

THE MEDIATING ROLE OF CUSTOMER FINANCIAL BEHAVIOR IN INSTALLMENT PAYMENT BEHAVIOR AT ISLAMIC BANKS IN GREATER BANDUNG

Benny Kurniawan^{1*}, Ira Novianty², Marwansyah³

benny.kurniawan.kps24@polban.ac.id*

Politeknik Negeri Bandung, Indonesia^{1,2,3}

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Abstract

The study employs an explanatory quantitative approach using Structural Equation Modeling–Partial Least Squares (SEM-PLS) on data collected from 211 retail financing customers across five Islamic Commercial Banks operating in Greater Bandung: Bank BSI, Bank BSN, Bank Muamalat, Bank BJB Syariah, and Bank BTPN Syariah. Respondents were selected through purposive sampling based on criteria including active financing status, minimum 12-month customer tenure, and residence within the Greater Bandung area. The findings reveal three key results. First, Islamic financial literacy has a direct positive and significant effect on installment payment behavior ($t = 3.191$, $p = 0.001$), confirming that customers with stronger understanding of contract structures, margin calculations, and debt management demonstrate better payment discipline. Second, customer ethics does not directly influence installment payment behavior ($t = 1.418$, $p = 0.156$), suggesting that moral values alone are insufficient to ensure payment compliance without behavioral transformation. Third, customer financial behavior fully mediates the relationship between customer ethics and installment payment behavior ($t = 3.276$, $p = 0.001$), while it does not mediate the literacy–payment behavior relationship ($t = 1.866$, $p = 0.062$). The structural model explains 79.4% of the variance in installment payment behavior ($R^2 = 0.794$) and 76.2% of customer financial behavior variance ($R^2 = 0.762$). The study is limited to the Greater Bandung retail financing context and cross-sectional self-report data; future research should extend to other regions and financing segments using longitudinal designs.

Keywords: Islamic financial literacy, customer ethics, SEM-PLS, Theory of Planned Behavior.

*Correspondence Author



By Authors

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1. Introduction

The quality of retail financing portfolios in Islamic Commercial Banks (BUS) remains a persistent concern for the Indonesian Islamic banking industry. The Financial Services Authority (OJK) Islamic Banking Statistics for December 2024 recorded the Non-Performing Financing (NPF) ratio of Islamic Commercial Banks at 2.08%, representing a downward trend from 3.23% in 2019 (OJK, 2024). While this improvement reflects progress in risk management, stabilization in the 2–3% range indicates that a substantial portion of retail financing customers continues to experience payment difficulties. With the national BUS financing portfolio reaching approximately IDR 456 trillion, even a 2% NPF translates to roughly IDR 9.1 trillion in non-performing assets, constituting a significant source of credit risk for the industry (OJK, 2024).

The core research problem addressed in this study is understanding why retail financing customers at Islamic banks fail to maintain smooth installment payments despite having access to financial information and operating within an ethical-religious banking framework. This problem is rooted in three interconnected phenomena. First, the 2024 OJK-BPS National Survey on Financial Literacy and Inclusion (SNLIK) revealed that while the national understanding of installment concepts reached 77.86%, Islamic financial behavior was recorded at only 37.12%, and confidence in Islamic financial products stood at merely 55.66% (OJK, 2024). This paradox of high conceptual understanding but low behavioral implementation suggests a fundamental disconnect between financial cognition and actual payment behavior that existing literature has not adequately explained for Islamic banking retail customers.

Second, customer ethics, which should theoretically serve as a moral anchor for payment discipline within the Islamic banking framework, may not operate as directly as assumed. The principles of *amanah* (trustworthiness), *sidq* (honesty), and *wafa bi al-'ahd* (fulfilling commitments) are central to Islamic financial transactions (Rahim et al., 2022; Nadia et al., 2025). However, whether these ethical commitments translate directly into consistent payment behavior or require intermediary behavioral mechanisms remains empirically underexplored in the Islamic retail financing context.

Third, customer financial behavior encompassing budgeting habits, consumption control, payment prioritization, and debt management may serve

as the critical mechanism through which both financial literacy and ethical values are translated into actual payment outcomes. Previous research has established that financial behavior mediates the relationship between financial literacy and financial outcomes in various contexts (Ramadhan, 2021; Agia, 2022; Rahmawati et al., 2024), but this mediating mechanism has not been systematically tested for Islamic bank installment payment behavior using an integrated theoretical framework that incorporates both cognitive and ethical dimensions.

The Greater Bandung area comprising Bandung City, Cimahi City, Bandung Regency, and West Bandung Regenc was selected as the research context for several empirically justified reasons. First, this area hosts five Islamic Commercial Banks (Bank BSI, Bank BSN, Bank Muamalat, Bank BJB Syariah, and Bank BTPN Syariah) managing substantial retail financing portfolios, with consumer financing constituting approximately 85% of total disbursement, dominated by Islamic mortgages (KPR) at 62%, multipurpose financing at 18%, and vehicle financing at 5% (Siregar, 2024).

Second, Bank BSN (a spinoff of Bank BTN Syariah) controls approximately 90% of the national subsidized Islamic mortgage market share, with its Bandung Branch serving as a primary distribution center (Siregar, 2024; IDX Channel, 2024). This concentration creates a natural research setting with high density of retail Islamic financing customers. Third, the regional economy experienced structural pressures in 2024, including layoffs of 5,606 textile industry workers from January to October 2024 (West Java Manpower and Transmigration Office, 2024) and a reported 50% decline in fashion MSME orders (Tribun Jabar, 2024), both of which directly affect household cash flows and, consequently, installment payment capacity.

Fourth, the 2024 SNLIK data indicates that while 9.59% of the Greater Bandung population is financially inclusive, functional Islamic financial literacy remains low (OJK, 2024). This creates a situation where customers access substantial Islamic financing products (IDR 400–700 million for mortgages) without necessarily understanding the operational differences between murabahah and ijarah muntahiya bittamlik contracts, calculating safe debt-service ratios, or comprehending the progressive consequences of collectibility downgrade from current to substandard (1–30 days), doubtful (31–90 days), and non-performing (>90 days) status. The combination of high financing volume, concentrated market structure, economic vulnerability, and low functional

literacy makes Greater Bandung a highly relevant context for studying the behavioral determinants of installment payment quality.

This study integrates two theoretical perspectives to construct a comprehensive model of installment payment behavior. The Theory of Planned Behavior (Ajzen, 1991) provides the cognitive-behavioral foundation, positing that behavior is determined by behavioral intentions, which are in turn shaped by attitudes toward the behavior, subjective norms, and perceived behavioral control. In this study, Islamic financial literacy operates as the cognitive component that shapes attitudes and perceived behavioral control regarding installment payments. Customers who understand contract structures, margin calculations, and debt management principles possess the knowledge base necessary to form positive attitudes toward timely payment and the perceived capability to manage their financial obligations effectively.

The Islamic Ethical Behavior Model (IEBM) extends the TPB by incorporating an ethical-religious dimension that is specific to Islamic financial transactions. Drawing from Islamic business ethics literature (Rahim et al., 2022; Nadia et al., 2025; Beekun, 2004), the IEBM positions customer ethics—including honesty (*sidq*), trustworthiness (*amanah*), compliance with contractual obligations (*wafa bi al-'ahd*), and social responsibility—as moral intention determinants that influence financial behavior. Within this framework, ethical values function as normative beliefs that should motivate customers to fulfill their financial commitments as a matter of religious and moral obligation.

The integration of TPB and IEBM in this study is operationalized as follows: Islamic financial literacy represents the cognitive-attitudinal pathway (from TPB), customer ethics represents the moral-normative pathway (from IEBM), and customer financial behavior serves as the behavioral implementation mechanism through which both cognitive knowledge and ethical values are translated into actual installment payment outcomes. This integrated model addresses a critical limitation of previous research that has examined either the cognitive determinants of financial behavior (through TPB or financial literacy frameworks) or the ethical dimensions of Islamic finance (through Islamic business ethics frameworks) in isolation, without testing how these pathways interact and whether they require behavioral mediation to influence payment outcomes.

A systematic review of existing literature reveals several gaps that this study addresses. First, the majority of repayment behavior research has been conducted in conventional banking or microfinance contexts (Brahmana et al., 2022; Lusardi & Mitchell, 2014), with limited empirical evidence on the behavioral determinants of installment payment quality specifically among Islamic bank retail financing customers. The unique ethical-religious dimension of Islamic finance—where contractual obligations carry both legal and spiritual significance—creates a distinct behavioral context that warrants dedicated empirical investigation.

Second, while individual studies have examined the relationships between financial literacy and financial behavior (Atkinson & Messy, 2012; Lusardi & Mitchell, 2014), financial behavior and payment outcomes (Dew & Xiao, 2011; Xiao, 2008), and Islamic ethics and financial decision-making (Rahim et al., 2022), no study has integrated these constructs into a single structural model to test both direct and mediated pathways simultaneously. The absence of such an integrated model prevents understanding of how cognitive, ethical, and behavioral factors interact to determine installment payment quality.

Third, the mediating role of customer financial behavior in the Islamic banking context has not been empirically established using rigorous structural equation modeling. Previous local studies have suggested that financial behavior mediates the literacy–financial decisions relationship (Agia, 2022; Ramadhan, 2021), but these studies have not: (a) incorporated customer ethics as a parallel predictor, (b) tested mediation in the specific context of installment payment behavior, or (c) used SEM-PLS with comprehensive mediation analysis including indirect effects and Variance Accounted For (VAF) calculations.

This study contributes to the literature in three ways. Theoretically, it develops and empirically tests an integrated TPB–IEBM model for retail installment payment behavior, demonstrating how cognitive (literacy) and ethical (customer ethics) pathways operate through behavioral mechanisms to influence payment outcomes. Empirically, it provides evidence from a strategically important but understudied context—retail Islamic financing customers in Greater Bandung—with a sufficiently large sample ($N = 211$) analyzed using rigorous SEM-PLS procedures. Practically, it offers evidence-based recommendations for Islamic bank risk management strategies that move beyond reactive collection toward preventive behavioral engineering.

Based on the theoretical framework and literature review, this study pursues the following objectives:

1. To examine the direct effect of Islamic financial literacy on installment payment behavior of Islamic Commercial Bank customers in Greater Bandung.
2. To examine the direct effect of customer ethics toward Islamic banks on installment payment behavior.
3. To examine the direct effect of customer financial behavior on installment payment behavior.
4. To examine the simultaneous effect of Islamic financial literacy, customer ethics, and customer financial behavior on installment payment behavior.
5. To examine the mediating role of customer financial behavior in the relationship between Islamic financial literacy and installment payment behavior.
6. To examine the mediating role of customer financial behavior in the relationship between customer ethics and installment payment behavior.

The research hypotheses are formulated as follows:

H1: Islamic financial literacy has a positive and significant effect on installment payment behavior.

H2: Customer ethics toward Islamic banks has a positive and significant effect on installment payment behavior.

H3: Customer financial behavior has a positive and significant effect on installment payment behavior.

H4: Islamic financial literacy, customer ethics, and customer financial behavior simultaneously have a significant effect on installment payment behavior.

H5: Customer financial behavior mediates the relationship between Islamic financial literacy and installment payment behavior.

H6: Customer financial behavior mediates the relationship between customer ethics toward Islamic banks and installment payment behavior.

2. Research Method

Research Design

This study employs an explanatory quantitative research design within a positivistic paradigm. The design is classified as an explanatory survey because the primary objective is to explain causal relationships between latent variables deductively derived from existing theories (Creswell, 2014; Sugiyono, 2019). The time dimension is cross-sectional, with data collected at a single point in time from a sample of Islamic Commercial Bank customers in Greater Bandung.

The analytical approach uses Partial Least Squares Structural Equation Modeling (PLS-SEM) implemented in SmartPLS 4 software. PLS-SEM was selected for several methodological reasons: (a) it accommodates complex predictive models with multiple latent constructs and mediation pathways; (b) it is suitable for moderate sample sizes and does not require strict multivariate normality assumptions; (c) it simultaneously evaluates measurement models (outer models) and structural models (inner models); and (d) it provides comprehensive tools for mediation analysis through bootstrapping of indirect effects (Hair et al., 2022).

Population, Sampling, and Sample Size

The population comprises all individual customers receiving Islamic financing from the five Islamic Commercial Banks operating in Greater Bandung: Bank BSI, Bank BSN, Bank Muamalat, Bank BJB Syariah, and Bank BTPN Syariah. The exact population size is indeterminable due to customer data confidentiality restrictions at each bank.

Non-probability purposive sampling was employed with the following inclusion criteria: (a) individual customer of one of the five BUS in Greater Bandung; (b) currently holding an active Islamic financing product (murabahah, ijarah muntahiya bittamlik, or musyarakah mutanaqisah); (c) minimum customer tenure of 12 months; and (d) willingness to complete the questionnaire. The original sample target was 300 respondents based on the 10-times rule (Hair et al., 2022) and Roscoe's (1975) guideline of 30–500 for multivariate research. A total of 250 questionnaires were distributed through both online (Google Forms via WhatsApp and email) and offline channels (printed questionnaires at bank branches). Of these, 223 questionnaires were

returned (response rate: 89.2%), and after screening for completeness and consistency, 211 valid responses were retained for analysis (valid data rate: 94.6%). Twelve responses were excluded due to incomplete answers on key variable items. The final sample of 211 exceeds the minimum threshold of 100–150 recommended for PLS-SEM models with the complexity level of this study (Kock & Hadaya, 2018).

Variable Operationalization

Table 1 presents the complete operationalization of all research variables, including definitions, dimensions, indicators, number of items, and source references.

Table 1. Operationalization of Research Variables

Variable	Operational Definition	Dimensions	Key Indicators	Items	Source
Islamic Financial Literacy (X1)	Customer's understanding of Islamic financial concepts, contract structures, and financial management principles	Knowledge; Skills; Financial Beliefs and Attitudes	Understanding of murabahah/ ijarah contracts; Ability to calculate debt-service ratio; Prudent financial attitudes	9	Atkinson & Messy (2012); Lusardi & Mitchell (2014); Aulia (2024)
Customer Ethics toward Islamic Banks (X2)	Customer's adherence to Islamic ethical principles in financial transactions	Customer Honesty (sidq); Customer Loyalty; Customer Compliance (amanah); Social Responsibility	Truthfulness in financial reporting; Commitment to contractual obligations; Fulfillment of trust; Awareness of social impact	12	Rahim et al. (2022); Beekun (2004); Nadia et al. (2025)
Customer Financial Behavior (Y1)	Customer's actual financial management practices in daily life	Planning & Budgeting; Saving & Emergency Funds; Debt Management; Repayment Habits; Consumption Control	Monthly budget creation; Emergency fund allocation; Debt-to-income monitoring; Payment prioritization; Spending discipline	15	Dew & Xiao (2011); Xiao (2008); Kholilah & Iramani (2013)
Installment Payment	Customer's actual pattern of	Schedule Compliance;	On-time payment	12	Brahmana et al.

Variable	Operational Definition	Dimensions	Key Indicators	Items	Source
Behavior (Y2)	installment payment compliance	Late Payment Rate; Restructuring Response; Proactive Communication	frequency; Zero late payments; Cooperative restructuring; Early communication of difficulties		(2022); Fahmi et al. (2025); Jatmiko (2024)

All items were measured on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The instrument was developed through construct elaboration, item drafting based on the operational definitions, expert judgment by three academics specializing in Islamic finance and behavioral research, and a pilot test with 30 respondents for clarity and wording improvements. The final instrument was evaluated within the PLS-SEM framework through convergent validity, discriminant validity, composite reliability, and Cronbach's Alpha analysis.

Data Collection

Primary data were collected through structured self-administered questionnaires distributed between January and March 2026. Online distribution via Google Forms (shared through WhatsApp groups and email) accounted for approximately 70% of responses, while printed questionnaires administered at bank branch offices accounted for the remaining 30%. The collection procedure included: (a) explaining research objectives and ensuring voluntary participation; (b) obtaining informed consent; (c) self-completion of the questionnaire; and (d) post-completion review for completeness.

Secondary data, including aggregate NPF ratios, customer profile demographics, and internal bank policies, were obtained through documentation from publicly available reports of the five participating banks and OJK publications. The combination of primary survey data and secondary documentation ensures that findings reflect both customer perceptions and empirical banking conditions.

Data Analysis Procedure

The analysis proceeded through four stages. First, descriptive analysis characterized respondent demographics and variable distributions using mean, standard deviation, and frequency percentages. Second, measurement

model evaluation (outer model) assessed convergent validity (outer loadings > 0.70 ; AVE > 0.50), discriminant validity (Fornell-Larcker criterion and Heterotrait-Monotrait ratio), and reliability (Cronbach's Alpha > 0.70 ; Composite Reliability > 0.70). Third, structural model evaluation (inner model) examined the coefficient of determination (R^2), effect size (f^2), predictive relevance (Q^2 via blindfolding), and path coefficient significance via bootstrapping with 5,000 subsamples. Fourth, mediation analysis tested indirect effects through bootstrapping, with mediation classification based on the significance of direct and indirect effects and Variance Accounted For (VAF) calculations, following the procedures recommended by Hair et al. (2022) and Zhao et al. (2010).

3. Results and Discussion

Respondent characteristics in this study include gender, age, highest level of education, occupation, monthly income, type of financing product chosen, length of time as a Sharia debtor, and current installment payment status. This profile is important to provide a general overview of the background of the respondents who are the object of this study of installment payment behavior at Sharia Commercial Banks in the Greater Bandung area.

The number of respondents collected through the distribution of the research questionnaire was 210 people. In terms of gender, respondents consisted of 100 men (47.62%) and 110 women (52.38%). This composition indicates that the research respondents were slightly dominated by women, so the description of installment payment behavior in this study relatively more represents the experiences of female customers, although the proportion of men was also quite large and still provides a variety of perspectives regarding the management of Sharia retail financing in households.

Table 2. Descriptive Statistics of Research Variables

Variables	N	Mean	Elementary School	Min	Max	Category
Sharia Financial Literacy (X_1)	211	4.53	0.59	1.00	5.00	Very high
Customer Ethics towards Islamic Banks (X_2)	211	4.41	0.64	1.00	5.00	Very high
Customer Financial Behavior (Y_1)	211	4.50	0.61	1.00	5.00	Very high

Variables	N	Mean	Elementary School	Min	Max	Category
Installment Payment Behavior (Y ₂)	211	4.47	0.66	1.00	5.00	Very high

Based on the table, all research variables are in the very high category. This finding indicates that respondents generally gave very positive assessments to all measured constructs, both in terms of factors influencing installment payment behavior and the installment payment behavior variable itself.

Convergent validity is used to assess the extent to which each indicator is able to explain the latent construct it measures. Reflective indicators are generally considered to meet convergent validity if they have an outer loading value above 0.70, as this value indicates that an adequate proportion of the construct's variance can be explained by the indicator (Hair et al., 2022; Alamer, 2022). Meanwhile, multicollinearity testing is conducted by examining the Variance Inflation Factor (VIF) value for each indicator. In this study, an indicator is considered to have no multicollinearity problem if the VIF value is below the critical limit of 5.00, as a VIF value that is too high indicates strong collinearity that can disrupt the stability of the model estimation (Hair et al., 2022).

Table 3. Outer Loading and VIF Values

Variables	Dimensions	Item Code	Outer loadings	VIF
Sharia Financial Literacy	Knowledge	X11.2	0.896	2,533
	Skills	X12.4	0.910	2,625
	Financial Beliefs and Attitudes	X13.3	0.907	2,582
Customer Ethics towards Islamic Banks	Customer honesty	X21.5	0.899	3,373
	Customer Loyalty	X22.1	0.909	3,544
	Customer Compliance	X23.2	0.921	4,158
	Social Responsibility	X24.1	0.912	3,846
Customer Financial Behavior	The habit of making planning and budgeting	Y11.4	0.917	4,254
	Saving Habits and Emergency Funds	Y12.1	0.857	2,895
	Debt Management and Financing Habits	Y13.1	0.917	4,097
	Debt Repayment and Financing Habits	Y14.3	0.918	4,423
	Consumption Control and Attitudes to Risk	Y15.3	0.908	3,893

Variables	Dimensions	Item Code	Outer loadings	VIF
Installment Payment Behavior	Installment Payment Schedule Compliance	Y21.2	0.899	3,256
	Late Installment Payment Rate	Y22.3	0.891	3,056
	Restructuring Response	Y23.2	0.926	4.135
	Proactive Communication	Y24.1	0.897	3,314

The test results show that all indicators in the variables of Sharia Financial Literacy (X1), Customer Ethics towards Sharia Banks (X2), Customer Financial Behavior (Y1), and Installment Payment Behavior (Y2) have outer loading values above 0.70, with a range of around 0.857 to 0.926. The indicator with the highest loading value is the indicator that represents the customer's response to financing restructuring, while the lowest loading value is still far above the minimum limit of 0.40, so that all items are declared to meet the convergent validity criteria. These findings indicate that each indicator provides a strong and significant contribution in representing the latent construct it measures, in line with the outer model evaluation standards in -reflective PLS SEM (Hair et al., 2022; Chua, 2024).

Table 4. Discriminant Validity

Variables	Customer Ethics towards Islamic Banks	Sharia Financial Literacy	Customer Financial Behavior	Installment Payment Behavior
Customer Ethics towards Islamic Banks	0.910			
Islamic Financial Literacy	0.864	0.904		
Customer Financial Behavior	0.862	0.814	0.904	
Installment Payment Behavior	0.829	0.829	0.862	0.903

For the Sharia Financial Literacy variable, the diagonal value of 0.904 is also greater than its correlation with Customer Ethics towards Sharia Banks (0.864), Customer Financial Behavior (0.814), and Installment Payment Behavior (0.829). These results indicate that the Sharia Financial Literacy construct has adequate discrimination and does not experience measurement overlap with other constructs.

After the convergent validity and discriminant validity tests showed adequate results, the next step was to test the construct validity and reliability of the research instrument. Construct validity in this study was evaluated using the Average Variance Extracted (AVE) value, while reliability was measured through Cronbach's Alpha and Composite Reliability (rhoA and rhoC) values. A construct is declared to have good construct validity if the AVE value is greater than 0.50, while reliability is declared good if the Cronbach's Alpha and Composite Reliability values are above 0.70.

Table 5. AVE Values and Construct Reliability

Variables	Cronbach's alpha	Composite reliability (rhoa)	Composite reliability (rhoc)	Average variance extracted (AVE)
Customer Ethics towards Islamic Banks	0.931	0.932	0.951	0.829
Islamic Financial Literacy	0.889	0.891	0.931	0.818
Customer Financial Behavior	0.944	0.946	0.957	0.817
Installment Payment Behavior	0.925	0.926	0.947	0.816

Based on the table, all variables in this study showed AVE values that were far above the minimum limit of 0.50. The highest AVE value was found in the Customer Ethics towards Islamic Banks variable at 0.829, followed by Islamic Financial Literacy at 0.818, Customer Financial Behavior at 0.817, and Installment Payment Behavior at 0.816. These results indicate that each construct is able to explain more than 80% of the variance of its indicators, which means the level of construct validity is very good. Thus, all latent constructs in this study have met the requirements of convergent validity at the construct level.

The coefficient of determination (R^2) is used to measure how much of the variation in endogenous constructs can be explained by exogenous constructs in the model. In the PLS -SEM literature, R^2 values of 0.75, 0.50, and 0.25 can be interpreted as strong, moderate, and weak, respectively (Hair et al., 2022; Statistikian, 2024). The results of the R^2 test and the model's predictive indicators are presented in the following table:

Table 6. Coefficient of Determination and Prediction Model

Variables	R-square	Adjusted R-square	Qpredict	RMSE	MAE
Customer Financial Behavior	0.762	0.760	0.750	0.511	0.314
Installment Payment Behavior	0.794	0.791	0.731	0.530	0.320

The Customer Financial Behavior variable (Y1) has an R^2 value of 0.762 and an adjusted R^2 of 0.760. This indicates that 76.2 percent of the variation in Customer Financial Behavior can be explained by two independent variables, namely Sharia Financial Literacy and Customer Ethics towards Sharia Banks, while the remaining 23.8 percent is explained by other factors outside the research model that were not analyzed in this study. The R^2 value of 0.762 is included in the strong category, thus indicating that the combination of Sharia Financial Literacy and Customer Ethics towards Sharia Banks has very good explanatory power towards variations in customer financial behavior.

After assessing the model's explanatory and predictive power, the next step is to test the effect size using the f^2 value. The f^2 test aims to determine the substantive contribution of each independent variable to a particular endogenous construct. In the PLS - SEM literature, an f^2 value of 0.02 indicates a small effect, 0.15 indicates a medium effect, and 0.35 indicates a large effect; values below 0.02 are generally interpreted as a very weak or negligible effect (Sarstedt et al., 2017, in Statistikian, 2024).

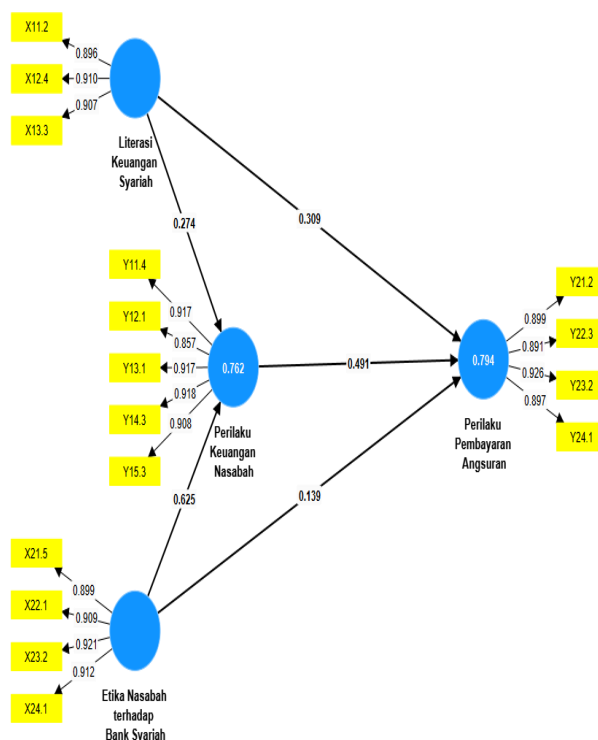
Table 7. Effect Size (f-square)

Variables	f-square against Y1 (Financial Behavior)	f-square against Y2 (Payment Behavior)
Customer Ethics towards Islamic Banks → Y1, Y2	0.417	0.017
Sharia Financial Literacy → Y1, Y2	0.081	0.109
Customer Financial Behavior → Y2	–	0.279

Based on the table, the f^2 value indicates that the influence of each independent variable on the endogenous variable is in the small, medium, to large categories. The Customer Ethics variable towards Sharia Banks has the

highest f^2 value on Customer Financial Behavior (Y1), which is 0.417. This value is above 0.35 so it is included in the large effect category. This finding indicates that customer ethics which includes honesty, loyalty, compliance, and social responsibility have a very strong substantive contribution in shaping the financial behavior of Sharia financing customers.

Figure 1. Final Research Model



Source: SmartPLS 4 output, primary data processed, 2026

Based on the Figure, the Sharia Financial Literacy variable is measured by three main indicators, namely knowledge (X11.2), skills (X12.4), and financial beliefs and attitudes (X13.3), with outer loading values of 0.896, 0.910, and 0.907, respectively. All of these values are above the minimum limit of 0.70, so all indicators are declared valid in representing the Sharia Financial Literacy construct.

In this study, testing of H1, H2, H3, H5, and H6 was conducted using a t-test (partial) by looking at the T-statistics and p-values. The hypothesis is declared significant if the T-statistics value is > 1.96 and p-values < 0.05 . Meanwhile, testing H4 uses the F-test (simultaneous) through the ANOVA table

to see the joint influence of all independent variables on the dependent variable. The simultaneous hypothesis is declared significant if the p-value is < 0.05 .

Additionally, confidence intervals are used to strengthen the interpretation of results, particularly when testing direct and mediating effects. If the test results meet the criteria for statistical significance, the hypothesis is accepted.

Table 8. Hypothesis Test Results

Hip	Hypothesis Path	Bias	Confidence Interval		T-test or F test	P values	Description
			2.5%	97.5%			
Direct Influence							
H1	Sharia Financial Literacy →Installment Payment Behavior	-0.006	0.120	0.497	3,191	0.001	Significant Influence
H2	Customer Ethics towards Sharia Banks →Installment Payment Behavior	0.007	-0.049	0.339	1,418	0.156	No Significant Impact
H3	Customer Financial Behavior →Installment Payment Behavior	0.001	0.245	0.717	4,053	0.000	Significant Influence
H4	Sharia Financial Literacy, Customer Ethics towards Sharia Banks & Customer Financial Behavior →Installment Payment Behavior			-	262,000	< 0.001	Significant Influence
H5	Sharia Financial Literacy	0.005	0.150	0.518	1,866	0.062	Not Mediating

Hip	Hypothesis Path	Bias	Confidence Interval		T-test or F test	P values	Description
			2.5%	97.5%			
Direct Influence							
	→Customer Financial Behavior →Installment Payment Behavior						
H6	Customer Ethics towards Islamic Banks →Customer Financial Behavior →Installment Payment Behavior	-0.006	0.017	0.313	3,276	0.001	Full Mediation

Although this study successfully produced statistically robust findings with an R^2 value of 0.794 for the Installment Payment Behavior variable and 0.762 for Customer Financial Behavior, several limitations related to the data collection method require attention. The primary limitation relates to the use of a self-assessment questionnaire as the sole instrument for collecting data from 211 respondents. The self-report approach has inherent weaknesses because it relies heavily on the subjectivity, perception, and honesty of respondents in answering each item. This is evident from the descriptive statistics, which show all variables fall into the "very high" category, with average scores ranging from 4.41 to 4.53 on a maximum scale of 5.00. This indicates the possibility of uniform response bias, where respondents tend to provide relatively similar positive answers for all measured constructs. This condition can affect measurement accuracy and potentially lead to overestimation of the actual condition, particularly for variables related to ethics, financial behavior, and payment discipline, which are socially perceived as desirable behaviors.

The second significant limitation is the potential for social desirability bias, which is highly relevant in the context of this study, given that the themes raised are closely related to Islamic ethical values, payment compliance, and financial behavior that have moral and religious dimensions. Respondents who are customers of Islamic Commercial Banks tend to provide answers that are

considered in accordance with applicable social and religious norms, especially for the variables Customer Ethics towards Islamic Banks which has an average value of 4.41 and Installment Payment Behavior which is worth 4.47. This can also explain the interesting finding that Customer Ethics does not have a direct significant effect on Installment Payment Behavior (H2: T-statistic 1.418; p-value 0.156), because even though respondents stated they had very high ethics, this was not always reflected in actual observable payment behavior. Furthermore, this study faces limitations related to the potential for common method bias because all variables were measured using the same instrument, from the same source, at the same time (single-source, single-time data collection). This can result in an inflated correlation between variables, as evidenced by the high correlation between constructs in the discriminant validity table (e.g., the correlation between Customer Ethics and Sharia Financial Literacy at 0.864).

A third limitation relates to the cross-sectional research design, which only captures conditions at a single point in time. Therefore, it is unable to reveal the dynamics of changes in customer installment payment behavior over time or fully test the causal relationships between variables. However, financial behavior and installment payments are dynamic phenomena influenced by various temporal factors such as economic cycles, income changes, family circumstances, and stages in the financing period. Furthermore, the data collected is entirely self-reported and unverified with objective data such as actual payment history from the bank system, collectibility records, or transaction data, which could provide a more accurate picture of actual payment behavior. This is crucial considering that the research sample included customers with various collectibility statuses (current, substandard, and even non-performing), but the classification was based solely on respondents' statements, not verified with internal bank data. Future research is recommended to adopt a mixed-method approach by combining self-report questionnaires and objective transaction data from the bank, employing a longitudinal design to capture behavioral changes over time, triangulating data through in-depth interviews or focus group discussions, and using common method bias testing techniques such as Harman's Single Factor Test or a marker variable approach to ensure the robustness of the research findings.

Islamic Financial Literacy and Installment Payment Behavior (H1: Supported)

The finding that Islamic financial literacy has a direct positive and significant effect on installment payment behavior ($\beta = 0.291$, $p = 0.001$) supports the cognitive component of the Theory of Planned Behavior. Within the TPB framework, financial literacy functions as a knowledge resource that shapes customers' attitudes toward timely payment (viewing it as beneficial and achievable) and enhances their perceived behavioral control (confidence in their ability to manage finances effectively enough to meet payment obligations). This finding is consistent with the broader financial literacy literature (Lusardi & Mitchell, 2014; Atkinson & Messy, 2012) and extends it to the specific context of Islamic retail financing repayment.

The mechanism through which literacy influences payment behavior in the Islamic banking context operates through several specific channels. Customers who understand the structure of murabahah contracts including how profit margins are calculated, how installment amounts are determined, and what the total cost of financing comprises are better positioned to plan their household budgets around these fixed obligations. Similarly, understanding the progressive consequences of collectibility downgrade (from current to substandard, doubtful, and non-performing status) provides a cognitive deterrent against late payment, as literate customers comprehend the financial and legal implications of each stage.

Furthermore, literate customers are more likely to calculate and monitor their debt-service ratio, ensuring that total monthly debt obligations remain within a sustainable proportion of household income. In the Greater Bandung context, where mortgage financing dominates the retail portfolio and repayment periods extend 15–25 years, this understanding is critical for maintaining long-term payment discipline through economic cycles, income fluctuations, and lifestyle changes. The finding that literacy operates through a direct pathway without requiring financial behavior as a mediator (H5 not supported) suggests that knowledge creates a relatively independent cognitive effect on payment behavior; literate customers can translate their understanding directly into payment compliance without necessarily transforming all aspects of their broader financial behavior.

Customer Ethics and Installment Payment Behavior (H2: Not Supported)

The finding that customer ethics does not directly influence installment payment behavior ($\beta = 0.136$, $p = 0.156$) represents one of the most theoretically significant results of this study. Within the Islamic Ethical Behavior Model, customer ethics encompassing honesty, trustworthiness, contractual compliance, and social responsibility are expected to function as moral-normative drivers of payment discipline. The Islamic banking relationship is predicated on the principle that both parties share ethical obligations: the bank provides financing in accordance with Sharia principles, and the customer commits to fulfilling repayment as an act of amanah (trust) and wafa bi al-'ahd (promise fulfillment) (Rahim et al., 2022; Nadia et al., 2025).

The non-significance of this direct path reveals an important intention-behavior gap that has significant implications for both theory and practice. Customers may genuinely hold strong ethical convictions about the importance of fulfilling their financial obligations as reflected in the high mean score for Customer Ethics (4.41 out of 5.00) yet these convictions do not automatically translate into consistent payment behavior when confronted with competing financial demands. This gap between ethical intention and behavioral execution can be explained through several mechanisms.

First, household economic pressures in Greater Bandung including income volatility from textile industry layoffs, MSME order declines, and general cost-of-living increases create immediate financial constraints that override ethical intentions. When customers must choose between installment payments and immediate household necessities, the urgency of present needs may dominate the moral commitment to future obligations, regardless of how strongly customers hold ethical values. Second, lifestyle inflation among dual-income millennial households where consumption expenditure on non-essential categories exceeds 60% of salary and multiple installment commitments exceed 50% of income creates structural cash flow constraints that ethical commitment alone cannot resolve. A customer may feel morally obligated to pay on time but find themselves unable to do so because their spending patterns have already consumed the financial resources needed for installment payments.

Third, the construct of customer ethics, as measured in this study, captures the moral cognitive and attitudinal dimensions of ethical commitment but does not capture the behavioral implementation of those values. This distinction

between holding ethical values and acting on them is well-documented in behavioral ethics research and is particularly relevant in financial contexts where structural and situational factors can prevent well-intentioned individuals from following through on their moral commitments.

Customer Financial Behavior and Installment Payment Behavior (H3: Supported)

Customer financial behavior emerged as the strongest direct predictor of installment payment behavior ($\beta = 0.471$, $p = 0.000$, $f^2 = 0.279$), confirming the behavioral finance premise that actual financial management practices – rather than knowledge or values alone determine financial outcomes (Dew & Xiao, 2011; Xiao, 2008). This finding supports the core proposition of behavioral finance that concrete habits in budgeting, saving, debt management, and consumption control are the proximate determinants of financial obligation fulfillment.

In the Greater Bandung retail financing context, the mechanism operates as follows: customers who regularly create household budgets allocate specific funds for installment payments before discretionary spending; those who maintain emergency funds can absorb temporary income shocks without missing payments; those who monitor their debt-to-income ratios avoid overextension that would compromise payment capacity; and those who prioritize installment payments over non-essential consumption maintain consistent payment records even during financially tight periods.

This finding also provides an empirical explanation for the "behavioral NPF" phenomenon described in the background. The observation that a substantial proportion of payment delays stems not from structural poverty but from excessive consumption patterns, multiple concurrent installments, and absence of emergency buffers all manifestations of suboptimal financial behavior is directly confirmed by the strong predictive relationship between financial behavior and payment outcomes. When financial behavior improves through habit formation in budgeting, consumption control, and payment prioritization, installment payment behavior improves correspondingly, even without changes in income levels.

Mediation Analysis: The Differential Role of Financial Behavior (H5 and H6)

The most nuanced finding of this study concerns the differential mediating role of customer financial behavior. Financial behavior does not

mediate the literacy–payment behavior relationship (H5: $p = 0.062$, VAF = 30.4%) but fully mediates the ethics–payment behavior relationship (H6: $p = 0.001$, VAF = 69.1%). This asymmetry has important theoretical and practical implications.

Islamic financial literacy has a direct cognitive pathway to payment behavior that operates relatively independently of broader financial behavior patterns. When a customer understands how their financing contract works, what the consequences of late payment are, and how to calculate a sustainable debt-service ratio, this knowledge creates a direct informational basis for payment compliance. The customer does not necessarily need to transform their entire financial behavior repertoire budgeting, saving, consumption control—to translate specific contract-related knowledge into timely payments. Literacy provides targeted, actionable information that directly enables payment compliance, bypassing the need for comprehensive behavioral transformation.

From the TPB perspective, literacy operates primarily through the attitude and perceived behavioral control pathways: knowing how the contract works creates positive attitudes toward compliance, and understanding one's financial capacity creates perceived control over payment behavior. These cognitive mechanisms can influence behavior directly without requiring changes in subjective norms or broader behavioral patterns.

Customer ethics, in contrast, operates at the level of moral values and normative commitments that are inherently abstract and do not automatically specify concrete behavioral actions. A customer who values honesty and trustworthiness in financial transactions holds a general moral orientation that must be translated into specific financial management practices before it can influence payment outcomes. The ethical commitment to fulfilling obligations (*amanah*) needs to be operationalized through budgeting habits that allocate resources for payments, consumption control that preserves payment capacity, and debt management that prevents overextension.

From the IEBM perspective, customer ethics functions as a moral motivator that energizes the formation of healthy financial behavior. Ethics provides the "why" (moral motivation) while financial behavior provides the "how" (practical implementation). Without the behavioral mechanism, ethical values remain at the intentional level and fail to cross the intention-behavior gap identified in the H2 analysis. The full mediation finding (VAF = 69.1%) confirms that the entire influence of customer ethics on payment behavior is channeled

through financial behavior, making financial behavior the essential conversion mechanism for translating ethical values into payment outcomes.

Practical Implications

The findings of this study carry implications for multiple stakeholders in the Islamic banking ecosystem.

For Islamic bank management and risk units, the results suggest a fundamental shift from reactive collection-based NPF management toward preventive behavioral engineering. Rather than intensifying collection activities after payment delays occur, banks should invest in upstream interventions that strengthen the behavioral determinants of payment quality. Specifically, Islamic financial literacy programs should move beyond general financial awareness campaigns to focus on contract-specific education: helping customers understand their specific financing structure, calculate their actual debt-service ratio, anticipate cash flow challenges, and comprehend the progressive consequences of collectibility downgrade. Financial behavior mentoring programs including household budgeting workshops, consumption control coaching, and emergency fund planning—should be offered to customers entering vulnerable periods (e.g., months 13–18 of long-term financing, year-end consumption peaks, or periods of income disruption).

For collection and customer relationship teams, the finding that customer ethics influences payment behavior only through financial behavior suggests that ethical appeals alone (reminding customers of their moral obligations) are unlikely to improve payment compliance. Collection strategies should integrate ethical reinforcement with practical financial behavior support: combining reminders of contractual commitment with concrete tools for budget restructuring, spending prioritization, and payment scheduling.

For the Financial Services Authority (OJK) and regulators, the results support policy interventions that mandate or incentivize customer education programs at Islamic banks that specifically target the behavioral determinants of payment quality. The current national Islamic financial literacy program, while valuable, should be complemented by institution-level behavioral interventions that address the demonstrated gap between literacy (77.86% conceptual understanding) and behavior (37.12% financial behavior score).

For Islamic financial education institutions, the findings indicate that financial education programs for Islamic banking customers should integrate three components: cognitive education (literacy), ethical internalization (customer ethics), and behavioral training (financial behavior). Programs that address only one dimension for example, teaching Islamic financial concepts without helping students develop practical budgeting skills are unlikely to achieve optimal impact on actual financial outcomes.

4. Conclusion

Based on the results of data analysis and discussion, this study concluded that the constructed structural model is proven to be able to explain the Installment Payment Behavior of Sharia Commercial Bank customers in the Greater Bandung Region strongly. The R-square value of 0.794 for the Installment Payment Behavior variable and 0.762 for the Customer Financial Behavior variable indicates high explanatory power, while the positive Q^2 value strengthens the predictive relevance of the model. Simultaneously, Sharia Financial Literacy, Customer Ethics towards Sharia Banks, and Customer Financial Behavior have a significant effect on Installment Payment Behavior. These findings confirm that good installment payment behavior is the result of a complex interaction between cognitive, ethical, and behavioral factors that work in an integrated manner within the hybrid framework of the Theory of Planned Behavior, behavioral finance, and the Islamic Ethical Behavior Model. The strong explanatory power of the model addresses the central problem of this research, namely how to understand and predict installment payment behavior of Sharia retail financing customers in the midst of persistent Non-Performing Financing (NPF) issues that continue to challenge the Islamic banking industry in Indonesia. However, it should be acknowledged that the high R^2 values, while indicating strong model fit, may also reflect the relative homogeneity of respondents within the Greater Bandung context and the conceptual proximity among the constructs, which warrants cautious interpretation when generalizing the findings to broader populations.

Sharia Financial Literacy has been shown to have a direct positive and significant impact on the installment payment behavior of customers of Islamic Commercial Banks in the Greater Bandung area, where the greater the customer's understanding of sharia principles, financing contracts, budget management,

and financial responsibility, the higher their discipline in fulfilling installment obligations. This finding responds directly to the problem of low functional Islamic financial literacy among customers who access substantial financing products without adequately understanding contract structures, debt-service ratios, or the progressive consequences of collectibility downgrade. The action implication suggests that Islamic banks should strengthen contract-specific literacy programs as a fundamental intervention to improve payment quality. Nevertheless, the measurement of financial literacy through self-report questionnaires represents a limitation, as respondents may overestimate their actual understanding of complex Islamic financial concepts, particularly when questions touch on technical aspects of murabahah or ijarah muntahiya bittamlik contracts that may not be fully comprehended despite respondents indicating familiarity with them.

Meanwhile, Customer Ethics towards Islamic Banks does not have a significant direct impact on Installment Payment Behavior, revealing an important intention-behavior gap where values such as honesty, loyalty, compliance with trust, and social responsibility are not strong enough on their own to encourage payment discipline without intermediaries. This finding challenges the conventional assumption in Islamic banking literature that ethical commitment alone should be sufficient to ensure customer compliance with financial obligations, and it points to the need for Islamic banks to move beyond moral appeals toward more substantive behavioral interventions. The non-significance of this direct path also reflects a methodological consideration, as ethical constructs measured through self-report instruments are particularly susceptible to social desirability bias, where respondents in a religious banking context may be inclined to provide answers that reflect socially or religiously acceptable values rather than their actual behavioral tendencies, potentially affecting the precision with which the ethics-behavior relationship can be captured.

On the other hand, Customer Financial Behavior has been shown to have a positive and significant impact as the strongest direct predictor, because it represents the actual implementation of knowledge and values in daily financial actions such as budgeting, consumption control, and payment priorities, confirming the behavioral finance premise that concrete habits—not abstract knowledge or values—are the proximate determinants of financial obligation fulfillment. This central role of financial behavior aligns with the empirical reality

observed in many Islamic banks, where customers who experience payment difficulties often do so not because of inadequate income or weak moral commitment, but because of consumption patterns and budgeting habits that crowd out installment capacity. However, the cross-sectional design of this study limits the ability to capture how financial behavior evolves over time, particularly across different phases of the financing tenure or in response to changing economic conditions such as the textile industry layoffs and MSME order declines that have affected household cash flows in Greater Bandung.

Customer Financial Behavior was not shown to mediate the effect of Sharia Financial Literacy on Installment Payment Behavior, indicating that literacy has a relatively independent direct pathway, while Customer Financial Behavior was shown to fully mediate the effect of Customer Ethics on Sharia Banking, meaning that ethical values are only effective in influencing payment behavior when they have been internalized into concrete financial habits. This differential mediation finding represents the core theoretical contribution of the study, as it reveals that cognitive and ethical pathways to behavior operate through fundamentally different mechanisms—the cognitive pathway is direct and information-based, while the ethical pathway requires behavioral internalization before it can influence outcomes. This finding reinforces the central role of Financial Behavior as a key variable linking moral intentions to actual actions, while also demonstrating that Sharia financial literacy needs to be combined with habit formation for optimal impact. Nonetheless, this finding emerges from a single-region sample and may not fully generalize to Islamic banking customers in other geographical areas, demographic groups, or banking segments such as Islamic Business Units or rural Islamic microfinance institutions, where the dynamics of literacy, ethics, and financial behavior may operate differently due to varying levels of digital infrastructure, cultural norms, and customer profiles.

From a theoretical perspective, this study provides significant reinforcement to the proposed hybrid model, where the central role of Financial Behavior as a full mediator and direct predictor aligns with behavioral finance, which emphasizes the importance of concrete habits in bridging the gap between knowledge, values, and behavior. The integration of the TPB, behavioral finance, and the Islamic Ethical Behavior Model has proven robust, both theoretically and empirically, with clear power and high predictive relevance, opening opportunities for developing customer behavioral scoring to predict the risk of

late installments and Non-Performing Financing (NPF) at the individual level earlier. This theoretical integration contributes to filling the research gap on Islamic retail repayment behavior that has been dominated by either pure cognitive frameworks (financial literacy alone) or pure ethical frameworks (Islamic business ethics alone), without adequately accounting for the behavioral implementation mechanism that connects them. However, the theoretical contribution would be further strengthened by future research adopting longitudinal designs that track behavioral changes over time, incorporating objective transaction-based data from bank systems to complement self-report measures, and conducting Harman's Single Factor Test or other procedures to address potential common method bias arising from collecting all variables through the same self-report instrument.

From a practical perspective, the findings of this study encourage a shift in the risk management approach of Islamic banks' retail financing from a reactive, collection-based model to a preventative approach based on behavioral engineering, where Islamic banks are advised to develop an integrated program that combines strengthening Islamic financial literacy, internalizing customer ethics, and fostering sustainable financial behavior. This approach aligns with the *maqāṣid al-syariah*, particularly *hifz al-māl* (the principle of preserving wealth), as it simultaneously protects customers from debt traps and maintains the quality of bank assets by reducing the risk of non-performing financing. The practical implications also extend to multiple stakeholders, including bank management who need to redesign customer education programs to be contract-specific and behavior-focused, collection units that must combine ethical reinforcement with concrete financial behavior support, regulators such as the Financial Services Authority (OJK) who can mandate behavioral interventions as part of consumer protection frameworks, and Islamic financial education institutions that should integrate cognitive, ethical, and behavioral dimensions in their programs. Future research is recommended to adopt longitudinal or mixed-method approaches, expand the research coverage to different regions and banking segments, and incorporate objective behavioral indicators or transaction-based data to reduce self-report bias and strengthen the robustness of the findings, while also exploring additional variables such as financial stress, religiosity, digital financial behavior, and customer engagement to enrich the explanatory power of the proposed behavioral model. Through this integrated approach to research and practice, the contribution of this study can extend beyond academic discourse to

support the broader development of a more resilient, ethical, and customer-centric Islamic banking ecosystem in Indonesia.

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