

Institutional Capacity, Financing Expansion, and Repayment Performance in Indonesian Islamic P2P Lending

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ABSTRACT

Purpose: This study examines the effects of financing expansion and institutional capacity on repayment performance in Indonesian Islamic peer-to-peer (P2P) lending using the 90-day Payment Success Rate (TKB90). **Methodology:** A quantitative approach was employed using 59 monthly industry-level observations from February 2020 to December 2024 based on Financial Services Authority (OJK) data. The Autoregressive Distributed Lag (ARDL) model was applied to estimate both long-run and short-run relationships. **Results:** Institutional capacity, measured by asset size, positively and significantly affects repayment performance in both the long run and the short run. In contrast, outstanding financing has no significant long-run effect but shows significant short-run lagged effects. The ECM confirms convergence toward long-run equilibrium. **Conclusion:** Repayment performance depends more on institutional capacity than financing expansion alone, highlighting the importance of governance, organizational resources, and risk management for sustainable Islamic P2P lending. **Implications:** The analysis is limited to aggregate industry-level data and a limited set of explanatory variables. Future studies should employ firm-level data and additional determinants of repayment performance. **Originality:** This study provides new evidence on the long-run and short-run determinants of repayment performance in Indonesian Islamic P2P lending using an ARDL framework and industry-level regulatory data, extending Financial Intermediation Theory and Firm Size Theory.

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INTRODUCTION

The rapid development of peer-to-peer (P2P) lending financial technology (fintech) has transformed financial intermediation by expanding access to financing through digital platforms. Compared with conventional financial institutions, fintech P2P lending provides faster, more flexible, and more inclusive financing, particularly for micro, small, and medium enterprises (MSMEs) that often encounter constraints in accessing formal credit (Adamek & Solarz, 2023; Cornelli et al., 2023; Feyen et al., 2023). Within this evolving landscape, Islamic P2P lending has become an increasingly important component of Indonesia's Islamic financial ecosystem by providing financing services that comply with Sharia principles, including the prohibition of *riba*, fairness, transparency, and ethical financial practices. In addition, Islamic fintech operates within a Sharia governance framework that emphasizes accountability, compliance, and responsible financial intermediation, distinguishing it from conventional digital lending platforms (Kazak et al., 2025; Rabbani, 2022).

As the regulator of Indonesia's financial services sector, the Financial Services Authority (OJK) supervises peer-to-peer (P2P) lending activities through several performance indicators, including the 90-day Payment Success Rate (TKB90) and the 90-day Default Rate (TWP90), as stipulated in the regulatory framework governing Information Technology-Based Joint Funding Services (LPBBTI) (Otoritas Jasa Keuangan, 2024). These indicators serve as key measures of repayment performance and financing quality within Indonesia's P2P lending industry. A decline in TKB90 indicates weaker repayment performance and may signal increasing financing risk, thereby reducing investor confidence and potentially affecting the long-term sustainability of Islamic fintech platforms.

Despite its rapid growth, Islamic P2P lending remains exposed to financing risk because digital lending platforms serve borrowers with heterogeneous credit profiles while relying on technology-driven credit assessment, screening, and post-disbursement monitoring systems (Adamek & Solarz, 2023; Cornelli et al., 2023; Frost et al., 2019). From the perspective of Islamic finance, maintaining financing quality is consistent with the principles of prudence (*al-ihityat*), trust (*amanah*), and responsible fund management, which are fundamental elements of Sharia governance in financial transactions (Kazak et al., 2025; Noory et al., 2021). Consequently, financing expansion and institutional capacity represent two important factors that may influence repayment performance. Financial Intermediation Theory suggests that rapid financing expansion may increase risk exposure when it is not accompanied by effective borrower screening and monitoring mechanisms. Meanwhile, Firm Size Theory argues that institutions with greater asset capacity generally possess stronger governance structures, technological infrastructure, and risk management capabilities, enabling them to manage financing risk more effectively (Dell'Ariccia et al., 2017; Khoury et al., 2023; Laeven et al., 2015; Lemma, 2020; Nabilou & Paccès, 2018).

Although the literature on fintech lending has expanded considerably in recent years, several important research gaps remain. First, empirical studies on Islamic fintech have predominantly focused on financial inclusion, technology adoption, user intention, and service quality, while relatively limited attention has been given to repayment performance and financing risk in Islamic P2P lending (Alshater et al., 2022; Bella, 2020; Rinaldi et al., 2026; Unal & Aysan, 2022). Second, regulator-based indicators such as the 90-day Payment Success Rate

(TKB90), which are officially published by the Financial Services Authority (OJK), have rarely been employed as proxies for repayment performance in empirical studies despite their importance for industry supervision and risk monitoring (Idris et al., 2025; Otoritas Jasa Keuangan, 2024). Third, previous studies have generally relied on firm-level surveys or user perception data, whereas relatively few have investigated how financing expansion and institutional capacity are associated with repayment performance using aggregate industry-level data within the Indonesian Islamic P2P lending sector (Edward et al., 2023; Hashfi & Zusryn, 2019). Addressing these gaps is important for improving the understanding of repayment performance from an industry-wide perspective and for providing evidence that can support more effective supervisory and risk management policies.

Addressing these gaps, this study aims to examine the relationships between outstanding financing, asset size, and payment performance, proxied by TKB90, in the Indonesian Islamic P2P lending industry. Using monthly industry-level data published by the Financial Services Authority (OJK), this study investigates whether financing expansion and institutional capacity are significantly associated with financing performance. The study contributes to the literature in three ways. First, it provides empirical evidence on financing performance in Islamic P2P lending using industry-level data. Second, it employs TKB90, an official regulator-based indicator, as an inverse proxy for financing risk. Third, it enriches the literature on Islamic fintech by highlighting the roles of financing expansion and institutional capacity in explaining payment performance, thereby providing insights for both researchers and policymakers.

The remainder of this article is organized as follows. The next section reviews the relevant literature and develops the research hypotheses. Section 3 describes the research methodology, including the data and empirical model. Section 4 presents and discusses the empirical findings. Finally, Section 5 concludes the study by outlining the main findings, implications, limitations, and directions for future research.

Financial Intermediation Theory

Financial intermediation theory explains how financial institutions facilitate the efficient allocation of funds between surplus and deficit units while mitigating information asymmetry, transaction costs, and credit risk (Dell'Ariccia et al., 2017; Nabilou & Paccès, 2018). In peer-to-peer (P2P) lending, digital platforms perform intermediary functions by matching lenders and borrowers through technology-driven credit assessment, loan origination, and monitoring processes. As digital lending continues to expand, fintech platforms increasingly rely on data analytics and automated risk assessment to improve financing decisions while reducing operational frictions (Adamek & Solarz, 2023; Cornelli et al., 2023). Nevertheless, rapid financing expansion may also increase risk exposure if borrower screening quality and post-disbursement monitoring do not improve proportionally.

Within Islamic P2P lending, financing activities are conducted in accordance with Sharia principles, emphasizing fairness, transparency, accountability, and prudent financial management. These principles encourage responsible financing practices while maintaining the quality of financing portfolios through effective Sharia governance and ethical risk management (Iqbal & Mirakhor, 2017; Mergaliyev et al., 2021; Noory et al., 2021). However,

compliance with Sharia principles alone does not eliminate financing risk, particularly when financing growth exceeds the institutional capacity required to manage increasingly complex financing portfolios. Consequently, Financial Intermediation Theory provides an appropriate framework for explaining how financing expansion may influence payment performance in Islamic P2P lending.

Firm Size Theory

Firm Size Theory suggests that larger financial institutions generally possess greater organizational resources, stronger governance systems, and more advanced technological capabilities, enabling them to manage operational and financing risks more effectively (Laeven et al., 2015; Lemma, 2020). Larger institutions also benefit from economies of scale, greater portfolio diversification, and stronger financial capacity to invest in credit assessment systems, digital infrastructure, monitoring technologies, and internal control mechanisms. In the digital finance ecosystem, institutional capacity has become increasingly important as fintech providers rely on technological innovation and risk management capabilities to sustain financing quality and operational resilience (Cornelli et al., 2023).

In the context of Islamic P2P lending, asset size reflects the institutional capacity of platform operators to support sustainable financing activities. Fintech operators with larger asset bases are expected to have stronger governance structures, better technological infrastructure, and greater capabilities in implementing prudent financing policies, strengthening borrower monitoring, and absorbing potential financing losses. These capabilities are also consistent with the principles of Sharia governance, which emphasize accountability, transparency, and prudent financial management in Islamic financial institutions (Noory et al., 2021). Therefore, Firm Size Theory suggests that institutional capacity, as reflected by asset size, may contribute positively to payment performance.

Outstanding Financing and Payment Performance

Financial Intermediation Theory suggests that expanding the scale of financing increases the volume and complexity of financial intermediation. As financing portfolios grow, digital lending platforms face greater challenges in maintaining effective borrower screening, credit assessment, and post-disbursement monitoring. Although technological innovation improves the efficiency of financing services, rapid financing expansion may increase financing risk when institutional risk management capabilities do not develop at the same pace (Cornelli et al., 2023; Jagtiani & Lemieux, 2019). Recent studies on digital lending also suggest that rapid credit expansion may increase portfolio vulnerability if underwriting standards and monitoring systems are insufficient to maintain financing quality (Cornelli et al., 2023; Frost et al., 2019). Consequently, financing expansion is expected to be associated with weaker payment performance in Islamic P2P lending.

Based on these arguments, the following hypothesis is proposed:

H1: Outstanding financing is negatively associated with the 90-day Payment Success Rate (TKB90) in Islamic peer-to-peer lending in Indonesia.

Asset Size and Payment Performance

Firm Size Theory argues that institutions with larger asset bases generally possess stronger managerial capabilities, more developed technological infrastructure, and greater

financial resources to support effective risk management (Laeven et al., 2015; Lemma, 2020). In the context of digital finance, larger financial institutions are also better positioned to invest in advanced credit assessment systems, data analytics, and monitoring technologies that enhance financing quality and operational resilience (Bronzini et al., 2025; Cornelli et al., 2023; Waliullah, 2024). In Islamic P2P lending, greater asset capacity enables platform operators to strengthen governance, improve borrower evaluation and monitoring, and absorb potential financing losses more effectively. These institutional advantages are expected to contribute to better financing quality and stronger payment performance.

Accordingly, the following hypothesis is proposed:

H2: Asset size is positively associated with the 90-day Payment Success Rate (TKB90) in Islamic peer-to-peer lending in Indonesia.

METHODOLOGY

Research Design

This study employs a quantitative research design to examine the association between financing expansion, institutional capacity, and payment performance in the Indonesian Islamic peer-to-peer (P2P) lending industry. A quantitative approach is appropriate because it enables the empirical assessment of relationships among measurable financial variables using objective statistical procedures (Wooldridge, 2020). The unit of analysis is the Islamic P2P lending industry at the aggregate level, reflecting industry-wide financing activities rather than individual platform performance.

Given that this study employs aggregate monthly time-series data, the analysis requires an econometric approach capable of capturing both long-run equilibrium relationships and short-run dynamics. Therefore, the Autoregressive Distributed Lag (ARDL) framework was adopted because it is appropriate for relatively small samples and variables integrated of order $I(0)$ and/or $I(1)$ (Kripfganz & Schneider, 2023).

Data Source and Sample

This study utilizes secondary data obtained from the official publications of the Financial Services Authority (OJK), including the Sharia Fintech Lending Statistics and other monthly reports on the development of Indonesia's Islamic peer-to-peer (P2P) lending industry. These publications provide industry-level information on financing activities, institutional characteristics, and payment performance, making them an appropriate source for examining financing conditions in the Islamic fintech sector.

The observation period spans from February 2020 to December 2024, yielding 59 monthly observations. February 2020 was selected as the starting point because consistent industry-level statistics on Islamic P2P lending became publicly available from OJK during this period, while December 2024 represents the most recent month with complete data available at the time of analysis. Because publicly accessible financial information at the individual platform level is unavailable, this study employs aggregate industry-level data published by OJK. The use of aggregate data enables the analysis to capture overall trends in financing expansion, institutional capacity, and payment performance across the Indonesian Islamic P2P lending industry rather than differences among individual platform operators.

Variable Measurement

This study employs one dependent variable and two independent variables to examine the association between financing expansion, institutional capacity, and repayment performance in the Indonesian Islamic peer-to-peer (P2P) lending industry. The dependent variable is the 90-day Payment Success Rate (TKB90), which is published by the Financial Services Authority (OJK) as an official indicator of repayment performance in Indonesia's P2P lending industry. According to OJK, TKB90 represents the percentage of financing obligations successfully repaid within 90 days after the due date. Consequently, higher TKB90 values indicate stronger repayment performance, whereas lower values reflect weaker repayment performance and higher financing risk. For this reason, TKB90 is employed as an inverse proxy for financing risk in this study. The use of repayment performance as a proxy for financing risk is consistent with previous studies on fintech lending and financial intermediation, which emphasize realized repayment outcomes as an important indicator of financing quality (Claessens et al., 2018; Jagtiani & Lemieux, 2019).

The first independent variable is outstanding financing, measured as the total amount of financing disbursed through Islamic P2P lending platforms. This variable reflects the scale of financing activities and the level of financing exposure within the industry. Based on Financial Intermediation Theory, expanding financing portfolios may increase repayment risk when financing growth is not accompanied by adequate borrower screening, monitoring, and risk management capabilities (Dell'Ariccia et al., 2017; Nabilou & Paccès, 2018).

The second independent variable is asset size, measured as the total assets of Islamic P2P lending providers. Asset size serves as a proxy for institutional capacity, reflecting the financial and operational resources available to support financing activities, governance, technological development, and risk management. Consistent with Firm Size Theory, institutions with larger asset bases are generally expected to possess stronger organizational capabilities that contribute to better repayment performance (Laeven et al., 2015; Lemma, 2020).

To reduce differences in measurement scale, mitigate potential heteroskedasticity, and improve estimation efficiency, both outstanding financing and asset size are transformed into their natural logarithms. Logarithmic transformation is widely employed in empirical financial research because it reduces data skewness and facilitates statistical estimation. Since the dependent variable remains in its original scale while the independent variables are expressed in logarithmic form, the estimated coefficients are interpreted as semi-elasticities, indicating the change in TKB90 associated with a one-percent change in the corresponding independent variable (Wooldridge, 2020). **Table 1** summarizes the operational definitions and measurements of the variables used in this study.

Table 1. Summary of Research Variables

Variable	Definition	Measurement	Unit / Scale	Role	Expected Sign	Source
TKB90	90-day Payment Success Rate	Percentage of financing obligations successfully repaid within 90 days after the due date (inverse proxy for financing risk)	Percent (%)	Dependent	-	OJK
LnOutstanding	Outstanding Financing	Natural logarithm of total outstanding Islamic P2P financing	ln(IDR)	Independent	-	OJK
LnSize	Asset Size	Natural logarithm of total assets of Islamic P2P lending providers	ln(IDR)	Independent	+	OJK

Econometric Framework

To examine the relationships between financing expansion, institutional capacity, and repayment performance, this study employs the Autoregressive Distributed Lag (ARDL) Bounds Testing approach developed by Kripfganz & Schneider (2023). The ARDL framework is appropriate for relatively small time-series samples because it simultaneously estimates long-run equilibrium relationships and short-run dynamic adjustments. Moreover, it accommodates variables integrated of order zero, $I(0)$, and order one, $I(1)$, provided that none is integrated of order two, $I(2)$.

Prior to estimating the ARDL model, the stationarity of all variables was examined using the Augmented Dickey–Fuller (ADF) unit root test to determine their order of integration (Kripfganz & Schneider, 2023). The ADF regression is specified as follows:

$$\Delta Y_t = \alpha + \beta_t + \gamma Y_{t-1} + \sum_{i=1}^p \delta_i \Delta Y_{t-i} + \varepsilon_t \quad (1)$$

Where Δ denotes the first-difference operator, Y_t is the variable under investigation, t represents the deterministic time trend, and ε_t is the error term. The null hypothesis indicates the presence of a unit root, whereas the alternative hypothesis indicates stationarity.

After confirming the order of integration, the optimal lag structure was selected using the Akaike Information Criterion (AIC). The specification with the lowest AIC value was retained to achieve an appropriate balance between model fit and parsimony.

The ARDL model is specified as:

$$TKB90_t = \alpha + \sum_{i=1}^p \beta_i TKB90_{t-i} + \sum_{j=1}^q \gamma_j \text{LnOutstanding}_{t-j} + \sum_{k=1}^r \delta_k \text{LnSize}_{t-k} + \varepsilon_t \quad (2)$$

Where TKB90 denotes the 90-day Payment Success Rate, LnOutstanding is the natural logarithm of outstanding financing, LnSize is the natural logarithm of the total assets of Islamic P2P lending providers, and ε_t is the disturbance term.

The existence of a long-run relationship was examined using the ARDL Bounds Test, where rejection of the null hypothesis indicates cointegration among the variables. Following the bounds testing procedure, the short-run dynamics were estimated through the Error Correction Model (ECM).

$$\Delta TKB90_t = \alpha + \sum_{i=1}^p \phi_i \Delta TKB90_{t-i} + \sum_{j=1}^q \theta_j \Delta \text{LnOutstanding}_{t-j} + \sum_{k=1}^r \psi_k \Delta \text{LnSize}_{t-k} + \lambda \text{ECT}_{t-1} + \varepsilon_t \quad (3)$$

Where Δ denotes the first-difference operator, ECT_{t-1} is the lagged error correction term derived from the estimated long-run relationship, λ is the speed-of-adjustment coefficient, and ε_t is the error term. A negative and statistically significant value of λ indicates that deviations from the long-run equilibrium are corrected over time, confirming the existence of a stable long-run relationship among the variables.

Finally, model adequacy was assessed using the Breusch–Godfrey LM test for serial correlation and the Breusch–Pagan test for heteroskedasticity. Finally, model adequacy was assessed using the Breusch–Godfrey LM test for serial correlation and the Breusch–Pagan test for heteroskedasticity. The results of these diagnostic tests were used to evaluate the reliability of the estimated ARDL model. All analyses were conducted using RStudio.

Cointegration and Diagnostic Evaluation

Following the estimation of the ARDL model, a series of post-estimation procedures was conducted to evaluate model adequacy and estimation reliability. These procedures included the ARDL Bounds Test for cointegration, the Error Correction Model (ECM), and diagnostic tests for serial correlation and heteroskedasticity. The Bounds Test was used to determine the existence of a long-run equilibrium relationship among the variables, where rejection of the null hypothesis indicates cointegration. Following the bounds testing procedure, the long-run coefficients and the Error Correction Model (ECM) were estimated to further examine the long-run equilibrium and short-run dynamics among the variables. Finally, serial correlation and heteroskedasticity were assessed using the Breusch–Godfrey LM and Breusch–Pagan tests, respectively. Finally, serial correlation and heteroskedasticity were assessed using the Breusch–Godfrey LM and Breusch–Pagan tests, respectively. These diagnostic tests were conducted to evaluate the adequacy and reliability of the estimated ARDL model.

RESULT AND DISCUSSION

Descriptive Statistics

Descriptive statistics were computed to provide an initial overview of the distribution and central tendency of the research variables, namely the 90-day Payment Success Rate (TKB90), the natural logarithm of outstanding financing (LnOutstanding), and the natural logarithm of asset size (LnSize). The summary statistics are presented in **Table 2**.

Table 2. Descriptive Statistics of Research Variables

Variable	Obs.	Mean	Std. Dev.	Min	Max
TKB90	59	0.97	0.02	0.91	0.99
LnOutstanding	59	30.66	1.63	23.99	31.92
LnSize	59	29.16	0.22	28.74	29.61

Table 2 presents the descriptive statistics of the variables used in this study based on 59 monthly observations spanning the period from February 2020 to December 2024. The

mean value of TKB90 is 0.97, indicating that approximately 96.8% of financing obligations were successfully repaid within 90 days over the sample period. The relatively low standard deviation (0.02) suggests that repayment performance remained fairly stable throughout the observation period. In contrast, LnOutstanding exhibits the largest dispersion (SD = 1.63), reflecting substantial fluctuations in the volume of outstanding financing. Meanwhile, LnSize records a mean of 29.16 with a comparatively small standard deviation (0.22), indicating that the asset base of Islamic P2P lending providers experienced relatively modest changes during the study period.

Unit Root Test

Prior to estimating the ARDL model, the Augmented Dickey–Fuller (ADF) unit root test was conducted to examine the order of integration of each variable. The ARDL methodology requires that the variables be integrated of order zero, $I(0)$, or order one, $I(1)$, while excluding variables integrated of order two, $I(2)$.

Table 3. Augmented Dickey–Fuller (ADF) Unit Root Test Results

Variable	Level ADF Statistic	First Difference ADF Statistic	Order of Integration
TKB90	-2.84	-4.07***	$I(1)$
LnOutstanding	-2.44	-5.99***	$I(1)$
LnSize	-2.08	-3.88***	$I(1)$

As shown in **Table 3**, none of the variables is stationary at the level form based on the 5% significance criterion. After first differencing, however, all variables become stationary, indicating that TKB90, LnOutstanding, and LnSize are integrated of order one, $I(1)$. Since no variable is integrated of order two, the data satisfy the prerequisite for estimating the ARDL model.

Lag Length Selection

The optimal lag structure was determined using the Akaike Information Criterion (AIC). As presented in **Table 4**, the ARDL (2,4,0) specification was selected as the optimal model, indicating two lags for the dependent variable (TKB90), four lags for LnOutstanding, and no lag for LnSize. The selected lag structure was subsequently employed for the ARDL bounds test as well as the estimation of both the long-run equilibrium and short-run dynamic relationships.

Table 4. Optimal Lag Length Selection

Variable	Selected Lag
TKB90	2
LnOutstanding	4
LnSize	0

Notes: The optimal lag structure was selected using the Akaike Information Criterion (AIC).

ARDL Bounds Test

The ARDL bounds test was conducted to examine the existence of a long-run equilibrium relationship among financing repayment performance (TKB90), outstanding financing, and asset size. As reported in **Table 5**, the estimated F-statistic was 4.13, with an approximate p-value of 0.09. The result provides preliminary evidence of a long-run

equilibrium relationship among the variables. Although the evidence is not sufficiently strong under the conventional 5% significance level, the ARDL framework permits further examination through the estimation of the long-run coefficients and the associated Error Correction Model (ECM). Accordingly, the long-run equilibrium and short-run dynamics are examined in the subsequent sections.

Table 5. ARDL Bounds Test Results

Test Statistic	Value
F-statistic	4.13
Approximate p-value	0.09
Number of Regressors (k)	2

Long-run Estimates

Following the ARDL bounds test, the long-run coefficients were estimated to examine the equilibrium relationship among the variables. The estimation results are presented in **Table 6**.

Table 6. Long-run Coefficient Estimates

Variable	Coefficient	Std. Error	t-value	p-value
LnOutstanding	0.23	0.44	0.53	0.60
LnSize	5.22	2.51	2.08	0.04**
Constant	-62.45	61.47	-1.02	0.32

As shown in **Table 6**, LnOutstanding has a positive coefficient ($\beta = 0.23$), but the relationship is not statistically significant ($p = 0.60$). This finding indicates that changes in the volume of outstanding financing do not exert a significant long-run effect on the financing repayment performance (TKB90). These findings imply that financing expansion alone does not necessarily improve repayment performance over the long run.

In contrast, LnSize exhibits a positive and statistically significant long-run effect on TKB90 ($\beta = 5.22$, $p = 0.04$). This result suggests that larger asset holdings are associated with better financing repayment performance over the long run. A stronger asset base may enhance operational capacity, risk management, and institutional resilience, thereby contributing to improved financing quality and repayment performance.

Error Correction Model (ECM)

Following the estimation of the long-run coefficients, the Error Correction Model (ECM) was estimated to examine the short-run dynamics and the speed at which deviations from the long-run equilibrium are corrected. The estimation results are reported in **Table 7**.

Table 7. Error Correction Model Estimates

Variable	Coefficient	Std. Error	t-value	p-value
Constant	-15.13	10.56	-1.43	0.16
ECT (-1)*	-0.24	0.13	-1.90	0.06
LnSize	1.27	0.44	2.91	0.01**
Δ LnOutstanding	0.13	0.09	1.39	0.17
Δ LnOutstanding(-1)	0.14	0.07	2.04	0.05**
Δ LnOutstanding(-2)	-0.28	0.07	-4.18	<0.00***
Δ LnOutstanding(-3)	-0.11	0.06	-1.70	0.09*
Δ TKB90(-1)	0.82	0.19	4.21	<0.00***

Notes: *ECT is represented by the lagged level of the dependent variable in the unrestricted error correction representation.

The coefficient associated with the error correction mechanism is negative ($\beta = -0.24$) and marginally significant ($p = 0.06$), indicating the presence of an adjustment process toward the long-run equilibrium. The estimated coefficient suggests that approximately 24.2% of short-run disequilibrium is corrected within one period following a temporary shock. Although the adjustment speed is statistically significant only at the 10% level, the negative sign is consistent with the theoretical expectation of convergence toward long-run equilibrium.

In the short run, asset size remains positively associated with financing repayment performance ($\beta = 1.27, p = 0.00$), suggesting that institutions with stronger financial resources maintain higher repayment quality. By contrast, the effects of outstanding financing vary across lag structures. While the contemporaneous change is statistically insignificant, the first lag exhibits a positive effect and the second lag shows a significant negative effect, indicating that the influence of financing expansion emerges gradually rather than instantaneously.

Furthermore, the lagged change in repayment performance ($\Delta\text{TKB90}(-1)$) is positive and highly significant ($\beta = 0.82, p < 0.00$), indicating that recent repayment performance contributes to maintaining current repayment stability.

Overall, the estimated ECM exhibits satisfactory explanatory power. The model achieves an adjusted R^2 of 0.705, indicating that approximately 70.5% of the variation in financing repayment performance is explained by the explanatory variables included in the model. In addition, the overall model is statistically significant ($F = 17.13, p < 0.00$), suggesting that the explanatory variables jointly provide substantial explanatory power for changes in financing repayment performance.

Diagnostic Tests

To evaluate the adequacy of the estimated ARDL model, diagnostic tests were conducted for serial correlation and heteroskedasticity (**Table 8**).

Table 8. Diagnostic Test Results

Diagnostic Test	Statistic	p-value	Conclusion
Breusch–Godfrey LM	0.68	0.41	No serial correlation
Breusch–Pagan	20.38	0.01	Heteroskedasticity detected

The Breusch–Godfrey LM test indicates no evidence of serial correlation in the residuals (LM = 0.68, $p = 0.41$), suggesting that the residuals are independently distributed over time. In contrast, the Breusch–Pagan test reveals the presence of heteroskedasticity. Finally, model adequacy was assessed = 20.383, $p = 0.009$), indicating that the variance of the residuals is not constant across observations. Given the time-series nature of the data and the volatility commonly observed in financial indicators, this finding is not uncommon. Therefore, although the model is free from serial correlation, the presence of heteroskedasticity suggests that statistical inference should be interpreted with caution.

Financing Expansion and Repayment Performance

The ARDL estimation reveals that outstanding financing does not exert a statistically significant long-run effect on the 90-day Payment Success Rate (TKB90), although significant lagged effects are observed in the short run. This finding suggests that financing expansion alone is insufficient to improve repayment performance over the long term. Instead, the influence of financing growth appears to materialize gradually through short-run adjustments,

indicating that the effects of expanding financing portfolios require time before being reflected in repayment outcomes.

These findings are consistent with Financial Intermediation Theory, which argues that financial institutions perform intermediary functions by allocating funds while mitigating information asymmetry and financing risk (Dell’Ariccia et al., 2017; Nabilou & Paccès, 2018). Similar evidence has been reported by Claessens et al (2018), who argued that the rapid expansion of fintech lending increases the importance of effective screening and monitoring mechanisms to preserve financing quality. Likewise, Jagtiani & Lemieux (2019) demonstrated that fintech lenders increasingly rely on alternative data and machine learning to improve borrower assessment, while Cornelli et al (2023) emphasized that sustainable growth in digital lending depends on institutional capability rather than financing expansion alone. The present study extends these findings by showing that, within the context of Indonesian Islamic P2P lending, financing expansion does not significantly improve repayment performance in the long run when measured using the industry-level TKB90 indicator. This suggests that increasing financing volume alone is insufficient unless accompanied by stronger governance, borrower monitoring, and institutional risk management.

The short-run dynamics further reveal that the effect of outstanding financing is not constant over time. Unlike previous studies that primarily examined borrower-level default risk or loan approval decisions (Adamek & Solarz, 2023; Berg et al., 2019; Cornelli et al., 2023; Jagtiani & Lemieux, 2019), the present study evaluates repayment performance using TKB90, an industry-level indicator mandated by the Indonesian Financial Services Authority (OJK). This broader perspective demonstrates that the benefits of financing expansion may emerge only temporarily before repayment risk gradually materializes, indicating that institutional monitoring capacity becomes increasingly important as financing portfolios grow. Consequently, the findings complement existing fintech lending literature by highlighting dynamic repayment adjustments at the industry level rather than solely at the individual borrower level.

From the perspective of Islamic finance, these findings reinforce the importance of prudential financing practices. Financing expansion should therefore be accompanied by effective governance, continuous borrower monitoring, and prudent risk management to ensure that financing growth remains consistent with the objectives of *maqashid al-shariah*, particularly *hifz al-mal* (the protection of wealth), which emphasizes responsible financial management and the preservation of public welfare (Iqbal & Mirakhor, 2017; Noory et al., 2021).

Using TKB90 as a regulator-based indicator provides an industry-level perspective on repayment performance that complements borrower-level default measures commonly employed in previous studies. Consequently, these findings offer practical implications for regulators and Islamic P2P platform operators in evaluating financing quality and strengthening supervisory frameworks to support sustainable industry development.

Institutional Capacity and Repayment Performance

Unlike financing expansion, institutional capacity, as proxied by asset size, demonstrates a positive and statistically significant effect on repayment performance in both

the long run and the short run. This finding indicates that institutions with larger asset bases consistently achieve higher repayment performance, suggesting that organizational capacity plays a more fundamental role than financing volume in sustaining financing quality.

These findings are broadly consistent with previous empirical evidence suggesting that larger financial institutions possess greater operational efficiency, stronger governance structures, and superior technological capabilities that enhance financing quality (Laeven et al., 2015; Lemma, 2020). However, while previous studies predominantly focused on conventional banking institutions, the present study demonstrates that similar institutional advantages are also evident within Islamic fintech lending. This indicates that institutional capacity remains a fundamental determinant of repayment performance despite the technological characteristics of digital financing platforms.

Furthermore, larger institutions generally benefit from economies of scale and greater financial resilience, enabling them to diversify financing portfolios and absorb temporary shocks more effectively. Such institutional advantages contribute to stronger repayment performance by improving financing supervision and maintaining operational stability. Although these mechanisms were not directly examined in the present study, they provide plausible explanations for the significant positive association between asset size and TKB90.

From the perspective of Islamic finance, the findings highlight the importance of institutional responsibility (*mas'uliyah*) in safeguarding entrusted funds. Strengthening institutional capacity through adequate capitalization, sound governance, and effective risk management supports the objectives of *maqashid al-shariah*, particularly *hifz al-mal*, by promoting prudent financing practices and sustainable financial intermediation (Bin-nashwan et al., 2020; Iqbal & Mirakhor, 2017; Mergaliyev et al., 2021).

Error Correction Mechanism and Dynamic Adjustment

The Error Correction Model provides additional evidence regarding the dynamic adjustment process following short-run disequilibrium. The negative coefficient of the error correction term indicates the existence of a convergence mechanism toward the long-run equilibrium, although the adjustment speed is relatively moderate. Approximately 24.2% of deviations from equilibrium are corrected within one period, suggesting that repayment performance gradually returns to its long-run path after temporary shocks.

The relatively moderate adjustment process reflects the characteristics of Islamic P2P lending, where financing portfolios, borrower repayment behavior, and institutional risk management require time to respond to changes in financing conditions. Unlike conventional financial markets that may adjust rapidly, repayment performance in Islamic fintech depends on ongoing borrower monitoring, financing evaluation, and portfolio management, resulting in gradual rather than instantaneous adjustment.

The moderate speed of adjustment also differs from findings reported in several conventional banking studies, where financial indicators often converge more rapidly following economic shocks. Within Islamic P2P lending, repayment performance depends on continuous borrower evaluation, financing supervision, and compliance with Sharia principles, resulting in a more gradual adjustment process. This finding therefore contributes to the

limited literature examining long-run equilibrium dynamics in Islamic digital financing markets.

This finding complements Financial Intermediation Theory by demonstrating that maintaining repayment performance requires not only financing expansion but also sufficient institutional capacity to manage financing risk throughout the adjustment process (Dell’Ariccia et al., 2017; Nabilou & Paccès, 2018). Accordingly, sustainable repayment performance depends on balancing financing growth with continuous improvements in governance, technological capability, and risk management practices.

Conceptual and Policy Implications

The findings provide several theoretical and practical implications for the development of Islamic fintech literature. First, the study extends Financial Intermediation Theory by demonstrating that financing expansion does not automatically improve repayment performance over the long run. Instead, its influence is primarily reflected through short-run dynamic adjustments, highlighting the importance of effective intermediary functions in managing financing portfolios.

Second, the findings provide additional support for Firm Size Theory by showing that institutional capacity, represented by asset size, consistently improves repayment performance in both the long run and the short run. This suggests that organizational resources, governance quality, and financial resilience constitute fundamental determinants of sustainable financing performance within Islamic P2P lending.

From a policy perspective, the findings suggest that regulators, particularly the Financial Services Authority (OJK), should encourage financing expansion while simultaneously strengthening institutional capacity through sound governance, adequate capitalization, and effective risk management. For Islamic P2P lending providers, financing growth should be accompanied by continuous improvements in borrower assessment, post-disbursement monitoring, technological infrastructure, and internal control systems to maintain repayment performance and support long-term industry sustainability.

Finally, from the perspective of Islamic finance, the findings reinforce the importance of integrating Sharia principles with prudent governance and modern risk management practices. Sustainable financing performance depends not only on expanding financial access but also on maintaining institutional responsibility, protecting entrusted funds, and ensuring balanced financing growth in accordance with the objectives of *maqashid al-shariah*, particularly *hifz al-mal*.

CONCLUSION AND RECOMMENDATION

This study examined the relationships between outstanding financing, institutional capacity, and repayment performance in the Indonesian Islamic peer-to-peer (P2P) lending industry using monthly industry-level time-series data analyzed through the Autoregressive Distributed Lag (ARDL) approach. The findings indicate that institutional capacity, proxied by asset size, exerts a positive and statistically significant effect on the 90-day Payment Success Rate (TKB90) in both the long run and the short run. In contrast, outstanding financing does not significantly influence repayment performance in the long run but exhibits significant

lagged effects in the short run, suggesting that the impact of financing expansion on repayment performance is dynamic rather than immediate. Furthermore, the Error Correction Model indicates the existence of a gradual adjustment process toward the long-run equilibrium, suggesting that short-run deviations are progressively corrected over time.

From a theoretical perspective, this study extends the literature on Islamic fintech by providing empirical support for Financial Intermediation Theory and Firm Size Theory within the context of Islamic digital lending. The findings suggest that sustainable repayment performance depends not only on financing expansion but also on the institutional capacity required to support prudent financing practices, effective governance, and sound risk management. From the perspective of Islamic finance, these findings reinforce the importance of integrating Sharia principles with institutional responsibility and prudent financial management in achieving the objectives of *maqashid al-shariah*, particularly *hifz al-mal* (the protection of wealth).

From a practical perspective, the findings imply that regulators, particularly the Financial Services Authority (OJK), should encourage sustainable financing growth while simultaneously strengthening institutional capacity through sound governance, adequate capitalization, and effective risk management frameworks. For Islamic P2P lending providers, financing expansion should be accompanied by continuous improvements in borrower assessment, post-disbursement monitoring, technological capability, and internal control systems to maintain repayment performance and support the long-term sustainability of the industry.

This study has several limitations. First, the analysis relies on aggregate industry-level data, which does not capture heterogeneity across individual Islamic P2P lending providers. Second, repayment performance is measured using a single indicator, namely TKB90, which may not fully reflect all dimensions of financing risk. Third, although the ARDL model captures both long-run and short-run dynamics, the analysis is limited to internal industry variables and does not explicitly incorporate broader macroeconomic conditions that may influence repayment performance. Future research is therefore encouraged to employ operator-level panel data, include additional indicators of financing quality such as non-performing financing and borrower characteristics, and incorporate macroeconomic variables to obtain a more comprehensive understanding of financing risk in Islamic P2P lending.

Overall, the findings emphasize that strengthening institutional capacity is more critical than financing expansion alone in maintaining sustainable repayment performance in Indonesia's Islamic P2P lending industry.

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