

# Sharia financing products and the performance of sharia commercial banks – the evidence from Indonesia

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Submitted: 9 June 2021. Accepted: 6 September 2022.

#### **Abstract**

This study aims to examine whether the financing products in sharia commercial banks will affect financial performance if moderated by NPF. The analytical method used in this study is MRA based on data obtained from audited annual reports of each sharia commercial bank in Indonesia in 2014–2018. The results showed that mudarabah, musyarakah, and ijarah had a positive effect on financial performance, while murabahah had no effect. NPF as a moderating variable is proven to be able to weaken the effect of mudaraba and ijarah, strengthen murabahah, but doesn't moderate the effect of musyarakah. The implication is that it can be used as a basis for determining policy procedures and standards for lending, especially in mudarabah and ijarah. However, in murabahah NPF is actually beneficial because the assets will be returned to the bank if the customer is unable to repay the loan during the period specified in the contract.

**Keywords:** sharia financing products, non-performing financing, financial performance, Islamicity Performance Indexes, sharia commercial banks

JEL: G2, G23, G29

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#### 1. Introduction

Sharia banking is banking in accordance with Islamic principles and value systems that have been regulated and stipulated in Islamic sharia (Said, Ahmad, Javaid 2008). Every Islamic financial transaction must be free of interest, gambling and gharar (Schoon 2016). In addition, sharia banking operations are also supported by good governance and risk management rules so that they can develop rapidly. An increase in the number of banks and sharia commercial bank offices in Indonesia shows that the sharia commercial bank is a financial institution that is in high demand and trusted by the public, to save and manage its money both as an alternative investment and a source of financing.

To maintain customer confidence, sharia banking in general must improve its financial performance. The performance measurement of a sharia commercial bank, as a sharia financial institution, should not only focus on profit, which is reflected in the ROE, ROA, EPS, etc., but also reflects the performance in accordance with shariah compliance. To realize this trust, sharia bank performance measurements must be made to the financial statements that are built on the basis of Islamic values (Meilani, Andraeny, Rahmayati 2014).

Indonesia and Malaysia have in common that most of the population is Muslim. Malaysia established the first Islamic bank in 1983, namely Bank Islam Malaysia Berhad. After that, the Islamic banking system in Malaysia has developed very well. The development of Islamic banking, which continues to show a positive trend, also occurs in Malaysia with the third highest total of Islamic banking assets in the world in 2017 (Thomson Reuters 2018). The reason why Malaysia has become a pro player or trusted player in Islamic banking is due to the rapid growth in the number of banks, products, and capital. Currently, Indonesia can be said to be able to compete with Malaysia in winning the first position in the Islamic banking market in Southeast Asia, which was previously always in the hands of Malaysia. Almost a decade after the establishment of the Malaysian Islamic bank, Indonesia also started the Islamic banking industry in 1992 by establishing the Bank Muamalat Indonesia (BMI). However, the product and capital growth of Islamic banking in Indonesia is rather slow when compared to Malaysia. This contrasts with the fact that 90% of Indonesia's population is Muslim, more than Malaysia's, which is only 60%. The development of sharia commercial banks in Indonesia should be more advanced than conventional banks. However, the number of sharia commercial banks in Indonesia is still less than conventional banks. Internal factors that cause a slowdown in the growth of sharia commercial banks in Indonesia include the amount of MSME financing, the amount of murabahah financing, and the large number of office networks (Syafrida, Aminah 2015). According to Syafrida, the several efforts that need to be made to overcome the slowdown in growth are the internal consolidation of Islamic bank management to evaluate the quality of financing and the cost of funding sources, the diversification of financing in corporate segmentation, and an increase in the number of networks, variety of products and services, etc. The important thing that needs to be reviewed and is the flagship product of sharia commercial banks is related to the role of financing that is channeled to the community. Further research is needed to find out about the role of financing in improving the financial performance of banks. Table 1 shows the increase in the number of sharia commercial banks and their financial performance in Indonesia in 2012–2018 (OJK 2020).

Sharia Enterprise Theory states that corporate responsibility is not only to shareholders, but also to stakeholders, and even higher, to God (Triyuwono 2006). Based on Islamic values, the demand for money must be used to meet basic needs and productive investment, not at all for excessive consumption

and non-productive and speculative spending (Chapra 1996). Various products are offered by banks, including sharia commercial banks to meet various financial instruments (Schoon 2016). Cash is the most unproductive company asset if it is left alone, so that the funds collected from wadiah (sharia saving), sukuk (sharia bonds), takaful (sharia insurance) and from other third parties should be used for productive activities to make it more profitable and beneficial for banking stability itself. Financing is a sharia commercial bank's business product that is able to generate profits. Compared to investment in fixed assets, financing provides a more definite return because it has been determined in the contract. This can be seen in the financial statements of Islamic banking from year to year, which show that the total financing disbursed by sharia commercial banks dominates compared to other products. Based on that, the financing gives the biggest yield compared to other products (wadiah, sukuk, takaful, etc.) (OJK 2020) so it can be said that the financing of Islamic commercial banks plays a role in the stability of the banking sector, especially musharakah and murabahah. This is because both include financing with less risk of being uncollectible than other financing products. In musyarakah, if there is a failure or loss from the business carried out by the mudarib, the loss will be divided according to the proportion of equity, unlike in mudarabah, where the loss is borne by shohibul maal (Nurhayati, Wasilah 2014). Whereas in murabahah, if the customer is unable to pay instalments, the purchased assets will be withdrawn and become the assets of the sharia commercial banks, so that the financing product offered will improve the financial performance of the sharia commercial banks. The types of financing products referred to are financing based on the profit sharing principle (mudarabah), financing based on the principle of equity participation (musharakah), the principle of buying and selling goods with a profit (murabahah), or financing of capital goods based on the principle of pure rent without choice (ijarah), or with the option of transferring ownership of goods leased from the bank by another party (ijarah wa iqtina).

Mudarabah is a business cooperation agreement between two parties, where the first party (fund owner) provides all the funds, while the second party (fund manager) acts as the manager, the profit funds are divided between them according to the agreement, while the financial losses are only borne by the fund owner (Nurhayati, Wasilah 2016). Musyarakah is a collaboration between two or more parties for a particular business in which each party contributes funds with the profits and risks being shared in accordance with the agreement (Nurhayati, Wasilah 2016). The management of mudarabah and musharakah financing will result in a profit ratio. The amount of the profit-sharing ratio is determined by the amount of financing disbursed in the form of a percentage. The greater the funds raised by the bank, the greater the bank's ability to channel these funds to the public in the form of lending. Sharia Enterprise Theory states that property belongs to Allah alone, and humans are only given a deposit to manage so that the property can be useful for others. Islamic banks act as institutions that collect funds from the public and manage them by channelling these funds in the form of financing for productive business activities with the principle of profit sharing. The ratio obtained from mudarabah and musharakah does not contain elements of usury or interest so that the ratio will affect the results of the financial performance of Islamic banks. Mudarabah and musharakah financing contracts must have an ijab qabul like Islamic sharia, which teaches that there must be an ijab qabul in an agreement so that the transaction is clear and avoids backbiting. According to research by Pratama, Martika and Rahmawati (2017), Sari and Anshori (2016) and Putra and Hasanah (2018) it shows that mudarabah has a significant effect on the profitability of sharia commercial banks. Research by Pratama, Martika and Rahmawati (2017), Anjani and Hasmarani (2015b) and Putra and Hasanah (2018) state that musyarakah

has a positive effect on the profitability of sharia commercial banks, and mudarabah dan musyarakah has a positive effect on the profitability of sharia commercial banks (Damayanti, Dewi 2021).

Al-ijarah is a contract for the transfer of usufructuary rights or goods or services through rental wages, without being followed by a transfer of ownership of the goods themselves. Ijarah rental wages are profits obtained from ijarah financing which can increase net income (Karim 2016). If the ijarah financing increases, then the possibility of the bank to obtain rental income will also increase, so that profits will also increase. In accordance with Sharia Enterprise Theory, from every income earned, the bank should have a responsibility to the stakeholders and shareholders to work better by showing their performance. Sharia commercial banks must be able to manage their assets for productive activities, one of which is ijarah financing. If assets can be managed optimally through ijarah, then financial performance will also increase (Pratama, Martika, Rahmawati 2017; Putra, Hasanah 2018; Rizki, Askandar, Afifudin 2017).

Murabahah is another product of sharia commercial banks as well as profit sharing financing. Murabahah is a type of financing for the sale and purchase of goods carried out by the bank to customers. Banks buy goods from suppliers to meet customers' needs in accordance with the desired specifications. Then, the bank resells the goods to the customer and takes a profit by adding the purchase price according to the initial agreement between the two. The high and low value of murabahah financing will affect the resulting return. The bank expects to get returns and profit margins on buying and selling financing provided to customers which then becomes profit. Many people choose murabahah over other financing to date. The high level of disbursement of funds through the murabahah principle affects the financial performance of the Islamic bank (Haq 2015). According to Sharia Enterprise Theory, Islamic banks are not only concerned with individual interests, but also think about the interests of others in order to achieve the benefit, which means that Islamic banks are not only looking for profits, but also provide benefits to the community. Through murabahah, Islamic banks make it easy for customers to have the goods they need with a payment system that is not burdensome and remains in accordance with Islamic law. The more murabahah financing is channelled to customers, the higher the margin obtained and the higher the profitability of Islamic commercial banks. This is supported by the research of Putra and Hasanah (2018), and Haq (2015).

The types of products offered by sharia commercial banks also carry risks, financing is no exception. The level of financing risk from the amount of financing disbursed is reflected in the ratio of non-performing financing (NPF) for sharia commercial banks. In 2018, the NPF sharia commercial banks ratio will reach 4.77% (OJK 2020). Factors causing murabahah financing problems come from customers, internal banks, and fictitious factors (Ibrahim, Rahmati 2017). The high NPF ratio indicates that the desired target of sharia commercial banks related to financing principal and profit sharing has not been met. If this is not managed properly, it will affect sharia commercial banks' performance. NPF is part of the funding funds distributed by sharia commercial banks to the public and NPF risks for each type of financing also vary. The greater the amount of financing disbursed, the greater the risk of the NPF, so that the NPF is likely to affect the performance of the sharia commercial banks derived from the financing products that channel.

This study aims to examine whether the financing products in sharia commercial banks will affect financial performance if moderated by non-performing financing. The financing products used in this study are mudarabah, musyarakah, murabahah, and ijarah. Mudarabah and musharakah are used because they represent profit-sharing financing in accordance with sharia principles. One of the

measurements of the financial performance of sharia commercial banks is the amount of profit-sharing financing compared to total financing. Murabahah is the most popular type of financing that is in demand by customers. This can be seen in the fact that the amount of financing disbursed is always the most (OJK 2020). Meanwhile, ijarah is the choice of customers who need capital by renting.

Islamicity Performance Index (IPI) is used as a proxy for the financial performance of sharia commercial banks because it is a performance measurement tool that is able to express the values of sharia in sharia banks (Ibrahim et al. 2004). IPI includes financial performance and also includes compliance with sharia values, social care, and concern towards stakeholders. There are profit sharing ratio, zakat performance ratio, equitable ratio, Islamic investment vs non Islamic investment, Islamic income vs non Islamic income, directors-employees welfare ratio, and AAOIFI Index. This is what distinguishes the measurement of financial performance from previous studies that only use profitability.

NPF is part of the financing channelled so that it does not directly affect the performance of the sharia commercial banks but depends on the size of the amount of financing channelled and how the risk management of financing is carried out by the sharia commercial banks. NPF negatively moderates the influence of BOPO on ROA (Yusuf, Surjaatmadja 2018). BOPO is the company's ability to manage operational costs. The more amount of financing that is channelled, the more operational costs will also be increased. Based on this, NPF is expected to moderate the effect of financing products on sharia commercial banks' performance. The hypothesis of this study is reflected in Figure 1.

#### 2. Literature review

Previous studies that discuss the effect of financing on the performance of Islamic banks focus more on the type of financing to profitability that is proxied by ROA or ROE. The traditional banks are more profitable than sharia banks (Hazzi, Kilani 2013; Hoque, Hossain, Bappy 2019). The inconsistent results regarding the effect of Islamic financing products on profitability from 2014–2019 are shown in Table 2. Murabahah and mudarabah have a negative effect on profitability, musyarakah has a positive effect (Anjani, Hasmarani 2015b); mudarabah has a negative effect on the level of ROE, while musyarakah has a positive effect on the level of ROE (Permata, Yaningwati, Zahroh 2014); mudarabah has an effect on profitability while musharakah has no effect (Jaurino, Wulandari 2017); mudarabah, musharakah, and ijarah have a positive effect on the level of profitability (Pratama, Martika, Rahmawati 2017); mudarabah has no effect on ROA and musyarakah has a negative effect on ROA (Nawawi, Nurdiansyah, Al Qodliyah 2018); mudarabah has a positive effect on profit-sharing financing (Vegirawati, Rawati 2019); mudarabah has a negative effect on profitability and musharakah has a positive effect on profitability (Arsyadona, Harahap, Ridwan 2019); mudarabah has no effect on profitability (Afkar 2017); musyarakah and qard financing have a positive effect on ROA (Nugraha, Darmansyah 2019); musyarakah has a negative effect on ROA (Almunawwaroh, Marliana 2017); murabahah has a negative effect on ROE, mudarabah has a positive effect on ROE, musyarakah and istishna have no effect on ROE (Sari, Anshori 2016). These results indicate that the financing disbursed by sharia commercial banks has not always given positive results as expected, therefore further research is still needed to determine other factors that influence this. From these studies, the profitability of sharia commercial banks is only seen from a financial perspective, whereas sharia

commercial banks are not only looking for financial benefits, but also pay attention to the benefit of the people, so that an appropriate performance measurement is needed. In addition, Islamic banks should have more spiritual dimensions. This spiritual dimension further not only requires non-usury business, but is also able to provide welfare for the wider community, especially the underprivileged (Meutia 2010). Ibrahim et al. (2004) has developed a measurement called the Islamicity Performance Index (IPI), which consists of seven indicators, so that the performance of Islamic financial institutions can be truly measured not only in terms of finance, but also able to evaluate the principles of justice, halal and purification (tazkiah) carried out by Islamic financial institutions.

Non-performing financing is a type of financing channelled by the sharia commercial banks, but there are uncollected constraints both in principle and for the results, so that the amount of the NPF ratio will affect the financial performance of sharia commercial banks. Previous studies used NPF as a factor that influenced sharia commercial banks' financial performance directly and in line with other types of financing, although the results have not been consistent. This result can be seen in Table 3. NPF has a negative effect on profitability (Setiawan, Indriani 2016; Harianto 2017; Medina, Marliana 2018; Suniyah, Muslichah, Mawardi 2019; Tho'in 2019); NPF has a positive effect on profitability (Munir 2018); NPF had no effect on profitability (Sitompul, Nasution 2019). NPF had no effect on the profit sharing rate of mudarabah deposits (Sudarsono, Saputri 2018) while Yulianto and Solikhah (2016) say otherwise. In fact, the amount of funding disbursed is also not the same for each type. Age, gender, occupation, and type of contract influence the non-performance of clients of Islamic MFIs in Indonesia (Fianto, Maulida, Laila 2019). In the financial statements the amount of financing listed reflects the total financing, so that the current and problematic amounts are not yet known. Based on this, as a solution, the researcher uses NPF as a variable that moderates the effect of sharia commercial banks' financing products such as mudaraba, musharaka, murabaha, and ijarah on financial performance. A previous study by (Arsyadona, Harahap and Ridwan (2019) also used NPF, which moderates mudarabah and musyarakah on profitability as measured by ROA. However, in this study, financial performance is measured using the Islamicity Performance Index, which is more in line with the characteristics of sharia commercial banks, and in addition, by adding murabahah and ijarah, which represent other financing products, not just profit-sharing financing products.

Sharia Enterprise Theory is an enterprise theory that incorporates Islamic values so as to produce a transcendental and humanist theory (Purwitasari, Anis 2011). This research uses this theory, which recognizes that responsibility is not only carried out to the owner but also to the wider stakeholders. According to Triyuwono (2003), sharia accounting is a form of management responsibility towards the company owner, stakeholders, nature and God. For more details, the research model is presented in Figure 1 with the formulation of the hypothesis as follows:

H1: mudarabah has a positive effect on financial performance,

H2: musyarakah has a positive effect on financial performance,

H3: ijarah has a positive effect on financial performance,

H4: murabahah has a positive effect on financial performance,

H5: non-performing financing moderates the influence of mudarabah on financial performance,

H6: non-performing financing moderates the influence of musyarakah on financial performance,

H7: non-performing financing moderates the influence of ijarah on financial performance,

H8: non-performing financing moderates the influence of murabahah on financial performance.

#### 3. Methods

The population of this study is Islamic banking in Indonesia, namely sharia commercial banks. The sampling technique used is purposive sampling technique, namely sharia commercial banks in Indonesia which are listed on the Indonesia Stock Exchange and each has published audited financial reports in a row for 5 years, namely in 2014–2018, and has not changed shape during the observation period. The total number of sharia commercial banks in Indonesia listed on the IDX is 13 banks and 9 banks which are in accordance with the criteria to be sampled in the study. The time span of 5 years is used because it fulfilled the generalization of results, while the deadline for research in 2018 is used because the annual report data that can be obtained last is 2018, which is the most recent information. The data was obtained from the website address of each of the Islamic banking institutions.

This study uses a Moderated Regression Analysis (MRA) tool, namely SPSS version 25. The independent variables are mudarabah, musharakah, ijarah, and murabaha (X). The dependent variable is financial performance (Y) measured using the Islamicity Performance Index, and moderation variable namely non-performing financing/NPF ratio (Z), which is measured by comparing the total financing problems with the total financing.

The Islamicity Performance Index consists of seven indicators (Ibrahim et al. 2004), but in this study only four indicators are used: the Profit Sharing Ratio, Zakat Performance Ratio, Equitable Performance Ratio, and Islamic Income vs Non-Islamic Income. The Profit Sharing Ratio (PSR) is a profit sharing transaction such as mudarabah and musharakah considered as the core of sharia banks. PSR is used to measure how much sharia commercial banks focuses on their business core through distributing funds to the productive sector by using a profit sharing scheme. The valuation of the PSR is based on the amount of profit-sharing financing divided by the overall financing. The Zakat Performance Ratio (ZPR) is the performance of sharia commercial banks should be based on the payment of zakat paid by the bank. The formulation of ZPR divides the amount of zakat paid by sharia commercial banks with the net assets of the bank. The Equitable Performance Ratio (EPR) is basically trying to find out how the income earned by sharia commercial banks is distributed to various stakeholders. In this case, it can be seen from the amount of money spent on qard and donations, the cost of employees, and others (Meilani, Andraeny, Rahmayati 2014). Islamic Income vs Non-Islamic Income – this ratio aims to measure income derived from halal income. The Islamic principle prohibits the existence of non-halal transactions (usury, gharar, and maysir) and obliges the halal trade (Khasanah 2016). Therefore, it is important for sharia banks to honestly disclose any earnings perceived as halal, and non-halal income (Ibrahim et al. 2004). Meanwhile, the other indicators such as the Directors-Employees Welfare Ratio, Islamic Investment vs Non-Islamic Investment, and AAOIFI Index are not used because the data needed to calculate such ratios are not available in the annual reports that become the samples of this research.

The model used is as follows:

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\begin{split} Y &= \alpha + \beta 1.X1 + \beta 2.X2 + \beta 3.X3 + \beta 4.X4 \\ Y &= \alpha + \beta 1.X1 + \beta 2.X2 + \beta 3.X3 + \beta 4.X4 + \beta 5.Z + \epsilon \\ Y &= \alpha + \beta 1.X1 + \beta 2.X2 + \beta 3.X3 + \beta 4.X4 + \beta 5.Z + \beta 6.X1.Z + \beta 7.X2.Z + \beta 8.X3.Z + \beta 9.X4.Z + \epsilon 8.X3.Z + \delta 9.X4.Z + \delta 9.X4.Z + \delta 9.Z4.Z + \delta 9.Z4
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#### where:

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\alpha – constant,
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 $\beta$ 1– $\beta$ 9 – regression coefficient,

X1 – mudarabah,

X2 – musyarakah,

X3 – murabaha,

X4 – ijarah,

Y – financial performance,

Z – non-performing financing.

The criteria for determining moderation variables are as follows:

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1. If \beta 6 - \beta 9 = 0 and \beta 5 \neq 0, then Z is not a moderating variable (but as an independent variable).
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- 2. If  $\beta 6 \beta 9 \neq 0$  and  $\beta 5 = 0$ , then Z is a pure moderator variable.
- 3. If  $\beta 6 \beta 9 \neq 0$  and  $\beta 5 \neq 0$ , then Z is a quasi-moderator variable.

#### 4. Results and discussion

#### 4.1. Moderation variable testing method

In this research hypothesis, it is suspected that non-performing financing (NPF) moderates the effect of Islamic financing products on financial performance so that it needs to be proven through Moderated Regression Analysis (MRA). MRA identifies the presence or absence of moderating variables by comparing three equations (Ghozali 2018).

From the results of multiple regression testing the coefficient values obtained are presented in Table 4. Based on Table 4, the results show that  $\beta 6 - \beta 9 \neq 0$  and  $\beta 5 \neq 0$ , so NPF is a quasi-moderator variable, where NPF functions is an independent variable while interacting with other independent variables (Ghozali 2018). The Adj R<sup>2</sup> result also showed an increase from 0.292 (equation 1 before there was NPF as a moderating variable) to 0.456 (equation 3 included NPF as a moderating variable), which meant that NPF strengthened/weakened the effect of sharia commercial banks' financing products on its financial performance.

The classical assumption test results, which include the normality test, the multicollinearity test, the autocorrelation test, and the heteroscedasticity test, state that the research model is worthy of research and proceed to the hypothesis test.

#### 4.2. Hypothesis testing

Table 6 shows the value of Adj R<sup>2</sup> of 0.456 or 45.6%. This shows that the percentage of influence of financial performance can be explained by the five variables including mudarabah financing, musyarakah financing, ijarah financing, murabahah financing, and NPF as quasi moderator variables. While 54.4% is explained by other variables outside the model.

The F test is used to measure the feasibility of the regression function of the sample/model fit or not (goodness of fit) (Ghozali 2018). The results seen in Table 7 show a calculated F value of 5.101 > F table of 2.10 with a total df of 44. The significance value is 0.000 < 0.05, so it can be concluded that the model used is fit. The T test shows how the influence of independent variables can partially influence the dependent variable. The T test results are shown in Table 8.

#### The effect of mudarabah financing on financial performance

Table 8 shows the t value is greater than t table, that is 2.268 > 1.680 and the p-value is smaller than  $\alpha$ , that is 0.030 < 0.05, which means that mudarabah financing has a positive effect on financial performance. So it can be concluded that H1 was accepted.

This result indicates that the intermediary function of sharia commercial banks runs optimally through the distribution of funds through profit sharing agreements (mudarabah). Public trust with mudarabah financing has an impact on increasing BUS revenue so that BUS financial performance also increases, especially the profit-sharing ratio and zakat distribution.

In line with the Sharia Enterprise Theory, banks are not only accountable to stakeholders and shareholders, but also to Allah SWT as the main source, because God is the sole and absolute owner of all available resources (Triyuwono 2006). Income obtained from mudarabah in the form of profit sharing ratio is a profit for sharia commercial banks. These benefits can improve financial performance in accordance with sharia principles. This is consistent with research conducted by Pratama, Martika and Rahmawati (2017), Sari and Anshori (2016), and Putra and Hasanah (2018), showing that mudarabah has a positive effect on the financial performance of sharia commercial banks. This is in contrast to research (Romdhoni, Yozika 2018) which states that mudarabah has a negative effect on profitability, while Afkar (2017) states that mudarabah has no effect on profitability.

#### The effect of musyarakah financing on financial performance

Table 8 shows the calculated t value is greater than the t table, that is 2.070 > 1.680 and the p-value is smaller than  $\alpha$ , that is 0.046 < 0.05. This shows that the musharakah financing variable has a positive effect on financial performance, so H2 is accepted.

When musharakah financing increases, the sharia commercial banks' financial performance also increases. Musharakah financing is the most popular financing by community number 2 after murabaha. This can be seen from the results of Table 5, which show an average of 0.3702. Musyarakah is an option for customers to obtain additional business capital because the specified profit-sharing ratio is adjusted to the capital composition and participation in managing their business. The risk borne by mudharib is also lower because if there is an accidental loss it will be borne by the bank. As one component of profit sharing financing, if musyarakah financing increases, the profit sharing ratio also increases.

According to the Sharia Enterprise Theory, banks not only increase their interests, but also think about the interests of others in order to achieve an even benefit. This means that in addition to looking for a personal profit for Islamic banks, banks must also provide benefits for the establishment of Islamic banks in the midst of society. With the absorption of funds through musyarakah, the public can improve their business and standard of living to be better, and the sharia commercial banks also benefits.

The results of this study are consistent with the research of Pratama, Martika and Rahmawati (2017), Anjani and Hasmarani (2015a), Arsyadona, Harahap and Ridwan (2019) and Putra and Hasanah (2018), which states that musyarakah has a positive effect on the financial performance of sharia commercial banks. However, on the contrary, the research of Romdhoni and Yozika (2018) and Faradilla, Arfan and Shabri (2017) states that musyarakah has a negative effect on the financial performance of sharia commercial banks.

#### The effect of ijarah financing on financial performance

H3 suggests that ijarah financing has a positive effect on financial performance. Based on Table 8 shows the t value is greater than t table, that is 2.073 > 1.680 and the p-value is smaller than  $\alpha$  that is 0.046 < 0.05 which means that ijarah financing has a positive effect on financial performance. The more ijarah financing distributed, the higher the profitability of the sharia commercial banks. A lease agreement is an alternative transaction that is very beneficial for the community. People who do not have enough capital to buy the assets needed choose ijarah as the solution. The long period of time in ijarah transactions is one of the factors increasing profitability. Payment made in advance by the customer provides an opportunity for sharia commercial banks to manage funds collected in other activities. This causes the risk of ijarah to also be lower, because there are certain payments and they tend to be fixed so as to facilitate management. The maintenance costs and depreciation costs borne by the sharia commercial banks can still be covered by the sharia commercial banks so it does not reduce profitability. This is in line with research (Putra, Hasanah 2018; Pratama, Martika, Rahmawati 2017; Rizki et al. 2017), which states that ijarah has a positive effect on profitability. While other results mention that ijarah negatively affects profitability (Asih 2018; Romdhoni, Yozika 2018).

#### The effect of murabaha financing on financial performance

Table 8 shows the value of t is smaller than t table, that is 1.629 < 1.680 and the p-value is greater than  $\alpha$ , that is 0.112 > 0.05, which means that murabaha financing has no effect on financial performance. The amount of murabaha financing distributed does not affect financial performance. This is due to the measurement of financial performance using IPI, murabaha is not an indicator that is directly calculated like mudarabah and musharakah as a measure of the profit sharing ratio. Even though the amount is dominant at an average of 54% of the total financing offered, the profit earned from the sale and purchase margin tends to remain constant because it was determined at the beginning of the contract. The profit margin obtained by the sharia commercial banks is also not so large and in the long term is expected to be beneficial to the people, while to make possible buying and selling, sharia commercial banks must first spend capital by buying assets needed by customers. With a constant amount of both value and time, the sharia commercial banks cannot maximize their management, then overall it does not affect financial performance.

The results of this study are supported by (Anjani, Hasmarani 2015a; Alzoubi 2017) and (Pratama, Febriansyah 2020) which state that murabaha has no effect on profitability. However, they are not consistent with Putra and Hasanah (2018), and Sari and Anshori (2016).

## Non-performing financing moderates the influence of mudarabah on financial performance

H5 states non-performing finance moderates the influence of mudarabah on financial performance. Table 8 shows the value of -t is smaller than -t table, that is -2.420 < -1.680 and p-value is smaller than  $\alpha$ , that is 0.021 < 0.05 and has a negative coefficient which means that the NPF moderates negatively or weakens the influence of mudarabah on performance finance. So it can be concluded that H5 is accepted.

Mudarabah financing management will generate revenue in the form of a ratio that affects the amount of sharia commercial banks' profit. In accordance with Sharia Enterprise Theory, property belongs to God alone. Humans are only entrusted to manage it so that the property can be useful for others. Sharia banks act as institutions to collect funds from the public and manage them by channelling these funds in the form of financing for productive business activities on the principle of profit sharing. The greater the funds raised by banks, the greater the ability of banks to channel these funds to the public in the form of lending. NPF is the amount of funding that is channelled to the community but has problems in its payment, so that it will reduce the amount of funds raised back from the community. If the funds raised are reduced, the funds channelled through the mudarabah contract will also be reduced. This will affect the total ratio received by the sharia commercial banks, in other words the financial performance of the sharia commercial banks will also decline. This is supported by research that states that non-performing loans weaken the influence between the loan deposit ratio and profitability (Widiasari, Mimba 2015) where LDR is a ratio used to measure the level of credit distribution.

## Non-performing financing moderates the influence of musyarakah on financial performance

H6 states non-performing finance moderates the influence of musyarakah on financial performance. Table 8 shows the value of t is smaller than t table, that is 0.795 < 1.680 and p-value is greater than  $\alpha$ , that is 0.432 > 0.05 and has a positive coefficient which means that the NPF does not moderate the influence of musyarakah on financial performance. So it can be concluded that H6 is not accepted.

Profit-sharing financing requires banks to be active in monitoring any given investment, which results in an inefficient system of bank operations. In addition, if the business suffers losses, the bank will also bear business losses for the business being run, even if the loss is not caused by intentional negligence of the mudharib, then the loss will be fully borne by the bank (Nurhayati, Wasilah 2014). A musyarakah contract is a contract that is much in demand by the number two community after murabaha. This indicates that the bank provides sufficient funds for this type of financing. The uncollectible risk of the musyarakah contract is considered lower than that of the mudarabah even though both receive a profit-sharing ratio. But the ratio in the musharakah contract is usually less than mudarabah because banks only provide additional capital, while to manage their businesses more is left to mudharib. Because the funds used as business capital do not come from banks, but from mudharib also, in doing business mudharib becomes more careful. By doing so, business continuity is more guaranted and payment is smooth. Based on these reasons, there is no concern for banks to reduce the distribution of funds to musharakah, including the existence of NPF, so that the NPF does not moderate the influence of musyarakah financing on financial performance. More or less the NPF ratio does not affect musyarakah financing to sharia commercial banks' financial performance.

#### Non-performing financing moderates the effect of ijarah on financial performance

Table 8 shows the value of -t is smaller than -t table, that is -1.947 < -1.680 and p-value is 0.05 < 0.060 < 0.10 and has a negative coefficient. In social sciences,  $\alpha$  of 0.10 is still permitted, which means that NPF moderates negatively or weakens the influence of ijarah on financial performance. Therefore it can be concluded that H7 is accepted.

A lease agreement is an alternative for the community to use the benefits of an item. In ijarah, sharia commercial banks must have capital in the form of goods/assets to be leased. The assets owned also require maintenance and incur operational costs such as depreciation. The higher the NPF, the more the amount of funds obtained from the public is reduced and the funds that will be distributed to finance ijarah are also reduced. This will affect the decline in sharia commercial banks' financial performance. Ijarah financing requires large capital from the bank's side because the rate of return on capital tends to be longer even though there is also a payment system at the beginning of the year. If the NPF ratio is high, then there is a possibility that the bank will divert ijarah financing to other types of returns that are faster so that sharia commercial banks' performance does not decline and the NPF weakens the effect of ijarah financing on financial performance.

## Non-performing financing moderates the influence of murabaha on financial performance

H8 states non-performing finance moderates the influence of murabaha on financial performance. Table 8 shows the calculated t value is greater than t table, that is 1.707 > 1.680 and p-value is 0.05 < 0.097 < 0.10 and has a positive coefficient. The significance level of 0.10 is still permissible with a confidence level of 90%, which means that the NPF moderates positively or strengthens the influence of murabaha on financial performance. The conclusion is that H8 is accepted. This means that the more NPF increases, the more murabaha financing will increase sharia commercial banks' financial performance.

The type of murabaha financing has an element of certainty in generating profits compared to the type of profit sharing financing because the determination of the profit margin percentage is determined at the beginning of the contract. This causes the bank to be sure of the amount of profit that will be obtained from the financing activities carried out. The existence of problematic financing causes the bank to choose to channel its financing to a definite type of murabaha to maintain its financial performance. Based on this, the higher the NPF, the more the disbursement of funds in murabaha financing will improve financial performance. This study is in line with research (Wahyuni 2016) with the NPF results positively moderating the influence of murabahah financing volume on the performance of sharia commercial banks.

#### 5. Conclusions

This study aims to determine the effect of financing products on the financial performance of sharia commercial banks with NPF as moderation. The results of testing moderating variables prove that NPF is a quasi-moderated variable, that is, NPF functions as an independent variable while interacting with other independent variables. This is also supported by the result of Adj R<sup>2</sup>, which increased from 0.292 before NPF to become 0.456 after NPF became a moderating variable, while 54.4% is explained by other variables outside the model. Variables outside the model could be other types of financing, for example gardh as in Hustia and Candera (2019) and Garwautama, Sulaeman and Noor (2021), which state that qardh has a positive effect on profitability, whereas qardh has a negative effect (Oktaviani, Alaidrus, Siswanto 2022). Other financing that may also affect profitability is istishna. Istishna has a positive effect on profitability of sharia commercial banks in Indonesia (Puteri, Meutia 2014), even istishna is an alternative for Islamic home financing in Malaysia (Mohd Faisol Ibrahim 2014). t test results show that mudarabah, musyarakah and ijarah financing have a positive effect on sharia commercial banks' financial performance, murabahah financing has no effect on financial performance, NPF weakens the influence of mudarabah and ijarah on financial performance, NPF strengthens murabahah's influence on financial performance, but NPF does not moderate the influence of musharakah on financial performance. These results can be used by sharia commercial banks to establish policy procedures and standards for lending, including the ability of customers to repay loans so that NPF can be minimized in order to improve the financial performance of sharia commercial banks. One way to do this is by conducting in-depth surveys of customers, including what kind of business will be carried out.

In other countries such as Europe, the banks under the ECB's direct supervision had non-performing loans worth over EUR 550 billion on their books in mid-2020, which represented nearly 3% of their total loan amount. The amount of non-performing loans has steadily decreased from a 2016 peak of around EUR 1 trillion. However, the economic crisis caused by the coronavirus pandemic is likely to trigger a sharp increase in non-performing loans: under a severe but plausible scenario they could reach levels as high as EUR 1.4 trillion by the end of 2022 (ECB 2021). This decline has resulted in the average ROA of banks in Europe reaching only 1.00%, below Indonesia's 2.50% (Bloomberg 2020). In addition, the research results (Kobia, Baimwera 2018) stated the indicators of credit risk management which were, capital adequacy, cost of loans, non-performing loans and the loans-to-assets ratios explained up to 77.64% of the financial performance of commercial banks in Kenya, which was measured by ROA. This reinforces that the NPF is one of the factors affecting financial performance, not only in Indonesia, but also in other countries in the world.

The limitation of this study is the use of a relatively small sample. Of the 13 sharia commercial banks, only 9 met the criteria. However, this number is sufficient to represent sharia commercial banks in Indonesia. Suggestions for future research are to add other financing products such as qardh, istishna, etc., which have not been included in this study as independent variables so as to broaden the types of financing products under study. In addition, using other moderation variables that are suspected of strengthening/weakening the influence of financing products on sharia commercial banks' financial performance such as ISR (Islamic Social Responsibility) or LDR (Loan Deposit Ratio).

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#### Acknowledgements

The researcher expresses her high appreciation and thanks to the Research and Community Service Institute, Universitas Muhammadiyah Magelang for funding this research.

#### **Appendix**

Table 1 Increasing the number of sharia commercial banks and financial performance in Indonesia in 2012–2018

	2012	2013	2014	2015	2016	2017	2018
The number of sharia commercial banks	11	11	12	12	13	13	14
The number of offices	1,745	1,998	2,163	1,990	1,869	1,825	1,875
ROA (%)	2.14	2.00	0.41	0.49	0.63	0.63	1.59

Source: data processed, 2020.

Table 2
The results of the 2014–2019 research are related to the effect of financing products on the profitability of Islamic commercial banks

Year	Result
2014	Mudarabah financing has a negative effect on ROE levels Musyarakah financing has a positive and significant effect on ROE levels (Permata, Yaningwati, Zahroh 2014)
2015	Musyarakah has a positive effect on profitability (Anjani, Hasmarani 2015a)
2016	Murabaha has a negative effect on ROE Mudarabah has a positive effect on ROE Musharakah and istisna has no effect on ROE (Sari, Anshori 2016)
2017	Murabaha financing and mudarabah financing have a negative effect on profitability Mudarabah affects profitability Musyarakah does not affect profitability (Jaurino, Wulandari 2017) Mudarabah, musyarakah, and ijarah have a positive effect on the level of profitability (Pratama, Martika, Rahmawati 2017) Mudarabah has no effect on profitability (Afkar 2017) Musyarakah has a negative effect on ROA (Almunawwaroh, Marliana 2017)
2018	Mudarabah financing has no effect on ROA Musyarakah has a negative effect on ROA (Nawawi, Nurdiansyah, Al Qodliyah 2018)
2019	Mudarabah has a positive effect on profit sharing financing (Vegirawati, Rawati 2019)  Mudarabah has a negative effect on profitability  Musyarakah has a positive effect on profitability (Arsyadona, Harahap, Ridwan 2019)  Musyarakah and qard financing have a positive effect on ROA (Nugraha, Darmansyah 2019)

Source: Google Scholar.

Table 3
Previous research results related to NPF, profitability, and financing products

NPF has a negative effect on profitability	Setiawan, Indriani (2016) Harianto (2017) Medina, Marliana (2018) Suniyah, Maslichah, Mawardi (2019) Tho'in (2019)
NPF has a positive effect on profitability	Munir (2018)
NPF had no effect on profitability	Sitompul, Nasution (2019)
NPF had no effect on the profit sharing rate of mudarabah deposits	Sudarsono, Saputri (2018)
NPF affected mudarabah deposits	Yulianto, Solikhah (2016)

Source: Google Scholar.

Table 4
Comparison of the regression equation coefficients for Testing Variable Moderation

Coefficient	Equation 1	Equation 2	Equation 3
β1	-0.680	-3.232	25.918
β2	14.865	14.062	11.674
β3	0.372	0.549	14.446
β4	10.728	9.703	9.233
β5		-6.932	55.711
β6			-913.705
β7			485.838
β8			-51,716.026
β9			46,788.492
Adj R <sup>2</sup>	0.292	0.283	0.456

Source: processed research data, 2020, SPSS 25.

Table 5
Descriptive statistical test

	N	Minimum	Maximum	Mean	Std. deviation
IPI	45	0.68	9.54	2.8262	1.80497
Pmud	45	0.00	0.18	0.0542	0.03752
Pmus	45	0.01	0.85	0.3702	0.22926
PIj	45	0.00	0.75	0.0913	0.20213
PMur	45	0.07	0.97	0.5400	0.23447
NPF	45	0.00	0.13	0.0427	0.02610
Valid N (listwise)	45				

Source: processed research data, 2020, SPSS 25.

Table 6
Determination coefficient test (R<sup>2</sup>)

Model	R	R square	Adjusted R square	Std. error of the estimate	Durbin- -Watson
1	0.753	0.567	0.456	1.35470	1.409

Source: processed research data, 2020, SPSS 25.

Table 7
Goodness of fit test

Model	l	df	F	Significance
	Regression	9	5.101	0.000
1	Residual	35		
	Total	44		

Source: processed research data, 2020, SPSS 25.

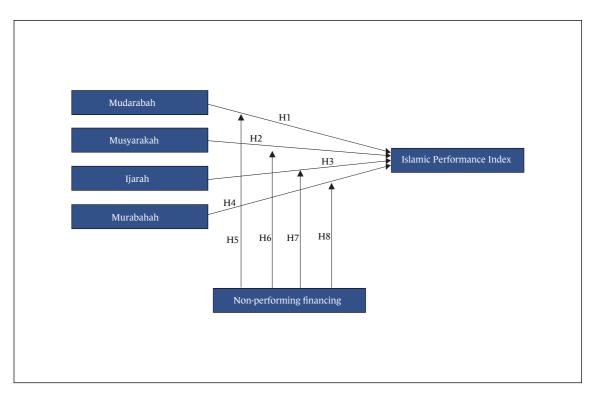
Table 8 T test

Variable	β	t value	t table	Significance
Constant	-8.849	-1.589	1.680	0.121
PMud	25.918	2.268	1.680	0.030
PMus	11.674	2.070	1.680	0.046
PIj	14.446	2.073	1.680	0.046
PMur	9.233	1.629	1.680	0.112
PMud*NPF	-913.705	-2.420	1.680	0.021
PMusy*NPF	485.838	0.795	1.680	0.432
PIj*NPF	-51,716.026	-1.947	1.680	0.060**
PMur*NPF	46,788.495	1.707	1.680	0.097**

<sup>\*\*</sup> Accepted at a significance level of 10% (90% confidence level).

Source: processed research data, 2020, SPSS 25.

Figure 1 Research model



## Muzułmańskie produkty finansowe a wyniki finansowe muzułmańskich banków komercyjnych – wnioski z Indonezji

#### Streszczenie

Wzrost liczby indonezyjskich banków muzułmańskich oraz oddziałów banków komercyjnych świadczących takie usługi pokazuje, że cieszą się one dużym zainteresowaniem i zaufaniem społecznym. Korzystanie z oferowanych przez nie produktów finansowych pozwala lepiej oszczędzać posiadane środki i i zarządzać nimi. Ponadto ich ofertę produktową można traktować jako alternatywne źródło finansowania działalności.

Aż 90% ludności Indonezji stanowią muzułmanie (w sąsiedniej Malezji tylko 60%), jednak to w Malezji sektor muzułmańskich banków komercyjnych jest bardziej rozbudowany niż w Indonezji. Można zatem oczekiwać, że sektor muzułmańskich banków komercyjnych w Indonezji powinien być bardziej rozbudowany niż sektor banków konwencjonalnych.

Wcześniejsze badania, które omawiały wpływ rodzajów finansowania na wyniki banków muzułmańskich, koncentrowały się w większym stopniu na ocenie wpływu rodzaju finansowania na rentowność, którego miarę stanowią ROA lub ROE. Wydaje się, że niesłusznie pomijano przy tym wykorzystanie wskaźnika zgodności z islamem (Islamicity Performance Index, IPI), który oprócz wyników finansowych mierzy także zgodność działalności banków z regułami szariatu, troskę o interesariuszy oraz zaangażowanie społeczne (Ibrahim i in. 2004). Wykorzystanie tego miernika odróżnia niniejsze badanie od poprzednich prac empirycznych, w których jako mierniki finansowe stosowano ROE, ROA, EPS (wskaźnik zysku na akcję) itp.

W poprzednich badaniach uwzględniano również NPF (non-performing financing, finansowanie zagrożone) jako jedną ze zmiennych, która oddziałuje na wyniki finansowe muzułmańskich banków komercyjnych, jednak uzyskane wyniki nie były spójne. NPF nie wpływa bezpośrednio na wyniki muzułmańskich banków komercyjnych. Niemniej jednak to od skali i sposobu zarządzania ryzykiem przez muzułmańskie banki komercyjne zależy, czy wzrastają ich koszty operacyjne. Uzasadnia to, dlaczego autorka wykorzystuje NPF jako zmienną moderującą wpływ takich kontraktów jak mudarabah, musharakah, murabahah i ijarah na wyniki finansowe muzułmańskich banków komercyjnych.

Podstawowe pytanie badawcze postawione w artykule są następujące:

- czy kontrakty typu *mudarabah*, *musyarakah*, *ijarah* i *murabahah* wpływają na wyniki finansowe muzułmańskich banków komercyjnych?
- czy finansowanie zagrożone (NPF) stanowi zmienną moderującą wpływ kontraktów typu mudharabah, musyarakah, ijarah i murabahah na wyniki finansowe muzułmańskich banków komercyjnych?
   Poniżej zaprezentowano hipotezy badawcze testowane przez autorkę.
  - H1: Mudarabah ma pozytywny (korzystny) wpływ na wyniki finansowe.
  - H2: Musyarakah ma pozytywny (korzystny) wpływ na wyniki finansowe.

*Mudarabah* jest umową o współpracy biznesowej między dwiema stronami, w której pierwszą jest właściciel funduszu, a drugą – zarządzający funduszem. Zysk funduszu jest dzielony między nimi zgodnie z umową, podczas gdy straty finansowe ponosi wyłącznie właściciel funduszu (Nurhayati, Wasilah

2016). Z kolei *musyarakah* jest formą współpracy między dwiema stronami lub ich większą liczbą. Każda ze stron wnosi fundusze, a zyski i ryzyko są dzielone zgodnie z umową (Nurhayati, Wasilah 2016). *Mudarabah* i *musharakah* nie zawierają elementów lichwy lub odsetek, jednak wpływają na wyniki finansowe.

H3: Ijarah ma pozytywny (korzystny) wpływ na wyniki finansowe.

*Ijarah* jest umową o przeniesienie praw użytkowania w zamian za wynagrodzenie, bez konieczności przeniesienia własności. W finansach zachodnich odpowiednikiem tej formy jest leasing finansowy. Zyski z tytułu *ijarah* mogą zwiększyć dochód netto (Karim 2016). Jeśli zwiększy się wykorzystanie tej formy finansowania, można przypuszczać, że banki bedą osiągały wyższe przychody i zyski.

H4: Murabahah ma pozytywny (korzystny) wpływ na wyniki finansowe.

*Murabahah* stanowi produkt finansowy muzułmańskich banków komercyjnych, jak również formę podziału zysków. *Murabahah* jest rodzajem finansowania sprzedaży i zakupu towarów realizowanym przez bank na rzecz klientów. Banki kupują dobra od dostawców, aby zaspokoić potrzeby klientów zgodne ze złożonymi przez nich specyfikacjami. Następnie bank odsprzedaje dobra klientowi i czerpie zysk, którym jest wynagrodzenie banku (marża) ustalone w umowie między stronami. Wielu inwestorów wybiera *murabahah* zamiast innych form inwestowania. Wysoki poziom wypłaty z funduszy działających według reguły *murabahah* wpływa na wyniki finansowe całego systemu bankowości muzułmańskiej (Haq 2015). Zgodnie z regułami szariatu banki muzułmańskie prowadzą działalność nastawioną na zapewnienie korzyści społeczeństwu. Poprzez *murabahah* ułatwiają klientom zdobycie potrzebnych towarów dzięki systemowi płatności, który nie jest uciążliwy i pozostaje zgodny z prawem szariatu. Im więcej osób korzysta z finansowania *murabahah*, tym wyższe są wpływy banków z tytułu wynagrodzenia ustalonego w umowie, a tym samym tym wyższa jest rentowność muzułmańskich banków komercyjnych. Potwierdzają to dotychczasowe badania (Haq 2015; Sari, Anshori 2016; Putra, Hasanah 2018).

- H5: Finansowanie zagrożone jest zmienną moderującą wpływ finansowania typu *mudarabah* na wyniki finansowe.
- H6: Finansowanie zagrożone jest zmienną moderującą wpływ finansowania typu *musyarakah* na wyniki finansowe.
- H7: Finansowanie zagrożone jest zmienną moderującą wpływ finansowania typu *ijarah* na wyniki finansowe.
- H8: Finansowanie zagrożone jest zmienną moderującą wpływ finansowania typu *murabahah* na wyniki finansowe.

Finansowanie zagrożone jest finansowaniem organizowanym przez muzułmańskie banki komercyjne, co do którego zasad i osiąganych wyników istnieją nieformalne ograniczenia. Wartość wskaźnika NPF wpływa więc na wyniki finansowe muzułmańskich banków komercyjnych. W rzeczywistości kwota wypłaconych środków nie jest taka sama dla każdego rodzaju finansowania. Kwoty wymienione w sprawozdaniach finansowych odzwierciedlają łączne finansowanie, co oznacza, że skala finansowania zagrożonego nie jest znana. Z tego względu autorka wykorzystuje wskaźnik NPF jako zmienną moderującą wpływ takich kontraktów jak *mudarabah, musyarakah, murabahah* i *ijarah* na wyniki finansowe muzułmańskich banków komercyjnych.

Badaną populacją był sektor muzułmańskich banków komercyjnych notowanych na Indonezyjskiej Giełdzie Papierów Wartościowych. Analizą objęto lata 2014–2018. W badaniu wykorzystano ana-

lizę regresji z moderatorem (Moderated Regression Analysis, MRA). Zmiennymi niezależnymi są: *mudarabah, musharakah, ijarah* i *murabahah*. Zmienną zależną są wyniki finansowe mierzone za pomocą wskaźnika zgodności z islamem (Islamicity Performance Index). Dodatkowo autorka wprowadziła zmienną moderującą, którą jest wskaźnik finansowania zagrożonego (NPF), odzwierciedlający relację między wartością produktów zagrożonych a całkowitą wartością wszystkich rodzajów finansowania.

Wartość skorygowanego R<sup>2</sup> wyniosła 0,456 (45,6%). Informuje to, jaki odsetek zmienności wyników finansowych można wyjaśnić zmiennością pięciu zmiennych objaśniających (*mudarabah*, *musyarakah*, *ijarah*, *murabahah* oraz NPF – zmiennej moderującej). Inne zmienne nieuwzględnione bezpośrednio w modelu odpowiadają za 54,4% zmienności wyników finansowych.

Na podstawie wartości statystyki testu t Studenta stwierdzono, że:

- finansowanie typu *mudarabah* ma pozytywny wpływ na wyniki finansowe; hipoteza H1 została przyjęta;
- finansowanie typu *musyarakah* ma pozytywny wpływ na wyniki finansowe; hipoteza H2 została przyjęta;
- finansowanie typu *ijarah* ma pozytywny wpływ na wyniki finansowe; hipoteza H3 została przyjęta;
- finansowanie typu *murabahah* nie ma pozytywnego wpływu na wyniki finansowe; oznacza to, że hipoteza H4 została odrzucona;
- NPF (finansowanie zagrożone) stanowi zmienną moderującą wpływ *mudarabah* na wyniki finansowe osłabia negatywny wpływ *mudarabah*; hipoteza H5 została przyjęta;
- NPF nie jest zmienną moderującą wpływ finansowania typu *musyarakah* na wyniki finansowe; na tej podstawie hipoteza H6 została odrzucona;
- NPF jest zmienną moderującą wpływ finansowania typu ijarah na wyniki finansowe; hipoteza H7 została przyjęta;
- NPF jest zmienną moderującą wpływ finansowania typu murabahah na wyniki finansowe; hipoteza H8 została przyjęta.

Przeprowadzona analiza dowodzi, że wprowadzenie NPF jako zmiennej moderującej poprawia jakość modelu. Współczynnik R<sup>2</sup> wzrasta dzięki temu z 0,292 do 0,456.

Rezultaty przeprowadzonych testów pokazują, że finansowanie *mudarabah*, *musyarakah* i *ijarah* ma dodatni wpływ na wyniki finansowe muzułmańskich banków komercyjnych. Z kolei finansowanie typu *murabahah* nie ma wpływu na wyniki finansowe. Wprowadzenie NPF jako zmiennej moderującej: (i) osłabia wpływ *mudarabah* i *ijarah* na wyniki finansowe; (ii) wzmacnia wpływ *murabahah* na wyniki finansowe; (iii) nie zmniejsza wpływu *musyarakah* na wyniki finansowe.

Na podstawie uzyskanych wyników muzułmańskie banki komercyjne mogą wypracować jednolite reguły i standardy udzielania pożyczek, w tym oceny zdolności klientów do spłaty pożyczek, tak aby można było zmniejszyć skalę finansowania zagrożonego, a dzięki temu uzyskać poprawę wyników finansowych. Jednym ze sposobów jest przeprowadzenie pogłębionych badań klientów, uwzględniających m.in. to, jaki rodzaj działalności jest finansowany za pomocą *mudarabah* i *ijarah*.

Ograniczeniem badania jest wykorzystanie stosunkowo małej próby. Spośród 13 muzułmańskich banków komercyjnych tylko 9 spełniało kryteria umożliwiające wykorzystanie ich w badaniu. Liczbę tę można jednak uznać za wystarczającą do reprezentowania całego systemu muzułmańskiej bankowości komercyjnej w Indonezji. Jako kierunek dalszych badań można wskazać wykorzystanie w analizie również innych produktów finansowych, takich jak *qardh*, *istishna* itp., które nie zostały uwzględnione

w tym badaniu jako zmienne niezależne, jak również zastosowanie innych zmiennych moderujących, co do których można przypuszczać, że wzmacniają/osłabiają wpływ muzułmańskich produktów finansowych na wyniki finansowe muzułmańskich banków komercyjnych, takich jak ISR (*Islamic social responsibility* – społeczna odpowiedzialność biznesu w muzułmańskich instytucjach finansowych) czy LDR (*loan deposit ratio* – wskaźnik kredyty/depozyty).

**Słowa kluczowe:** muzułmańskie produkty finansowe, finansowanie zagrożone, wyniki finansowe, wskaźnik zgodności z islamem (Islamicity Performance Index), muzułmańskie banki komercyjne