

DETERMINING FACTORS OF ISLAMIC BANK CAPITAL STRUCTURE IN INDONESIA

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Artikel Info	Abstrak
<p><i>Article history:</i> Received 13 Februari 2021 Revised 25 Maret 2021 Accepted 09 April 2021 Available online 12 Mei 2021</p> <p>Keywords: <i>Investasi; Capital Structure; Indonesian Islamic Banking; ROA; ROE; NPF; and FDR</i></p> <p>JEL Classification; bisa ditelusur dengan mengklik link berikut : D25; G32; G24</p>	<p><i>In the capital structure there are several determinants to determine the capital structure, these determinants will later be used as a consideration in determining the capital structure. This research will analyze the factors that determine the capital structure of Islamic banks in Indonesia. The data used for this research are in the period 2015.1-2019.4. The data used is data from the Indonesian Islamic Commercial Bank. For analysis data processing using panel data regression with the best model selection. The data variable consists of 2 variables, namely dependent and independent. The dependent variable in this study is the Capital Adequacy Ratio (CAR). While the independent variables in this study are Return On Assets (ROA), Return On Equity (ROE), Non-Performing Financing (NPF) and Financing to Deposit Ratio (FDR). From the results of the analysis for this study, it is known that the Return On Assets (ROA) variable has a positive and significant effect on the Capital Adequacy Ratio (CAR) variable. For variables that have a negative and significant effect on the CAR variable are the Return On Equity (ROE) and Non-Performing Financing (NPF) variables. Whereas the Financing to Deposit Ratio (FDR) variable has a positive and insignificant effect on Capital Adequacy Ratio (CAR) variable.</i></p>

INTRODUCTION

The current era of globalization has a broad impact on banking growth in Indonesia (Roesdian, 2014; Safitri, 2019; Suprijanto, 2011). It is characterized by the establishment of conventional banks and Islamic banks either the locally based and internasional (Khoir, 2019; Roesdian, 2014). The fast growth of the Indonesian economy is one form of the success of Indonesian banking. Development of the economy of banks in the world are also followed by Islamic economic development in the world (Bank Indonesia, 2017; Roesdian, 2014). The establishment of Islamic-based financial services, such as the Islamic Rural Credit Agency to conventional banks that open Islamic bank branch offices, and even changing their type of

business from conventional banks to Islamic banks are actions that reflect that Islamic banking has good potential in Indonesia (Indra, 2017; Otoritas Jasa Keuangan, 2017). In developing Islamic banking, the government's efforts include developing market share, human resources and implementing regulations governing Islamic economic and Development (Liputan6.com, 2019; Syihabuddin, 2012). The attractiveness of the Islamic banking development in Indonesia has made Indonesia "the biggest and the fastest-growing Islamic banking market in the world", because the Indonesian people have been able to increase the number of customers through the years, thus supporting progress of Islamic bank themselves (Kemenkeu, 2018; Roesdian, 2014; Widya, 2015).

The development of Islamic banking, each bank is trying to attract as many customers as possible by improving the quality of the bank (Altje, 2016; Roesdian, 2014). The level of banking competition has a major influence on environmental changes which will directly or indirectly change people's behavior in choosing and sorting banks (Altje, 2016; Roesdian, 2014; Roni, 2017). This of course will have an effect on increasing the productivity to maximize the benefits they can get (Doni dkk, 2016; Fardin dkk, 2014). To meet these objectives requires appropriate funding decisions. One way to see whether a banking company has made the right funding decisions is by looking at the company's capital structure (Hariyanto, 2016; Mutamimah, 2012; Nurshadrina, 2013).

The capital structure is a component balance between own capital and foreign capital (Abdul, 2015; fahmi, 2015; Riyanto, 2010). Capital structure is good if foreign capital tends to be lower than own capital. This is because foreign capital will be included in the debt burden so that it will increase the burden on a banking company (Arwiny, 2011; Kurniasih dkk, 2015; Malik, 2017). It should be noted by banks that capital is a sensitive matter (Anuttara, 2016; Aurelia, 2018). If it is not managed properly, the capital can reduce the company's profit (Yunita, 2014). In addition, a strong capital structure is able to be used as a bulwark against global competition at any time (Aurelia, 2018; Yunitri, 2018).

Capital adequacy Ratio is important in assessing the soundness level of a bank (Diana, 2019; Jeremiah, 2013). Based on the level of health, the classification of banks is divided into three categories, namely : healthy, fairly healthy, and unhealthy (Aji, 2012; Aprilia, 2018). Based on these categories, banks can minimize the level of losses they will face through increasing capital (Yusril, 2019). The importance of adequacy capital for banks serves as a buffer against the possibility of loss, while for customers, capital adequacy will increase customer confidence in the bank as well as to protect customers from the risk of loss that the bank may experience (Merlin, 2014; Nofitasari, 2017). Therefore, information regarding capital adequacy is very useful for various parties (Hasifa, 2016; Putra, 2015).

CAR (Capital Adequacy Ratio) is the ratio of capital adequacy that serves to accommodate the possibility of losses from banks (Harun, 2016; Prayudi, 2011; Simanjuntak, 2016). Research (Nurismalatri, 2019) states that

the better the ability of bank to bear the risk of each s structure, determinants of capital structure are needed as a consideration in determining the capital structure are influenced by several factors, including ROA, ROE, BOPO, NPF, FDR, NPL, NIM, ROI, LDR and many other factors. This factor is considered important because ratios such as profitability, liquidity, solvency, activity, and others greatly affect the capital structure. Research conducted by (Fani, 2016; Gladis, 2017; Khaled dkk, 2013; Nuning, 2019; Yeano, 2016) states that capital structure are influenced by NPL, LDR, ROA, ROE, FDR, NPF, and BOPO.

The importance determinants factor of capital structure in bank capital turnover makes researchers want to analyze the turnover of capital structure which is influenced by certain factors so that it is able to be seen how much influence the determinants of the capital structure have. Research (Bateni dkk, 2014; Iqbal, 2016; Nuning, 2019; Rani, 2017; Rheza dkk, 2016) also explains the be seen how much influence it has on the capital structure. Through financial ratios, researchers limit the capital ratio, profitability ratio, non-performing loan ratio and liquidity ratio. This restriction is intended to focus the influence on bank capital in Indonesian Islamic banking. The ratios that are used in this study include ROA, ROE, NPF, FDR, and CAR.

Research conducted by (Bateni dkk, 2014; Mohammed dkk, 2013; Rani, 2017) used 6-11 banking data which were used as research samples. In this study, researches used 9 Islamic banks as research samples based on a healthy CAR ranking based on the BI regulation about KPMM. The period that is used by researchers is also different, namely using the period 2015.1-2019.4.

Another advantage of this study is use three variables that describe profitability, this is different from research (Ahmed, 2011; Gladis, 2017; Yeano, 2016) which only used one of the profitability ratios in his research. In addition, this study use a regression test with the best model selection, where this test is rarely used in previous studies.

Literature Review and Hypotheses Development

Capital structure is a component balance between own capital and foreign capital (Abdul, 2015; fahmi, 2015; Riyanto, 2010). If this capital is not managed properly, it can reduce company profits (Yunita, 2014), The calculation of bank capital is carried out using the capital adequacy ratio CAR (Eka, 2019). CAR is the ratio of capital adequacy that serves to accommodate the possibility of losses from banks (Eka, 2019; Harun, 2016; Prayudi, 2011; Simanjuntak, 2016). Research (Mohammed dkk, 2013) explains that the higher the CAR of the capital of bank considered getting better. This is line with research by (Bateni dkk, 2014) that in order to produce a high CAR, the total capital value must be higher than the ATMR. Bank capital adequacy is influenced by the level of profit generated by the bank (Diana, 2019). If the bank is able to increase profits, the capital of bank will increase so that it can increase the CAR. The ratio that is used to measure a ability of bank to earn a profit is the profitability ratio (Hidayah, 2017; Mauliza, 2016; Puji, 2015).

Profits are able to be obtained from various sources, one of which is through the ability of bank management to generate income from managing assets owned (Dendawijaya, 2018). Research (Gladis, 2017; Rani, 2017) shows a positive relationship between ROA and CAR. (Mursal dkk, 2019) stated that the higher a ability of bank to generate profits, the more funds are allocated to increase capital so that the capital structure is getting better.

Other profits are able to be seen from the net income side. According to (Magfira, 2019) the bank management ability to manage capital so as to get net income is able to be measured using the ROE ratio. (Gladis, 2017) states that if there is an increase in credit it will cause two things, namely an increase in interest income and an increase in ATMR. If interest income rises, it will increase in ATMR. If interest income rises, it will increase ROE (Yeano, 2016). Because interest income is part of net income, so that interest income affects ROE. However, this is inversely proportional to ATMR. When ATMR is higher than total capital, it will decrease the value of CAR, causing a negative relationship between ROE and CAR (Rani, 2017). A decrease in CAR will have an impact on increasing interest income and will affect ROE (ROE has increased), and vice versa an increase in CAR will reduce interest income so that ROE will decrease (Ahmed, 2011).

The one of the priority activities of the Bank is credit. A situation where the debtor has difficulty repaying credit due to intentional or unintentional credit is called a credit problem (Ambarsita, 2019; Andrika dkk, 2019; Arif dkk, 2019). Loans that are said to be problematic are not necessarily said to be bad credit, while bad credit is of course problematic credit (Andrika dkk, 2019; Saputri, 2015). The ratio for measuring non-performing loans in Islamic banking uses NPF (Mares, 2013). According to (Lifstin dkk, 2014; Shinta dkk, 2015; Yurniwati dkk, 2020; Zakiyah dkk, 2011) NPF is the ratio between non-performing financing (NPF) and total financing. According to (Yurniwati dkk, 2020), problematic financing is defined as substandard, doubtful, and NPF. High NPF will reduce CAR (Mohammed dkk, 2013), this is because problematic financing affects bank income, in other words, high problem financing will tend to decrease bank income where bank income will be used up only for NPF (Yeano, 2016). This condition causes CAR decline. Research (Khaled dkk, 2013) also explains that problematic financing will reduce the amount of income the bank will accept so that the bank will use the existing capital to finance its operational activities. The more frequent congestion will cause losses to the bank concerned, the loss forces the bank to cover its capital needs from its own capital, reducing the capital of bank adequacy ratio. In line with (Rheza dkk, 2016) opinion which states that a high NPF value will decrease the CAR value and vice versa.

As we know, profitability specs and credit or non-performing loans are very influential on capital adequacy. In terms of profit utilization, financing, and capital obtained depend on one another. In line with this, liquidity also has an important role in capital adequacy. The company ability to meet its short-term obligations is called liquidity (Gantiah dkk, 2014;

Ibnudin, 2016; Taudlikhul, 2017). The ratio that is used in measuring liquidity is the FDR. The level of FDR level does not have an effect significantly on the minimum capital adequacy that must be met by banks. According to (Nuning, 2019) the high and low Financing to Deposit Ratio which does not have an impact on the level of capital adequacy occurs due to a limitation from Bank Indonesia that banks can channel financing beyond the third party funds that the bank has managed to collect as long as it does not exceed 100%. The higher the FDR level, the higher the CAR (Yeni, 2017).

This study has a hypothesis including :

H0 : ROA has an effect on CAR significantly

H1 : ROE has an effect on CAR significantly

H2 : NPF has an effect on CAR significantly

H3 : FDR has an effect on CAR significantly

RESEARCH METHODS

The method that is used in this research is panel data regression method using a quantitative approach. The data variable consists of 2 variables, namely dependent and independent. The dependent variable in this study is the CAR. While this study uses variables of independent that are ROA, ROE, NPF and FDR. In this study the data that are used are secondary data sourced from Islamic banking financial reports by looking at the database of financial statements of each bank studied in the 2015.1-2019.4. There are 14 Islamic Commercial Bank (BUS) companies registered with the Financial Services Authority as the research population. The sample selection method that is used in this study used a purposive sampling method, this is so that the data obtained allows it to be compared with the results of previous studies (Novy, 2019). Based on this method, a total sample of 9 Islamic Commercial Banks (BUS) was obtained in the period 2015.1-2019.4.

In the first stage, a regression equation is carried out which will be followed by selecting the best model from the three existing estimation models, namely the Random Effects (RE), Fixed Effects (FE), and Common Effects (CE) models. For the best estimation model selection between RE and FE using the Hausman Test. Furthermore, the best estimation model selection between CE and FE uses the Chow Test. And finally, the best estimation model selection between CE and RE uses the Lagrange Multiplier test. Based on the above equation, the regression equation for this study is obtained as follows :

$$CARi_t = \alpha + \beta_1 ROA1 i_t - \beta_2 ROE2 i_t - \beta_3 NPF3 i_t - \beta_4 FDR4 i_t + e$$

Information:

CARit : Capital Adequacy Ratio (CAR)

α	: Constant
$\beta_1 - \beta_5$: Regression coefficient of each independent variable
ROA _{it}	: Return On Assets (ROA)
ROE _{it}	: Return On Equity (ROE)
NPF _{it}	: Non Performing Financing (NPF)
FDR _{it}	: Finance Deposit to Ratio (FDR)
e	: error term

Dependent Variable

The dependent variable that is used in this study is the CAR.

Independent Variable

Based on the level of the ratio in this study using the independent variable profitability ratio, non-performing loan ratio and liquidity ratio. Specifically, the variable that is used is the ROA variable which is measured by net income after tax divided by total assets multiplied by 100%. The variable ROE is measured by net income after interest and taxes divided by total capital multiplied by 100%. The NPF variable as measured by financing problems is divided by total financing multiplied by 100%. And finally, there is the FDR (Finance to Deposit Ratio) variable which is measured by financing divided by Third Party Funds (DPK) multiplied by 100%.

Table 1. Variable Definition and Size

Variable	Definition
Dependent variable : <i>Capital Adequacy Ratio (CAR)</i>	Total capital divided by Risk-Weighted Assets (ATMR) times 100%
Independent variable :	
Return On Assets (ROA)	Net profit after tax divided by total assets times 100%
Return On Equity (ROE)	Net income after interest and tax divided by total assets times 100%
Non-Performing Financing (NPF)	Non-performing financing divided by total financing multiplied times 100%
Finance to Deposit Ratio (FDR)	Financing divided by Third Party Funds (DPK) times 100%

RESULT AND DISCUSSION

Table 2. Best Model Selection

Test	Chi-Square	Prob	Best Model
Hausman Test	6,417	0,170	Random Effect
Chow Test	146,127	0,000	Fixed Effect

LM Test	BP (183,680)	0,000	Random Effect
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In table 2 it is explained that in selecting the best model there are three test that must be used, the first is the Hausman test. In this test values obtained Chi-Square test statistic of 6,417 with a probability of 0,170 ($p > 0,05$) so that the hypothesis of null is accepted. So in the Hausman test, it is able to be concluded is Random Effect model is better than Fixed Effect model. Furthermore, the Chow test in this test the statistical value of Chi-Square test 146,127 with a probability value of 0,000 ($p < 0,05$) so that the hypothesis of null is rejected. So in the Chow test, the conclusion is Fixed Effect model is better than Common Effect model. Finally, the LM test with the Breusch-Pagan statistic shows a BP value of 183,680 with a probability of 0,000 ($p < 0,05$) so that the hypothesis of null is rejected. So in the LM test the conclusion is Random Effect model is better than Common Effect model. Based on the the results of the three diagnostic tests, it is able to be concluded that the best model that is able to be used in the analysis is the Random Effect model.

Table 3. Regression Results

R-Squared	0,34547
F-Statistic	23,09246
Prob (F-Statistic)	0,000000

The first hypothesis testing is to test the hypothesis of the parameters simultaneously. Testing this hypothesis using the F test. The results of the F test in the table above show that the F statistical value is 23,0924 with a probability value of 0,0000 ($p < 0,05$). Because the probability value is less than 0,05, it is able to be concluded that at least one independent variable has an effect significantly on the dependent variable. The next stage is to see the goodness of the regression model. Value goodness regression model seen from the calculation coefficient of determination (R^2). Based on the calculation results obtained table value R^2 of 0,3454 or 34,54%. This means that the variance of the CAR variable is able to be explained by the variance of the independent variable that is included in the regression model by 34,54%, the rest is explained by the variance of other variables outside the model.

Variabel	Coefficient	t-statistic	Prob	Keterangan
ROA	8,015447	5,559307	0,0000	Signifikan
ROE	-1,000060	-6,162159	0,0000	Signifikan
NPF	-0,736962	-2,944223	0,0037	Signifikan
FDR	0,011980	0,258898	0,7960	Tidak Signifikan

After testing the parameters simultaneously, the next step is to test the parameter partially to get a conclusion which variables the next step is to test the parameters partially to get a conclusion which variables have an effect significantly on changes in the CAR variable. The ROA variable has a

statistical t value of 5,559 with a probability of 0,000. The probability value is less than $\alpha = 0,05$, which means that the parameter value of the ROA variable is significant. So it is able to be concluded that the ROA variable has a positive and effect significantly on changes in the CAR variable. The regression coefficient value of 8,015 means that every 1% addition of the ROA variable will increase the CAR variable by 8,015. It's means that if the ROA variable has increased, the CAR variable will also increase.

Research (Mohammed dkk, 2013) explains that the higher the CAR of the capital of bank considered getting better. This is line with research by (Bateni dkk, 2014) that in order to produce a high CAR, the total capital value must be higher than the ATMR. Bank capital adequacy is influenced by the level of profit generated by the bank (Diana, 2019). If the bank is able to increase profits, the capital of bank will increase so that it will be able to increase the CAR. The ratio which is used to measure a ability of bank to earn a profit is the profitability ratio (Hidayah, 2017; Mauliza, 2016; Puji, 2015). Profits are able to be obtained from various sources, one of which is through the ability of bank management to generate income from managing assets owned (Dendawijaya, 2018). Research (Gladis, 2017; Rani, 2017) shows a positive relationship between ROA and CAR. (Mursal dkk, 2019) stated that the higher a ability of bank to generate profit, the more funds are allocated to increase capital so that the capital structure is getting better.

The ROE variable has a statistical t value of -6,162 with a probability of 0,000. The probability value is less than $\alpha = 0,05$, which means that the parameter value of the ROE variable is significant. So it is able to be concluded that the ROE variable has a negative and significant effect on changes in the CAR variable. The regression coefficient value of -1,000 means that every 1% addition of the ROE variable will decrease the CAR variable by 1,000. This means that if the ROE variable decreases, the CAR variable will increase.

(Gladis, 2017) states that if there is an increase in credit it will cause two things, namely an increase in interest income and an increase in ATMR. If interest income rises, it will increase in ATMR. If interest income rises, it will increase ROE (Yeano, 2016). Because interest income is part of net income, so that interest income affects ROE. However, this is inversely proportional to ATMR. When ATMR is higher than total capital, it will decrease the value of CAR, causing a negative relationship between ROE and CAR (Rani, 2017). A decrease in CAR will have an impact on increasing interest income and will affect ROE (ROE has increased), and vice versa an increase in CAR will reduce interest income so that ROE will decrease (Ahmed, 2011).

The NPV variable has a t-statistic value of -2,944 with a probability of 0,003. The probability value is less than $\alpha = 0,005$, which means that the NPF variable parameter value is significant. So it is able to be concluded that the NPF variable has a negative and significant effect on changes in the CAR variable. The regression coefficient value of -0,736 means that every 1% addition of the NPF variable will decrease the CAR variable by 0,736. This means that if the NPF variable decreases, the CAR variable will increase.

High NPF will reduce CAR (Mohammed dkk, 2013), this is because problematic financing affects bank income, in other words, high problem financing will tend to decrease bank income where bank income will be used up only for NPF (Yeano, 2016). This condition causes CAR decline. Research (Khaled dkk, 2013) also explains that problematic financing will reduce the amount of income the bank will accept so that the bank will use the existing capital to finance its operational activities. The more frequent congestion will cause losses to the bank concerned, the loss forces the bank to cover its capital needs from its own capital, reducing the capital of bank adequacy ratio. In line with (Rheza dkk, 2016) opinion which states that a high NPF value will decrease the CAR value and vice versa.

The FDR variable has a statistical t value of 0,258 with a probability of 0,796. The probability value is more than $\alpha = 0,05$, which means that the parameter value of the FDR variable is not significant. So it is able to be concluded that the FDR variable has a positive and insignificant effect on changes in the CAR variable. The regression coefficient value of 0,011 means that every 1% addition of the FDR variable will increase the CAR variable by 0,011. This means that if the FDR variable has increased, the CAR variable will also increase.

The level of FDR level does not have an effect significantly on the minimum capital adequacy that must be met by banks. According to (Nuning, 2019) the high and low Financing to Deposit Ratio which does not have an impact on the level of capital adequacy occurs due to a limitation from Bank Indonesia that banks is able to channel financing beyond the third party funds that the bank has managed to collect as long as it does not exceed 100%. The higher the FDR level, the higher the CAR (Yeni, 2017).

CONCLSLUTION

This study complements previous research using data from 9 Indonesian Islamic Commercial Banks (BUS) for the period 2015.1-2019.4. The strength of this research is it uses three variables that describe profitability and bank selection based on a healthy CAR ranking in accordance with the BI regulation about KPMM. Therefore, the ranking has been tested on 9 Islamic Commercial Banks (BUS) which eventually produce banks that match the criteria for a healthy CAR. But on the other hand, this study has shortcomings because this study does not use all Indonesian Islamic Commercial Banks (BUS) as research objects. Apart from that this study only used a 5 year period. From the results of the above research, it is able to be concluded that the ROA variable has a positive and significant effect on the CAR variable, the ROE and NPF variables have a negative and significant effect on the CAR variable, and the FDR variable has a positive and insignificant effect on the CAR variable. This study has a results that are expected to provide an overview for further researchers in order to expand the object of research, increase the observation time and change the observation time period so that using newer data is expected to reflect the

current situation. In addition, Islamic banking can reconsider the determinants that play a role in the capital structure, and finally, this research is able to become a reference for investors as a material for consideration in making investment decisions.

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