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The Determinant Factors of Operational Performance in Indonesian Banking Companies

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ABSTRACT---*This study aims to examine the determinant factors of operational performance in the Indonesia banking companies. The factors are tested include public funds, growth of earning assets, credit risks, liquidity risks and capital adequcy on operational performance. The data use a new unbalanced data panel from 203 financial reports of 44 banking companies that listed in the Indonesia Stock Exchange for the period 2013-2017.*

The results showed that public funds and the growth of earning assets have a significant negative effect on operational performance. Meanwhile, credit risk as measured by a non-performing loan has a significant positive effect on operational performance. However, this study found liquidity risk and leverage risk have no effect on operational performance.

Keywords---*public funds, growth of earning assets, credit risks, leverage risks and capital adequacy, operational performance.*

I. Background Research

Banks that function as financial intermediaries have a very important role for the economy of a country (Pandia, 2012). Therefore, the performance of a good bank will encourage the health of the country's economy. In general, a bank's good performance is associated with efficiency in managing resources to generate profits (Margaretha & Zai, 2013). In addition, efficiency in managing banking operations guarantees long-term sustainability of the company (Sufian & Habibullah, 2010).

Banking in Indonesia is always encouraged by the Financial Services Authority (OJK) to always improve efficiency so that the competitiveness of companies increases and is able to compete with regional banking companies within the scope of the ASEAN Economic Community (Hadad, 2016). Therefore, OJK has issued provisions issued in the form of the Financial Services Authority Circular Letter (SEOJK) concerning the Opening of Commercial Bank Office Networks based on Core Capital. Based on these provisions, the measurement of the efficiency of the operational performance of Indonesian banks uses the OCOI ratio. The OCOI ratio is the comparison between operating costs and operating income (Ślusarczyk et al., 2019).

Based on these provisions, banks that have capital of more than IDR 5 trillion is declared efficient if the OCOI ratio is lower than 75%. Meanwhile, banks that have capital of less than IDR 5trillion is declared efficient if it has a OCOI ratio lower than 85%. (Deputy Commissioner of Banking Supervision 1 OJK, Mulya E. Siregar in SP-34 / DKNS / OJK / 4/2016: 28 April 2016). The lower OCOI ratio in a bank indicates that the better the performance of bank management (Slamet, 2006) .

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Data obtained from Indonesian Banking Statistics in 2017 shows the average OCOI ratio for four years fluctuating from 70.31% - 90.71%. Banks that are categorized as having capital of more than Rp. 30 trillion can be said to be quite efficient because the OCOI ratio is close to a provision below 75%. However, banks that are in the category have capital of less than IDR 30 Trillion shows the OCOI ratio is higher than the stipulated provisions. This shows that Indonesian banking in general has not been efficient. This inefficiency is caused by the operational costs of the banking sector in Indonesia which are still high when compared to ASEAN countries. The use of technology and the like is expected to help reduce operational costs (Adityaswara, 2017)

Banks as financial intermediaries are required to always be careful in managing funds in the form of bank owner funds, other bank company funds and customer funds. Bank fund management must avoid the risk of not returning the invested funds which are a form of protection of the interests of the fund owners or customers. Therefore, fund management is an absolute demand in the banking world (Taswan, 2006).

The funds used in the operations of a bank can be sourced from first party funds, second parties and third parties. Community funds are funds collected from the community in the form of demand deposits, deposits and savings (Saudi, 2018). This community fund is the largest source of funds because it can reach 80% -90% of all funds managed by the bank (Dendawijaya, 2009). Meanwhile, in the management of bank funds allocation can be divided into primary reserves, secondary reserves, lending, portfolio investment and assets fixed (Dendawijaya, 2009). Credit distributed is the largest part of assets owned by the bank. Credit distribution is one component of the management of productive assets.

This research was conducted with the aim of knowing the factors that influence the operational performance of banks in Indonesia in the context of banking operational efficiency. Previous research on banking has been carried out in Indonesia. However, previous research focused more on factors that affect banking financial performance, especially on profitability. Research that examines banking operational efficiency is still very little done. Therefore, the results of this study are expected to enrich and develop existing research results.

II. Framework for Research and Hypothesis

Effect of Community Funds on Operational Performance

Public funds are the largest source of funds that is the most reliable and managed by banks because it reaches 80% -90% of all bank funds. Public funds sourced from current accounts, deposits and savings are used by banks to encourage the growth of lending (Dendawijaya, 2009). Even though public funds are considered to be a source of operational costs for banks, credit activities that provide higher interest income will cover the interest expense that is the bank's obligation. This will cause the operational performance ratio, measured by the ratio of operational costs to operating income, to decrease because operating income is higher than operating expenses.

Researchers in Indonesia conducted by Rohim, Askandar, and Junaidi (2017) and Nurwahyuni, Sinarwati, and Wahyuni (2017) found that public funds have a statistically significant negative effect on operational performance. However, different results are shown by the studies of Setyawati and Suartana (2014), Arnaya, Cipta, and Yudiaatmaja (2014)), Andhika and Sujana (2016), Yasa and Setyawan (2011) and Kusumayanti and Jati (2010) who found public funds statistics have a significant positive effect on operational performance. Meanwhile, research in Nigeria conducted by Olarewaju and Obalade (2015) shows that public funds have no effect on banking operational performance.

Based on the explanation above, the hypothesis of this study are:

H_1: Public funds have a significant negative effect on operational performance.

The Effect of Productive Asset Growth on Operational Performance

Management of banking fund allocations can be divided into primary reserves, secondary reserves, lending, portfolio investment and fixed assets (Dendawijaya, 2009). Loans disbursed constitute the largest portion of assets owned by banks. Credit distribution is one component of the management of productive assets.

High growth shows the greater the amount of funds that can be collected from the community so that the higher the growth rate of funds that can be channeled by the Bank to the public indicates that the operational income of both loan interest and bank administration costs will increase, which can reduce the ratio of operational costs to operating income. Higher income has an impact on increasingly efficient operational performance (Firdaus & Ariyanti, 2004; Setyawati & Suartana, 2014).

Nurwahyuni et al. (2017), Setyawati and Suartana (2014), Arnaya et al. (2014), Kusumayanti and Jati (2010), Yasa and Setyawan (2011) and Yanti, Yudiaatmaja, and Suwendra (2016) found that the growth of earning assets was statistically significant negative effect on banking operational performance. Contradictory results are shown by the research of Andhika and Sujana (2016) who found credit growth had a significant positive effect on operational performance. Meanwhile, research by Rohim et al. (2017) shows that statistically the growth of earning assets does not have a positive effect on operational performance.

Based on the explanation above, the hypothesis of this study are:

H_2: the growth of earning assets has a significant negative effect on operational performance

Effect of Credit Risk on Operational Performance

Lending to the community is not always going well. Credit that is poorly managed will cause a lot of problem loans. This results in a decrease in the principal repayment and interest income from banks (Firdaus & Ariyanti, 2004). Non-performing loans will cause a loss of opportunity to obtain income (income) and adversely affect the bank's profitability, namely the ratio of operating costs to operating income (Dendawijaya, 2009).

Hidayat and Prasetyo (2017) and Setyawati and Suartana (2014) from Indonesia and Amer, Moustafa, and Eldomiaty (2011) from Egypt found that credit risk was statistically significant positive effect on banking operational performance. Whereas, the results of research by Rohim et al. (2017)) shows that credit risk does not statistically affect operational performance.

Based on the explanation above, the hypothesis of this study are:

H_3: credit risk has a significant negative effect on operational performance

Effect of Capital Adequacy on Operational Performance

Capital is the main factor for a bank to be able to develop its business growth. Bank Indonesia applies this provision through a Minimum Capital Fulfillment Obligation Regulation of 8%, which will gradually be adjusted to banking conditions in Indonesia and international banking. The greater the capital owned by a bank will increase its capital adequacy ratio. This means increasing the ability of banks to utilize funds through lending and increasing the income received by banks from the direct results of their business activities so that operational efficiency can be achieved.

Research from Fathony (2017) found that capital adequacy had a significant positive effect on banking operational performance in Indonesia. However, research from Fitrianto and Mawardi (2006) found that capital adequacy did not affect operational performance. Based on the explanation above, the hypothesis of this study are:

H_4: Capital adequacy has a significant positive effect on operational performance

Effect of liquidity ratios on operational performance

Liquidity is generally defined as the ownership of an adequate source of funds for all needs and obligations that are due. In the banking context, the concept of liquidity refers to the ability of the bank to fulfill all its debt obligations, can repay its depositors' funds and be able to fulfill loan requests submitted without delay.

Loan to deposit ratio (LDR) is often used to measure banking liquidity. The higher the level of LDR, the lower the level of liquidity, because the amount of funds needed to finance credit is increasing. the ability of bank liquidity to make credit as a source of liquidity. This can be a measure of whether the loan can still be given extra or must be limited. A high LDR shows that banks are relatively illiquid, which indicates that the bank is increasingly inefficient in its operational management. Based on the explanation above, the hypothesis of this study are:

H_5: Liquidity risk has a significant positive effect on operational performance

III. Objects and Research Methods

The object of research in this study is the financial statements of banking companies listed on the Indonesia Stock Exchange in the period 2013-2017. The method of research used is explanatory research) which aims to obtain answers about "how" and "why" a phenomenon occurs The population in the study were all financial statements of banking companies listed on the Indonesia Stock Exchange in the period 2013-2017, namely 203 financial statements. Operational variables in this study are shown as follows:

Independent variable one (X_1) is public funds defined as funds collected from the community which is the largest source of funds relied on by the bank. Usually in the form of demand deposits, deposits and savings. (Dendawijaya, 2009: 49). Measurement indicators use third party funds with formulas:

Third Party Funds = Ln (Current Account + Deposits + Savings) (Febrianto & Muid, 2013)

The second independent variable (X_2) is the growth of earning assets which is defined as the difference between the loans given in the comparison period and the loans given in the previous period compared to loans given in the previous period expressed as a percentage (Yasa & Setyawan, 2011). The measurement indicator uses credit growth with the following formula:

Growth = (Total Credit (t) -Total credit (t-1)) / (Total Credit (t-1)) x100% (S.Mischin, 2008: 28)

The third independent variable (X_3) is credit risk which is defined as the ratio between non-performing loans to total credit. The measurement indicator uses a non-performing loan with the following formula:

NPL = (Credit given with collectibility 3 to 5) / (Total Credit) x100% (Slamet, 2006)

The fourth independent variable (X4) is capital adequacy which is defined as the bank's capital adequacy in supporting risk-bearing assets, such as loans (Leon & Ericson, 2008). The indicator indicator uses a capital adequacy ratio (CAR) with the following formula:

CAR = (bank capital) / RWA x 100%

The fifth independent variable (X_5) is liquidity risk which is defined as the composition of the amount of credit given compared to the amount of public funds and own capital used (Kasmir, 2013). The measurement indicator uses loan to deposit ratio (LDR) with the following formula:

LDR = (credit amount) / (Third Party Fund amount) x 100%

Operating Performance (Y) defined as performance measures the level of efficiency and ability of the bank in conducting its operations. The measurement indicator using OCOI is the comparison between operating costs and operating income (Rivai, 2013: 482) with the formula as follows:

OCOI = Operational Cost / Operating Income x100% (Slamet, 2006)

4. Research Results and Discussion

4.1. Research result

4.1.1 Results of Panel Data Regression Analysis

The panel data regression results with the fixed effect model can be seen in the following table:

Table 1: Regression Result Fixed *Effect Model*

Dependent Variable: OCOI
Method: Panel Least Squares
Date: 04/25/19 Time: 21:04
Sample: 2013 2017
Periods included: 5
Cross-sections included: 44
Total panel (unbalanced) observations: 203

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.236452	1.076525	3.006389	0.0031
TPF	-0.142327	0.063514	-2.240869	0.0264
GROWTH	-0.236144	0.063973	-3.691296	0.0003
DNPL	4.141381	0.763669	5.423005	0.0000
DCAR	0.014586	0.009603	1.518947	0.1321
DLDR	0.007046	0.006461	1.090561	0.2782

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.683484	Mean dependent var	0.907787
Adjusted R-squared	0.590152	S.D. dependent var	0.249472
S.E. of regression	0.159711	Akaike info criterion	-0.631203
Sum squared resid	3.979164	Schwarz criterion	0.135894
Log likelihood	111.0671	Hannan-Quinn criter.	-0.320866
F-statistic	7.323160	Durbin-Watson stat	2.113562
Prob(F-statistic)	0.000000		

Source: *outputEviews* 9

Based on the results of regression calculations, it is known that the established regression model is a fixed effect model. The regression equation that will be formed is as follows:

Operational Performance = 3.236452 -0.142327 public funds -0.236144 Growth + 4,141381 Non Performing Loans +0.0014586 CAR + 0.007046 LDR

Model Suitability Test

The model match test is done by calculating the coefficient of determination (R2) in essence to measure how far the model's ability to explain the variation of the dependent variable. The Adjusted R-square value obtained is 59.01%. This shows that the five independent variables consisting of community funds, growth of earning assets (credit), credit risk, leverage risk and CAR are able to explain the dependent variable namely operational performance (OCOI ratio) of 59.01%, while the remaining 40.99% is a contribution from other variables not examined.

IV. Discussions

Effect of Community Funds on Operational Performance

The statistical results of this study indicate that public funds have a negative effect on operational performance. This means that the first hypothesis is accepted. This result shows that the higher public funds managed by Indonesian multiplication can cause the operational performance measured through OCOI to decrease.

Community funds are the largest source of funds most relied on by banks because they reach 80% -90% of all funds managed by banks. Subsequent public funds will be used by banks to encourage the growth of lending (Dendawijaya, 2009). Although public funds are considered to be a source of operational costs for banks, credit activities that provide higher interest income will cover the interest expense that is the bank's obligation. This will cause the ratio of operational performance measured through OCOI to decrease because operating income is higher than operating expenses.

The results of this study are in line with Rohim, Askandar & Junaidi (2015), Nurwahyuni, Sinarwati & Wahyuni (2016), Olarewaju & Obalade (2015) but not in line with the results of research by Dewi & Suartana (2009) and Kusumayanti & Jati (2010) that Third The Party Fund has a statistically positive and insignificant effect on the OCOI ratio and Setyawati & Suartana (2014) and Andika & Sujana (2016) that the Third Party Fund is statistically significant positive effect on the OCOI ratio.

Effect of Growth on Operational Performance

The second hypothesis in this study is the growth of earning assets (credit) has a negative effect on operational performance. The results showed that the growth of earning assets (credit) was statistically significant negative effect on operational performance. This condition shows that the higher growth of earning assets (credit) can cause operational performance measured through OCOI to fall which reflects more efficient operational performance. Thus the second hypothesis is accepted. With high growth, it shows that the amount of funds that can be collected from the community increases so that the higher the growth rate of funds that can be channeled by the Bank to the community indicates that the operating income, such as interest on loans and bank administration costs, can reduce the OCOI ratio. Higher income has an impact on increasingly efficient operational performance (Firdaus & Ariyanti, 2004; Setyawati & Suartana, 2014).

The results of this study are in line with Yasa and Setyawan (2011), Arnaya et al. (2014), Setyawati and Suartana (2014) that the growth of earning assets (credit) is statistically significant negative effect on operational performance but is not in line with Olarewaju and Obalade (2015) that Growth has a significant negative effect on operational performance. The results of this study contradict the research conducted by Andhika and Sujana (2016) that the growth of earning assets was

statistically significant positive effect on operational performance. These results contradict Rohim et al. (2017) that earning assets are statistically not significantly positive for operational performance (OCOI).

Effect of Non Performing Loans on Operational Performance

The third hypothesis in this study is that non-performing loans have a positive effect on operational performance. The results showed that non-performing loans were statistically significant positive effect on operational performance. This condition shows that the higher the non-performing loan, the higher the operational performance measured through OCOI. A high OCOI ratio reflects that operational performance is not yet efficient. Thus the third hypothesis is accepted.

This reflects a lot of bad credit that is done by the debtor in paying the loan principal installments along with the interest agreed upon by both parties in the credit agreement (Dendawijaya, 2009: 82). This results in losses to creditors as providers of funds. Non-performing loans cause bank income from interest to decline in addition to the principal loan repayments that do not return which results in a higher OCOI ratio.

The results of this study are in line with the research conducted by Setyawati and Suartana (2014), Amer et al. (2011) and Hidayat and Prasetyo (2017) that non-performing loans are statistically significant positive effect on operational performance. The results of this study are not in line with Parlan (2013) that non-performing loans statistically have a positive and insignificant effect on the OCOI ratio and this study contradicts Rohim et al. (2017) that non-performing loans statistically have a negative effect that is not significant for operational performance.

Effect of capital adequacy on operational performance

The fourth hypothesis in this study is that capital adequacy has a positive effect on operational performance. The results of this study indicate that CAR has no significant positive effect on positive operational performance. CAR increases, performance also increases. No significant effect can be caused by banks operating in the 2013-2017 period unable to utilize existing capital for profit-generating activities, for example increasing their credit expansion. This causes cash to flow and does not provide adequate returns while the bank's operational costs continue to run, so that the bank's capital will be used to cover operational costs.

This research is in line with the results of research conducted by Fitrianto and Mawardi (2006) who found that the capital adequacy ratio had a significant positive effect on operational performance (OCOI). On the contrary, this research contradicts the results of research conducted by Fathony (2017).

Effect of liquidity risk on Operational Performance

The fifth hypothesis in this study is that loan to deposit ratio has a significant positive effect on operational performance. The results of this study indicate that loan to deposit ratio has a positive and insignificant effect on operational performance measured through OCOI. The value of the regression coefficient which shows positive results means that the LDR value in the conventional banking period of 2013-2017 which increases tends to increase performance and vice versa.

There is no significant effect of the Loan to deposit ratio variable because during the 2013-2017 period Indonesian banks were unfavorable in channeling all their funds collected from third party funds. In addition, bank income does not only come from interest income from loans given to the community but can also be generated from fee-based income or commission-based income (Pandi, Purwanto, & Kohar Irwanto, 2018). Fee based income obtained by banks can come from treasury trending, trade finance and e-channel services. This research is in line with the results of research conducted by Fitrianto and Mawardi (2006) who found that liquid risk does not affect operational performance.

V. Conclusions and Suggestions

Conclusion

Based on the results of the research and discussion that has been done, the authors obtain several conclusions as follows:

1. Public funds have a significant negative effect on operational performance
2. Earning Assets Growth (credit) has a significant negative effect on operational performance
3. Credit risk has a significant positive effect on operational performance
4. Capital adequacy has no significant positive effect on operational performance
5. Liquidity risk has no significant positive effect on operational performance.

Suggestions

Suggestions that the author can convey to several parties, namely:

For Banking

Banking management is expected to pay more attention to every action that will be taken along with the risks that will be borne by each decision made. In order for credit distribution to provide appropriate expectations, banks need to improve internal control when granting credit such as being selective in accepting prospective customers and sticking to the precautionary principle so that credit quality can be maintained (healthy) and the number of problem loans can be reduced. The amount of Third Party Funds collected also needs to be considered, so that it does not cause operational performance measured through a high OCOI ratio which results in operational costs that exceed operating income. Banks must be able to improve and maintain the Capital Adequacy Ratio (CAR), which is above 8%. Capital Adequacy Ratio (CAR) must be used efficiently for purposes that can increase profits. Increasing the Capital Adequacy Ratio (CAR) can be done by increasing the owner's capital deposit, evaluating assets or selling unproductive assets that will reduce RWA (Risk Weighted Assets). Increased Capital Adequacy Ratio (CAR) shows the better the ability of banks to bear the risk of any risky credit or productive assets. In addition, it must be able to maintain the movement of the Loan To Deposit Ratio (LDR) which is 80% -110% in accordance with Bank Indonesia Regulation Number 18/14 / PBI / 2016, because the lower the Loan To Deposit Ratio (LDR) indicates the bank's ineffectiveness in channeling credit and the higher the Loan To Deposit Ratio (LDR) indicates the more risky the condition of bank liquidity. Banks must be able to manage their assets in order to generate profits covering the amount of credit that cannot be returned by its customers in addition to its operational costs so that the level of Loan To Deposit Ratio (LDR) can be maintained even the value of LDR decreases.

For Further Researchers

a) Researchers can then add to the observation period with the latest years of research in order to provide an up-to-date description of the company.

b) Further researchers are expected to conduct research on other types of banking operating in Indonesia such as State-Owned Commercial Banks, Foreign Exchange Private Banks, Non-Foreign Exchange Private Banks, or Regional Development Banks.

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