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The Influence of Financing Diversification and Financial Performance on the Risk of Islamic Commercial Banks in Indonesia

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Abstract

This study aims to examine the influence of financing diversification, which includes six financing contracts of Islamic banks in Indonesia and financial performance on credit risk represented by NPF in Islamic commercial banks using regression panel data in 2018-2022. The results of this study indicate that there is an insignificant positive influence on financing diversification and financial performance partially on credit risk in Islamic banking in Indonesia. However, financing diversification and financial performance together have a significant influence on credit risk, which is currently a concern of the Islamic bank financial services authority in Indonesia. The financial performance measurement indicators in this study only focus on ROA, and this indicator may have limitations in measuring the financial performance of Islamic banking.

Keywords: islamic bank, diversification financing, financing contract, NPF, ROA

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1. Introduction

Islamic banks are financial institutions that serves as intermediaries between fund owners, who have excess funds (surplus), and also parties facing a deficit of funds (Puspitasari, 2018). The activities of Islamic banks are to collect funds from the public and distribute funds to the public. In order to collect funds from the public, Islamic banks use deposit products, such as savings, current accounts and deposits as instruments or tools in collecting funds. Meanwhile, to distribute it, Islamic banks use various financing products, such as financing with *murabahah*, *mudharabah*, *musyarakah* contracts and so on. When channeling or distributing funds to the community, two things might happen, namrly risk and profit. The risk that may be faced is loss in the form of bad credit, while the profit that may be obtained is profit from profit sharing, margin, or *ujrah*. Basically, partnership and project financing (profit-loss sharing or PLS products) is the most preferred form of financing in the Islamic world because resources are pooled, profits are not fixed, losses and profits are shared, as well as the underlying project is economically real. On the other hand, cost-plus sales and leases are comparable to secured loans (like debt). Therefore, the ideal Islamic bank will offer more profit and loss sharing and less leasing and cost-plus sales. When Islamic banks act as investment managers as well as investors, they must have a plan to minimize risk, one way is to diversify financing (Ahyar, 2021).

Unlike diversification in non-financial firms, diversification in the banking industry can create value for shareholders (Ajao and KOKUMO-OYAKHIRE, 2021; Nahda and Rahmadana, 2021; Feng *et al.*, 2022; Okpoa and Damiana, 2023). Increased bank value due to diversification can come from economies of scale (Shun-Ho Chu, Shunping Li, Xueying Xia, Xiaoyu Liu, Jiaxia Li, 2021; Adam *et al.*, 2023). Banks usually benefit from long-term relationships with their customers that help them collect important, diverse, and critical customer information, (Azmi *et al.*, 2019; Khattak *et al.*, 2021), which they can use in shaping portfolios (Lee, Hsieh and Yang, 2014; Boamah, Boakye-Dankwa and Opoku, 2022). However, if the costs of diversification outweigh the benefits, then diversification may lead to more risk. Opponents of bank diversification argue that if banks diversify their activities, (Nataly, Mahadwartha and Utami, 2019; Pham *et al.*, 2021). The bank will experience a decrease in management's comparative advantage, as it will enter business activities outside of its expertise, resulting in inefficiencies, increased competition, and higher agency costs (Phan, Nguyen and Hoang, 2022; Septina, 2022; Addury, 2023). Furthermore, one of the negative impacts of

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diversification depends on the internal mechanisms and regulations that can be implemented to align the interests of bank managers and owners (AlKhouri and Arouri, 2019).

Each type of financing provided by banks has a different risk profile, causing the need for special treatment in carrying out risk control and risk management (Ulfah, 2020; Ab Hamid and Abd Rahman, 2021). The purpose of using different financing can also affect the risk of bad debts. The composition of lending in accordance with the right activities can help reduce the risk of bad debts in banks (Masruroh, 2018; Ihdina Sabilal Haq, 2023). Numerous studies have found that the impact of financing contracts has a high risk on banks, such as (Ilyas, 2015; Arifin, 2017; Moudud-Ul-Huq *et al.*, 2018; Prasetya, Kosjoko and Mufarida, 2022). Conversely, research by (Hidayat, 2017) found that financing can increase NPF.

Return on Asset is an important part of the company because it shows the level of company effectiveness. Return on Asset (ROA) is a ratio for measurement related to the company's ability to generate profits or returns. The higher the ROA means the greater the level of profit achieved by the bank so that the possibility of problematic conditions is smaller (Fatmafuli and Moin, 2022).

This research contributes to the empirical literature in several ways. First, previous research that focuses on non-performing loans in Islamic commercial banks (Roziq and Sumartin, 2021). Second, previous studies measured diversification using the Herfindahl-Hirschman index (HHI) to measure income diversification (Gitahiga, 2020; Pertiwi, S. P., & Suhartini, 2022; Sofianingsih and Fitanto, 2022)., asset diversification and credit diversification, such as research by (Turiastini and Darmayanti, 2017; Nisar *et al.*, 2018; Chen *et al.*, 2018; Sittichobtham, 2019; Asif and Akhter, 2019; Ngoc Nguyen, 2019; Anggraeni, Basuki and Setiawan, 2020; Prastiwi and A. Anik, 2020; Muharam and Bellinda, 2020; Duho, Onumah and Owodo, 2020; Lestari, 2020; Prastiwi and Anik, 2021; Priyadi *et al*, *et al.*, 2021; Benjakik, S., & Habba, 2021; Aditya Kurnia Indrajaya, Stevan Goklas Simanjuntak and Susy Muchtar, 2022; Pramika *et al.*, 2022; Risfandy and Pratiwi, 2022; Yaman and Holle, 2022; Rahmawati and Mardanugraha, 2023). Indeed, there are several empirical studies using financing diversification for banks in Indonesia (Malini, Islahiyah and Suwantono, 2020; Wardina, 2020; Wasiaturrahma *et al.*, 2020; Widarjono and Rudatin, 2021; Ayusaleha and Laila, 2022; Widarjono and Sidiq, 2022). Therefore, it is important that financing diversification can affect the risk of Islamic banking.

2. Literature Review

2.1. NPF

Risk is defined as uncertainty that can cause losses in business and investment activities. Market risk is also part of this risk because it can threaten the existence of Islamic banking both now and in the future. In the context of Islamic banking, financing risk is measured using NPF or financing ratio, which is a parameter of the customer's inability to pay bank financing within a certain period of time. In the calculation system, NPF is measured from the ratio of non-performing financing to total financing with a critical value of more than 5% (Almunawwaroh M., & Marliana, 2018).

2.2. Diversification

Markowitz's theory states that "Don't put all your eggs in one basket" as a diversification strategy. This concept aims to minimize risk for companies that will make investments using investments made by companies that are not focused on one allocation to reduce the possibility of risk occurrence (Ndungu and Muturi, 2019; Baroroh, 2023). Diversification is one of the strategies used by companies to deal with fierce competition and rapid market growth (Halim et al., 2019; Fadli, 2019). Diversification can increase systematic risk, but companies can benefit from increasing the value of the companies they invest in (Sittichobtham, 2019; Duho, Onumah and Owodo, 2020; Muharam and Bellinda, 2020; Benjakik, S., & Habba, 2021); Trinugroho, Risfandy and Ariefianto, 2018).

Financing portfolio diversification is a strategy to spread the financing portfolio that can be carried out by Islamic banks to minimize the risk to Islamic banks (Prastiwi and A. A. Anik, 2020; Huynh and Dang, 2021). This is in accordance with PBI No. 7/3/PBI/2005, which states that Bank Indonesia urges banks in Indonesia to diversify their portfolios (Sittichobtham, 2019; Anggraeni, Basuki and Setiawan, 2020; Lestari, 2020; Quyen et al., 2021). One of the classifications of lending funds in Islamic banks is based on the type of financing contract.

Credit distribution is funding carried out by banks to support planned investments, either carried out by themselves or run by others. The allocation of credit funds has several objectives, namely achieving an adequate level of profitability and a low level of risk, and maintaining public trust by maintaining a safe liquidity position. Thus, financing portfolio diversification is a financing portfolio distribution strategy that can be carried out by Islamic banks to minimize risks to Islamic banks. This is in accordance with PBI No. 7/3/PBI/2005, which states that Bank Indonesia urges banks in Indonesia to diversify their portfolios. One of the classifications of lending funds in Islamic banks is based on the type of contract and the purpose of using financing. Lending based on the type of contract or principle that forms the basis of Islamic bank operations is divided into three types, namely profit sharing contracts, sale and purchase contracts, and leases.

2.2.1. Production Sharing Contract

Profit-sharing contracts are investment contracts that are uncertain and have variable income. The size of the income depends on the results of the business run by the customer. Lending under this contract has a high-risk opportunity. The main reason is because the profit-sharing contract involves the risk of asymmetric information in the form of moral hazard and adverse selection. Islamic banks must have screening tools provided to prospective customers and businesses to be financed to reduce the possibility of this risk and monitor the financed business as a preventive measure. Meanwhile, the advantages of profit-sharing contracts are that the bank will enjoy an increase in profit sharing when the customer's business profits increase and the repayment of the principal is adjusted to the cash flow of the customer's business so as not to burden the customer and minimize the risk of customer default. Various types of lending products based on profit-sharing contracts are as follows:

1) Lending with *Mudharabah* contract

Mudharabah agreement refers to a cooperation agreement between the bank as the owner of funds *(shahibul maal)* and the customer as a business manager with special skills *(mudharib)* (Sudiro, Ahmar and Ardiansyah, 2022). Profits generated from the business will be shared based on a predetermined ratio, while all losses will be borne by the *shahibul maal*. However, if the loss is caused by the negligence of the *mudharib*, the loss will be borne by the *mudharib*.

2) Lending with *Musyarakah* contract

Musyarakah agreement is a cooperation agreement between the bank as the owner of part of the capital and the customer as the manager and owner of part of the capital. In this contract, the bank has the right to participate in the management of the business in accordance with the agreement of both parties, with the bank's right to participate in managing this business, making the potential risk of moral hazard can be minimized. Then, profits and losses will be shared in accordance with the proportion of capital invested. In this contract, Islamic banks can play an active role in business activities and reduce potential risks that will occur such as moral hazard.

3) Lending with *Musyarakah Mutanaqisah* (MMQ) contract

a. *Musyarakah Mutanaqisah* (MMQ) Agreement

The *Musyarakah Mutanaqisah* (MMQ) agreement is one form of product development based on the *Musyarakah* agreement. This is because the risks inherent in the profit sharing agreement are quite high. MMQ is a form of cooperation between Islamic banks and customers related to the ownership of an asset, where this cooperation will reduce the ownership of Islamic banks to full customer ownership along with the payment of capital repayment installments and rental prices to Islamic banks.

b. Contracts Receivable/Payable

Loan disbursement based on receivables contracts is done because of the transfer of goods ownership. The level of profit earned by the bank is part of the price of the goods sold, so it is determined in advance. Receivables have a fixed rate of return because the profit margin of the profit percentage is determined at the beginning of the contract. Once the price is set, the amount must be paid by the customer, the price may not change until the contract ends, so when the economic conditions of the customer's economic conditions deteriorate, the risk of default will be higher.

Various types of lending products based on receivables/account contracts are as follows:

– Lending with *Murabahah* contract

The *murabahah* agreement is a sale and purchase agreement for goods at the cost price plus the agreed profit margin. The bank buys the goods ordered by the customer and sells them to the customer. The selling price given by the bank is the purchase price from the supplier plus the agreed profit.

– Lending with *Salam* contract

Salam contract is a sale and purchase contract for a commodity where payment for the goods is made at the time of the contract, while the goods will be given later according to the agreed period.

– Lending with *Istishna'* contract

Istishna' is a sale and purchase contract in the form of manufacturing certain goods with certain criteria and requirements agreed between the buyer and the seller/producer. Then, payment for the goods can be made at the beginning, in the middle, or at the end of the order.

c. Lease Contract

A leasing contract is an agreement to transfer the right to use benefits or use rights. Leasing contracts are similar to leasing in conventional banks because both involve the transfer of benefits between the two parties, but the difference lies in the object of the difference is that the object of leasing in Islamic banks does not allow buying and selling because there is an element of *gharar* in it. This contract has a fixed rate of return because the percentage of profit margin has been determined at the beginning of the contract. The risk in this contract is when the bank sells the leased asset and the selling value is not as expected, causing the bank to not return the capital provided. If there are indications of congestion in this contract, the steps taken by Islamic banks are to review the rental price using the floating rental rate approach. This can be able to minimize the possibility of the risk of congestion. The types of credit distribution products based on leasing-based credit distribution products are as follows:

– Loan disbursement with *Ijarah* contract

Ijarah agreement is a contract for the transfer of rights to use or services through payment of rental fees without being followed by the transfer of ownership of the goods themselves. The benefit of the goods in question is only limited to use, the goods are not changed or destroyed.

– Lending with *Ijarah Muntahiyya Bittamlik* (IMBT) contract

a) *Ijarah Muntahiyya Bittamlik* (IMBT) Contract

Ijarah Muntahiyya Bittamlik (IMBT) is a lease contract for an item which at the end of the lease period becomes the property of the lessee. However, the ownership transfer contract can only be done after the end of the *ijarah* period and the promise to transfer ownership *(wa'ad)* agreed upon at the beginning is not legally binding. The risk in this contract is if the payment is made using the balloon payment method, so that it can pose a risk of inability to pay.

2.3. ROA

Return On Assets (ROA) is a ratio used to measure the company's management ability to obtain overall profit (profit) (Susamto, Octavio and Wardani, 2020). The greater the Return On Assets (ROA) of a company, the greater the level of profit achieved by the company and the better in terms of asset utilization the company's position will look better (Kurniawan, 2022). ROA is used to measure the efficiency and effectiveness of the use of company assets to obtain profit. A good ROA indicates that the company has a good future and is able to develop over a long period of time.

2.4. Hypothesis

2.4.1. Financing Diversification on Bad Debt Risk

Credit distribution based on the type of contract is divided into three types, namely profit sharing contracts, receivables/payables, and leases. According to (Muhammad, 2016), profit-sharing contracts have several risks because the bank does not participate in the management of the company and does not supervise the business being financed, so there is an asymmetric risk of information in the form of moral hazard and adverse selection. Furthermore, according to (Wahyudi, 2013) receivables/acceptable have a certain rate of return because the percentage of profit margin has been stated at the beginning of the contract and there is no possibility of price changes until the contract ends, so that if the customer's economic condition decreases, the risk of congestion will be higher.

Meanwhile, the risk of a lease contract is when the bank sells the leased asset, then the sale value of the asset does not match the estimate, which will cause the bank to not be able to return the capital provided. This shows that each contract has inherent risks, so it is necessary to diversify the financing portfolio to minimize the possibility of bad credit. This is in accordance with what was stated by (Adzobu, et al. (2017) that several factors can affect the level of credit problems, one of which is the composition of the financing portfolio that plays an important role as an indicator of the risk profile faced by the bank and when the risk of Islamic banks increases, it is better to diversify into Islamic instruments.

Financing diversification shows how Islamic banks diversify their financing into many different contracts to reduce financing risk. A high HHIF indicates that Islamic banks' financing is concentrated and otherwise financing is diversified, so our study expects the relationship between financing diversification and NPF to be positive.

H1: Diversification of the financing portfolio based on the type of contract has a negative influence on the risk of bad credit.

2.4.2. The Influence of Return on Asset on Non Performing Financing

ROA is the ratio of the company's ability to earn profits from the use of assets (Utami and Nabhan, 2022). A high level of ROA reflects the greater profit received by the bank. The large profits earned by the bank mean that the bank has a lot of reserve funds that can be used to facilitate overcoming risks, namely facing problematic financing conditions so that the NPF level is reduced. In research Purnamasari and Musdholifah (2018) explained that the ROA variable has an effect on NPF. These findings are in line with research by Ningrum, Samrotun and Suhendro (2020). A high Return on Asset (ROA) illustrates that the bank has managed to get a good profit and the value of Non Performing Financing (NPF) at the bank can be reduced. Based on the explanation above, the following hypothesis can be drawn:

H2: Return on Asset affects Non-Performing Financing

3. Research Method and Materials

This study used the population of Islamic Commercial Banks registered with the Financial Services Authority. While the sample in this study used purposive sampling technique with the criteria of Islamic banks that publish financial reports from 2018-2022 in full. This technique was chosen because not all Islamic banks publish complete financial reports on the web www.ojk.go.id. Thus, the sample in this study amounted to 6 (six) Islamic banks, namely Bank Aceh Syariah, Bank Jabar-Banten Syariah, Bank Mega Syariah, Bank Muamalat, Bank NTB Syariah, Bank Panin Syariah. This research data employed secondary data. In panel form with the period 2018-2022. The operational definition of variables is the method used to measure a variable. The following are the variable measurements in this study:

a) The dependent variable in this study is NPF. This is the ability of bank management to manage problematic financing that occurs in the bank.

b) Independent variable

The independent variables used include diversification proxied by diversification of financing based on contracts and profitability proxied by a ratio that reflects the company's capacity to manage assets to create net profit, namely ROA. Based on previous research, the measurement of each variable shown on Table 1.

Table 1. Operational Variables

No.	Variables	Measurement
1	Financing Diversification	FIN= 1- HHI FIN = 1- $\left(\left(\frac{Murabahah}{Total\ Pembiayaan}\right)^2 + \left(\frac{Salam}{Total\ Pembiayaan}\right)^2 + \left(\frac{Istishan}{Total\ Pembiayaan}\right)^2 + \left(\frac{Mudharabah}{Total\ Pembiayaan}\right)^2 + \left(\frac{Musyarakah}{Total\ Pembiayaan}\right)^2 + \left(\frac{Ijarah}{Total\ Pembiayaan}\right)^2\right)$
2	ROA	$\left(\frac{Laba\ Bersih\ setelah\ pajak}{Total\ Aset}\right)$ _100 %
3	NPF	$\left(\frac{Pembiayaan\ Bermasalah}{Total\ Pembiayaan}\right)$

This study uses the panel data regression analysis method, which analyzes a combination of time series data and cross data using the Eviews 10 analysis tool. The regression equation model in this study:

$$NPF=\beta0+\beta_1\ FIN+\beta_2\ ROA+e$$

Description:

NPF : ratio of non-performing financing to total financing
β0 : constant

β_1, β_2 : regression coefficient
FIN : level of financing diversification based on contract
ROA : ratio of total profit after tax to total assets
e : error

4. Results

4.1. Descriptive Statistics

	NPF	FIN	ROA
Mean	1.429333	0.371203	0.996333
Median	1.170000	0.395935	1.050000
Maximum	4.300000	0.559784	4.080000
Minimum	0.030000	0.108808	-6.720000
Std. Dev.	1.233925	0.149963	1.772192
Skewness	0.784103	-0.380136	-2.634917
Kurtosis	2.753076	1.734691	13.25421

Figure 1. Descriptive Statistics Results
Source: E-views 10 Processed Data, 2023

Based on the table above, the average differentiation of BUS financing in Indonesia projected with FIN is 37%, which means that financing is quite diversified. The maximum value of FIN is at Bank Muamalat in 2020 of 55,97%, which is very diversified, while the minimum value is at Bank Aceh Syariah in 2018 of 10,88%, meaning that financing at the bank is not diversified.

Based on the table above, the average risk of BUS financing in Indonesia projected by NPF is 142%, which means high risk financing. The maximum NPF value is at Bank Muamalat in 2019 of 430%, which is very high risk, while the minimum value is at Bank Aceh Syarih in 2021 of 3%, meaning that financing at the bank is not at risk.

4.2. Panel Data Regression Model Estimation Results

Determining the most suitable panel data regression model was done through 2 (two) tests, namely the chow test and the hausman test. The results of the three tests are shown below:

a. Chow Test Results

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section and period fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	4.538229	(5,18)	0.0075
Cross-section Chi-square	24.469163	5	0.0002
Period F	3.287738	(4,18)	0.0345
Period Chi-square	16.454192	4	0.0025
Cross-Section/Period F	4.519167	(9,18)	0.0032
Cross-Section/Period Chi-square	35.447981	9	0.0000

Figure 2. Chow Test Results
Source: E-views 10 Processed Data, 2023

Based on the chow test results, it is known that the prob value is 0.0075 and 0.0002, so H1 is accepted, so the FEM TEST is appropriate.

b. Hausman Test Results

Based on the Hausman test results, it is known that the prob value of 0.001 is smaller than 0.05, so H1 is accepted. Then, the FEM is appropriate. Therefore, the Lagrange Multiplier (LM) test is not continued.

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	17.904784	2	0.0001

Figure 3. Hausman Test Results
Source: E-Views 10 Processed Data, 2023

c. *Classical Assumption Model*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.288642	0.895212	0.322428	0.7508
FIN	2.826931	2.430508	1.163103	0.2600
ROA	0.091663	0.117796	0.778150	0.4466

Figure 4. Hypothesis Test Results
Source: E-views 10 processed data, 2023

Based on figure 4, the research model can be described as follows:

NPF= 0,28 +2,82 FIN+0,09 ROA.

Based on the Figure 4, it is known that the constant value coefficient has a positive value of 0,288. This positive sign indicates that the influence is in the same direction between the dependent variable and the independent variable. This shows that the FIN and ROA variables are 75%, then the NPF value is 28%. The coefficient (slope) of the FIN variable is 2.82, which means it has a positive value, indicating that if the financing differentiation increases by 26%, the credit risk will increase by 282%. While the coefficient of the ROA variable is 0,09 which has a positive value. This indicates that an increase in profitability will increase credit risk by 44%.

d. *R^2 Test (Coefficient of Determination)*

R-squared	0.742270
Adjusted R-squared	0.584769

Figure 5. Test Results of the Coefficient of Determination
Source: Eviews 10 Processed Data, 2023

Based on the R-Square value, it shows a value of 0.74. This shows that only the level of variation of the dependent variables, namely FIN and ROA, can be explained by credit risk by 74.22%. The remaining 25.78 is explained by other variables in the model.

e. *F-Simultaneous Test*

Simultaneous test is used to prove that the independent variables together or simultaneously affect the dependent variable. The results of the F test shown Figure 6.

F-statistic	4.712787
Prob(F-statistic)	0.001874

Figure 6. F Test Results
Source: Eviews 10 Processed Data, 2023

It is known that the Prob (F-Statistic) value for the regression model with the dependent variable FIN and ROA is = 0.000. The probability value is smaller than 0,05. This shows that the coefficient obtained is equal to zero, so the alternative hypothesis is accepted, which means that the independent variables together have a significant effect on credit risk.

f. Partial T-Test

The use of the t-test aims to show that the impact of the independent variable on the dependent variable individually. The results of the t-test are in the table below:

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.288642	0.895212	0.322428	0.7508
FIN	2.826931	2.430508	1.163103	0.2600
ROA	0.091663	0.117796	0.778150	0.4466

Figure 7. Partial T-Test Results
Source: Eviews 10 processed data, 2023

Based on the T test results, it shows that the financing diversification variable (FIN) has no significant influence with a positive direction, considering from the probability value/credit risk greater than the significance level (0,26> 0,05) with a regression coefficient of 2,82. This shows that when the level of financing diversification increases, it will increase credit risk by 282%. The probability value of ROA is 0,44. This indicates that the probability value of ROA is greater than 0,05, which means that ROA has no partially significant influence on NPF.

4.3. Discussion

Diversification is the activity of distributing productive assets not only in the form of credit, but also securities, placements with other banks, credit, income, assets, and contracts. The results of this study prove that financing diversification has a positive and insignificant influence on NPF and contradicts Markowitz portfolio theory and agency theory, which state that management diversifies in order to increase credit risk to avoid financial stress. From the management point of view, the level of diversity of financing products affects management performance, as (Iskandar, 2002), that management will find it easier to manage the bank's business if the level of product diversity and type of business is low. This is because the increasing diversity of financing products makes the monitoring of financing that must be carried out by management extensive, making the agency costs increase. The increase in the cost of providing funds and agency costs that must be incurred by the bank reduces the portion of profit earned by the bank. In addition, financing based on contracts is a binding and long-term activity. Therefore, the more diverse financing means that the volume of financing provided by banks is large with a long repayment period. This increases the potential for customer default during the contract period. Thus, it can be concluded that the existence of financing diversification increases risk. The results of this study are in line with research (Baroroh, 2023); (Widarjono and Rudatin, 2021); (Junaeni et al., 2023), which found that financing diversification has an influence on NPF in Islamic banking. Similar to the results of this study, diversification can be used as an increase in bank credit risk. Wardina (2020) found that financing diversification has no effect on bank risk.

ROA has a positive and insignificant inflience on NPF, meaning that the high and low level of NPF is not due to the level of ROA. ROA is a tool to measure a company in converting money used to buy assets into net income in its operations. ROA functions for the level of efficiency of a company with competing companies in the same industry so that it will know the weaknesses and strengths of the company. These results are in accordance with research from Sudarsono (2018), which shows that ROA in the long term has no significant influence on NPF. Meanwhile, the results of this study contradict with the research by (Purnamasari and Musdholifah, 2018; Ningrum, Samrotun and Suhendro, 2020)

5. Conclusion

For Conclusions, the main conclusions of the study indicate that there is an insignificant positive influence on financing diversification and financial performance partially on credit risk in Islamic banking in Indonesia. However, financing diversification and financial performance together have a significant influence on credit risk, which is currently a concern of the Islamic bank financial services authority in Indonesia. The financial performance measurement indicators in this study only focus on ROA, and this indicator may have limitations in measuring the financial performance of Islamic banking.

References

Ab Hamid, N.A. and Abd Rahman, M.J. (2021) 'Institut Pengajian Tinggi students' acceptance of online learning: a review in the Muallim area of Perak', *Jurnal Dunia Pendidikan,* 3(2), pp. 164-173. Available at: http://myjms.mohe.gov.my/index.php/jdpd.

Adam, C. *et al.* (2023) 'Evidence of Diversification and Leverage in the Performance of Brazilian and Mexican Family Businesses', *Latin American Research Review*, 58(4), pp. 892-907. Available at: https://doi.org/10.1017/lar.2023.10.

Addury, M.M. (2023) 'Do financing models in Islamic banks affect profitability? Evidence from Indonesia and Malaysia', *Journal of Islamic Economics Lariba*, 9(1), pp. 79-96. Available at: https://doi.org/10.20885/jielariba.vol9.iss1.art5.

Aditya Kurnia Indrajaya, Stevan Goklas Simanjuntak and Susy Muchtar (2022) 'Bank Risk, Profitability, and Investment Diversification: A Study of Banking Companies in Indonesia', *Journal of Economics*, 27(1), pp. 64-79. Available at: https://doi.org/10.24912/je.v27i1.855.

Ahyar, M.K. (2021) 'The Effects of Economic Sector Financing Diversification on Profitability and Risk of Islamic Banks in Indonesia', *JPS (Journal of Islamic Banking)*, 2(2), pp. 197-211. Available at: https://doi.org/10.46367/jps.v2i2.388.

Ajao, M.G. and KOKUMO-OYAKHIRE, G.A. (2021) 'Corporate Diversification and Financial Performance of Conglomerate Firms in Nigeria', *Journal of Business Studies and Management Review*, 5(1), pp. 91-101. Available at: https://doi.org/10.22437/jbsmr.v5i1.16665.

AlKhouri, R. and Arouri, H. (2019) 'The effect of diversification on risk and return in banking sector: Evidence from the Gulf Cooperation Council countries', *International Journal of Managerial Finance*, 15(1), pp. 100-128. Available at: https://doi.org/10.1108/IJMF-01-2018-0024.

Almunawwaroh M., & Marliana, R. (2018) 'Pengarug CAR, NPF, FDR, to the Profitability of Islamic Banks in Indonesia', *Amwaluna: Journal of Islamic Economics and Finance* [Preprint].

Anggraeni, Basuki and Setiawan, R. (2020) 'Diversification, Bank Risk, and Efficiency on Sharia Banking in Indonesia'. Available at: https://doi.org/10.2991/aebmr.k.200127.042.

Arifin, J. (2017) 'SPSS 24 for Research and Thesis', *PT Gramedia*, p. 79.

Asif, R. and Akhter, W. (2019) 'Exploring the influence of revenue diversification on financial performance in the banking industry: A systematic literature review', *Qualitative Research in Financial Markets*, 11(3), pp. 305-327. Available at: https://doi.org/10.1108/QRFM-04-2018-0057.

Ayusaleha, A. and Laila, N. (2022) 'Diversifications, Bank Characteristics, and Profitability of Sharia Commercial Banks in Indonesia', *Journal of Islamic Economics Theory and Application*, 9(3), pp. 299-309.

Azmi, W. *et al.* (2019) 'Intricacies of competition, stability, and diversification: Evidence from dual banking economies', *Economic Modeling*, 83, pp. 111-126. Available at: https://doi.org/10.1016/j.econmod.2019.02.002.

Baroroh, H. (2023) 'Activity Diversification, Performance, and Profitability in Islamic Banking', *JIET (Scientific Journal of Islamic Economics)*, 9(02), pp. 1920-1927.

Benjakik, S., & Habba, B. (2021) 'Income Diversification and Bank Performance: Does Bank Size Matter? Empirical Evidence from African Banking Sector', *Research Journal of Finance and Accounting* [Preprint]. Available at: https://doi.org/10.7176/rjfa/12-16-03.

Boamah, N.A., Boakye-Dankwa, A. and Opoku, E. (2022) 'Risk-taking behavior, competition, diversification and performance of frontier and emerging economy banks', *Asian Journal of Economics and Banking*, 6(1), pp. 50-68. Available at: https://doi.org/10.1108/ajeb-04-2021-0047.

Chen, C.J. *et al.* (2018) 'How business strategy in non-financial firms moderates the curvilinear effects of corporate social responsibility and irresponsibility on corporate financial performance', *Journal of Business Research*, 92, pp. 154-167. Available at: https://doi.org/10.1016/j.jbusres.2018.07.030.

Duho, K.C.T., Onumah, J.M. and Owodo, R.A. (2020) 'Bank diversification and performance in an emerging market', *International Journal of Managerial Finance*, 16(1), pp. 120-138. Available at: https://doi.org/10.1108/IJMF-04-2019-0137.

Fadli, J.A. (2019) 'Should Banks Diversify Their Income and Credit? Evidence From Indonesia Banking Industry', *Kinerja*, 23(1), pp. 28-41. Available at: https://doi.org/10.24002/kinerja.v23i1.2124.

Fatmafuli, E. and Moin, A. (2022) 'The Effect of Return on Assets, Operating Costs and Operating Income, and Financing to Deposit Ratio on Non Performing Financing in Islamic Banks with Financial Constraints as Moderating Variables', *Selekta Manajemen: Journal of Business & Management Students*, 01(01), pp. 248-269. Available at: https://journal.uii.ac.id/selma/index.

Feng, Y. *et al.* (2022) 'Diversification and financialization of non-financial corporations: Evidence from China', *Emerging Markets Review*, 50. Available at: https://doi.org/10.1016/j.ememar.2021.100834.

Gitahiga, P.N. (2020) 'Reveneu Diversification and Quality of loan portoflio', *Jornal of Economics and Management*, pp. 5-19.

Halim, A. *et al.* (2019) 'The Effect of Diversification Strategy on Efficiency in Manufacturing Companies Listed on the Indonesia Stock Exchange', *Indonesian Accounting and Finance Studies*, 2(2), pp. 149-176. Available at: https://doi.org/10.21632/saki.2.2.149-176.

Huynh, J. and Dang, V.D. (2021) 'Loan portfolio diversification and bank returns: Do business models and market power matter?', *Cogent Economics and Finance*, 9(1). Available at: https://doi.org/10.1080/23322039.2021.1891709.

Ihdina Sabilal Haq (2023) 'the Effect of Credit Portfolio Diversification Strategy on the Risk of Bad Credit in Indonesian Islamic Banking for 2018-2022 Period', *J-EBIS (Journal of Economics and Islamic Business)* [Preprint]. Available at: https://doi.org/10.32505/j-ebis.vi0.5560.

Ilyas, R. (2015) 'The Concept of Financing in Islamic Banking', *Research Journal*, 2.

Junaeni, I. *et al.* (2023) 'Efforts To Increase the Growth of Islamic Bank Financing By Diversifying the Right Financing Types', *International Journal of Professional Business Review*, 8(4). Available at: https://doi.org/10.26668/businessreview/2023.v8i4.1011.

Khattak, M.A. *et al.* (2021) 'Competition, diversification, and stability in the Indonesian banking system', *Bulletin of Monetary Economics and Banking*, 24, pp. 59-88. Available at: https://doi.org/10.21098/BEMP.V24I0.1481.

Kurniawan, H. (2022) 'Analysis of factors affecting the financial performance of Islamic Commercial Banks', *Journal of Accounting and Digital Finance*, 2(1), pp. 16-30. Available at: https://doi.org/10.53088/jadfi.v2i1.320.

Lee, C.C., Hsieh, M.F. and Yang, S.J. (2014) 'The relationship between revenue diversification and bank performance: Do financial structures and financial reforms matterα', *Japan and the World Economy*, 29, pp. 18-35. Available at: https://doi.org/10.1016/j.japwor.2013.11.002.

Lestari, W.A. (2020) 'Diversification of Financing as an Effort to Increase Profitability at Islamic Commercial Banks in Indonesia', *Iqtishaduna*, 11(1), pp. 37-58. Available at: https://doi.org/10.20414/iqtishaduna.v11i1.1131.

Malini, H., Islahiyah, D. and Suwantono, E. (2020) 'Integration and Portfolio Diversification of Islamic Banking in ASEAN Emerging Countries', *Proceedings of the Annual Academic Seminar on Economics and Development Studies*, pp. 978-602.

Masruroh, M. (2018) 'Financing Diversification as an Effort to Increase Profitability in Islamic Banks', *Al-Tijary*, 3(2), p. 117. Available at: https://doi.org/10.21093/at.v3i2.1102.

Moudud-Ul-Huq, S. *et al.* (2018) 'Does bank diversification heterogeneously affect performance and risk-taking in ASEAN emerging economies?', *Research in International Business and Finance*, 46, pp. 342-362. Available at: https://doi.org/10.1016/j.ribaf.2018.04.007.

Muharam, H. and Bellinda, B. (2020) 'Income Diversification, Bank Performance, and the Moderating Role of Ownership Type', *Strategic Business Journal*, 29(1), pp. 68-79. Available at: https://doi.org/10.14710/jbs.29.1.68-79.

Nahda, K. and Rahmadana, A.L. (2021) 'Diversification Strategy and Good Governance: Does It Affect Firm's Leverage?', *Journal of Finance and Banking*, 25(3), pp. 599-616. Available at:

https://doi.org/10.26905/jkdp.v25i3.5758.

Nataly, Mahadwartha, P.A. and Utami, M. (2019) 'The Effect of Risk and Diversification on Profitability in Foreign Exchange Banks Listed on the Indonesia Stock Exchange for the Period 2012-2016', *Calyptra: Scientific Journal of Surabaya University Students*, 7(2).

Ndungu, J.G. and Muturi, W. (2019) 'Effect of Diversification on Financial Performance of Commercial Banks in Kenya', *International Journal of Current Aspects*, 3(V), pp. 267-285. Available at: https://doi.org/10.35942/ijcab.v3iv.67.

Ngoc Nguyen, K. (2019) 'Revenue Diversification, Risk and Bank Performance of Vietnamese Commercial Banks', *Journal of Risk and Financial Management*, 12(3). Available at: https://doi.org/10.3390/jrfm12030138.

Ningrum, E.P., Samrotun, Y.C. and Suhendro, S. (2020) 'Non Performing Financing in Islamic Commercial Banks in Indonesia', *Journal of Development Economics STIE Muhammadiyah Palopo*, 5(2). Available at: https://doi.org/10.35906/jep01.v5i2.422.

Nisar, S. *et al.* (2018) 'The impact of revenue diversification on bank profitability and stability: Empirical evidence from south asian countries', *International Journal of Financial Studies*, 6(2). Available at: https://doi.org/10.3390/ijfs6020040.

Okpoa, A.G. and Damiana, O.E. (2023) 'Corporate Diversification and Firm Performance: Evidence from the Nigerian Banking Sector', *Journal of Technology Management and Business*, 10(1). Available at: https://doi.org/10.30880/jtmb.2023.10.01.006.

Pertiwi, S. P., & Suhartini, D. (2022) 'The Effect of Revenue Diversification, Intellectual Capital, and Risk Management Disclosure on Firm Value: Empirical Study on Conventional Commercial Banks Listed on the Indonesia Stock Exchange 2015-2020. Fair Value:', *Scientific Journal of Accounting and Finance*, 5((02)), pp. 1082-1094.

Pham, K.D. *et al.* (2021) 'Financial crisis and diversification strategies: The impact on bank risk, and performance', *Economics and Business Letters*, 10(3), pp. 249-261. Available at: https://doi.org/10.17811/ebl.10.3.2021.249-261.

Phan, D.T., Nguyen, T.T. and Hoang, T.T. (2022) 'Impact of income diversification on the business performance of Vietnamese commercial banks', *Cogent Business and Management*, 9(1). Available at: https://doi.org/10.1080/23311975.2022.2132592.

Pramika, M. *et al.* (2022) 'Income Diversification, Performance and Risk in Indonesian Islamic Banks for the Period 2009-2018', *Alkasb: Journal of Islamic Economics*, 1(June), pp. 20-42. Available at: https://jurnal.instika.ac.id/index.php/alkasb/article/view/273%0Ahttps://jurnal.instika.ac.id/index.php/alkasb/article/download/273/174.

Prasetya, I.E., Kosjoko, K. and Mufarida, N.A. (2022) 'Effect of Electric Current Variation and Weld Seam on Tensile Strength and Microstructure of Tig Weld Joints on Aluminum Alloy 6061', *Elements: Journal of Mechanical Engineering*, 9(1), pp. 14-23. Available at: https://doi.org/10.34128/je.v9i1.187.

Prastiwi, I.E. and Anik, A. (2020) 'The Impact of Credit Diversification on Credit Risk and Performance of Indonesian Banks', *Global Review of Islamic Economics and Business*, 8(1), p. 013. Available at: https://doi.org/10.14421/grieb.2020.081-02.

Prastiwi, I.E. and Anik, A. (2021) 'Financing Diversification and Profitability of Islamic Banking in Indonesia', *Journal of Accounting and Tax*, 21(02). Available at: https://doi.org/10.29040/jap.v21i02.1817.

Prastiwi, I.E. and Anik, A.A. (2020) 'Credit Diversification, Monitoring, and Banking Performance in Indonesia', *Scientific Journal of Islamic Economics*, 6(1). Available at: https://doi.org/10.29040/jiei.v6i1.775.

Priyadi, U. *et al.* (2021) 'Determinants of credit risk of Indonesian Sharīʿah rural banks', *ISRA International Journal of Islamic Finance*, 13(3), pp. 284-301. Available at: https://doi.org/10.1108/IJIF-09-2019-0134.

Purnamasari, A.E. and Musdholifah, M. (2018) 'Analysis of External and Internal Bank Factors on Financing Risk of Islamic Commercial Banks in Indonesia for the Period 2012-2015', *BISMA (Business and Management)*, 9(1), p. 13. Available at: https://doi.org/10.26740/bisma.v9n1.p13-25.

Puspitasari, N. (2018) *Islamic Finance Theory and Practice*. Yogyakarta: UII Press.

Quyen, P.G. *et al.* (2021) 'Income Diversification and Financial Performance: The Mediating Effect of Banks' Size, Ownership Structure and the Financial Crisis in Vietnam', *Journal of Accounting and Investment*, 22(2). Available at: https://doi.org/10.18196/jai.v22i2.10775.

Rahmawati, D. and Mardanugraha, E. (2023) 'Impact Analysis of Income Diversification on Banking Profitability Case Study of Banking in Indonesia IMPACT ANALYSIS OF INCOME DIVERSIFICATION ON BANKING PROFITABILITY CASE STUDY OF BANKING IN INDONESIA-NonCommercial 4.0 International License (CC BY-NC 4.0)', *Journal of Economics*, 12(02), p. 2023. Available at: http://ejournal.seaninstitute.or.id/index.php/Ekonomi.

Risfandy, T. and Pratiwi, D.I. (2022) 'The Performance of Indonesian Islamic Rural Banks During Covid-19 Outbreak: the Role of Diversification', *Journal of Islamic Monetary Economics and Finance*, 8(3), pp. 455-470. Available at: https://doi.org/10.21098/jimf.v8i3.1564.

Roziq, A. and Sumartin, D.P. (2021) 'Capital, Effeciency, NPF and Profitability: Sharia Banks In Indonesia', *International Journal of Management* [Preprint].

Septina, F. (2022) 'Leverage, Product Diversification, and Performance of Life Insurance Companies in Indonesia', *Peer-Reviewed Article Journal of Finance and Banking*, 26, pp. 2443-2687.

Shun-Ho Chu, Shunping Li, Xueying Xia, Xiaoyu Liu, Jiaxia Li, S.Z. (2021) 'Bank Diversification and Performance: The Role of Financial Stability', *Advances in Economics, Business and Management Research*, 178(Icemed), pp. 38-43.

Sittichobtham, M.K. (2019) 'How does loan portfolio diversification affect bank profitability?', *Chulalongkorn University* [Preprint].

Sofianingsih, R. and Fitanto, B. (2022) 'The Effect of Income Diversification, Bopo and Carter on Banking Profitability During the Covid-19 Pandemic', *Contemporary Studies in Economic, FINANCE AND BANKING*, 1(2), pp. 333-344. Available at: https://csefb.ub.ac.id/index.php/csefb/article/view/12.

Sudiro, B.A., Ahmar, N. and Ardiansyah (2022) 'Murabahah Financing, Musyarakah, Mudharabah, Istishna and Ijarah Against Sharia Banking Profit Sharing', *JFBA: Journal of Financial and Behavioural Accounting*, 2(2), pp. 40-49. Available at: https://doi.org/10.33830/jfba.v2i2.4182.2022.

Susamto, A.A., Octavio, D.Q. and Wardani, D.T.K. (2020) 'Comparing Credit Risk in Islamic and Conventional Banking Using Bank-Level Panel Data', *Economica: Journal of Islamic Economics*, 11(2), pp. 235-262. Available at: https://doi.org/10.21580/economica.2020.11.2.5027.

Trinugroho, I., Risfandy, T. and Ariefianto, M.D. (2018) 'Competition, diversification, and bank margins: Evidence from Indonesian Islamic rural banks', *Borsa Istanbul Review*, 18(4), pp. 349-358. Available at: https://doi.org/10.1016/j.bir.2018.07.006.

Turiastini, M. and Darmayanti, N.P.A. (2017) 'The Effect of Diversification and Business Risk on the Financial Performance of Miscellaneous Industry Sector Companies in Bei', *E-Journal of Management, Udayana University*, 7(1), p. 251. Available at: https://doi.org/10.24843/EJMUNUD.2018.v7.i01.p10.

Ulfah, S. (2020) 'Understand 5 PAUD Learning Methods before sending your child to school', *Popmama.Com*, p. 1. Available at: https://www.popmama.com/kid/1-3-years-old/sarrah-ulfah/metode-pembelajaran-paud-sebelum-menyekolahkan-anak/5.

Utami, R.A. and Nabhan, F. (2022) 'The important role of bank efficiency in mediating the effect of income diversification and bank liquidity on bank performance', *Journal of Accounting and Digital Finance*, 2(2), pp. 72-85. Available at: https://doi.org/10.53088/jadfi.v2i2.48.

Wardina, T.D. (2020) 'Impact of Financing Diversification on Islamic Bank Credit Risk', *Journal of Islamic Economics Theory and Applied*, pp. 140-155.

Wasiaturrahma *et al.* (2020) 'Financial performance of rural banks in Indonesia: A two-stage DEA approach', *Heliyon*, 6(7). Available at: https://doi.org/10.1016/j.heliyon.2020.e04390.

Widarjono, A. and Rudatin, A. (2021) 'Financing diversification and Indonesian Islamic bank's non-performing financing', *Journal of Islamic Economics & Finance*, 7(1), pp. 45-58. Available at: https://doi.org/10.20885/jeki.vol7.iss1.art4.

Widarjono, A. and Sidiq, S.S. (2022) 'the Sectoral Financing Diversification and the Profitability of Islamic Banking in Indonesia', *Journal of Islamic Economics and Business*, 8(2), pp. 201-219. Available at: https://doi.org/10.20473/jebis.v8i2.36316.

Yaman, A. and Holle, M.H. (2022) 'Funding Diversification: Impact on the Performance of Islamic Commercial Banks in Indonesia', *El-Qist: Journal of Islamic Economics and Business (JIEB)*, 12(1), pp. 96-110. Available at: https://doi.org/10.15642/elqist.2022.12.1.96-110.