

Comparative Analysis of NPL and NPF of Consumer Credit on the Financial Performance of Bank BTN and BTN Syariah

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ABSTRACT

This study examines the differences in consumer Non-Performing Loans (NPL) at Bank Tabungan Negara (Bank BTN) and Non-Performing Financing (NPF) at BTN Syariah, as well as their effects on bank financial performance within Indonesia's dual banking system. Using a quantitative approach, the study analyzes secondary data from the published financial statements of Bank BTN and BTN Syariah for the period 2015–2025. Data were analyzed using descriptive statistics, the Shapiro–Wilk normality test, difference tests (independent sample t-test or Mann–Whitney U Test), and OLS time-series regression with a COVID-19 dummy variable. The findings indicate no significant difference between Bank BTN's NPL and BTN Syariah's NPF in the consumer segment. Both NPL and NPF have a negative effect on Return on Assets (ROA), although their significance differs across models. These findings highlight the importance of strengthening credit/financing risk management and contribute to the literature on the relationship between NPL, NPF, and financial performance in Indonesia's dual banking system.

Keywords: NPL, NPF, Consumer Credit/Financing, ROA, Dual Banking System, COVID-19 Dummy, Bank Financial Performance.

ABSTRAK

Penelitian ini bertujuan menganalisis perbedaan Non-Performing Loans (NPL) pada Bank Tabungan Negara (Bank BTN) dan Non-Performing Financing (NPF) pada BTN Syariah di segmen konsumen, serta pengaruhnya terhadap kinerja keuangan bank dalam konteks sistem perbankan ganda di Indonesia. Penelitian ini menggunakan pendekatan kuantitatif dengan data sekunder berupa laporan keuangan Bank BTN dan BTN Syariah periode 2015–2025. Analisis dilakukan menggunakan statistik deskriptif, uji normalitas Shapiro–Wilk, uji beda (independent sample t-test atau Mann–Whitney U Test), serta regresi deret waktu Ordinary Least Squares (OLS) dengan variabel kontrol dummy COVID-19. Hasil penelitian menunjukkan bahwa tidak terdapat perbedaan yang signifikan antara NPL Bank BTN dan NPF BTN Syariah pada segmen konsumen. Selain itu, NPL dan NPF berpengaruh negatif terhadap Return on Assets (ROA), meskipun tingkat signifikansinya berbeda pada masing-masing model. Temuan ini menegaskan pentingnya penguatan manajemen risiko kredit/pembiayaan serta memberikan kontribusi pada pengembangan literatur mengenai hubungan NPL, NPF, dan kinerja keuangan dalam sistem perbankan ganda di Indonesia.

Kata kunci: NPL, NPF, Kredit/Pembiayaan Konsumer, ROA, Sistem Perbankan Ganda, Kinerja Keuangan Bank.

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INTRODUCTION

The banking industry plays a crucial role in the economic system, serving as a financial intermediary connecting those with funds and those in need. Through fundraising and disbursement, banks contribute to economic growth, increase investment activity, and create job opportunities in various sectors. However, lending and financing activities are inherently subject to the risk of default, which can impact bank stability and performance. This risk is generally reflected in Non-Performing Loan (NPL) indicators in conventional banking and Non-Performing Financing (NPF) in Islamic banking. When the ratio of non-performing loans or financing increases, banks tend to face increased loss provision burdens, the need for financing restructuring, and a decline in profit-generating capacity.

The relationship between NPLs and NPFs on bank profitability remains a topic that yields mixed findings. Several studies indicate that increasing non-performing loans (NPLs) leads to a decrease in Return on Assets (ROA), but others find a possible positive relationship influenced by risk management strategies and returns (risk-return trade-off). These differing results indicate that there is still room for further research, particularly research that directly compares the impact of NPLs on Bank BTN consumer credit and NPF on BTN Syariah consumer financing on financial performance within a single, integrated research design.

In the context of Indonesia's dual banking system, a comparative study of conventional and Islamic banks is crucial because they have different operational foundations, contractual patterns, and risk management approaches. In general, the development of the national banking industry showed a downward trend in NPL and NPF ratios during the 2015–2025 period, despite initial pressure from the COVID-19 pandemic. After that period, asset quality improved, as indicated by a lower ratio that remained below the prudential limit of 5%.

The selection of Bank BTN and BTN Syariah as research subjects is based on their similar business orientation, which focuses on consumer financing, particularly the housing and retail financing sectors. The movement of the NPL and NPF ratios at both institutions shows relatively similar dynamics, including increased risk during the pandemic and improvements after economic conditions began to recover. This phenomenon provides an opportunity to examine how different banking models affect asset quality and financial performance.

Based on these conditions, the study, titled "Comparative Analysis of NPL and NPF of Consumer Credit on the Financial Performance of Bank BTN and BTN Syariah," was conducted to provide an empirical contribution to the study of banking risk in Indonesia. Unlike prior studies that compare NPL and NPF across different, unrelated banks or rely on aggregate bank-level

ratios, the novelty of this study lies in its paired, within-group research design: it directly compares a conventional bank (Bank BTN) with its own Islamic banking unit (BTN Syariah), which share the same parent institution, market segment, and customer base, thereby holding institutional and market factors constant while isolating the effect of the banking system (conventional versus Islamic) on credit/financing risk and profitability. The analysis is further narrowed to the consumer/housing financing segment specifically, rather than total bank financing, a level of granularity that has received comparatively little attention in the existing NPL-NPF literature. The COVID-19 dummy is employed as a control variable within this design to isolate the pandemic shock from the underlying system-level effect, rather than constituting the primary contribution of the study. This design is expected to yield a more precise understanding of how financing quality affects financial performance in the conventional and Islamic banking systems.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Agency theory explains the contractual relationship between principals (shareholders) and agents (management) in banking (Jensen & Meckling, 1976). Agency conflicts arise when management tends to aggressively pursue financing growth for short-term profits, thereby increasing the risk of non-performing loans (NPL) at Bank BTN and non-performing financing (NPF) at BTN Syariah. This theory emphasizes the importance of risk control mechanisms and coverage recovery through restructuring, reserves, and collateral recovery to reduce agency costs and protect the interests of principals.

The theoretical link between Agency Theory and the NPL/NPF-ROA relationship tested in this study can be made explicit through the "bad management" mechanism (Berger & DeYoung, 1997): when agents pursue expansionary lending or financing targets to meet short-term performance incentives, they tend to relax underwriting standards and monitoring effort, which is itself a manifestation of the information asymmetry between management and shareholders that Agency Theory predicts (Eisenhardt, 1989). This lowered underwriting discipline manifests empirically as a higher NPL/NPF ratio. As non-performing loans/financing accumulate, the bank incurs additional monitoring and bonding costs, such as loan-loss provisioning, restructuring, and collateral recovery, which are themselves a form of agency cost that directly reduces the residual profit available to shareholders, observed empirically as declining ROA. This causal chain, from agency conflict to lax underwriting to elevated NPL/NPF to reduced ROA, provides the explicit theoretical foundation for hypotheses H2 and H3, rather than treating Agency Theory and the NPL/NPF-ROA relationship as two loosely connected ideas.

The dual banking system in Indonesia allows conventional and Islamic banks to operate in parallel, relying on different principles. Conventional banks use an interest-based system, while Islamic banks implement Islamic contracts such as murabahah, ijarah, and musyarakah. These differences in mechanisms have the potential to create variations in credit/financing risk profiles, making a comparison of NPL and NPF in the consumer segment relevant for assessing the effectiveness of risk management across both banking models.

Credit/financing risk is defined as the potential loss resulting from a customer's failure to fulfill contractual obligations. The Bank applies the 5C principle (Character, Capacity, Capital, Collateral, and Condition of the Economy) to conduct feasibility analyses. Credit/financing risk management encompasses proactive, structured, and adaptive risk identification, measurement, monitoring, and control, addressing economic and regulatory changes to maintain asset quality.

Consumer credit/financing is the distribution of funds to individuals for consumer needs such as housing and retail, which is highly sensitive to economic cycles and household income. The primary research variables are Non-Performing Loans (NPLs) for conventional banks and Non-Performing Financing (NPF) for Islamic banks. These two indicators measure the proportion of non-performing financing to total credit/financing and serve as benchmarks for the quality of a bank's productive assets.

Bank financial performance is proxied by Return on Assets (ROA), which measures management's ability to generate profits from total assets. Increasing NPLs/NPFs are expected to depress ROA through increased provisioning costs and decreased revenue. This study also uses a COVID-19 dummy control variable to capture the impact of the pandemic shock on credit quality and profitability during the 2015–2025 period.

The research framework integrates Agency Theory and Dual Banking System to explain the dynamics of NPL and NPF. The research model examines two main issues: the significant difference between BTN consumer credit NPL and BTN Syariah consumer financing NPF, and the influence of both variables on ROA. A COVID-19 dummy is included as a control variable to avoid bias due to systemic external factors.

This study develops three hypotheses. H1 states that there is a significant difference between Bank BTN's consumer credit NPL and BTN Syariah's consumer financing NPF for the 2015–2025 period, based on differences in operational characteristics within the dual banking system. H2 predicts that NPL will have a negative and significant effect on Bank BTN's ROA, while H3 predicts a similar effect for NPF on BTN Syariah's ROA.

Overall, this research is based on a strong theoretical foundation and supported by previous research showing inconsistent effects of NPL/NPF on profitability. Focusing on the consumer segment at Bank BTN and BTN Syariah, this research is expected to provide empirical evidence regarding differences in risk and their impact on financial performance within the context of Indonesia's dual banking system.

RESEARCH METHODS

This research uses a quantitative approach with a comparative and explanatory design. The comparative design is applied to examine the differences in the level of non-performing loans or financing in the consumer segment between Bank BTN as a conventional bank and BTN Syariah, specifically through a comparison of the Non-Performing Loan (NPL) and Non-Performing Financing (NPF) ratios. Meanwhile, the explanatory design is used to explain the causal relationship between non-performing loans/financing variables and bank financial performance as proxied by Return on Assets (ROA). The choice of this design is very relevant because it can answer the research problem formulation while testing three formulated hypotheses, namely the significant difference between NPL and NPF (H1), the effect of NPL on ROA of Bank BTN (H2), and the effect of NPF on ROA of BTN Syariah (H3). This design serves as a framework for the research strategy that ensures the data and analytical tools used are in accordance with the objectives to produce valid and reliable conclusions.

Operational definitions of the variables were developed to provide clarity on concepts and indicators, thus avoiding differences in interpretation. The dependent variables in this study are Bank BTN's Consumer Loan Non-Performing Loan (NPL), measured as the ratio of non-performing consumer loans (collectibility 3-5) to total consumer loans, and BTN Syariah's Consumer Financing Non-Performing Loan (NPF), measured as the ratio of non-performing consumer financing to total consumer financing. The independent variable is financial performance, proxied by ROA, the ratio of profit after tax to total assets. The control variable used is the COVID-19 dummy, which has a value of 0 for the pre-pandemic period (2015–2019) and 1 for the pandemic period (2020–2021). These operational definitions are summarized in a table listing the definition, measurement formula, and measurement scale of each variable to make the study more structured and easily replicable.

The data used in this study are genuinely quarterly, covering the period from the first quarter of 2015 to the fourth quarter of 2025 (Q1 2015–Q4 2025), which corresponds to 11 years x 4 quarters, yielding a panel of 44 quarterly observations per variable. The primary source is the

Quarterly Published Financial Statements (Laporan Keuangan Publikasi Triwulanan) that Bank BTN and BTN Syariah are required to release every quarter under Indonesia's Financial Services Authority (OJK) transparency and publication regulations, cross-checked against the OJK's Indonesian Banking Statistics (Statistik Perbankan Indonesia, SPI) and Islamic Banking Statistics (Statistik Perbankan Syariah, SPS) for definitional consistency. Because the ratios are drawn directly from each bank's own quarterly disclosures rather than interpolated or distributed from annual figures, the 44 observations reflect genuinely observed quarterly values rather than constructed estimates.

Hypothesis H1 was tested using a two-sample independent test, taking into account the results of the normality test. If the data were normally distributed, the Independent Sample t-test was used; otherwise, the Mann-Whitney U Test was used. The decision criterion was based on a p-value of 0.05. For H2 and H3, testing was performed using linear regression by examining the significance of the β coefficient, t-value, and p-value. All tests used a significance level of $\alpha = 5\%$. This approach ensures that the research conclusions are based on strong statistical evidence and are in accordance with the characteristics of the time series data.

Overall, the analysis and hypothesis testing techniques in this study are comprehensively designed to produce valid, reliable, and bias-free conclusions. The use of a COVID-19 dummy control variable strengthens the model by isolating the effects of the pandemic, while checking classical assumptions and selecting appropriate tests ensure the quality of the estimation results. Therefore, this study is expected to provide clear empirical evidence regarding the differences between NPL and NPF and their impact on the financial performance of Bank BTN and BTN Syariah within the context of Indonesia's dual banking system.

RESULTS AND DISCUSSION

Descriptive statistical analysis aims to provide an overview of the data distribution characteristics of each research variable during the 2015–2025 observation period. The following table presents the minimum, maximum, average, and standard deviation values of the four main research variables.

Descriptive Statistics Table of Research Variables

Variables	N	Minimum	Maximum	Mean	Standard Deviation
ROA_BTN (%)	44	0.13	3.78	1,1286	0.56649
NPL_BTN (%)	44	1.02	4.91	3,5339	0.71984

NPF_BTNS (%)	44	0.84	7.56	3,3500	1.93640
ROA_BTNS (%)	44	0.41	2.54	1.3223	0.63497

Based on the descriptive statistics in the table above, the ROA_BTN variable consists of 44 observations during the study period. The lowest ROA value was recorded at 0.13%, while the highest value reached 3.78%. The average ROA of 1.1286% illustrates that Bank BTN's ability to generate profits through asset utilization was in the fairly good category during the observation period. On the other hand, the standard deviation value of 0.56649% indicates that profitability movements did not experience significant fluctuations. This condition indicates that Bank BTN's profit performance was relatively maintained over time, although in some periods there were still changes influenced by economic conditions and the dynamics of credit distribution quality.

Shapiro-Wilk Normality Test Results Table)

Variables	SW Statistics	df	SW Sig.
NPL_BTN	0.906	44	0.002
NPF_BTNS	0.932	44	0.013

Based on the results of the normality test shown in the table, the NPL_BTN variable shows a Shapiro–Wilk test significance value of 0.002, while the NPF_BTNS variable has a significance value of 0.013. Because both values are below the 0.05 significance limit, the data in both variables are declared not to follow a normal distribution pattern. These results indicate that the normality requirements have not been met for further analysis. Therefore, the use of parametric test methods such as the Independent Sample t-test is less appropriate for comparing the two data groups, so a testing approach that does not require a normal distribution is needed.

Mann-Whitney U Test Results Table

Statistics	NPL_BTN	Information
Mean Rank NPL_BTN	48.53	Higher
Mean Rank NPF_BTNS	40.47	Lower
Mann-Whitney University	790,500	
Wilcoxon W	1780,500	
Z	-1,481	
Asymp. Sig. (2-tailed)	0.138	Not significant (p > 0.05)

Based on the test results using the Mann–Whitney U method presented in Table 4.3, the U value was obtained at 790.500 with a Z value of -1.481 and an Asymp. Sig. (2-tailed) value of 0.138. This probability value is greater than the significance level used ($\alpha = 0.05$), so the null hypothesis (H_0) cannot be rejected. These results indicate that there is no statistically significant difference between the level of non-performing loans (NPL) in Bank BTN consumer credit and the level of non-performing financing (NPF) in BTN Syariah consumer financing during the research period of 2015–2025. Although descriptively the mean rank value of NPL_BTN of 48.53 appears slightly higher than NPF_BTNS of 40.47, this difference does not show a strong enough difference to support the alternative hypothesis (H_1). Therefore, hypothesis H_1 is not accepted and it can be concluded that the risk quality in the consumer segment at both banks tends to be at a relatively comparable level.

BTN Model Residual Normality Test Table

P-value	Information
0.018	< 0.05 Abnormal

Referring to the results of the residual normality test in Table 4.4, the Asymp. Sig. (2-tailed) value was obtained at 0.018. Because this value is below the significance limit of 0.05, the residuals in the Bank BTN regression model can be declared not to meet the normal distribution assumption. In other words, the error distribution in the model does not fully follow the normal pattern as required in classical regression.

The failure to meet the normality assumption indicates that more careful interpretation of the regression results is necessary to avoid inaccurate conclusions. To maintain the reliability of the statistical test results and minimize the possibility of bias due to non-normal residual distributions, this study employed the heteroscedasticity-consistent (robust) standard error method following White (1980) and MacKinnon and White (1985). The rationale for this choice is that violations of the normality, homoscedasticity, and no-autocorrelation assumptions do not bias the OLS point estimates of the coefficients themselves, since OLS remains unbiased and consistent as long as the model is correctly specified; what these violations affect is the estimated standard errors, and therefore the t-statistics and significance levels used for inference (Gujarati & Porter, 2009). Using robust standard errors corrects this second-stage problem directly, without requiring a change in model specification. The practical implication is that the coefficient magnitudes reported below are unaffected by the assumption violations, while the associated

significance levels are more conservative and more defensible than those that would have been obtained from conventional (non-robust) standard errors.

BTN Model Heteroscedasticity Test Table

Parameter	t	Sig.	Information
NPL_BTN	-0.177	0.861	There is no heteroscedasticity
Year (COVID Dummy)	-2,993	0.005	Heteroscedasticity occurs

Based on the test results presented in the table above, the NPL_BTN variable obtained a significance value of 0.861. Because this value is above the 0.05 significance limit, the NPL_BTN variable is declared to have no significant effect on the absolute residual value. This result indicates that the residual variance tends to be constant at various levels of the variable value, so the regression model does not exhibit symptoms of heteroscedasticity. Thus, the assumption of homoscedasticity in the model can be considered to have been met for this variable.

Table BTN Model Autocorrelation Test

Durbin-Watson	dL	dU	Information
1,218	1.4226	1.6120	Positive Autocorrelation Indicated

Based on the test results in the table above, the Durbin–Watson value for the BTN model is 1.218. This value is below the lower limit (dL) of 1.4226, indicating positive autocorrelation in the model residuals. This condition suggests that prediction errors in one period may be related to errors in the previous period, a fairly common phenomenon in time series data analysis.

The presence of autocorrelation requires careful analysis of regression estimation results, as it can affect the accuracy of statistical testing of model parameters. To reduce potential distortion in standard error estimates and maintain the quality of the resulting inferences, this study applies the robust standard error method. It should be noted that conventional heteroscedasticity-consistent (HC) standard errors correct for heteroscedasticity but do not, by themselves, fully correct for serial correlation; a heteroscedasticity- and autocorrelation-consistent (HAC) estimator, such as Newey-West standard errors, is the theoretically preferred correction when both violations are present simultaneously, as is the case in the BTN model. The HC-based results reported here should therefore be interpreted as a partial correction, and

inferences for coefficients close to conventional significance thresholds, such as NPL_BTN (Sig. = 0.102), should be treated with appropriate caution pending a HAC-based robustness check in future replications of this study.

Regression Results Table with Robust Standard Error Model of Bank BTN

Parameter	B	Robust Std. Error	t	Sig.
Intercept	2,820	0.886	3,184	0.003
NPL_BTN	-0.402	0.241	-1,671	0.102
Year (COVID Dummy)	-0.494	0.135	-3,661	0.001

Based on the estimation results in Table , the regression equation for the BTN Bank model is obtained as follows:

$$ROA_BTN = 2,820 - 0,402NPL_BTN - 0,494Tahun + \varepsilon$$

BTN Model F Test Results Table

F	P-value	Information
24,635	0,000	Significant simultaneously

Referring to the F-test results listed in the table above, the F-value was 24.635 with a significance level of 0.000. Since this probability value is below the 0.05 significance limit, it can be concluded that the regression model has a good level of simultaneous feasibility. These results indicate that the NPL_BTN variable, along with the Year variable used as a dummy representation of COVID-19, collectively have the ability to explain changes or variations in Bank BTN's Return on Assets (ROA).

Thus, the relationship formed in the model did not occur by chance, and both independent variables jointly contributed to the formation of the dependent variable's value. Therefore, the regression model used was deemed adequate and could be continued for analysis and hypothesis testing in the next stage.

BTN Model R Square Results Table

R	R Square	Adj. R Square	Standard Error Estimate
0.739	0.546	0.524	0.39098

Based on the results presented in the table, the R-square value of 0.546 indicates that the NPL_BTN variable and the Year variable, used as a COVID-19 dummy, are able to explain 54.6% of the changes in Bank BTN's Return on Assets (ROA). In other words, more than half of the variation in Bank BTN's profitability level during the study period can be explained by the combination of these two variables.

Furthermore, the Adjusted R Square value of 0.524 indicates that after considering the number of independent variables and sample size, the model's ability to explain changes in ROA remains at 52.4%. The remaining 45.4% is estimated to be influenced by other factors not included in the research model. These factors may include the bank's operational efficiency, interest rate or financing margin setting strategy, funding source composition, liquidity conditions, and changes in general economic conditions. Therefore, the regression model used can be categorized as having sufficient explanatory power in explaining variations in Bank BTN's profitability performance.

BTNS Model Residual Normality Test Table

P-value	Information
0.124	> 0.05 Normal

Based on the table, the results of the residual normality test show an *Asymp. Sig. (2-tailed)* value of 0.124. This value is greater than the 0.05 significance level, so it can be concluded that the residuals of the BTN Syariah regression model are normally distributed. Thus, the assumption of residual normality in the BTN Syariah model has been met. However, the model is still estimated using the *robust standard error approach* because in testing other classical assumptions there are still indications of heteroscedasticity, so that the standard error estimate remains more consistent and the statistical inference results can be interpreted more validly.

Table 4. Heteroscedasticity Test of BTNS Model

Parameter	t	Sig.	Information
NPF_BTNS	3,454	0.001	Heteroscedasticity occurs
Year (COVID Dummy)	-2,231	0.031	Heteroscedasticity occurs

Based on the table, the NPF_BTNS variable has a significance value of 0.001, while the Year variable as a COVID-19 *dummy* has a significance value of 0.031. Both significance values are smaller than the 0.05 significance level, so it can be concluded that NPF_BTNS and Year have a significant effect on the absolute residual value. This finding indicates that the BTN Syariah regression model experiences heteroscedasticity. Thus, model estimation needs to be carried out using the *robust standard error approach* of the HC3 method so that the resulting standard error is more consistent and the statistical inference results can still be interpreted validly even if there is a violation of the heteroscedasticity assumption. The HC3 estimator was selected specifically because it applies a larger correction for observations with high leverage and has been shown to perform better than the simpler HC0/HC1 estimators in small samples such as this study's 44 observations (MacKinnon & White, 1985), which reduces the risk of understating standard errors and overstating significance.

BTNS Model Autocorrelation Test Table

Durbin-Watson	dL	dU	Information
0.979	1.4226	1.6120	Positive Autocorrelation Indicated

Based on the table, the Durbin-Watson value of the BTN Syariah model is 0.979, which is smaller than the *dL* value of 1.4226. Based on the Durbin-Watson criteria, if the DW value is smaller than *dL*, the model residuals are indicated to experience positive autocorrelation. This finding indicates a possible relationship between residuals in one period and residuals in the previous period. This condition is quite common in time series data, especially in banking financial data, which tends to have a continuous pattern between periods. Therefore, the use of a *robust standard error approach* is necessary to ensure consistent standard error estimates and more valid statistical inference results can be interpreted despite indications of autocorrelation in the model. As with the BTN model, it should be acknowledged that the HC3 correction primarily addresses heteroscedasticity; because the BTN Syariah model also shows indications of autocorrelation (DW = 0.979), a HAC-consistent estimator would provide an additional, more complete correction, and is recommended as a robustness check in future extensions of this study.

Regression Results Table with Robust Standard Error Model BTNS

Parameter	B	Robust Std. Error	t	Sig.
Intercept	2,315	0.106	21,841	0,000

NPF_BTNS	-0.235	0.041	-5,719	0,000
Year (COVID Dummy)	-0.379	0.109	-3,469	0.001

Based on the estimation results in Table 4.13, the following regression equation for the BTN Syariah model was obtained:

$$ROA_BTNS = 2,315 - 0,235NPF_BTNS - 0,379Tahun + \varepsilon$$

Table BTN Model F Test Results

F	P-value	Information
72,529	0,000	Significant simultaneously

Based on the table, the F-test results show an F-value of 72.529 with a significance level of 0.000. This significance value is smaller than the 0.05 level, thus concluding that the BTN Syariah regression model is simultaneously significant. This means that the NPF_BTNS variable and the Year as a COVID-19 *dummy* simultaneously have a significant effect on BTN Syariah's ROA. Therefore, the regression model is deemed suitable for further analysis because it is able to meaningfully explain variations in BTN Syariah's ROA.

BTNS Model R Square Results Table

R	R Square	Adj. R Square	Standard Error Estimate
0.883	0.780	0.769	0.30525

Based on the analysis results, the R Square value of 0.780 in the BTN Syariah regression model indicates that 78% of the variation in ROA levels can be explained by the NPF_BTNS variable and the COVID-19 period dummy variable. Meanwhile, the Adjusted R Square value of 0.769 indicates that after adjusting for the number of variables and observations, the model is still able to explain approximately 76.9% of the variation in ROA. The remaining 22% is influenced by other factors outside the model, such as operational efficiency, financing structure, profit margin, liquidity, cost of funds, and macroeconomic conditions. This reflects that the regression model used has sufficient explanatory power. It is important to note, however, that the higher R Square in the BTN Syariah model reflects the overall explanatory power of that specific model, which

combines the effects of NPF_BTNS and the COVID-19 dummy together, and is not by itself a valid basis for concluding that NPF has a quantitatively stronger effect on ROA than NPL, because the two R Square values are produced by two separately estimated models fitted to different dependent variables (ROA_BTN and ROA_BTNS) with different underlying variances, and are therefore not directly comparable as effect-size measures. A more appropriate basis for comparison is the statistical significance and consistency of each variable's estimated effect within its own model: NPF_BTNS shows a statistically significant negative effect on ROA_BTNS ($t = -5.719$; Sig. = 0.000), whereas NPL_BTN's effect on ROA_BTN, while also negative in direction, does not reach conventional significance ($t = -1.671$; Sig. = 0.102). On this basis, the evidence supports the more limited conclusion that financing quality (NPF) is a statistically significant determinant of profitability at BTN Syariah, while credit quality (NPL) is not shown to be a significant determinant of profitability at Bank BTN during this period, a difference in the statistical reliability of the estimated relationship rather than a directly comparable difference in effect magnitude.

This study uses a partial t-test with robust standard error using the HC3 method to examine the effect of independent variables on BTN Syariah's ROA. The results show that the NPF_BTNS variable has a negative coefficient of -0.235 with a t-value of -5.719 and a significance level of 0.000 (below 0.05). This finding proves that NPF has a negative and significant effect on ROA, thus accepting hypothesis H3. This means that every one-unit increase in NPF is estimated to decrease ROA by 0.235 units, assuming other variables remain constant. This result is consistent with the theory that the higher the non-performing financing, the greater the provision costs that must be established, which ultimately suppresses the profitability of Islamic banks. The dummy variable COVID-19 (Year) also shows a significant negative effect with a coefficient of -0.379 and a significance level of 0.001, reflecting the pressure on financial performance during the pandemic and early recovery.

Based on the Mann-Whitney U test, no significant difference was found between the NPL levels of Bank BTN consumer credit and BTN Syariah consumer financing NPF during the 2015–2025 period ($Z = -1.481$; $p = 0.138$). This result rejects hypothesis H1 and indicates that the risk profiles in the consumer segments of both entities are not statistically significantly different, even though they operate with different principles. This similarity can be understood from the increasingly strong banking regulations and the OJK restructuring policies implemented uniformly during the pandemic across both conventional and Islamic banking, which prior research has also found to significantly reduce non-performing loan ratios during the pandemic period

(Kusumaningtyas & Fadli, 2025), as well as the focus of both banks on housing finance, which has similar debtor characteristics and business cycles.

From an Agency Theory perspective, the similarity in NPL and NPF levels illustrates that management decisions in disbursing funds result in relatively similar levels of risk, regardless of the banking system used. Internal factors such as the quality of risk management and underwriting processes appear to be more determinant than differences in contract types. Descriptive data also supports this finding, where the average NPL of BTN (3.53%) and NPF of BTNS (3.35%) are very close, although BTNS's NPF showed higher volatility, especially in 2019–2020. Rejection of H1 does not mean there is no difference at all, but rather that the difference is not statistically significant enough, necessitating a uniform risk mitigation approach for both banks.

During the COVID-19 pandemic (2020–2021), BTN Syariah's NPF was higher than BTN's NPL. This was due to the characteristics of fixed-rate contracts like Murabahah, whose margin is fixed at the time the contract is signed and does not adjust with subsequent changes in market interest rates (Muammar & Ningsih, 2026), leaving BTN Syariah with less flexibility in adjusting installments for affected customers, unlike conventional banks that can utilize interest rate adjustments. Furthermore, BTN Syariah's risk mitigation capacity, as a Sharia Business Unit, is also more limited than that of its parent bank.

In contrast, during the New Normal period (2022–2025), BTN Syariah's NPF was actually lower than BTN's NPL. The increase in BI's benchmark interest rate had a more severe impact on BTN's floating-rate mortgage products, while BTN Syariah customers with fixed-rate contracts were relatively protected from installment increases, consistent with the limited interest-rate transmission of murabahah-based financing described above. The success of the post-restructuring recovery program and the implementation of stricter underwriting policies also accelerated improvements in financing quality at BTN Syariah.

Hypothesis testing H2 shows that consumer credit NPLs have no significant effect on Bank BTN's ROA ($\beta = -0.402$; Sig. = 0.102), thus H2 is rejected. Although the coefficient is negative in theory, the effect is not statistically strong enough. This rejection is likely due to the effectiveness of the OJK's restructuring policy in cushioning the transmission of credit risk to bank profitability during the pandemic (Hidayat et al., 2021), bank revenue diversification, and the greater dominance of external factors related to the pandemic. Meanwhile, the COVID-19 dummy variable remains significant as the main explanation for the decline in ROA during the crisis.

Testing H3 yielded strong evidence, indicating that NPF had a negative and highly significant effect on BTN Syariah's ROA ($\beta = -0.235$; Sig. = 0.000), thus H3 was accepted. The regression model was able to explain approximately 78% of the variation in ROA. This finding aligns with various studies showing that Islamic banks tend to be more sensitive to financing quality than conventional banks due to their contract structure and limited risk management instruments.

Overall, this study found a long-term convergence in consumer financing/credit risks between BTN and BTN Syariah, despite differing dynamics across periods. Non-Performing Financing (NPF) was found to have a statistically significant impact on BTN Syariah's profitability, whereas the impact of Non-Performing Loans (NPL) on BTN's profitability, although directionally negative, was not statistically significant during the study period, a difference in the strength of statistical evidence rather than in directly comparable effect magnitude. This finding provides important implications for bank management and regulators: despite a tendency toward convergence in risk profiles, Islamic banks require mitigation strategies that are more sensitive to financing quality, while macroeconomic factors such as the pandemic remain key determinants of the financial performance of both entities.

CONCLUSIONS, IMPLICATIONS, SUGGESTIONS, AND LIMITATIONS

Based on the analysis, this study shows no statistically significant difference between the Non-Performing Loan (NPL) levels in Bank BTN consumer credit and Non-Performing Financing (NPF) in BTN Syariah consumer financing during the 2015–2025 period, thus rejecting the first hypothesis. Although there is variation in the average values between the two, this difference is not sufficient to indicate a significant difference. These results indicate that asset quality and risk levels in the consumer segment at both institutions tend to move in a similar pattern. This similarity may be influenced by the characteristics of both businesses, which focus on housing finance, relatively similar customer profiles, and their relationship to the dynamics of the property sector. Furthermore, the implementation of financing restructuring policies during the pandemic and the influence of national economic conditions are suspected to have contributed to the relatively consistent risk patterns in both banking models.

In testing the relationship between credit quality and profitability at Bank BTN, the study found that consumer credit NPLs did not significantly impact Return on Assets (ROA), thus disproving the second hypothesis. Although the direction of the relationship shows a negative trend as explained in theory, this influence is not statistically strong enough. This finding suggests

that changes in Bank BTN's profitability level are not solely determined by the magnitude of non-performing loans, but are also influenced by other factors such as macroeconomic conditions, restructuring policies, loss reserve management strategies, and the bank's ability to develop other sources of income. In other words, the implemented risk management mechanisms and institutional support enable the impact of non-performing loans on financial performance to be minimized.

Different results were found at BTN Syariah. The study showed that an increase in consumer financing NPF had a negative and significant effect on ROA, thus accepting the third hypothesis. This condition indicates that financing quality is a significant factor in determining the ability of Islamic banks to generate profits. When the non-performing financing ratio increases, banks face pressure in the form of increased provisioning costs and decreased margin-based income. This finding suggests that profitability sensitivity to financing risk tends to be higher in Islamic banks than in conventional banks. Thus, although the levels of consumer risk at the two banks are relatively close, the impact of this risk on financial performance exhibits different characteristics.

Beyond these findings, this study offers several contributions to the academic literature that extend past their practical implications. First, by adopting a paired, within-institution comparative design between a conventional bank and its own Islamic banking unit, this study extends Agency Theory into the dual banking context by showing that the same underlying agency mechanism, in which lax underwriting translates into non-performing loans/financing and, in turn, into agency costs that depress ROA, operates in both conventional and Islamic financing but with materially different statistical strength, offering an empirical basis for future theoretical work on how contract structure (fixed-margin murabahah versus floating-rate conventional credit) moderates the agency cost-profitability link. Second, this study contributes to the dual banking system literature by documenting that consumer/housing-segment credit and financing risk levels have converged between a conventional bank and its Islamic counterpart operating under a shared parent institution, which nuances the common assumption in prior literature that Islamic and conventional banks necessarily exhibit structurally different risk profiles. Third, by isolating the consumer/housing financing segment rather than analyzing banks at the aggregate level, this research adds segment-specific evidence to the literature on financing risk and profitability, complementing studies that examine NPL/NPF at the whole-bank level.

The practical implications of this study provide several recommendations. For Bank BTN, the study's findings do not imply that credit risk can be ignored, even though it was not proven to

significantly impact ROA during the observation period. The bank still needs to strengthen its early detection mechanisms for potential defaults, improve the quality of its credit analysis process, and conduct more intensive monitoring of its mortgage portfolio. Sustainable mitigation measures are expected to maintain long-term financial performance stability.

Meanwhile, for BTN Syariah, controlling non-performing financing needs to be a primary concern, given the strong evidence that non-performing financing (NPF) has a significant impact on profitability. Possible measures include strengthening customer eligibility evaluations through the implementation of the 5Cs principle, developing a more data-driven financing assessment system, and accelerating the handling and restructuring of non-performing financing. Regular monitoring of portfolio quality also needs to be part of a more structured risk management system. From a regulatory perspective, the results of this study can serve as a basis for strengthening a more specific risk-based supervisory approach to each financing segment and developing restructuring policies that maintain prudent principles.

There is still ample scope for further research. Further research is recommended involving more conventional and Islamic banks to enhance the generalizability of the results. This study already employs genuinely quarterly data (44 observations); future research could further improve estimation precision by using monthly data where available, or by extending the panel to include more banks to increase statistical power. Model development by incorporating macroeconomic variables and other internal banking variables also has the potential to provide a more comprehensive picture of the factors influencing profitability. Future studies could also consider moderating or mediating variables to explore the more complex relationship between financing quality and financial performance.

Despite providing several important findings, this study still has several limitations. The study's limited sample size, Bank BTN and BTN Syariah, means the results may not be representative of the overall condition of the national banking industry. Furthermore, although the quarterly data used in this study are genuinely observed rather than interpolated from annual figures, the consistency of ratio definitions across the 2015-2025 period is a relevant concern: the adoption of PSAK 71 (Indonesia's equivalent of IFRS 9), effective from 2020, changed the collectibility classification and impairment provisioning methodology for banks in Indonesia, which may have introduced a structural break in the NPL/NPF and ROA series that coincides in time with the COVID-19 period and is therefore not fully separable from the COVID-19 dummy in this model. The research model also fails to incorporate various other factors that could potentially influence ROA, such as capital ratios, operational efficiency, or macroeconomic variables.

Furthermore, the use of a COVID-19 dummy variable in a simple categorization does not fully capture the complexity of the pandemic's impact, which occurs gradually and varies across periods. Therefore, interpretation of the research results must be made with these limitations in mind.

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