

“Financing profitability optimization: case study on sharia business unit of regional development banks in Indonesia”

AUTHORS	Jusni  https://orcid.org/0000-0002-5368-3381 Andi Aswan  https://orcid.org/0000-0002-7893-591X Andi Reni Syamsuddin Bayu Taufiq Possumah  https://orcid.org/0000-0001-5541-4890
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Jusni, Economics and Business Faculty, Hasanuddin University, Indonesia.

Andi Aswan, Lecturer, Economics and Business Faculty, Hasanuddin University, Indonesia.

Andi Reni Syamsuddin, Lecturer, Economics and Business Faculty, Hasanuddin University, Indonesia.

Bayu Taufiq Possumah, Doctor, Lecturer, STEI Tazkia, Indonesia.



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Jusni (Indonesia), Andi Aswan (Indonesia), Andi Reni Syamsuddin (Indonesia), Bayu Taufiq Possumah (Indonesia)

FINANCING PROFITABILITY OPTIMIZATION: CASE STUDY ON SHARIA BUSINESS UNIT OF REGIONAL DEVELOPMENT BANKS IN INDONESIA

Abstract

The study aims to examine the financing profitability optimization as recorded by Sharia Business Unit of Regional Development Banks (RDBs) in Indonesia. The profitability measured by Net Operating Margin (NOM) and predicted variables were tested with the ratio of Operational Cost to Operational Income (BOPO), Non-Performing Financing (NPF) and Profit Sharing Financing (PSF). On the basis of the literature review conducted, the study proposed five path coefficients to impact NOM, of which the constructed direct path to NOM was three and two for indirect paths. Time series data used were obtained from annual reports and publication reports. Using Pearson Correlation and Path Analysis, the study has found that BOPO, PSF, and NPF contributed to impact to NOM directly, and PSF impacted NOM indirectly through BOPO. Interestingly, PSF recorded a negative impact on NOM, suggesting inefficiency matters faced by SBU of RDBs not contributed from PSF. Another interesting finding, NPF was found insignificant to BOPO, indicating loan default is not a major matter for inefficiency issue, but could be a tight financing policy.

Keywords

financing profitability, sharia business unit, regional development banks, net operating margin

JEL Classification

G2, G21, G24

INTRODUCTION

The study is motivated by a low profitability recorded by Sharia Business Unit of Regional Development Banks (SBU of RDBs) compared to its conventional business segment. With its unique position and potential customers of Muslim, SBU of RDBs should be able to improve its profitability through financing activities. Therefore, assisting Sharia Business Unit (SBU) of Regional Development Banks (RDBs) in improving their profitability is a critical issue.

The SBU of RDBs is a bank whose ownership proportion is greater or even wholly owned by provincial and district/city governments. Although some of them have already gone public, the largest shares are still owned by the local government (Syarfira, 2018; Purwanti & Kalbuana, 2016; Hadad et al., 2003). This relationship certainly could provide a chance for SBU of RDBs to finance projects managed or controlled by the local government (Permana & Andjani, 2014; Lisdayanti, Daniel, & Anindita, 2013). Further, unlike other Islamic banks, a tight relation with the local government has provided a unique benefit for SBU to offer consumer financing for State Civil Apparatus (ASN) collateralized by monthly salary payment (Cahyadi, 2018; Maryana, 2010).

Apart from aforementioned, there is an extensive study that ever discussed Islamic banks in Indonesia, but only some of them were examined at the provincial level. Literature noted that Islamic bank studies are focused mostly on commercial banks at the national level (Yundi & Sudarsono, 2018; Sutrisno, 2018; Sani, Ambonongtyas, & Yulianea, 2018; Putri & Affandi, 2018; Yusuf, 2017) which could provide a different result when study is conducted at a provincial level due to the differences in market coverage. In relation to study of SBU of RDBs in Indonesia, to the best of knowledge, the existing literatures focus mostly on an individual bank (Putranto, 2018; Musnadi & Majid, 2018) or very few at a regional level only such as Verawaty, Jaya, and Widiati (2017) on Sumatra Island and Cahyono and Laila (2017) on Java Island or on a different topic of discussion (see also Abidin & Enri, 2011; Setiawan, 2006).

Different with other researches, this study examines how independent variables of Operational Cost to Operational Income (BOPO) often called efficiency ratio, Non-Performing Loans (NPF), and financing based on Profit-Sharing Financing (PSF) are associated with profitability measured by Net Operating Margin (NOM). These three variables are believed to contribute to impact the profitability of SBU of RDBs in Indonesia. With respect to PSF, it has not ever been taken into account by any literature of Islamic banking study before at the RDB level. The existing studies of PSF focus on national level for either private or state bank. It is our assertion to consider PSF as it is believed that the demand for financing based on musyarakah and mudarabah (profit-sharing financing) is predicted more in comparison with receivable financing (Murabaha and Qard) (Chalifah & Sodiq, 2015; Permata, 2014; Fahrul & Arfan, 2012) in which it could affect financing made by SBU of RDBs.

Finally, the research examines an integrated model to impact NOM through BOPO with the use of path and correlation analysis to identify the relationship between NOM and the predicted variables. The study also elaborates the relationship between BOPO and other predicted variables. As such, the study is centered to discuss three variables to impact the profitability of SBU of RDBs and evaluate the relative effect of the predicted variables on NOM.

1. LITERATURE REVIEW

Profitability is often used to measure viability and sustainability (Kim, Longest, & Lippmann, 2015; Ward, 2006). In banking, profitability can be measured by three indicators, namely Return on Assets (ROA) (Yanikkaya, Gumus, & Pabuccu, 2018), Return on Equity (ROE) (Trad, Trabelsi, & Goux, 2017), and Net Interest Margin (NIM) for conventional banks (Winarso & Salim, 2017). Differently, an Islamic bank uses the term of Net Operating Margin (NOM) for the measurement of profitability as loan interest is prohibited in Islam religion (Karim, 2018; Hosen & Muhari, 2018). This is because it is a profit sharing and margin generated from financing and investment portfolio called operational income deducted with the operational profit-sharing cost which is then divided by the average of the productive asset, the asset that allows generating profit sharing income (Financial Service Authority, 2015). This study takes into account the variable of NOM to measure the profitability of SBU of RDBs as it repre-

sents the investment in portfolio only and does not consider non-operating income sources.

2. FINANCING RISK

Non-performing financing (NPF) is a measure of the risks of financing disbursed to third parties on the basis of profit sharing and margin principles. The risks here are the risks arising from the repayment of financing principal and rate of profit-sharing or margin. Risk of the repayment could be caused by internal and external matters (Waemustafa & Sukri, 2015). In the internal issue, NPF possibly increases when a bank faces competitive condition (Masruki et al., 2014), moral hazard problem (Samad & Hasan, 1999), expansion of financing policies (Poetry & Sanrego, 2014) and downturn in economic condition (Havidz & Setiawan, 2015; Nasih, 2014).

On the basis of repayment structures, there are five categories. Non-performing financing only in-

cludes financing with substandard, doubtful and loss (Havidz & Setiawan, 2015). As to the measurement categories, NPF can be divided into two groups, gross NPF and NPF net. For gross NPFs, non-performing financing is not reduced by the Impairment Loss Assets (CKPN) of financial assets. The gross NPF formulation is the amount of non-performing financing divided by total financing distributed to third parties (OJK, 2015). For the purpose of the study, the research applies NPF gross.

In general, NPF gross could have a negative sign on NOM. Logically, income earned from financing activities will be recorded at the NOM, while each inability to perform repayment by a customer will be recorded at NPF (Alqahtani, Mayes, & Brown, 2017). The higher the score of NPF gross, the lower the score of NOM would be (Purbaningsih, 2014; Setiawan & Putri, 2013).

H1: The lower the NPF gross, the higher the profitability would be.

With respect to BOPO, NPF is assumed to have a positive sign to BOPO. When the amount of financing default is high, the income generated from financing would be lower, which in turn drives up the efficiency ratio to become higher (Hosen & Rahmawati, 2016). When the efficiency ratio is high, it indicates inefficiency (Purbaningsih, 2014). NPF would have an impact on the efficiency ratio through the denominator (Rahayu, 2015; Al Arif, 2015). In banking, the proportion of income generated from financing is usually higher than other incomes, since profit-sharing financing rate is higher than the profit-sharing of placement.

H2: The lower the NPF gross, the more efficient condition would be.

3. EFFICIENCY

Another performance measurement often used to evaluate performance is the efficiency ratio. That is the ratio of Operational Cost to Operating Income (BOPO) (OJK, 2015). This ratio can be used to measure the rate of efficiency of an Islamic bank so that this ratio is often associated with the internal ability of the bank. The higher the BOPO

score, the less efficient the sharia bank is. The inefficient score of the ratio can be judged obviously when the amount of the operating expenses exceeds the operating income generated. Such a condition is said a suffered loss and the ratio score is more than 1.

In relation to NOM and NPF, theoretically, the efficiency ratio is associated with a negative impact on NOM (Wibowo & Syaichu, 2013) and affects NPF positively. Logically, the ability of the internal bank to generate efficiency in management can increase profits. Conversely, inefficient banks cause to record lower earnings and certainly contribute to affect financing risk (Rosly, 2005). Such a condition occurs since income and operating expenses for banks are always related to financing activities.

H3: The more efficient the SBU of RDBs is, the more profitable it would be.

4. PROFIT-SHARING FINANCING (PSF)

There are several financing instruments offered in Islamic banks and these products can be grouped into two, namely, financing based on account receivable called receivable financing and based on profit-sharing called Profit-Sharing Financing (PSF). Based on profit-sharing, they can be split into Musyarakah and Mudarabah. Musyarakah contract is a joint venture between two or more parties and the profit is divided according to the agreed profit sharing ratio or a form of partnership between two or more parties in a business in which each of them contributes funds provided that the profit is shared by agreement, while the risk is based on the share of the contribution of funds (Lukman, 2018). Mudharabah is a form of agreement between two or more parties, in which the owner of capital (Shahibul Mal) entrusts a certain amount of capital to the manager (Mudharib) with a preliminary agreement (Nurhasanah, 2015).

Profit-sharing financing has a high correlation to profitability. Some literature notes that the portion of financing based on profit-sharing is greater than other financing portions (Satria & Saputri, 2018; Chalifah & Sodiq, 2015; Permata, 2014; Fahrul & Arfan, 2012). The demand for prof-

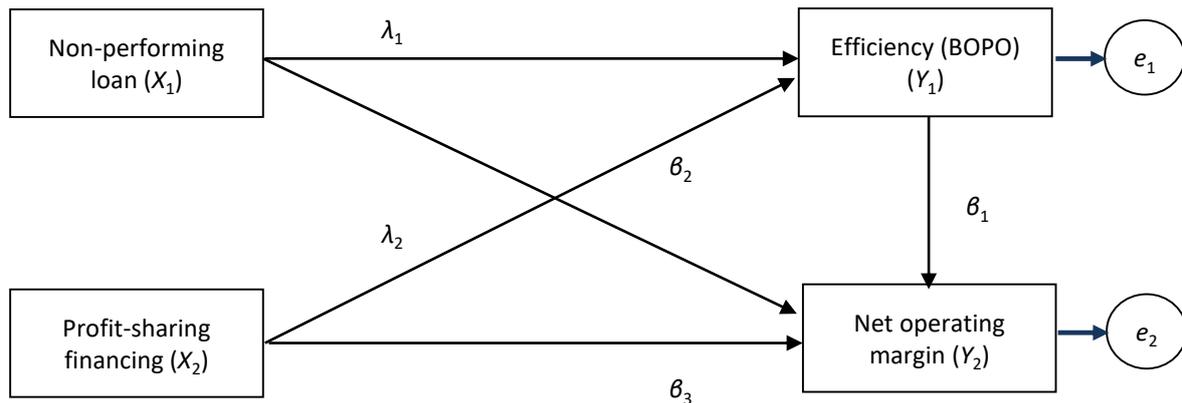


Figure 1. Proposed full path model for NOM

it-sharing financing is heavily influenced by the number of existing business and new business (Ananda & Setiawan, 2011), since the principle of this financing products is the equity share of a business (Satria & Saputri, 2018; Chalifah & Sodiq, 2015).

H4: The higher the profit-sharing financing made, the more profitable SBU of RBDs would be.

PSF also could impact the efficiency ratio. When the amount of profit-sharing financing made is high, the possibility to have inefficiency condition would be high due to a repayment problem (Alqahtani, Mayes, & Brown, 2017; Asraf, Rizwan, & L’Huillier, 2016; Iqbal & Molyneux, 2016). Conversely, it would decrease the ratio of BOPO or be efficient, when the financing made is repayed as expected (Iqbal & Molyneux, 2016).

H5: The higher the profit-sharing financing made, the more the possibility to have an inefficiency condition.

Given the proposed model the structural equation for the models is constructed as follows:

$$Y_1 = \alpha + \lambda_1 X_1 + \lambda_2 X_2 + e_1, \quad (1)$$

$$Y_2 = \alpha + \beta_1 Y_1 + \beta_2 X_1 + \beta_3 X_2 + e_2, \quad (2)$$

where λ is a standardized regression coefficient for the first equation Y_1 , while λ and β are the standardized coefficient parameters for equations one and two, respectively. The symbols e_1 and e_2 are the residuals for equations 1 and 2, respective-

ly, and X_1 , X_2 and Y_1 are predicted variables to be tested for the NOM.

5. DATA AND METHODOLOGY

The research is designed for the quantitative approach with the use of path analysis until after justification from literature for the construction of the proposed three path arrows pointed NOM and two to BOPO. The study also quantified coefficient correlations with the use of Pearson correlation to identify a possible new path arrow (s) between the predicted variables in the model and to justify the reliability of path coefficient parameter result obtained from the standardized regression. The new path is introduced only when the existing literature supports the relationship.

The data were times series of 81 samples from 9 Sharia Business Units (SBU) of RDBs applied in the study. The name of the bank was sharia business unit of Sulsebar, Kaltimara, Kassel, Kalbar, Jabar, DKI dan Banteng, Jateng, and Riaukepri. The data was obtained from audited and published financial reports from the year of 2009 to 2017. The analysis was conducted using SPSS software version 23.

The descriptive statistics were conducted as presented in Table 1. With regard to minimum and maximum data value, it indicates outlier data for the variable of NOM indicated by the minimum score for the variable of 0.0 and BOPO reflected by the maximum score of 2.56090. To ensure the existing outlier data, the study conducted outlier

Table 1. Descriptive statistic for main variables

Variables	N	Minimum	Maximum	Mean	Std. deviation
NOM	81	.00000	.07240	.0264894	.02117638
BOPO	81	.15450	2.56090	.7897667	.41759949
NPF	81	.00114	.22142	.0411839	.03658877
PSF	81	.00196	.61090	.2375605	.15914407
Valid N (listwise)	81	–	–	–	–

detection using a scatter plot. The results detect 9 (nine) outlier data for NOM and BOPO. To have an efficient coefficient parameter, the study dropped the outlier data. As to normality distribution, the data can be said to have a normal distribution indicated by the test of the P-P plot. The P-P plot is one of reliable normality distribution tests counting on visual judgment (Ghasemi & Zahediasi, 2012; Altman & Bland, 1995). With respect to the linearity test, the study applied the curve estimation test. The result indicates that there is a slight bent only on the variable of BOPO and NPF. For the purpose of data analysis, the study treated the data as linear data.

5.1. Correlation coefficient test

The secondary data was quantified using Pearson Correlation as indicated in Table 2. The results show that all predicted variables of BOPO, NPF, and PSF indicate a significant correlation to NOM with a p -value less than 0.01 ($P < 0.01$), suggesting that the three predicted variables were important to impact NOM. These findings were in line with the existing literature used to construct the proposed path model in the study.

The statistical output of the second equation proposed in the model indicates a significant correlation coefficient of NPF and PSF to BOPO with a p -value less than 0.01 and a p -value less than 0.05, respectively. The findings support the constructed path model given in Figure 1. As to the relationship between NPF and PSF, the output shows the

insignificant coefficient score, suggesting that the path correlation between the predicted variables is not available. Since the correlation coefficient parameter did not indicate a possible indirect effect to other predicted variables, standardized regression is then used for that prediction.

5.2. Test of standardized coefficient

5.2.1. Equation 1

The path analysis is then used to quantify the proposed model in the study. As given in Figure 1, two equations were proposed in the model, which are the structural equation for BOPO (Y_1) and NOM (Y_2). The first equation tested two predicted variables of NPF (X_1) and PSF (X_2) to impact BOPO (Y_1). The statistical result indicated different results for each path coefficient. The variable of PSF, as predicted, indicated a positive significant impact on BOPO indicated by a standardized coefficient parameter of 0.420. The coefficient score is significant with a p -value of 0.01 ($0.0 < 0.01$). Interestingly, NPF did not show a significant impact on BOPO indicated by a p -value of 0.121 ($0.121 > 0.10$).

On the basis of the result given, the structural equation for the path to BOPO $Y_1 = 0.453X_1 + e_1$ (see Table 3 column 3). The adjusted r-square score of 0.194 means that the predicted variable of PSF (X_2) contributes to 0.194 or 19.4% in the model and the rest of 0.806 or 80.6% is explained by other variables. The quantified residual parameter for the model is 0.8916 $e_1 = \sqrt{(1 - 0.795)} = 0.8916$.

Table 2. Pearson correlation matrix for main variables

Variables	NOM	BOPO	NPF	PSF
NOM	1	–	–	–
BOPO	–0.694**	1	–	–
NPF	–0.302**	0.431**	1	–
PSF	–0.398**	–0.237*	0.066	1

Note: * significant at the 0.05 level, ** significant at the 0.01 level, *** significant at the 0.10 level.

Table 3. The structural path for equation 1 (BOPO)

Result of regression: standardized coefficient parameter (beta)						
Dependent variable BOPO (Y_2)						
Regressor	1	2	3	4	5	6
NPF (X_1)	0.250**	0.169		0.416**	0.434**	–
PSF (X_2)	–	0.420**	0.453**	0.224**	–	0.257**
Summary statistics						
R_2	0.063	0.232	0.205	0.238	0.188	0.66
\bar{R}_2	0.049	0.210	0.194	0.219	0.178	0.54
N	72	72	72	81	81	81

Note: * significant at $P < 0.05$, ** significant at $P < 0.01$, *** significant at $P < 0.10$.

5.2.2. Equation 2

The second equation examined three predicted variables of BOPO, NPF, and PSF to NOM. After dropping 9 outlier data, on the basis of statistical output, all predicted variables (BOPO, NPF, and PSF) contribute significantly to negatively impact NOM. The BOPO contributed to a negative effect on NOM with the highest coefficient parameter of -0.627 and p -value of 0.00 , meaning that the finding is significant with alpha less than 0.01 ($0.00 < 0.01$). As regards PSF, it was the second rank of the predicted variable that contributed negative impact to NOM with a path coefficient of -0.193 . The p -value for its coefficient was 0.023 , suggesting that the finding is significant with alpha 0.05 ($0.023 < 0.05$). The variable of NPF was the last rank contributed to NOM with a coefficient path of -0.165 . Since the p -value of 0.034 , it indicated a significance with alpha 0.05 ($0.034 < 0.05$). The adjusted r -square score of 0.194 means that the predicted variable of PSF (X_2) contributes to 0.615 or 61.5% in the model and the rest of 0.385 or 38.5% is explained by other variables.

The residual coefficient for the second model was 0.6066 , $e_2 = \sqrt{(1 - 0.632)} = 0.6066$.

On the basis of two path equations given above, an integrated model of full path diagram can be drawn as in Figure 2. With the use of a standardized coefficient given in two equations, the total effect of each predicted variable on NOM was calculated.

As to the three predicted variables studied, the variable of PSF was the only one that had an indirect coefficient parameter. The variable of NPF was detected insignificant to BOPO, meaning no path arrow was directed to BOPO. The indirect effect of NPF to NOM was detected through BOPO only with the score of -0.284 [$(-0.627) (0.453)$]. Thus, the total indirect score of four quantified relationships was -0.477 [$(-0.284 + -0.193)$]. Since indirect score is higher than the direct one, it could be said that indirect score is a significant effect on NOM (Y_2). Regarding NPF and BOPO, they did not have indirect coefficient. It is therefore that direct effect is equal to the total effect. The total effect of NPF was -0.165 and BOPO was -0.627 .

Table 4. The structural path for equation 2 (NOM)

Result of regression: standardized coefficient parameter (beta)						
Dependent variable NOM (Y_2)						
Regressor	1	2	3	4	5	6
BOPO (Y_1)	-0.756^{**}	-0.711^{**}	-0.661^{**}	-0.627^{**}	-0.621^{**}	-0.615^{**}
NPF (X_1)	–	-0.181^{**}	–	-0.165^*	–	-0.013
PSF (X_2)	–	–	-0.210^{**}	-0.193^*	-0.276^{**}	-0.277^{**}
Summary statistics						
R_2	0.572	0.602	0.607	0.632	0.549	0.550
\bar{R}_2	0.565	0.591	0.595	0.615	0.538	0.532
N	72	72	72	72	81	81

Note: * significant at $P < 0.05$, ** significant at $P < 0.01$, *** significant at $P < 0.10$.

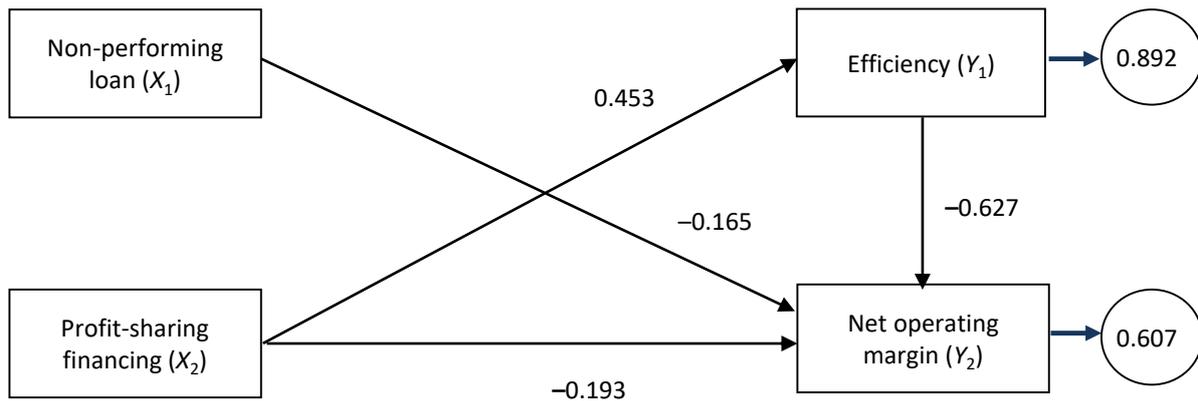


Figure 2. A reduced full model of NOM through BOPO

Related to the validity, on the basis of the result, all predicted variables examined to NOM indicated the same rank based on correlation and regression coefficient parameter. BOPO indicated the highest correlation coefficient and the highest standardized regression coefficient to affect NOM. It is also valid for PSF to NOM and NPF to NOM. Since the both results indicated the same contribution to NOM, the statistical result can be assumed valid.

6. DISCUSSION AND IMPLICATION

The study examined the strategy to optimize profitability obtained from financing activities of Sharia Business Unit (SBU) of Regional Development Bank(s) in Indonesia. The profitability of the study measured by NOM and predicted variables tested were three, namely BOPO, NPF, and PSF. On the basis of the literature review conducted, the study proposed five path coefficients to impact NOM, of which the constructed direct path to NOM was three and two for indirect impact.

The study revealed that the direct path of BOPO was contributed to the highest rank of all coefficient parameters with a negative sign. The findings have also been recorded by the number pieces of literature, including Wibowo and Syaichu (2013) and Rosly (2005). The finding suggested that an efficiency effort made by SBU of RDBs could provide a high impact on NOM.

It was the fact that the ratio of BOPO was higher and the ratio of NOM was lower at SBU of RDBs, suggesting a close relation. Two things perceived

contributed to this condition, efficiency and financing policy of the banks. An efficiency matters occurred in SBU of RDBs since operational costs such as human resource, cost of profit-sharing, and others were higher. To anticipate the condition, SBU of RDBs should drive up more financing activities to cover the routine operational cost. Currently, it indicated SBU of RDBs invested more funds collected in the portfolio of placement account in which it only generates a small percentage of profit-sharing compared to financing activities.

The second major effect to NOM was Profit-Sharing Financing (PSF). It is financing investment in the portfolio of Musyarakah and Mudharabah. Literature noted that the two products were in high demand compared with other products such as receivable financing (Satria & Saputri, 2018; Chalifah & Sodiq, 2015). Interestingly, it was found a negative sign in the study suggesting that when PSF increases it would reduce NOM. This negative sign was also found by Chalifah and Sodiq (2015) in Musyarakah financing made by Syariah Mandiri. The findings could indicate that PSF was not one of major investment options for SBU of RDBs mostly as shown by a lower proportion quantified in a certain SBU.

Another interesting finding related to PSF was an indirect effect through NPF. The indirect effect of PSF was recorded higher than that of direct effect, suggesting that the indirect effect contributed significantly to NOM. With a positive sign to BOPO, it could suggest that NPF contributed to inefficient matters faced by SBU of RDBs.

To the indirect effect of NPF to NOM through BOPO, it was recorded insignificant. It can be said

that it is not the only NPF contributed to inefficiency matters of SBU of RDBs. This could also indicate that a tight financing policy applied by SBU of RDBs was reflected by the amount of investment portfolio made in the placement on other bank accounts.

Finally, the direct effect of NPF to NOM was found to have a significant impact on NOM with a

negative sign. The findings are supported by numbers of literatures (Purbaningsih, 2014; Setiawan & Putri, 2013). The finding suggests that amount of financing default booked by SBU of RDBs was high. This also suggests that SBU of RDBs did not intensify financing activities and preferred to have the investment portfolio in placement to other Islamic bank accounts.

CONCLUSION

The study tested the optimization of profitability obtained from financing activities of Sharia Business Unit (SBU) of Regional Development Banks in Indonesia. There were three predicted variables which are examined to relate with the NOM, namely efficiency, risk repayment, and profit-sharing financing. The statistical output indicated that efficiency ratio measured by BOPO was the highest contributor to impact lower profitability recorded by SBU of RDBs. The efficiency ratio indicated a negative sign, suggesting that high efficiency would increase the availability of liquidity and vice versa. The second rank was contributed by profit-sharing financing with a negative sign which indicates repayment made by customers would not impact profitability. NPF also indicated to have a contribution to NOM, but not through BOPO, suggesting that an obvious tight financing policy was applied by SBU of RDBs.

The finding of this study basically provides many interesting insights of Islamic banking industry of Indonesia especially related to Sharia Business Unit (SBU) and suggests the policy implications. At a bank level, there is room for all the banks, especially the largest banks to enhance their profitability in scale and from current level by being more cost effective in the resources allocation and operations, and to increase their product innovation in line with the other banks in the same area.

The study suggests to make a comparative analysis of Islamic banking with the conventional banking industry of Indonesia, and the Islamic banking industry of ASEAN countries. Furthermore, the resilience factors and risk exposures can also be an interesting factor to take into account while analyzing the profitability of Islamic banking industry of Indonesia.

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