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Macroeconomic and Bank Specific on Profitability: The Case of Islamic Rural Bank in Indonesia

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Abstract. Purpose - The purpose of this study to investigate determinant Islamic Rural Bank's (BPRS) profitability in Indonesia. Factors that can affect profitability are economic growth, inflation, deposit to total assets, NPF, liabilities to total assets, and profitability. This study uses a quantitative method with multiple linear regression method. Data use is all Islamic Rural Bank in Indonesia with the period of this study are 2010-2017 quarterly. The results of this research were Economic growth, deposit to total assets, NPF, and liabilities to total assets have partial significant effects on profitability. All independent variables have simultaneous effects on profitability with the value of R^2 is 82.1%. BPRS are expected to improve their performance optimizations, especially in financing areas. Gathering third-party funds on BPRS are good enough but the distribution of financing is still not optimal due to the high level of congestion financing. The BPRS must be more cautious in conducting financing to produce an optical profit. In addition, BPRS are also expected to observe the macroeconomic state especially economic growth and can take the opportunity to increase its profitability. The existence of Islamic Rural Banks is indeed very helpful for small entrepreneurs, with a very easy process and also becoming a solution for the community. Islamic Rural Banks need to increase the performance to get greater profitability.

Keywords: Islamic Rural Bank; profitability; Economic growth; deposit to total asset; NPF; liabilities to total assets.

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INTRODUCTION

Islamic Rural Bank (BPRS) aims to provide banking services particularly in rural communities and Small Medium Enterprises generally have not reached by Islamic Bank in order to realize the prosperity evenly. Indonesia is one of the countries that have high total number of BPRS, can be seen from the table below (Department, 2017) :

Table 1 . *The growth of Islamic Rural Bank in Indonesia*

Description	**Unit**	**Year**			
		2014	**2015**	**2016**	**2017**
Total BPRS	Unit	163	163	166	167
Total Asset	Million IDR	6.573.331	7.739.270	9.157.801	10.840.375
Third-Party Funds	Million IDR	4.028.415	4.801.888	5.823.964	6.987.280

The table 1 shows that beginning in 2014 to 2017 the number of the BPRS per year has increased. With an increase in the number of BPRS, mean range BPRS wider so as to provide more benefits for the community. Total assets of the BPRS are also increasing each year. Third-party funds also have elevated the BPRS on a span of 2014-2017. In 2014 the funds of third parties amounting to 4,028,415,000,000 IDR and continued to increase until the year 2017 is 6,987,280,000,000 IDR. Increased third-party funds means more customers trusted their funds to be managed by the BPRS.

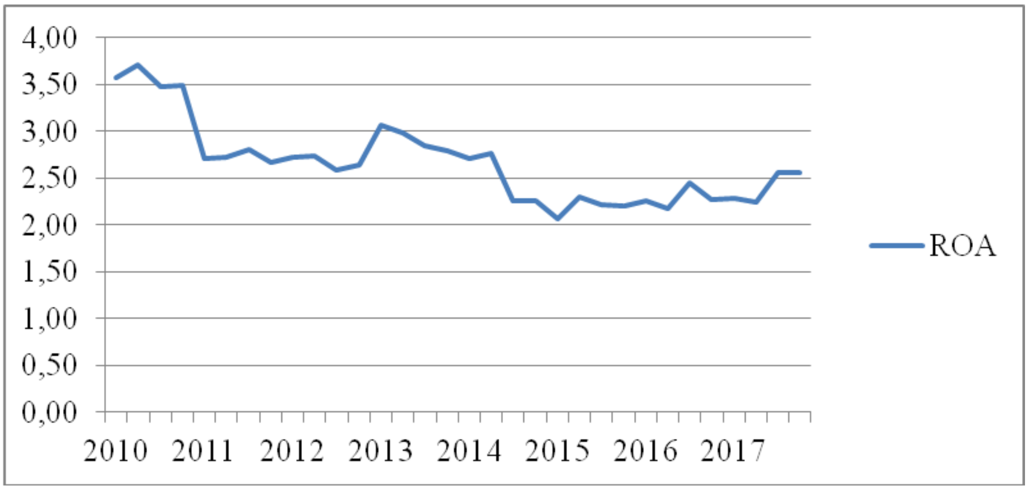

Figure 1. *ROA Islamic Rural Bank year 2010-2017 (Department, 2017)*

In contrast to the growth of the BPRS are increasing, the financial performance of the BPRS are visible yet either. In figure 1 above, the profitability (ROA) BPRS looks experienced fluctuations and tend to decrease in 2010-2017. Profitability is crucial for the survival of the BPRS. Profitability will affect the development of the bank. Customers also pay attention to the bank's profitability as consideration before investing their funds at BPRS (Masood and Ashraf, 2012) It is certainly becoming a problem for BPRS and Indonesia's economy.

The purpose of the BPRS are to prosper the economy society of the weak economy, which included in it are Small Medium Enterprises. SMEC is Indonesia's largest GDP contributor so that the presences of the BPRS are very important as a supporter of the financing for Small Medium Enterprises. Therefore, the decrease in profitability of the BPRS will certainly influence the development of Small Medium Enterprises (Sudarsono, 2015; Marvelous et al., 2019; Kaya & Aydin, 2019; Hove & Troskie, 2019). Profitability as well as one benchmarks the effectiveness of banking management. The effectiveness of risk management can be tested by measuring the profitability of a bank where financial institutions everywhere have set profitability as its main goal to be achieved (Ariffin and Tafri, 2014).

Study of the profitability of Islamic banks is an important tool to improve the performance of the bank's operations, evaluate and determine management plans can help to increase opportunities for banks to survive in a competitive market (Muda, Shaharuddin and Embaya, 2013). The level of profitability of the BPRS is not free from the influence of external factors and internal BPRS. External factors are factors that the source stemming from external BPRS namely macroeconomic. The definitions of internal factors are factors that the source comes from in the BPRS.

Macroeconomic factors are broad and its impact is felt by many parties ranging from the community, the company, to the State. Economic growth and inflation is macroeconomic factors have a major impact on the company. Economic growth with an indicator of the growth of gross domestic product (GDP) is a reflection of the State of the economy of a region. If an increase in GDP, then productivity is on the rise and can enhance people's interest to invest their funds and also propose funding so that a positive effect towards profitability. Economic growth has a positive and significant effect on the profitability of Islamic banks, increased economic growth can stimulate demand of bank financing (Smaoui and Salah, 2011). Inflation can have an impact on the profitability of BPRS. Inflation is the influential macroeconomic factors are strong on the economy of the country. Inflation will affect the increase in prices of goods and services, so that will affect the ability of the customers to pay their financing. Inflation has a negative and significant relationship towards Islamic banking profitability (Zeitun, 2012).

Internal factors are derived from the financial performance of the BPRS. Bank profitability performance of their financial performance primarily BPRS. Internal factors of the bank used in this study are deposits to total assets, non performing financing, liabilities to total assets, and financing to total assets.

Based on the above background, the purpose of this study was to investigate the influence of economic growth; inflation; liabilities to total assets; non performing financing; financing to total assets; and deposits to total assets against Islamic Rural Bank profitability in Indonesia in the year 2010-2017.

LITERATURE REVIEW

Economic growth reflects the State of the economy of a country. If the State of the economy being good means an increase in productivity and can enhance customer interest in saving their funds or ask for financing so that very effect on profitability. It supported the results of the study (Ben Khediri, Ben-Khedhiri and Ben Ali, 2010) showed that economic growth was positive and significant effect against the profitability of Islamic banks. In contrast to research (Masood and Ashraf, 2012) economic growth effect profitability negatively to Islamic banks.

Inflation is the increases in the prices of goods are generally caused by the fall in the value of money. Inflation can affect the cost and income of all organization including bank (Mirzaei and Mirzaei, 2011). The increase in the prices of raw materials may cause small medium enterprises have difficulty in paying their financing obligation. Besides the increase in inflation rate also increases the range of costs on BPRS. According to a study (Zeitun, 2012) inflation has a negative and significant relationship towards Islamic banking profitability. While the results of the research (Masood and Ashraf, 2012) inflation has no effect against the profitability of Islamic banks.

A third-party fund is one of the main funding source of the bank. The higher third-party funds obtained will higher financing distribution by BPRS so improve profitability. The results of the research (Ramlan and Adnan, 2016); (Masood and Ashraf, 2012) third-party funds shows that do not affect the profitability of Islamic banks. This research using Deposit to total assets ratio as proxy a third-party fund and the entire asset owned by a bank.

Non-Performing Financing (NPF) is a ratio to measure the level of congestion from bank financing. If the NPF ratio is higher, the risk of losses that will be experienced will be even greater. According to (Yusuf and Mahriana, 2016) NPF has a negative and significant effect on Islamic Rural Banks profitability. Means that the higher NPF level will impact the lower of profitability. On the other hand, the result of the research conducted by (Widyaningrum *et al.*, 2015) shows NPF has insignificant effects on Islamic Rural Banks profitability.

Liabilities to total assets measures how many assets of a bank is financed with debt. If the value of liabilities to total assets is high, the bank can reap a large profit, but the risk also increases. if the solvability ratio of a company is high, it will risk in greater losses. However, it still has an opportunity to get more profit. In contrast, if the company has a higher solvability ratio, the risk of losses will be smaller, especially when the economy declines (Kasmir, 2010). Liabilities to total assets have a positive and significant influence on profitability (Masood and Ashraf, 2012).

Financing to total asset is a ratio used to measure the ability of a Islamic Rural Banks to provide financing using the total assets owned. The greater the ratio, the greater the total funding provided so that it can increase the profitability of Islamic Rural Banks. Masood & Ashraf (2012) in their research suggest that there is a positive and significant relationship between financing to total assets and profitability. Meanwhile, Ramlan & Adnan (2016) in their research suggest that there is a positive yet insignificant relationship between financing to total assets and profitability.

DATA AND METHODOLOGY

The approach used in this study is the quantitative approach. Time series data is used in this research and examines 167 Islamic Rural Banks (BPRS) in Indonesia. The source of data is derived from the statistics of Sharia banking which is uploaded by the Financial Services Authority (OJK) every quarterly period 2010-2017, Central Bureau Of Statistics (BPS), dan Bank Indonesia official website. Total sample period are 32 period. This research uses multiple linear regression to find the relation between independent variable and dependent variable. Equation model in this research is as follows:

$ROA = a + \beta EG + \beta INF + \beta DTA + \beta NPF + \beta LTA + \beta FTA + e$

Variables

Dependent variable of this research uses ROA as dependent variable because it can describe how profitable of Islamic Rural Banks in Indonesia. Table 1 will explain what the variables in this study are and how to calculate these variables:

Table 2: *Variables and How the Calculation*

Category	Variable	Measurement Tools
Dependent Variable	Profitability (Eugene F. Brigham, 2015)	ROA = (Net Income After Tax)/(Total Assets) x100%
Internal Variable	Deposit to total asset	DTA = (Total of Third − parties Fund)/(Total Assets) x

		100%
	Non-Performing Financing	NPF = (Non − performing Financing)/(Total of Financing) x 100%
	Liabilities to total asset)	LTA = (Total of Liabilities)/(Total Assets) x 100%
	Financing to total assets	FTA = (Total of Financing)/(Total assets) x 100%
External Variable	economic growth (Kurniawan and Budhi, 2015)	EG = (GDP_(t) − GDP_(t − 1))/(GDP_(t − 1))
	Inflation (Karim, 2007)	INF = (〖Price level〗_(t) − 〖Price level〗_(t − 1))/(〖Price level〗_(t − 1))

RESULTS

Multiple linear regression test is a linear relationship between two or more independent variables with one dependent variable. Following is the result of multiple linear regression test on this research:

Table 3: *Multiple Linear Regression Test Results*

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.254	.033		7.694	.000
	EG	.064	.025	.356	2.502	.019
	INF	-.002	.040	-.004	-.041	.968
	DTA	.148	.041	.663	3.595	.001
	NPF	-.131	.035	-.433	-3.706	.001
	LTA	-.352	.056	-1.085	-6.247	.000
	FTA	-.013	.028	-.074	-.480	.636

Based on table 3 above, multiple linear regression equation of this research are as follows:
ROA = 0,254 + 0,064EG - 0,002INF + 0,148DTA – 0,131NPF – 0,352LTA – 0,013 FTA
The coefficient of determination (R square) is used to find out how large the donation of independent variables influence against the dependent variable. If the results of the R square getting closer to number 1, then the independent variables influence against the dependent variable bound getting stronger and vice versa. The result of the test on the determination coefficient R square is presented in the following table:

Table 4: *Determination of Coefficient Test Results R Square*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.901[a]	.811	.766	.0020906

a. Predictors: (Constant), EG, INF, DTA, NPF, LTA,FTA
b. Dependent Variable: ROA

Table 4 shows the calculation result R square as 0.811. So it can be inferred that the model on the research may explain the variable of 81.1% against and the remaining independent variables i.e. amounting to 18.9% can be explained by variables outside of a research model.
The t-test is used to find out the influence of the independent variables; inflation, economic growth, liabilities to total assets, non performing financing, financing to total assets and deposits to total assets against ROA partially. Independent variables can have had a significant relationship against the dependent variable in the value significance of 0.05 <. The result of t- test presented in the following table:

Table 5: *t-test results*

Variables	Significant	Description
Economic Growth	0,019	0,019 < 0,05
Inflation	0,968	0,986 > 0,05

Deposits to total assets	0,001	0,001 < 0,05
NPF	0,001	0,001 < 0,05
Liabilities to total assets	0,000	0,000 < 0,05
Financing to total assets	0,636	0,636 > 0,05

Based on the results of t-test on table 4 can be drawn as follows:
1. Economic growth has a significance value of 0.019 where 0.019<0.05. So, can be concluded that Economic growth influential significantly to ROA.
2. Inflation has a significance value of 0,968 where 0,968 > 0,05. So can be concluded that inflation no significant effect against ROA.
3. Deposits to total assets has a significance value of 0,001 where 0,001 < 0,05. So can be concluded that deposits to total assets influential significantly to ROA.
4. NPF has a significance value of 0,001 where 0,001 < 0,05. So can be concluded that NPF influential significantly ROA.
5. Liabilities to total assets has a significance value of 0,000 where 0,000 < 0,05. So can be concluded that liabilities to total assets influential significantly to ROA.
6. Financing to total assets has a significance value of 0,636 where 0,636 > 0,05. So can be concluded that financing to total assets no significant effect against ROA.

Analysis

Economic growth has a positive and significant influence towards the profitability of BPRS. If an increase in economic growth, then the profitability of the BPRS will also increase and vice versa. Economic growth is a process of continuous output increases in the long term. Good economic growth will improve the welfare of society. When the welfare of the community in good condition, then the ability of saving society will increase. BPRS as intermediaries must utilize this by optimizing the distribution of financing from third party funds, then the profitability of the BPRS will increase. Economic growth is also a reflection of the growth of productivity in a given period. With the increasing productivity of the company requires a larger capital so that the company will propose the bank financing. Increasing productivity will also facilitate payment financing obligation so as to reduce the risk of default that will be detrimental to the BPRS.

There is a trade-off between economic growth and Islamic banking, economic growth will help boost the growth of Islamic banking and Islamic banking will also help increase economic growth (Abduh and Azmi Omar, 2012). the results of this research have in common with the research (Ben Selma Mokni and Rachdi, 2014) stating that economic growth has a positive influence towards Islamic banking profitability. But there is a difference with research results (Masood and Ashraf, 2012) stating that economic growth was negative and not significant effect against the profitability of Islamic banks.

The inflation effect is not significantly to profitability BPRS. On a conventional bank, inflation is causing significant losses. This is because when inflation rates are high, Bank Indonesia will raise interest rates to attract the interest of the public to save money in the bank. High interest rates will normally be followed by increased interest rates to conventional bank loans, so that it will have difficulty in channelling credit.

In contrast to conventional banks, losses BPRS is not too big when there are elevated levels of inflation. This is because the BPRS does not use interest rates as a reference, but rather uses the principle of profit margin and revenue sharing. This is evident when an economic crisis in 1998 which the inflation rate and interest rates are very high, Islamic banks stay afloat because it does not use the system of interest. But in a State of high inflation, BPRS is not a huge benefit because the cost is also great.

Deposits to total assets ratio have positive effect significantly to profitability BPRS. So when there is an increase in the ratio of deposits to total assets, profitability will also increase. The ratio of deposits to total assets ratio is to compare funds of third parties obtained a bank compared to a total of asset. Third party Fund is the largest source of funding of the BPRS are obtained from deposits and savings. If third party funds gathered the BPRS and channel it with optimum, then the profitability of the BPRS will increase. The level of third-party funds a high indicates increased public confidence towards Islamic banking and shows that the market potential of Islamic banking in Indonesia is big enough (Hamidi, 2003). The results of this research contrasts with research (Ramlan and Adnan, 2016) (Masood and Ashraf, 2012) stating that the deposits to total assets no significant effect against the profitability of Islamic banks.

Non-Performing Financing significant negative effect against the profitability of BPRS. When an increase in NPF then ROA will decrease significantly. NPF is a problem that has long faced by Indonesia in the BPRS. NPF on the BPRS level continues to increase every year until above the normal limit that has been set by the OJK by 5%. According to statistics published by the Islamic banking OJK, on December 2017 biggest NPF contribution comes from small and medium enterprises (SMEs), which amounted to 73%. SME is the focus of the Ministry of the BPRS. The number of SMEs in Indonesia is big enough for up to 60% of the GDP in Indonesia obtained from SMES. However, SMEs in Indonesia still faces many problems, one of which is the financial management problems often cause traffic-jammed financing. The results of this research with the research (Yusuf and Mahriana, 2016) stating that the NPF negative effect significantly to profitability BPRS.

Liabilities to total assets or leverage significant negative effect against the profitability of the BPRS. If the value of the ratio of liabilities to total assets increased, then the profitability of the BPRS will decline. Liabilities to total assets ratio was used to see how large the portion of assets that are financed by a liability. The larger the value of leverage ratio then it will increase the financial risk of the company and vice versa (Eugene F. Brigham, 2015). Debt can be used as a means for the expansion of the BPRS, but if too large a debt can be a threat to the BPRS.

Ratio of liabilities to total assets BPRS tend to increase each year, this means the portion of a liability in more assets. The increase in this ratio may reduce the profitability of the bank will avoid is due to have a higher risk. The results of the research supported by the pecking order theory postulated that companies that have a high ratio of loan profitability tends to be low, due to the high profitability companies have internal sources of funds overflow (Myers, 1984). Debt in Islam also advocated the use of debt is only done when in urgent condition. This should be a reference for BPRS in determining debt policy.

Financing to total assets no significant effect against the profitability of BPRS. If there is an increase in the ratio of financing to total asset, then it will decline in profitability and vice versa but the amount is not significant. Financing to total assets ratio is to compare between how big a portions of the financing that has been transmitted as compared with a total of asset. The ratio of financing to total asset in 2010-2017 experience fluctuations and tend to decrease so that do not impact on the profitability of the BPRS.

CONCLUSION

Islamic Rural Banks (BPRS) have an important role in the economy in Indonesia. BPRS help provide capital or financing on Small Medium Enterprises and rural communities. BPRS can improve economic wellbeing especially the weak economies that are generally located in rural areas so that BPRS have to survive and boost profitability. The purpose of this research was to look at the variables that have an impact on the profitability of BPRS.

Variable Inflation did not have an impact on the profitability of large profits show that BPRS is not affected by inflation. Economic growth can increase the profitability of the contract indicates that the BPRS BPRS based investment will provide higher revenue and improved financing based on sale and purchase. Internal variables i.e. bank deposits to total assets, total liabilities, to NPF assets significantly impact the profitability of the BPRS. the company's performance to contribute on the profitability of the BPRS. Overall the variable gives the effects on profitability with the value of R^2 is 82.1%.

BPRS is expected to further enhance the investment-based financing (mudharabah and musyarakah) to be able to increase profitability. BPRS should also improve screening in selection of financing so that the NPF ratio could decline. Capital structure management must also be improved with more prudent use of debt policies that can increase the risk of the BPRS.

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