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Panel Data Analysis Of Profitability Determinants: Evidence From Rural Bank's Indonesia

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Abstract

This study aims to investigate determinants of profitability's rural bank in Indonesia. The method used in this study uses panel data analysis. The data used are secondary data obtained from Bank publication reports during period 2009 - 2018. The population used in this study is rural banks in East Java and sample selection based on purposive sampling. Empirical investigation shows that capital, non-performing loan, operations efficiency, and credit growth have a strong relationship to profitability's bank. Net interest margin and cash ration do not have relationship to bank perform. The high level of non-performing loans reduces the ability of banks to disburse further loans, thus affecting the bank's profitability. This requires banks to have strong capital. Inefficient bank management also disrupts bank capital which can reduce bank profitability. Rural bank needs to continuously improve its efficiency in order to avoid the risk of bankruptcy. Credit growth also needs to be accompanied by good credit quality so that it does not increase non-performing loans and has the opportunity to earn high interest income. This study is useful to determine the indicators of bank profitability which are reflected in financial ratios to ensure the continuity of the bank's business, especially rural bank by using bank-specific variables.

Keywords: profitability, rural banks, data panel

1. INTRODUCTION

Rural banks (RB) in phrases of Indonesian practices are Bank Perkreditan Rakyat (BPR), are the ones banks that are mainly positioned withinside the rural regions and the centers furnished withinside the banks are much less complex than the ones of business banks. The banks are best imparting financial savings and deposits bills for investment offerings and loans or lending because the financing offerings. Since the dimensions of banks in phrases of property in addition to capital is much less than business banks, then the offerings are commonly limited best for micro and small businesses.

Due to the vital role of rural banks, it is very important to maintain their level of performance. Performance has become the most important issue for any organization whether it is for-profit or not-for-profit (Barney, 1997). Performance is regularly associated with preceding or proposed expenditure efficiency, control responsibility, or accountability. Financial overall performance

control is a part of the entire overall performance control of an organization (Haider et al., 2015). According to Armstrong (2006), financial performance is a subjective measurement tool assessing how well a company manages assets to generate returns. Financial performance is used as a general measure of the level of banking financial soundness during a certain period to be compared with other banks and the banking industry. The decline in financial performance will reduce the reputation and public trust in banks.

One measure of bank financial performance is using profitability analysis. The measurement of bank profitability has received attention in the financial literature. The role of the bank as an intermediary starts from mobilizing public funds and redistributing public funds in the form of credit (Puspitasari et al., 2020). The bank's financial ratios become an instrument to obtain information on the soundness of a bank that shows the performance of the bank.

Over the beyond decade, records suggests that the range of rural banks in Indonesia has declined. In 2015 there were 1,800 rural banks, but in November 2019 there were 1,709 rural banks registered and operating. This of course will disrupt rural banks in carrying out their role for economic progress. One of the motives for the decline within side the wide variety of rural banks is the decline within side the profitability of rural banks from time to time. Most of the previous research focused on the performance of commercial banks, but performance studies on other financial institutions such as rural banks are still minimal (Puspitasari et al., 2021). Therefore, it is necessary to identify the factors that determine the profitability of rural bank objects with an atmosphere in developing countries such as Indonesia. This study aims to fill this gap by identifying the determinants of rural bank's profitability in Indonesia using panel data approach.

2. LITERATURE REVIEW

Profit is the last intention of banks. All the techniques designed All the techniques designed and sports done thereof are supposed to understand this grand intention to reveal extraordinary economic overall performance. To degree the economic overall performance of rural banks, there are style of ratios of profitability (Murthy and Sree, 2003; Alexandru and Romanescu, 2008). This has a look at used Return on Asset (ROA) as a proxy of economic overall performance.

Agency theory explains the connection among agents and principals wherein bank management is the agent and stockholders are the principal. According to Jensen (1986) issues that regularly rise up are corporation conflicts, specifically while dealers and principals combat for his or her personal hobbies despite the fact that they've the identical goal, specifically to growth the price of the company. In the monetary control framework, the disclosure of monetary statements could be very essential thinking about that bank regulations and country legal guidelines are tracking events in order that banks can manipulate their risks properly. In relation to corporation principle, monetary statements have to be designed on the premise of the choice of man or woman togetherness to be able to limit the corporation fees incurred (Purwani, 2010).

Signal theory states how indicators have an effect on the market's evaluation of the financial institution thru the facts indicators it receives. Banks want to construct public believe that banks are controlled through governance through successful management (Napitupulu, et al., 2020). Signal principle explains the life of facts asymmetry among banks and involved events. Therefore, banks want to bring beneficial facts thru economic reviews to involved events for destiny funding decisions (Jama'an, 2008). One of the vital matters this is frequently visible through traders is the extent of earnings improvement pronounced through the agency thru the profit's declaration may be translated into an amazing sign or a horrific sign (Listiana and Prabowo, 2011). If the financial institution's profitability increases, it'll be taken into consideration as properly news, whilst at the opposite its miles taken into consideration as horrific news.

Empirically, many studies have been conducted with respect to bank performance (Altunbas et al., 2004; Demerguç-Kunt and Huizinga, 2001; Flamini et al., 2009; Godlewski, 2006; Ongore and Kusa, 2013). Bank performance is reflected in bank profitability using ROA proxies. This is due to the fact the banking authorities, as financial institution supervisors and supervisors, prioritize the price of a bank rentability as measured with the aid of using property whose budget are primarily from public deposit budget (Dendawijaya, 2009). The higher the ROA, the better

the bank's performance due to a greater return from the assets used (Nanda and Panda, 2018). In this study, the dependent variable uses ROA as a proxy for profitability which shows bank performance. The independent variables in this study used bank-specific variables based on previous research. Bank-specific variables consist of Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), Operational Efficiency (OE), Cash Ratio (CR), and Credit Growth (CG). The following is an explanation of the independent variable.

2.1 Capital Adequacy Ratio (CAR)

This study uses variable indicators from bank internal factors referring to previous studies. Capital is the amount of own fund available to support the bank's operation and act as a buffer in case of adverse condition and influence profitability (Athanasoglou *et al.*, 2005). The greater the capital adequacy ratio, the bank has the ability to provide funds for business and business activities and is able to increase return on assets so as to show good financial performance (Stanley and Sinaga, 2020). This study are consistent with Alyousfi's research (2020). Different results are shown by the research of Salim (2017), and Fajari and Sunarto (2017) who found that capital adequacy ratios did not affect return on assets.

Capital adequacy indicates that the bank has sufficient funds to manage its productive assets to create profit. The study conducted by Fukuda et al. (2008) found that banks soundness when they meet the capital adequacy ratio (CAR). CAR is an important capital adequacy ratio for banks to run their business and accommodate the risk of losses caused by bank operations (Puspitasari et al., 2019). CAR is a banking performance ratio that serves to measure the adequacy of capital owned by banks to support assets that are potentially exposed to risk such as loans extended by banks (Sudarmawanti and Pramono, 2017). The higher the CAR, the better the bank's ability to bear the risk of credit or risky productive assets (Indrajati et al., 2020). CAR is one of the indicators used to measure the soundness of a bank. The higher the profitability of the bank indicates the bank is in a soundness condition.

Positive correlation between profitability and capital has been proven empirically (Puspitasari et al, 2022 and Demirgüç-Kunt and Huizinga, 1999) that banks with high capital will be able to meet their needs and are also able to create better profits. In contrast to Agusman et al. (2008) and Guidara et al. (2013) who found that capital has an insignificant relationship to bank profitability.

H1: Capital Adequacy Ratio has a positive and significant influence on profitability

2.2 Non-Performing Loan (NPL)

High non-performing loans of banks results in a negative perception of depositors about bank soundness prompting them to pay higher interest rates to compensate for the same. Credit quality is measured by the provision of loan losses to gross. loans have a significant negative effect on the profitability of banks. Non-Performing Loan (NPL) is the main indicator that describes the credit risk of rural banks. The higher this ratio indicates the worse the quality of bank credit and causes the bank to be in big trouble (Puspitasari, 2015). NPL is a condition where the debtor fails to fulfill its obligations so that it is in the status of non-performing loans. Non-performing loans are loans with substandard, doubtful, and bad quality (Kurniasari and Ghozali, 2013).

This examine makes use of variable signs from financial institution inner elements relating to preceding studies. Based on studies carried out via way of means of DAO (2020) indicates has a significant positive effect on profitability. The results of this study are in line with Sofie et al. (2020), and Raz (2018). NPL is a ratio that suggests the capacity of bank control in handling non-performing loans. The better this ratio, the more serious the exceptional of bank credit, which reasons the wide variety of non-performing loans to increase because the health level decreases and of course the bank suffers greater losses. The causes of bad loans are usually caused by a lack of effective monitoring and supervision on the part of the bank (Utami and Puspitasari, 2021). Meanwhile, Putri and Abundanti (2018) the higher non-performing loans resulted in the increasingly complex bank activities. Different results Horobet et al. (2021) in her research concluded that NPL had no effect on profitability in rural bank subjects. The results of this study are in line with Ali and Puah (2019).

H2: Non-performing Loan has a negative and significant influence on profitability

2.3 Operational Efficiency (OE)

Operational risk is brought about by insufficient or breaking down of human mistake, interior procedures, framework disappointments, or outside occasions that influence bank activities. Operational risk can cause direct or indirect financial losses and potential losses from lost profit opportunities. Mahardia (2008) argues that efficiency is the ability to use input resources to produce output products or services. The operational efficiency ratio is used as a proxy to measure the operational efficiency of running a bank's business. The efficiency of bank operations impact on bank performance which shows that bank has used all factors of production appropriately or otherwise (Mawardi, 2005). When a bank is efficient with its capital, the bank is able to produce profitability in order to avoid the risk of tent to default and increase bank stability (Boadi and Lartey., 2016). This is in accordance with examines led by Fiordelisi and Mare (2013) who found that operation efficiency has a negative and significant effect on profitability. This result is in consistent with Wheelock and Wilson (2000) which found that capital adequacy ratio had a negative and significant effect on operating efficiency.

H3: Operational Efficiency has a negative and significant influence on profitability

2.4 Cash Ratio (CR)

One of the complex problems of banks in bank operations is bank liquidity. Cash Ratio is a comparison between liquid assets owned by banks and current liabilities as stated in the provisions of the laws and regulations governing the process of assessing the soundness level of rural bank. When a bank experiences a high cash ratio, liquidity risk will decrease (Wheelock et al., 2020). This finding strengthens the results of the study of Bennet et al. (2014), Uhliq (2013), Haque and Heaney (2012), Filippaki and Mamatzakis (2009), and Wheelock and Wilson (2000). This is contrary to studies conducted by Giordana and Schumacher (2017), Dermine and Carvalho (2005) and Altunbas et al. (2000), where in times of over-liquidity, banks are faced with weak profitability, so there is a risk of default if it continues in the long term. If a bank has assets that are less liquid, then it is in a state of distress. Banks will find it difficult to sell their assets and are faced with problems meeting their liquidity requirements. The larger this ratio, the lower the liquidity risk faced by the bank. Therefore, this variable contributes negatively to bank risk (Febrian and Herwany, 2011).

H4: Cash Ratio has a positive and significant influence on profitability

2.5 Credit Growth (CG)

The amount of credit extended to the public means the bank's performance is considered productive. Because credit is an illiquid asset, an increase in the amount of credit means an increase in illiquid assets in the bank's asset portfolio. According to Weisel, Harm, and Bradley (2003); Eakins and Bojórquez-Tapia (2008); Pilbeam (2013); Engida (2015), the amount of liquidity maintained by banks will be greatly influenced by the demand for credit which is the basis for the growth of credit assets. If the demand for credit is low, then banks tend to maintain assets. Banks tend to maintain assets that are less liquid because long-term loans are generally more profitable. So, it can be said that credit growth has a negative impact on bank liquidity. Where it is proven that liquidity has a significant effect on bank performance. When the liquidity ratio is outside the threshold of a bank's soundness ratio, it will cause a decrease in bank performance.

H5: Credit Growth has a positive and significant influence on profitability

3. METHODOLOGY

The studies method used is descriptive verification and quantitative within side the shape of causal studies. It is descriptive and is used to obtain empirical evidence of the effect of the independent variables, namely Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), Operational Efficiency (OE), Cash Ratio (CR), and Credit Growth (CG) on the dependent variable, namely, profitability.

The data used is secondary data in the form of the monthly financial statements of rural banks in East Java for the 2009-2018 period. Furthermore, the control method used in this research is purposive sampling of banks that meet the listed criteria, and the application of the panel data methodology involves 295 banks. The regression panel data equation formed is as follows:

$$ROA_{i,t} = \alpha_0 + \alpha_1 CAR_{i,t-1} + \alpha_2 NPL_{i,t-1} + \alpha_3 OE_{i,t-1} + \alpha_4 CR_{i,t-1} + \alpha_5 CG_{i,t-1} + \epsilon i, t$$
 (1)

Wherei=1,2,...,N=295,t=2009 until 2018. In our model, ROAi,t stands for profitability CARi,t, NPLi,t, OEi,t, CR i,t, and CGi,t are the bank-specific control variables; and ϵ i,t is the regression error term. Equations (1) is estimated using ordinary least squares (OLS) with the bank's fixed effects.

This study models the financial performance of banks based on previous research. Therefore, this study uses the proxy variables defined in Table 1, drawn from the literature on profitability.

Table 1. Definition and measurements of Variabel

<u>Variable</u>	Definition Definition	Measurement	Expect.	Evidence from		
			Effect	Prior Studies		
Dependent Variables: Bank's Profitability						
Profitability (ROA)	The bank's ability to generate profits or profits from the assets used	Net Prof Total Asset		Altunbas et al., 2004; Demerguç- Kunt and Huizinga, 2001; Flamini et al., 2009; Godlewski, 2006; Ongore and Kusa, 2013		
		t variables: Bank Spesific Factors Equity		C. II. 2017		
Capital Adequacy Ratio (CAR) i,t	All financial institution belongings that contain risks (credit, investments, securities, claims on different banks) also are financed from the financial institution's very own capital finances similarly to acquiring finances from re-assets outdoor the financial institution.	Risk Weighted Asset	Positive	Salim 2017; Fajari and Sunarto, 2017; Puspitasari et al., 2019; Stanley and Sinaga, 2020; Indrajati et al., 2020; Puspitasari et al, 2022		
Non- performing Loan (NPL) i,t	A credit score class categorized as non-perform loans. Non-current loans, namely loans whose principal or interest payments are not smooth as required in the credit agreement	Non Performing Loan Total Credit	Negative	Raz, 2018; Putri and Abundanti, 2018; Ali and Puah, 2019; DAO 2020; Sofie et al. 2020; Utami and Puspitasari, 2021; Horobet et al. 2021.		
Operational Efficiency (OE) _{i,t}	Bank's ability to perform efficiency by measuring operating expenses against operating income.	Operating Expenses Operating Income	Negative	Fiordelisi and Mare, 2013; Boadi and Lartey, 2016; Wheelock and Wilson (2000)		
Cash Ratio (CR) _{i,t}	Bank's ability to pay short-term obligations with available cash and cash equivalents	Cash and cash equivalents Current liabilities	Positive	Filippaki and Mamatzakis, 2009; and Wheelock and Wilson, 2000; Haque and Heaney, 2012; Uhliq, 2013; Bennet et al. 2014.		
Credit Growth (CG)	Growth in total loans extended to third parties	$\frac{Tot \ Kredit \ m-Tot \ Kredit \ m-1}{Total \ Kredit \ m-1} \ x \ 100$	Positive	Weisel, Harm, and Bradley, 2003; Eakins and Bojórquez-Tapia, 2008; Pilbeam, 2013; Engida, 2015.		

The model in this study is a variant of previous research on bank financial performance. This study uses proxy variables to determine the determinants of profitability which are usually found in conventional and Islamic commercial banks. This study fills the gap in previous research by determining bank-specific variables that determine rentability as shown in Figure 1.

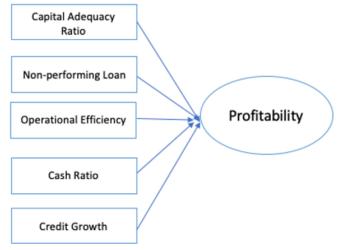


Figure 1. Theoretical Framework

4. RESULT AND DISCUSSION

Table 1 describes the descriptive records for the variables used on this study. It presents info withinside the shape of maximum, minimum, mean, median and well-known deviation for the structured variable and its explanatory variable. Table 2 summarizes the effects of the OLS regression with fixed effects for equation (1).

Table 1. Summary Statistics

Table II cannot f caateere					
Variabel	Observation	Mean (%)	Std. Deviation	Z	
Profitability Variable					
ROA	23.972	3.29	5.57	33.380	
Bank-specific variables					
CAR	23.972	33.77	22.05	14.986	
NPL	23.972	9.11	5.87	30.547	
OE	23.972	146.69	20.98	35.316	
CR	23.972	24.56	30.56	3.784	
CG	23.972	5.94	0.46	6.717	

Notes: Summary statistics of the main variables used in the empirical analysis are reported in this Table. Variables are divided into four main categories: profitability variables on the left, capital and bank-specific variables.

Based on Table 1 the average ROA is above 1% which interprets rural banks as being able to generate profits and of course good for bank performance. The average CAR of rural banks has met the minimum capital adequacy set by the authorities aimed at covering poor credit quality performance and inefficient bank operations. The high average NPL figure above 5% has an impact on decreasing profits obtained by banks so that the chances of banks to face financial problems increase. Loan interest problems are common in rural banks. The high cost of funds and low efficiency have an impact on the high loan interest rates received by customers. This of course makes rural banks less competitive and reduces their attractiveness in the eyes of customers, thus affecting the growth of rural banks. Rural banks show a low level of efficiency. This is because they are still using the personal selling method. In addition, rural banks collect funds from the public in the form of deposits and savings. These two forms of savings are public funds with high deposit interest rates which increasingly pose a challenge to efficiency for rural banks. In an effort to maintain public trust that banks are in good health, rural banks always maintain adequate cash stock for adequate liquid assets. This is because the CR requirement at the threshold of 6% can generally be met because the percentage is small. CR is used for the operational needs of the bank so that it can run. In terms of channeling funds, BPRs are still in tight competition with commercial banks and other financial institutions. However, BPR has more

value in competition, namely relationship and locality. In terms of banking intermediation function has been running well so that credit distribution is considered quite good. There are still a few banks that are able to survive in the micro segment because they require their own expertise. Even micro customers sometimes do not fit into the standards of commercial banks, while BPRs are able to enter this niche market.

The correlations between all the variables are shown in Table 2. Overall, the results showed that the correlations between the dependent variables were generally low, indicating that there was no multicollinearity problem.

Table 2. Correlations Matrix of All Variables

Variables	ROA	CAR	NPL	OE	CR	CG
Y (ROA)	1					
CAR	.23**	1				
NPL	-0.32**	473 ^{**}	1			
OE	0.3**	01**	-0.26**	1		
CR	-0.14**	0.22**	201**	0.07**	1	
CG	0.29**	0.05*	370 ^{**}	-0.13**	185**	1

Notes: The reported P-values under the correlation coefficients, ***, **, * correspond to significance levels of 1, 5 and 10%, respectively, for the bidirectional distribution.

Table 3. OLS Regression with Fixed-Effect Result

Table 5. OLS Regression with Fixed-Effect Result					
Independent	Expected	Coefficient	Prob		
Variables	Sign				
С		-0.751**	126.089		
CAR, t-1	(+) positive	0.029***	0.0120		
NPL, t-1	(-) negative	-0.168***	0.0185		
OE, t-1	(-) negative	0.020**	0.0139		
CR, t-1	(-) negative	-0.006	0.0199		
CG, t-1	(+) positive	0.718***	0.0185		
Adjusted R ²	0.54				
F-statistic	0.767				
Prob (F-statistic)	0.00				
Durbin-Watson	3.35				

Notes: The dependent variable is Rentability. Constant terms are included in the models but are omitted in the table for simplicity. t-statistics are reported in parentheses. Standard errors are bank-clustered; ***, **, *correspond to the 1, 5 and 10% levels of significance, respectively, for a two-tailed distribution

Based on table 3, the t-test shows the relationship between the independent and dependent variables, while 76.7% of bank profitability can be explained by CAR, NPL, OE, CR and Credit Growth (CG), while others are explained by variables not examined in this research. Therefore, it can be concluded that the model formed is acceptable. Table 3 shows that CAR shows a strong relationship in influencing bank profitability which has positive signs in the regression at 1 per cent confidence level. So that it accepts Hypothesis 1. In general, this investigation is in line with the findings of Puspitasari et al, 2022 and Demirgüç-Kunt and Huizinga, 1999. However, these findings contrast with Agusman et al. (2008) and Guidara et al. (2013) who found that capital has an insignificant relationship to bank profitability.

The test results show that the NPL ratio shows negative signs in the regression at 1 per cent confidence level. It means that it accepts Hypothesis 2. This finding supports the study of Sofie et al. (2020), Ali and Puah (2019), but inconsistent with the findings of Horobet et al. (2021). This result is intuitive because banks with higher NPL ratios tend to have lower bank performance. A high NPL will have an impact on the ability of rural banks to extend further credit and can reduce the confidence of depositors and investors, thereby triggering a flight of funds which, if it occurs on a large scale, will ultimately decrease the rural bank's profitability. Sophie et al. (2020), Utami and Puspitasari (2021) also reported similar findings in their study.

With a positive coefficient indicates the greater the OE, the higher the bank's profitability. It shows that it accepts Hypothesis 3. The results of this research strengthen the findings of Boadi and Lartey (2016) and Fiordelisi and Mare (2013) who found that a low OE ratio indicates that banks are more efficient in running their business. High efficiency can minimize costs so as to optimize profit and the bank will avoid the risk of bank failure. The test results show that the Cash Ratio (CR) has no effect on bank profitability with a significance level above 10% so that it rejects Hypothesis 5. This is because the CR needs of rural banks can generally be met because the percentage is small. CR is used for the operational needs of the bank so that it can run. The results of this test are not in line with several previous studies including Giordana and Schumacher (2017) that in order for the sustainability of the bank to be maintained, it is necessary to manage the ability of the bank to meet its third-party fund obligations with liquid assets. The high level of third-party funds originating from the public in a bank shows the high level of public trust in the bank. The results of the research by Febrian and Herwany (2011) are also not in line with the results of this study where public distrust of banks will result in loss of funds because people will withdraw all funds embedded in banks for fear of experiencing losses. With a positive regression coefficient, the higher the credit growth (CG), the higher the bank's profitability. The results of this test are consistent with the findings of Engida (2015) that lending is the main activity to generate bank income. For most banks, credit is the main source of income and the biggest source of risk, so it needs to be accompanied by good credit quality. Similarly, the findings of Eakins and Bojórquez-Tapia (2008) concluded that the larger the allocation of credit distribution, the greater the bank risk, especially for banks that carry out development missions in addition to commercial missions, especially on the type of credit that is dependent on demand so that it is at high risk. However, the results of this study contradict the findings of Melese and Laximikantham (2015) who found that there was no significant relationship between credit growth and bank profitability as long as it needed to be balanced with good credit quality.

5. CONCLUSION AND RECOMMENDATION

In this study, we investigate the relationship between bank performance and bank-specific variables for rural banks in Indonesia. In examining this relationship, we proxy the performance variable and estimate the relationship using a simultaneous equation framework to capture the determinants of bank performance. We contribute to the literature using rural bank data in East Java Indonesia during the 2009-2018 period as the implementation of Basel III.

Our empirical evidence shows that bank performance and bank-specific variables are simultaneously related. Based on this simultaneous relationship, we find that high capital adequacy does not always reflect good bank performance but reflects resilience to risk. This finding also has several policy implications. Within the framework of bank capital and risk, capital regulations contribute to the high level of rural bank capital in Indonesia for bank sustainability. The relationship between rural bank performance which leads to higher growth of third-party funds. The implication of this result is that the trust of bank customers is higher from the information on good bank financial performance. Therefore, rural banks need to pay attention to maintaining their reputation through their financial performance. Rural banks need to manage their non-performing loans so that they are at the threshold according to the provisions of the regulator.

We also find that high NPL will reduce bank performance. Proper asset management will increase profitability so that capital will be stronger. Banks with strong capital will certainly have the ability to maintain the sustainability of the bank so as to avoid the risk of bankruptcy. Banks that are inefficient due to the inability of banks to reduce their operational costs have an impact on decreasing bank profitability. The condition of continuously declining profitability will erode capital thereby increasing the risk of bankruptcy.

Credit growth accompanied by good quality will increase the opportunity for banks to channel funds back to the community so that the opportunity to earn interest income is greater. When the bank's interest income increases continuously it will increase profits and strengthen capital so as to avoid financial risk.

The results of this study can be used as input for improving regulations and supervision of the banking industry activities of rural banks. Considering the identification of the determinant factors that make up the model of bank financial performance, this study uses bank-specific factors in the case of rural banks in Indonesia. For further research, it can be enriched by using other variables or methodologies that were not investigated and used in this study.

REFERENCE

- Agusman, A., Monroe, G. S., Gasbarro, D., & Zumwalt, J. K. (2008). Accounting and capital market measures of risk: Evidence from Asian banks during 1998–2003. Journal of Banking & Finance, 32(4), 480-488.
- Alexandru, C., & Romanescu, M. L. (2008). The assessment of banking performances-Indicators of Performance in Bank Area. University Library of Munich, Germany.
- Ali, M., & Puah, C. H. (2019). The internal determinants of bank profitability and stability: An insight from banking sector of Pakistan. Management Research Review.
- Altunbas, Y., De Bondt, G., & Marques-Ibanez, D. (2004). Bank capital, bank lending, and monetary policy in the euro area. Kredit und Kapital.
- Altunbas, Y., Liu, M. H., Molyneux, P., & Seth, R. (2000). Efficiency and Risk in Japanese Banking. Journal of Banking & Finance, 24(10), 1605-1628.
- Armstrong, M. (2006). Performance management: Key strategies and practical guidelines. Kogan Page Limited.
- Barney, J. B. (1997). Gaining and sustaining competitive advantage.
- Bennett, R. L., Güntay, L., & Unal, H. Inside Debt, Bank Default Risk, And Performance During the Crisis. Journal of Financial Intermediation, 2015 Elsevier
- Boadi, E. K., Li, Y., & Lartey, V. C. (2016). Role of Bank Specific, Macroeconomic and Risk Determinants of Banks Profitability: Empirical Evidence from Ghana's Rural Banking Industry. International journal of economics and financial Issues, 6(2), 813-823.
- Bolton, P., & Jeanne, O. (2011). Sovereign default risk and bank fragility in financially integrated economies. IMF Economic Review, 59(2), 162-194. https://doi.org/10.3386/w16899
- Chatterjee, S., & Eyigungor, B. (2012). Maturity, Indebtedness, and Default Risk. The American Economic Review, 102(6), 2674-2699.
- Dao, B. T. T., & Ta, T. D. N. (2020). A meta-analysis: capital structure and firm performance. Journal of Economics and Development.
- Demerguç-Kunt, A., & Huizinga, H. (2001). Financial structure and bank profitability in financial structure and economic growth: a cross-country comparison of banks, markets, and development. Asli Dermirgue-Kunt, & Rose, L.(Eds.
- Demirgüç-Kunt, A., & Huizinga, H. (1999). Determinants of commercial bank interest margins and profitability: some international evidence. The World Bank Economic Review, 13(2), 379-408.
- Dendawijaya, L. 2009. Manajemen Perbankan. Bogor: Ghalia Indonesia.
- Dermine, J., & De Carvalho, C. N. (2006). Bank loan losses-given-default: A case study. Journal of Banking & Finance, 30(4), 1219-1243.
- Eakin, H., & Bojórquez-Tapia, L. A. (2008). Insights into the composition of household vulnerability from multicriteria decision analysis. Global Environmental Change, 18(1), 112-127.
- Engida, A. M., Faika, S., Nguyen-Thi, B. T., & Ju, Y. H. (2015). Analysis of major antioxidants from extracts of Myrmecodia pendans by UV/visible spectrophotometer, liquid chromatography/tandem mass spectrometry, and high-performance liquid chromatography/UV techniques. Journal of food and drug analysis, 23(2), 303-309.
- Febrian, E., & Herwany, A. (2011). Depositor sensitivity to risk of Islamic and conventional banks: Evidence from Indonesia. The International Journal of Business and Finance Research, 5(3), 29-44.
- Fiordelisi, F., & Mare, D. S. (2013). Probability of default and efficiency in cooperative banking. Journal of International Financial Markets, Institutions and Money, 26, 30-45.
- Flamini, V., McDonald, C. A., & Schumacher, L. B. (2009). The determinants of commercial bank profitability in Sub-Saharan Africa.
- Godlewski, C. J. (2006). Regulatory and institutional determinants of credit risk taking and a bank's default in emerging market economies: A two-step approach. Journal of Emerging Market Finance, 5(2), 183-206.
- Guidara, A., Soumaré, I., & Tchana, F. T. (2013). Banks' capital buffer, risk and performance in the Canadian banking system: Impact of business cycles and regulatory changes. Journal of Banking & Finance, 37(9), 3373-3387.
- Haider, N., Khan, N., & Iqbal, N. (2015). Impact of corporate governance on firm financial performance in Islamic financial institution. International Letters of Social and Humanistic Sciences, 51, 106-110.
- Horobet, A., Curea, S. C., Smedoiu Popoviciu, A., Botoroga, C. A., Belascu, L., & Dumitrescu, D. G. (2021). Solvency risk and corporate performance: a case study on European retailers. Journal of Risk and Financial Management, 14(11), 536.
- Indrajati, V., Yuvita, Y., Putri, N. A., Rismawati, F. O., & Puspitasari, D. M. (2020). Determinants of Financial Distress Rural Bank in Indonesia: A Logit Approach. Solid State Technology, 63(3), 5069-5075.
- Jama'an, J. A. (2008). Pengaruh Mekanisme Corporate Governance, Dan Kualitas Kantor Akuntan Publik Terhadap Integritas Informasi Laporan Keuangan (Studi Pada Perusahaan Publik di BEJ) (Doctoral dissertation, program Pascasarjana Universitas Diponegoro).
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. The American economic review, 76(2), 323-329.
- Koutsomanoli-Filippaki, A., & Mamatzakis, E. (2009). Performance and Merton-type default risk of listed banks in the EU: A panel VAR approach. Journal of Banking & Finance, 33(11), 2050-2061. https://doi.org/10.1016/j.jbankfin.2009.05.009

Kurniasari, C., & Ghozali, I. (2013). Analisis pengaruh rasio CAMEL dalam memprediksi financial distress perbankan Indonesia (Doctoral dissertation, Fakultas Ekonomika dan Bisnis).

- Listiana, N., & PRABOWO, T. J. W. (2011). Likuiditas Pasar Saham dan Asimetri Informasi di Seputar Pengumuman Laba Triwulan (Doctoral dissertation, Universitas Diponegoro).
- Mahardia, P. (2008). Analisis pengaruh rasio CAR, BOPO, NPL, NIM dan LDR terhadap kinerja keuangan perbankan (studi kasus perusahaan perbankan yang tercatat di bej periode juni 2002 â juni 2007) (Doctoral dissertation, Program Pascasarjana Universitas Diponegoro).
- Mawardi, W. (2005). Analisis Faktor-faktor yang Mempengaruhi Kinerja Keuangan Bank Umum di Indonesia (Studi Kasus pada Bank Umum dengan Total Asset kurang dari 1 Trilyun). Jurnal Bisnis Strategi, 14(1), 83-94. https://doi.org/10.14710/jbs.14.1.83-94
- Murthy, Y., & Sree, R. (2003). A study on financial ratios of major commercial banks. Research Studies, College of Banking & Financial Studies, Sultanate of Oman, 3(2), 490-505.
- Nanda, S., & Panda, A. K. (2018). The determinants of corporate profitability: an investigation of Indian manufacturing firms. International Journal of Emerging Markets.
- Napitupulu, S., Primiana, I., NIDAR, S. R., Effendy, N., & Puspitasari, D. M. (2020). The effect of management capabilities in implementing good corporate governance: A study from indonesia banking sector. The Journal of Asian Finance, Economics and Business, 7(1), 159-165.
- Ongore, V. O., & Kusa, G. B. (2013). Determinants of financial performance of commercial banks in Kenya. International journal of economics and financial issues, 3(1), 237-252.
- Pilbeam, K. (2013). International finance. Bloomsbury Publishing.
- Purwani, T. (2010). Pengaruh good corporate governance terhadap kinerja perusahaan. Majalah Ilmiah Informatika, 1(2), 47-60.
- Puspitasari, D. M., Febrian, E., Anwar, M., & Sudarsono, R. (2019). Risk Determinants on Foreign Exchange Banking Based on Endogenous Variable Using Probit Models. Global Business and Management Research, 11(1), 66-74.
- PUSPITASARI, D. M., FEBRIAN, E., ANWAR, M., SUDARSONO, R., & NAPITUPULU, S. (2021). Determinants of default risks and risk management: evidence from rural banks in Indonesia. The Journal of Asian Finance, Economics and Business, 8(8), 497-502.
- Puspitasari, D. M., Maharani, A., Artika, L. R. P., Anwar, R. A., & Maulana, T. (2022). INDICATORS OF BANK DEFAULT: EMPIRICAL STUDY OF RURAL BANKS IN INDONESIA. CENTRAL ASIA AND THE CAUCASUS, 23(1).
- Puspitasari, D. M., Roespinoedji, D., & Napitupulu, S. (2020). Applicability of Altman Model in Predicting Financial Distress: Evidence from Rural Bank in Indonesia. Solid State Technology, 63(3), 3064-3069.
- Puspitasari, D. N. (2015). Analisis Fenomena Undisbursed Loan.
- Putri, N. K. A. P., Wiagustini, L. P., & Abundanti, N. N. (2018). Pengaruh NPL, CAR dan BOPO terhadap profitabilitas pada BPR di Kota Denpasar. E-Jurnal Manajemen Universitas Udayana, 7(11), 6212.
- Raz, A. F. (2018). Risk and capital in Indonesian large banks. Journal of Financial Economic Policy, 10(1), 165-184.
- Saif-Alyousfi, A. Y. (2020). Determinants of bank profitability: evidence from 47 Asian countries. Journal of Economic Studies.
- Sofi, M. R., Bashir, I., Parry, M. A., & Dar, A. (2020). The effect of customer relationship management (CRM) dimensions on hotel customer's satisfaction in Kashmir. International Journal of Tourism Cities.
- Stanley, J., Hutahaean, T. F., & Sinaga, R. U. A. (2020). The Effect of CAR, NPL, LDR, and BOPO On ROA in Banking Companies Listed in Indonesia Stock Exchange Period 2011-2016. Journal of Research in Business, Economics, and Education, 2(5), 1132-1143.
- Sudarmawanti, E., & Pramono, J. (2017). Pengaruh CAR, NPL, BOPO, NIM dan LDR Terhadap ROA (Studi kasus pada Bank Perkreditan Rakyat di Salatiga yang terdaftar di Otoritas Jasa Keuangan Tahun 2011-2015). Among Makarti, 10(1).
- Tang, D. Y., and Yan, H. (2010). Market Conditions, Default Risk and Credit Spreads. Journal of Banking & Finance, 34(4), 743-753.
- Uhliq, H. (2014). Sovereign Default Risk and Banks In Monetary Union. German Economic Review. Wiley Online Library.
- Utami, E. M., & Puspitasari, D. M. (2021). A Geographical Comparative Study On Conventional Versus Sharia Mutual Fund Performance. Review of International Geographical Education Online, 11(1), 436-442.
- Weisel, J. A., Harm, N., & Bradley, C. F. (2003). The cash factor. Strategic Finance, NA-NA.
- Wheelock, D. C., & Wilson, P. W. (2000). Why do banks disappear? The determinants of US bank failures and acquisitions. Review of Economics and Statistics, 82(1), 127-138.