



The Impact of Cost-to-Income Ratio, Net Benefit, and Operating Expenses on Islamic Commercial Bank Loss Reserves

Annisa Anggraini, Fatih Fuadi & Is Susanto
State Islamic University of Raden Intan Lampung, Indonesia

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Corresponding author:

Annisa Anggraini
annisaagrni@gmail.com

Author's email:

fatihfuadi@radenintan.ac.id,
issusanto@radenintan.ac.id

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Abstract

Purpose – This study aims to examine the influence of Cost to Income Ratio (CIR), Net benefit (NI) and operating expenses operating income (BOPO) on the impairment loss reserve (CKPN).

Methodology – In this study, the sample determination was carried out for 5 years. Determination of sample criteria using purposive sampling method, which is a sampling technique derived from certain criteria and obtained a sample of 6 banks so that the total number of samples is 30 samples. The method used is regression analysis of panel data using Random Influence Model approach analyzed through software Eviews 10.

Findings – Derived from upshots of the study can be obtained that the partial Cost to Income Ratio has a significant influence on CKPN. Net rewards significant influence on CKPN. Operating expenses operating income has no significant influence on CKPN. Simultaneously Cost to Income Ratio, Net benefits and operating expenses operating income has a significant influence on CKPN in Sharia commercial banks registered with the Financial Services Authority for the period 2019-2023. In Islamic business management, efficiency (CIR and BOPO), transparency and benefit optimize halal income (NI) and maintain financial stability in accordance with sharia values.

Implications – Upshots of this study provide recommendations to each bank in facing different credit risk challenges, both in terms of financing portfolio characteristics, risk mitigation strategies, and financial management policies.

Originality – This study provides insight into the importance of risk management in Islamic banking, especially in managing impairment losses (CKPN) as a mitigation measure against potential financing risks.

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Department of Islamic Banking, Faculty of
Islamic Economics and Business, IAIN
Sultan Amai Gorontalo, Indonesia



1. Introduction

Global economic dynamics and intense competition require attention to the factors that sway the performance of Islamic banking. In Indonesia, Islamic banking is experiencing rapid development, although Islamic commercial banks still face various risks, including the risk of asset impairment that sways the quality of financing and financial stability. One of the important indicators in managing risk is the impairment loss reserve (CKPN) which reflects the bank's ability to anticipate potential losses due to asset quality degradation. CKPN has a very crucial role in banking. Without the existence of CKPN, this can have a negative impact on both customers and investors, because it shows that the bank is not able to manage or reduce the risk of losses properly (Limbong & Diana, 2023).

To prevent possible losses suffered by the bank due to credit risk, the bank needs to establish a reserve for problem loans called the Reserve for impairment losses (CKPN). Losses arising from loans can reduce the bank's capital. If the losses experienced by the bank are greater, the Capital owned may not be sufficient to cover these losses, so that the funds deposited by the community are potentially non-refundable by the bank (Pusponingrum & Diana, 2022). The implementation of PSAK 71 related to impairment changes the calculation method used. In determining the amount of CKPN, objective evidence is no longer required, but using a new method, the Expected Credit Loss (ECL). Ckpn measurement with this method is carried out from the beginning of the financing transaction until maturity (Roni & Oktavia, 2023). Banks form these reserves derived from the evaluation of the placement of funds as a form of applying the precautionary principle. The main function of the establishment of CKPN is to anticipate potential business failures that may be experienced by the bank if the debtor is unable to meet its obligations in making payments.

For example, one interesting phenomenon is a bank with a high CKPN, which can reflect a large exposure to credit risk or a conservative approach in reserving losses. Conversely, banks with stable or declining CKPN displayed success in maintaining asset quality or lowering the risk level of problem financing. This difference is relevant to be discussed further because it can illustrate how Islamic banks apply the principle of prudence in risk management in accordance with Risk Theory. Risk Theory emphasizes the importance of risk mitigation through adequate reserves to maintain financial stability. Risk Theory also emphasizes that every financial institution, including Islamic banks, must manage risk as an integral part of its operational sustainability. In this context, CKPN becomes an important tool to anticipate potential losses due to asset impairment. Thus, this ckpn trend needs to be studied to evaluate the operational sustainability and influenceiveness of risk management at Islamic banks during the 2019-2023 period.

Table 1. Reserves for impairment losses (CKPN)

No.	Bank Name	Proposed Impairment Loss				
		(In Millions Of Rupiah)				
		2019	2020	2021	2022	2023
1	Bank Aceh Syariah	0,80	1,00	0,88	0,54	0,74
2	BPD Riau Kepri Syariah	2,25	1,98	1,68	1,54	1,50
3	BPD Nusa Tenggara Barat Syariah	0,68	0,46	0,52	0,97	0,84
4	BCA Syariah	2,0	1,9	2,5	3,9	3,3
5	Bank Tabungan Pensiun Nasional	2,12	5,68	4,09	3,96	5,98
6	Bank Aladin Syariah	0,15	0,01	0	0,88	0,84

Source: Financial Statements of buses registered with the OJK 2019-2023.

Otherefore, the risk of financing in Islamic banking becomes more responsive to the situation when there is an economic crisis. Islamic banks tend to increase the amount of reserves when economic conditions weaken and reduce them when the economy improves. If Islamic banks expect high returns from the distribution of financing, then the bank must also be prepared to face great risks. The main risk arising from financing activities, either through receivables, leases, or

profit sharing contracts is the risk of default by the customer (Irawati & Sihotang, 2023). However, each type of financing has a variety of risks, so it is necessary to establish CKPN to minimize risks in Islamic banking (Damayanti & Suprayogi, 2018). The following is a phenomenon or issue of Sharia Commercial Bank CKPN data registered with the Financial Services Authority for the period 2019-2023.

Derived from the Table 1, it can be seen that CKPN fluctuates in each bank. For example, Bank Aceh Syariah experienced an increase in CKPN in 2020 compared to 2019, but then decreased in 2021 and 2022 before rising again in 2023. This could be due to tighter risk management policies as well as adjustments to economic conditions. Meanwhile, bpd Riau Kepri Syariah has the highest CKPN in 2020 and tends to fall gradually thereafter. The sharp rise in 2020 was most likely due to increased credit risk due to the COVID-19 pandemic, which required banks to set aside more reserves in anticipation of potential problem financing. BPD West Nusa Tenggara Syariah actually experienced a decrease in CKPN in 2020 compared to 2019, before increasing again in the following years.

This may indicate that in 2020, the bank is restructuring or has a different risk management strategy. Meanwhile, BCA Syariah displayed an upward trend in CKPN, especially from 2021 to 2023. This increase was due to a more aggressive expansion of financing, which was followed by an increase in reserves in anticipation of greater risks. Bank Tabungan Pensiun Nasional Syariah has the highest CKPN compared to other banks, especially in 2023 which reached 5.98. This can be attributed to the market segment they serve, which is Microfinance that has a higher level of risk than corporate or commercial financing. Bank Aladin Syariah also experienced a gradual increase in CKPN from 2019 to 2023 due to the early phase of the bank's development which is still building its financing portfolio, thus requiring a larger CKPN for risk mitigation. In Islamic financial management, it is important for financial institutions to apply the principle of prudence and responsibility in every transaction. This is in line with the teachings in the Qur'an, especially in surah al-Hashr verse 18:

يَا أَيُّهَا الَّذِينَ آمَنُوا اتَّقُوا اللَّهَ وَانظُرُوا نَفْسَ مَا قَدَّمْتُمْ لِغَدٍ وَاتَّقُوا اللَّهَ إِنَّ اللَّهَ خَبِيرٌ بِمَا تَعْمَلُونَ

Meaning: "O ye who believe! fear Allah, and let every soul consider what it hath done for the morrow, and fear Allah; verily Allah is aware of what ye do" (Q.S Al-Hashr 59:18)

This verse reminds Muslims to prepare for the future wisely, including in managing financial risks. In this context, the impairment loss reserve (ckpn) serves as an anticipatory measure for Islamic commercial banks to mitigate potential losses due to decreased financing quality. By applying the precautionary principle, the bank is expected to maintain financial stability and operational sustainability in accordance with Sharia values.

One of the factors that allegedly sway the CKPN is the Cost to Income Ratio. The CIR is a very important financial ratio to evaluate the performance of a bank because it reflects the management of the company's expenses in relation to the income obtained. To calculate this ratio, operating expenses, including administrative and fixed expenses such as salaries and property expenses, are divided by operating income, with the note that written-off bad debts are not taken into account (Pradhan et al., 2017). CIR can be considered as a factor of efficiency in banking operations. This ratio is used to determine efficiency in the study of the financial sector, especially Islamic banking. If the high CIR ratio indicates less efficient banking operations. Thus, banks whose lending efficiency is low will decrease profitability (Putra & Muharam, 2015).

In addition to the Cost to Income Ratio, another factor that sways CKPN is Net payoff. Net payoff is a ratio used to evaluate the performance of banking management in managing all existing productive assets, with the aim of achieving net profit. In other words, the higher the NI value, the better the bank's performance in generating profits. Therefore, this ratio is considered an important indicator for the government, customers and investors (Tiyas, 2020). The net benefit ratio is a crucial indicator for Islamic banking, which serves to measure the extent to which the

influenceiveness and ability of banks to generate income through the placement of productive assets in the form of financing (Putri, 2024).

Operating expenses operating income is the next factor that can sway the reserve of impairment losses. Costs are expenses that can be direct or indirect, which are related to business activities to generate income during a certain period (Sholika & Zaki, 2024). In the banking sector, cost management efficiency can be measured using the operating expense to operating income ratio (BOPO). This ratio is utilized to compare operational costs with the revenue generated. The lower the BOPO ratio, the better the bank's management performance, as it reflects efficiency in utilizing the company's resources (Hediati & Hasanuh, 2021). On the contrary, the higher the ratio reflects that the bank is less efficient in its management.

Based on previous research investigations conducted by (Abi Kumalasari & Hersugondo, 2020) that there is a negative and significant connection between CIR and profitability. This negative and significant influence of CIR on profitability has significant implications for risk management, particularly in CKPN. Banks that face low profitability due to high CIR tend to face greater pressure in the face of potential credit losses, which causes the bank to have to form a larger CKPN. Then a study conducted by (Wardana, 2024) said that Net rewards have no significant influence on profitability which means an increase or decrease in NI does not directly sway the bank's profit. However, banks still have to maintain CKPN to anticipate existing credit risks. (Pusponingrum & Diana, 2022) revealed that BOPO has no significant influence on CKPN. And research from Investigations into CKPN in Islamic banking generally focus on credit risk factors, such as Non-Performing Financing (NPF), Financing to Deposit Ratio (FDR) and Return on assets (ROA). findings from a previous study conducted by (Irawati & Sihotang, 2023) showed that increasing NPF encourages banks to increase the formation of CKPN. While higher profitability usually reduces the need for backups (Made et al., 2024).

An interesting phenomenon as well as novelty that can be discussed from this study is the difference in the pattern of impairment loss reserves (ckpn) in each bank, which reflects variations in credit risk management. Some banks show volatile trends, while others have relatively stable or declining CPNs. This reflects how each bank faces different credit risk challenges, both in terms of the characteristics of its financing portfolio, risk mitigation strategies, and financial management policies. The ratio of costs to revenues as an indicator of operational efficiency reflects the management of the costs of the enterprise in relation to the income earned. As an indicator of efficiency, a high CIR indicates that the bank is less efficient in managing its operating costs, which can lead to a decrease in profitability.. Investigation of the effect of operational efficiency and revenue structure on CKPN is still very limited. Variables in this study such as Cost to Income Ratio (CIR), Net reward (NI) and operating costs to operating income (BOPO) are still rarely studied in the context of CKPN, although it has an important role in the risk management of Islamic banks. Therefore, the novelty in this study will provide a new theory about the context in CKPN which has an important role in banking related to the dependent variable in this study.

Based on the background phenomena and Research gaps raised in this study, researchers will conduct research aimed at filling these deficiencies by analyzing the effect of CIR, NI, and BOPO on CKPN in Sharia commercial banks registered with the Financial Services Authority for the period 2019-2023.

2. Literature Review

2.1 Stakeholder Theory

Stakeholders are individuals or groups who have an interest in or concern for a specific issue. According to Grimble and Wellard, stakeholders can be analyzed derived from their level of importance and influence (Anggraini & Iqbal, 2022). From this perspective, stakeholders are connected to certain interests. Therefore, stakeholder theory revolves around discussions regarding the interests of various parties. The core principle of this theory suggests that the stronger a corporation's connections, the more successful its business will be. Conversely, poor connections

can create challenges for the corporation. Strong stakeholder connections are built on trust, respect, and collaboration (Tirtagiri & Sufina, 2024).

2.1 Risk Management Theory

In a company, risk management is the process of planning, organizing, directing, and overseeing organizational activities to reduce the potential risks that may impact corporate earnings (Hendrawati et al., 2023). In KBBI, the meaning of the word risk is the less pleasant (detrimental, harmful) consequences of an action. This uncertainty can be in the form of threats, strategy development, and risk mitigation.

2.2 Agency Theory

Agency theory, also known as contracting theory, is a crucial aspect of contemporary accounting inquiry. This theory describes the contractual connection between the owner (principal) and the manager or agent (Triyuwono, 2018). The core issue in agency theory lies in the conflict of interest between these two parties. The principal, as the owner, and the agent, as the manager, often have differing objectives in managing the company, particularly in terms of maximizing satisfaction and achieving desired outcomes from business activities (Jamal & Enre, 2023).

2.3 Sharia Banking Theory

Islamic banks, in general, are financial institutions that primarily engage in fund management, financing, and payment services. Their operations are guided by Islamic Sharia principles, which are derived from the teachings of the Qur'an and Hadith. Consequently, Islamic banks must refrain from activities involving usury and any practices that contradict Islamic law (Kurnialis et al., 2022).

2.4 Cost to Income Ratio

Cost to Income Ratio (CIR) is a ratio that shows the amount of costs that must be incurred by the bank to obtain revenue. Any activity that is carried out to obtain income inevitably entails costs that must be incurred. Cost is a factor that can determine the high and low profitability (Hendrayanti et al., 2022). Cost to Income Ratio (CIR) can also be used to measure the quality of Management in a bank. The lower the Cost Income Ratio (CIR), the quality of bank management can be said to be good (Ervina et al., 2021). The following formula is used to calculate the CIR:

$$CIR = \frac{\text{Operating Expenses}}{\text{Benefit Value}}$$

2.5 Net Returns

Net benefit is a ratio used to determine the ability of productive assets to generate profits by comparing operating income minus benefits and bonuses with the average of productive assets (Awintasari & Nurhidayati, 2021). According to SEOJK No. 10/SEOJK/.03/2014 Net remuneration (NI) is disbursement income after profit sharing- (Remuneration and Bonus) is disbursement income after deducting the expense of yield, remuneration and bonus (annualized). This ratio reflects a bank's capability to generate operating income from funds allocated for financing loans. A higher NI signifies greater influenceiveness in utilizing productive assets through financing (VMS et al., 2020). Here's the formula used to calculate NI:

$$NI = \frac{\text{Revenue Disbursement Of Funds After Profit Sharing} - (\text{Reward} + \text{Bonus})}{\text{Average total Poductive assets}}$$

2.6 Operating Expenses Operating Income

Costs are expenses incurred, either directly or indirectly, related to business activities aimed at generating income in a certain period (Mustika & Farikhah, 2021). In the banking sector, one of the key indicators for evaluating a bank's efficiency in cost management is the ratio of operating

expenses to operating income (BOPO). This ratio compares operating costs with revenue, where a lower BOPO ratio indicates better management performance due to more efficient resource utilization. Conversely, a higher BOPO ratio suggests inefficiency, as operating costs outweigh income (Anugrah & Yatna, 2020). Here is the formula used to calculate BOPO:

$$\text{BOPO} = \frac{\text{Operating Costs}}{\text{Operating Income}} \times 100\%$$

2.7 Proposed Impairment Loss

Impairment loss reserve (ckpn) is an allowance formed to cover the possible risk of losses arising as a result of the inadmissibility of the return of part or all of the loans granted or funds set in other banks, as stipulated in the provisions of Bank Indonesia regarding allowance for write-offs of productive assets (Napisah & Widiyati, 2020). The following formula is used to calculate CKPN:

$$\text{CKPN} = \text{EAD} \times \text{PD} \times \text{LGD}$$

2.8 Hypotheses

2.8.1 The influence of Cost-to-Income Ratio (CIR) on impairment losses reserves (Ckpn)

Cost to Income Ratio (CIR) is an indicator of a bank's operational efficiency that shows how much operational costs are incurred to generate revenue. The higher the CIR, the less efficient a bank is in managing its operational activities (Iman & Umiyati, 2022). In the context of impairment loss reserves (CKPN), CIR becomes a relevant factor as operational inefficiencies are often correlated with higher credit risk. Agency theory explains that conflicts of interest between management (agents) and owners (principals) can have an impact on the management of bank resources. When management is inefficient in managing operations, as reflected in the high CIR, the risk of loss on financing disbursed tends to increase. To anticipate these potential losses, banks need to increase CKPN as a reserve protection against the risk of financing default. In addition, risk management theory supports that a high CIR indicates weakness in operational cost management.

H₁: Cost to Income Ratio has a positive influence on the reserves of impairment losses

2.8.2 Influence of Net return (NI) on impairment loss reserve (Ckpn)

The greater the net returns earned by the bank, the lesser the requirement for CKPN. This growth signifies that the financing extended by the bank is of high quality and yields optimal revenue, thereby reducing the risk of losses from problematic financing (Dalimunthe, 2022). Conversely, if NI decreases, this can reflect lower financing quality, so the risk of losses increases and banks need to increase CKPN as a reserve to cover these potential losses. In addition, in this study also considered the Return on Assets (ROA) as a variable that is in line with NI. The connection that arises between ROA and CKPN is negative. This is in line with inquiry Performed by (Yuniar, 2022). which states that ROA has a negative influence on CKPN means that increasing ROA can reduce the value of CKPN.

H₂: Net returns negatively sway the reserves of impairment losses

2.8.3 Influence of operating expenses operating income (BOPO) on impairment losses (Ckpn)

The higher the ratio of operating expenses operating income (BOPO), the lower the operational efficiency of the bank (Daulay & Astuti, 2022). This occurs because the high bopo ratio reflects a large cost burden compared to the income obtained by the bank, which indicates that the bank is less efficient in managing its operational resources. When operational efficiency decreases, this can sway the quality of bank assets, because suboptimal management can worsen the financing portfolio owned, increasing the possibility of non-Performing Financing (NPF) (Prawira & Anwar,

2024). As a result, the risk of loss from non-current financing increases. To anticipate these potential losses, the bank will increase the reserve of impairment losses (Ckpn), as a preventive measure against larger losses. In inquiry Performed by (Irawati & Sihotang, 2023) who said that NPF positively sways CKPN. The findings of the study indicate a connection with this study that the higher the level of non-performing financing (NPF), the Islamic banks need to increase the CKPN to anticipate the risk of losses due to uncollectible financing.

H₃: Operating expenses operating income has a positive influence on the reserves of impairment losses

3. Research Methods

This inquiry employs a quantitative approach, utilizing Panel Data Analysis as an analytical tool. Panel data combines time series and cross-sectional data (Widarjono, 2013). According to Sugiyono, a population is a generalization area consisting of objects or subjects with specific characteristics and qualities determined by inquiryers for study and conclusion drawing (Setyosari, 2016). The population in this study includes all Islamic commercial banks registered with the Financial Services Authority (OJK) for the 2019-2023 period. A sample is a subset of the population that is considered representative of the whole (Nurdin & Hartati, 2019). In this inquiry, sample selection was conducted over five years, from 2019 to 2023, resulting in a total of 30 samples. The sampling method used is purposive sampling, a technique derived from predetermined criteria and considerations aligned with the study's objectives.

The data used in this study is secondary data, which, according to Sugiyono, refers to data that is not directly provided to the inquiryer by the data sources (Sugiyono, 2016). This type of data is obtained through intermediaries, such as individuals or documents. The data in this study was sourced from the annual financial statements of Islamic commercial banks registered with the Financial Services Authority (OJK) for the period 2019-2023. The data collection method employed is the documentation method, where data is gathered from official documents published annually by each Islamic commercial bank. Data analysis in quantitative inquiry involves organizing and presenting data, performing calculations to describe the data, and testing hypotheses through statistical methods (Syofian, 2014). The statistical approach used in this study is descriptive statistics, which is a type of data analysis aimed at testing the generalization of inquiry findings derived from samples. The analysis and processing of data in this study use panel data, which combines time series data and cross-sectional data. Time series data is assembled over time from an individual, while cross-sectional data is assembled at a single point in time from multiple individuals (Prawoto & Basuki, 2016). The equation for panel data regression is as follows:

$$CKPN_t = \beta_0 + \beta_1 CIR_t + \beta_2 NI_t + \beta_3 BOPO_t + e_t$$

Description:

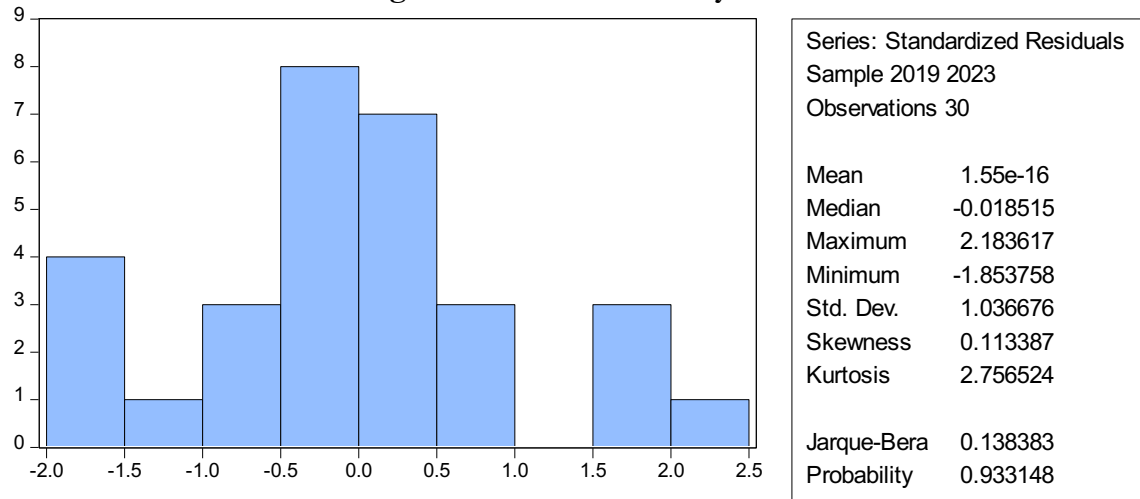
CKPN	= Proposed Impairment Loss
CIR	= Cost to Income Ratio
NI	= Net return
BOPO	= Operating expenses operating income
β_0	= Constants
$\beta_1 - \beta_3$	= Independent variable regression coefficient
e	= eror trem
t	= time

4. Results and Discussion

4.1 Classical Assumption Test

Derived from Figure 1, upshots obtained by the probability of normality test of 0.933148 is greater than that of $\alpha = 0.05$, it can be concluded that the data are normally distributed.

Figure 1. Test of Normality



Source: Output Reviews 10 (data processed 2025)

Derived from Table 2, results of multicollinearity test through the value of VIF (Variance Inflation Factor) shows that there is no centered VIF value greater than 10. Thus the regression model in this study proved to have no multicollinearity problems.

Table 2. Multicollinearity Test Results

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.293395	7.342826	NA
Cost to Income Ratio	6.74E-06	2.404665	1.478350
Net return	0.007120	4.707056	1.014545
Operating expenses operating income	2.19E-09	5.538381	1.466121

Source: Output Reviews 10 (data processed 2025)

Uphots of heteroscedasticity test displayed that the value of p-value of 0.2257 or greater than α (0.05). Thus stating that the variance is the same or no symptoms of heteroscedasticity.

Table 3. Heteroscedasticity Test Results

F-statistic	1.471183	Prob. F(3,26)	0.2454
Obs*R-squared	4.353535	Prob. Chi-Square(3)	0.2257
Scaled explained SS	4.623616	Prob. Chi-Square(3)	0.2015

Source: Output Reviews 10 (data processed 2025)

Chi-square probability of autocorrelation test results using the Breusch-Godfrey method displayed results of 0.4117 which means less than the value of alpha (0.05) so this indicates that in this study does not occur autocorrelation problems.

Table 4. Autocorrelation Test Results

F-statistic	0.754567	Prob. F(2,24)	0.4810
Obs*R-squared	1.774817	Prob. Chi-Square(2)	0.4117

Source: Output Reviews 10 (data processed 2025)

4.2 Panel Data Regression Analysis

Derived from upshots of the chow Test it can be seen that the value of the probability value = $0.0001 < \alpha = 0.05$, this indicates that the Fixed Influence Model (FEM) is better or more appropriate to use than the Common Influence Model (CEM). At this stage, the FEM model is obtained, so it should proceed to the hausman test.

Table 5. Chow Test Results

Influences Test	Statistic	d.f.	Prob.
Cross-section F	5.683259	(5,21)	0.0018
Cross-section Chi-square	25.672732	5	0.0001

Source: Output Reviews 10 (data processed 2025)

Derived from Figure 6, it can be seen that the value of p-value = $0.0719 > \alpha = 0.05$. This shows that the Random Influence Model (REM) is better or more appropriate to use than the Fixed Influence Model (FEM). At this stage, a brake model is obtained, so it does not proceed to the LaGrange Multiplier test.

Table 6. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	7.000011	3	0.0719

Source: Output Reviews 10 (data processed 2025)

Table 7. Random Influence Model Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.238917	0.727078	4.454705	0.0001
Cost to Income Ratio	-0.004829	0.002600	-1.857548	0.0746
Net return	-0.306423	0.113966	-2.688715	0.0124
Operating expenses operating income	3.55E-05	3.44E-05	1.032092	0.3115

Source: Output Reviews 10 (data processed 2025)

Derived from upshots of multiple regression testing panel data using Random Influence Model approach can be obtained multiple regression equation panel data as follows:

$$Y = 3.238917 - 0.004829X_1 - 0.306423X_2 + 0.0000355X_3$$

4.3 Hypothesis Test

Derived from the Table 8, it can be analyzed. The T-statistic for variable Cost to Income Ratio

- 1) is -2.217, with a significance probability of 0.0355, which is less than 0.05. Therefore, H0 is rejected and H1 is accepted. This indicates that variable Cost to Income Ratio has a significant impact on variable Y, at least partially.
- 2) The T-statistic for variable Net return is -5.542, with a significance probability of 0.0000, which is below 0.05. As a result, H0 is rejected and H1 is accepted. Thus, variable Net return has a significant influence on variable Y, at least partially.
- 3) The T-statistic for variable Operating expenses operating income is 0.434, with a significance probability of 0.667, which is greater than 0.05. Hence, H0 is accepted and H1 is rejected. This means that variable Operating expenses operating income does not have a significant influence on variable Y, at least partially.

Table 8. T test results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.172636	0.541659	7.703431	0.0000
Cost to Income Ratio	-0.005756	0.002596	-2.217753	0.0355
Net return	-0.467649	0.084383	-5.542002	0.0000
Operating expenses operating income	2.03E-05	4.68E-05	0.434911	0.6672

Source: Output Reviews 10 (data processed 2025)

F-statistic value of 11,427 with the value of prob. F-statistic of 0.000058 <0.05 it can be concluded that the independent variable (X) significant influence simultaneously (together) to the dependent variable (Y).

Table 9. F Test Results

F-statistic	11.42764
Prob(F-statistic)	0.000058

Source: Output Reviews 10 (data processed 2025)

Derived from the Table 10, it can be analyzed:

- 1) The value of the coefficient of determination (R-square) in this study amounted to 0.5687 this result shows that the CKPN in Sharia commercial banks in Indonesia is influenced by the Cost to Income Ratio, Net return and operating costs operating income as much as 56.87%, while the remaining 43.13% influenced by other variables not studied in this study.
- 2) Adjusted R-square value in this study amounted to 0.5189 this result shows that the contribution of the influence of Cost to Income Ratio, Net return and operating expenses operating income to CKPN of 51.89% while the remaining 48.11% influenced by other variables outside this study.

Table 10. R2 Test Results

R-squared	0.568700
Adjusted R-squared	0.518935

Source: Output Reviews 10 (data processed 2025)

4.4 Discussion

Upshot of the discussion is something obtained through observation or inquiry. These results can be both objective and subjective. In addition, upshots of the discussion also became the basis for the development of new theories. This study consists of 4 variables, namely CIR, NI, BOPO and CKPN in Sharia commercial banks registered with the Financial Services Authority for the period 2019-2023.

4.4.1 Influence of CIR on Impairment Loss Reserve in Islamic Business Management Perspective

Theoretically, the CIR reflects the operational efficiency of the bank in managing costs against Earned Income. A high CIR indicates that operating expenses are greater than the income generated, so the risk of uncollectible financing also increases. This encourages the bank to increase the CKPN to anticipate potential losses on financial assets that experience impairment. In this study it is known that CIR has a T-statistic value of -2.217 with the value of prob. (significance) of $0.0355 < 0.05$ then it can be concluded that partially the CIR variable has a significant influence on the ckpn variable. Upshots of this study are in line with the theory of risk which states that the higher the operational efficiency ratio of a bank, the higher the reserves that must be provided to mitigate the potential risk of loss. Therefore, optimal CIR management is an important factor in

maintaining the financial stability of Islamic banks, especially in the face of credit risk and asset quality degradation.

Although there have been no previous studies that directly address the connection between CIR and CKPN, several previous studies have examined the influence of CIR on profitability. Studies Performed by found that the CIR has a negative and not significant connection to profitability, which means that the higher the CIR, the lower the level of profitability of the bank. This shows that poor operational efficiency can reduce the bank's ability to generate profits.

While there have been no studies directly exploring the connection between CIR and CKPN, several previous studies have investigated the impact of CIR on profitability. Inquiry by (Abi Kumalasari & Hersugondo, 2020) and (Yuni et al., 2024) revealed a negative and insignificant connection between CIR and profitability, indicating that a higher CIR is associated with lower bank profitability. This suggests that inefficient operations can hinder the bank's capacity to generate profits.

Human beings have a responsibility to work and strive by applying Islamic ethics. This is in line with inquiry (Fatih Fuadi & Destin Fitria Anjayani, 2023), which states that good employer branding and employee value proposition can increase employee engagement, encourage efficiency, and create a fairer work environment. In the perspective of Islamic business management, efficiency in cost management not only increases profitability, but also reflects the principles of trustworthiness, transparency, and employee welfare as part of the responsibilities of a leader in business. If the company focuses only on profits without paying attention to the welfare of employees, operational inefficiencies will arise, which can ultimately have an impact on increasing CKPN due to poor risk management.

4.4.2 Influence of NI on Impairment Loss Reserve in Islamic Business Management Perspective

Upshots displayed that NI has a T-statistic value of -5,542 with the value of prob. (significance) of $0.0000 < 0.05$ which means that partially NI variables have a significant influence on CKPN. This study relates the influence of NI on profitability because the direct influence on CKPN has not been studied much. Inquiry by (Wardana, 2024) and (Fikri, 2023) said that Net rewards have no significant influence on profitability which means an increase or decrease in NI does not directly sway the bank's profit. However, banks still have to maintain CKPN to anticipate existing credit risks. This is in line with inquiry Performed by (Awintasari & Nurhidayati, 2021) and (Putri, 2024) which also says that Net rewards have no significant influence on profitability.

In the perspective of Islamic Business Management, this increase not only signifies better financial performance, but also reflects the implementation of ethical values such as honesty, transparency, and social responsibility. These values are also emphasized in inquiry (Ramadhan et al., 2024). yang concluded that a holistic and ethical marketing strategy derived from Islamic principles is essential to build customer trust and loyalty. Thus, an increase in ethically managed NI not only supports optimal risk management through CKPN, but also strengthens the position of Islamic banks in market competition and makes a positive contribution to society. From the perspective of maqashid syariah, good management of CKPN reflects the principle of protection of property (hifzhul maal), where the Islamic financial system must maintain the stability and economic sustainability of the Ummah. If Islamic banking can manage risks wisely, then public confidence in the Islamic finance industry will increase. Therefore, this study confirms that the post-pandemic economic recovery not only rests on the role of Islamic philanthropy, as explained by (Fuadi, 2022), but also on the optimization of Sharia financial management, especially in the management of Net rewards and reserves for impairment losses.

4.4.3 Influence of BOPO on Impairment Loss Reserve in Islamic Business Management Perspective

The smaller the BoPo value, the bank can manage its business more efficiently by reducing the burden on the income obtained. The operating expenses taken into account in this ratio include costs related to the management of the write-off of productive assets, which are certainly related

to the increase in the CKPN to be formed (D. W. Napisah, 2020). Derived from upshots of inquiry and analysis that has been done that BOPO has a T-statistic value of 0.434 with the value of prob. (significance) of $0.667 > 0.05$ which means that partially the BOPO variable does not have a significant influence on CKPN. This is in line with inquiry Performed by (Pusponingrum & Diana, 2022) which says that BOPO has no influence on CKPN. (Kasir, 2020) revealed that bopo sways ROA. This is contrary to inquiry (Ayu Wulandari et al., 2024) which says that there is no significant influence between BOPO on CKPN. (Prena & Nareswari, 2022) said that BOPO has an influence on ROA but has a negative influence.

In the context of the digitization of Islamic Banking, Inquiry (Pratama & , Muhammad Iqbal Fasa, 2024) shows that the use of technology can be a solution in suppressing BOPO, which can ultimately reduce CKPN. From the perspective of Islamic Business Management, this step is in line with the principles of efficiency, transparency, and benefit, where Islamic banks must remain competitive in the digital age without neglecting the underlying Sharia values. Non-optimal cost management can lead to reduced allocation of funds for productive financing, which ultimately inhibits sharia-based economic growth. Therefore, Islamic banks are required to manage BOPO influenceively in order to maintain financial health and business sustainability in accordance with Sharia principles.

5. Conclusion

This investigation aims to assess the effect of the ratio of expenses to revenues (CIR), net income (NI), and the ratio of operating expenses to operating revenues (BOPO) to impairment reserves (CKPN) on Sharia commercial banks registered with the Financial Services Authority for the period 2019-2023.

The analysis reveals that the CIR variable has a T-statistic of -2.217 and a significance level of 0.0355, which is below 0.05. As a result, H₀ is rejected and H₁ is accepted, demonstrating that CIR has a significant partial impact on CKPN. The Net Income variable shows a T-statistic of -5.542 and a significance value of 0.0000, which is also less than 0.05, leading to the rejection of H₀ and acceptance of H₁, indicating a significant partial influence of NI on CKPN. On the other hand, the Operating Expense to Operating Income Ratio variable has a T-statistic of 0.434 and a significance value of 0.667, which is greater than 0.05, meaning H₀ is accepted and H₁ is rejected, suggesting no significant partial influence of BOPO on CKPN. In conclusion, when considered together, CIR, Net Income, and BOPO significantly influence the impairment loss reserves in Sharia commercial banks registered with the Financial Services Authority during the 2019-2023 period.

From the perspective of Islamic Business Management, this investigation emphasizes the importance of the principles of efficiency, transparency, and benefits. Efficient management of CIR and BOPO is required to control operational costs. The transparency of ckpn reserves reflects the prudence of banks in managing financing risks. Meanwhile, the benefits of directing bank policies are not only oriented to profitability, but also consider the long-term benefits for customers and society. Therefore, the author suggests to apply this principle, Islamic banks can maintain a balance between profit, risk and sustainability in accordance with Islamic economic values.

Author Contributions

Conceptualization: Annisa Anggraini

Data curation: Annisa Anggraini, Is Susanto

Formal analysis: Annisa Anggraini, Fatih Fuadi, Is Susanto

Investigation: Annisa Anggraini

Methodology: Annisa Anggraini

Project administration: Annisa Anggraini

Supervision: Annisa Anggraini

Validation: Annisa Anggraini

Visualization: Annisa Anggraini

Writing – original draft: Annisa Anggraini

Writing – review & editing: Annisa Anggraini, Fatih Fuadi, Is Susanto

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