Payment (0.68) shows that most banks have adopted or collaborated with fintech payment systems. Meanwhile, Fintech Lending (mean = 1.69) varies significantly across banks, suggesting different levels of exposure or partnership intensity. Financial Performance (mean = 36.77) varies widely,

indicating performance heterogeneity among the observed banks.

Classical assumption checks for multicollinearity, heteroscedasticity, and autocorrelation were performed to ensure model validity.

Tabel 3. Regression Model

Test	Result	Criteria	Conclusion
Normality (Kolmogorov–Smirnov)	Sig. = 0.200	> 0.05	Normal distribution
Multicollinearity (VIF)	< 10 for all variables	< 10	No multicollinearity
Heteroskedasticity (Glejser)	Sig. > 0.05	> 0.05	Homoskedasticity
Autocorrelation (Durbin–Watson)	1.873	1.5–2.5	No autocorrelation

Source: Processed data (OJK, 2022)

The results of all tests indicated that the data satisfied the classical assumptions, allowing for the proper application of multiple linear regression analysis. From the multiple regression analysis, the resulting equation is presented as follows:

$$Y = 74.386 + 1.818X_1 + 3.810X_2 - 1.025X_3 + \varepsilon$$

Where:

Y = Financial Performance

X1 = Digital Banking

X2 = Fintech Payment

X3 = Fintech Lending

Table 4. Regression Coefficients

Variable	Coefficient (β)	t-value	Sig.	Interpretation
Constant	74.386	4.523	0.000	—
Digital Banking (X1)	1.818	5.613	0.000	Significant positive effect
Fintech Payment (X2)	3.810	8.323	0.000	Significant positive effect
Fintech Lending (X3)	-1.025	-2.355	0.027	Significant negative effect

$R^2 = 0.491$; $F = 14.615$; Sig. $F = 0.000$

The model explains 49.1% of the changes in financial performance through Digital Banking, Fintech Payment, and Fintech Lending, with the rest (50.9%) influenced by external factors like economic trends, central bank policies, or bank scale.

The F-test ($F = 14.615$; $p < 0.001$) confirms that the model is significant overall, demonstrating that the combined effect of the independent variables significantly influences conventional banks' financial outcomes.

The regression analysis reveals that Digital Banking exerts a positive and statistically significant influence on financial performance ($\beta = 1.818$; $t = 5.613$; $p < 0.05$). This suggests that greater adoption and integration of digital banking services—such as mobile banking, online banking, and digital account onboarding—enhance banks' profitability and operational efficiency.

This finding supports (Supriyadi, 2023) and (Wibowo, 2022), who reported that digital transformation enhances revenue generation and customer satisfaction by streamlining transaction processes and reducing operational costs.

Fintech Payment also exerts a significant positive influence on bank financial



performance ($\beta = 3.810$; $t = 8.323$; $p < 0.05$). Collaborations with fintech payment platforms such as Gopay, OVO, and DANA have expanded transaction volumes and increased non-interest income. This result aligns with (Lestari, 2021) and (Wijaya, 2020), emphasizing that digital payment ecosystems stimulate financial inclusion and improve banks' fee-based income streams.

In contrast, Fintech Lending has a negative and significant effect on bank financial performance ($\beta = -1.025$; $t = -2.355$; $p = 0.027$). The expansion of P2P lending platforms creates a substitution effect, reducing the credit demand from conventional banks. Moreover, competition in the lending market forces banks to lower interest rates, affecting net interest margins. These findings are consistent with (Anggreini, 2019) and (Chen, 2019), who concluded that fintech lending disrupts traditional credit channels and compresses bank profitability.

The results reveal that digital transformation and fintech collaboration are double-edged phenomena for conventional banks. While Digital Banking and Fintech Payment enhance efficiency and customer engagement, Fintech Lending introduces competitive pressure that diminishes traditional lending revenues.

This study implies that banks must strengthen digital ecosystem strategies, emphasizing partnership and data analytics integration, rather than viewing fintech solely as a competitor. A balanced approach to digital innovation and risk management will ensure sustainable financial performance in the era of financial technology disruption.

CONCLUSION

This research investigated the impact of Digital Banking, Fintech Payment, and Fintech Lending on the financial performance of Indonesian conventional banks, based on OJK data from 2018 to 2022. Financial performance benefits positively from Digital Banking, as digital channels such as mobile and online banking streamline operations, cut costs, and attract a wider customer audience. This finding confirms that digital transformation plays a strategic role in strengthening the competitiveness of conventional banks. Fintech Payment also exerts a significant positive influence on financial performance. Collaboration between banks and digital payment platforms reinforces banks' positions within the digital economy ecosystem while generating additional fee-based income. This partnership contributes to higher transaction volumes and promotes financial inclusion, thereby supporting income diversification. Fintech Lending, however, exerts a notable adverse effect on the financial performance of banks. The rise of peer-to-peer lending platforms has led to disintermediation in the credit market, decreasing demand for traditional bank loans and compressing interest margins. This indicates that the fintech lending revolution presents both challenges and opportunities for conventional banking institutions. Overall, the model explains 49.1% of the variation in financial performance, highlighting that the digitalization of financial services is a critical determinant of banking success amid technological disruption. The findings emphasize the need for banks to undergo comprehensive digital transformation while adapting strategically to increasing competitive pressures from fintech firms.

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AUTHORSHIP CONTRIBUTION STATEMENT

Here's a slightly refined version of your CRediT authorship contribution statement for clarity and consistency:

1. Dewi Kirowati^{1*}: Conceptualization, Methodology, Formal Analysis, Supervision, Writing – Review & Editing
2. Shinta Noor Anggraeny Tayech Lakew²: Data Curation, Software, Validation, Visualization, Writing – Original Draft Preparation
3. Tayech Lakew³: Investigation, Resources, Project Administration, Writing – Review & Editing.

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