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Analyzing The Macroeconomic and Fundamental Determinants of Non-Performing Financing of Bank Muamalat Indonesia

Pungky Lela Saputri
Universitas Islam Sultan Agung Semarang, Indonesia
email: pungkylelasaputri@unissula.ac.id

Ratno Agriyanto
Universitas Islam Negeri Walisongo Semarang, Indonesia
email: ratnoagriyanto@walisongo.ac.id

Mujiyono Abdillah
Universitas Islam Negeri Walisongo Semarang, Indonesia
email: mujiyono@walisongo.ac.id

Abstract: This study analyzes the macroeconomic and fundamentals of Islamic banking factors towards the non-performing financing (NPF) of Bank Muamalat Indonesia in the long and short-run period 2005-2018. The data used in this study are quarterly time-series data of Bank Muamalat Indonesia Financial Report as the source of fundamentals of Islamic banking data and Bank Indonesia Monetary Policy Review as the source of macroeconomic data period 2005 - 2018. The analytical method used is the Error Correction Model (ECM). This study shows that in the long run, inflation, central bank (Bank Indonesia/BI) Rate, and capital adequacy ratio (CAR) significantly affect the NPF; meanwhile, the financing to deposit (FDR) ratio does not affect NPF. In the short term context, only CAR has a significant effect, yet inflation, BI Rate, and FDR have no significant impact on NPF. Thus, the novelty can present the result of analyzing factors that affect NPF in the long and short run. The limitation of the study is the use of time-series data that are very likely to spurious regression.

Keywords: NPF; inflation; BI rate; CAR; FDR

Abstrak: Penelitian ini menganalisis faktor makroekonomi dan fundamental perbankan syariah terhadap non performing financing (NPF) Bank Muamalat Indonesia dalam jangka panjang dan jangka pendek periode 2005-2018. Data yang digunakan dalam penelitian ini adalah data time-series triwulanan Laporan Keuangan Bank Muamalat Indonesia sebagai sumber fundamental data perbankan syariah dan Tinjauan Kebijakan Moneter Bank Indonesia sebagai sumber data makroekonomi periode 2005 - 2018. Metode analisis yang digunakan adalah Error Correction Model (ECM). Hasil dari penelitian ini menunjukkan bahwa dalam jangka panjang, inflasi, suku bunga bank sentral (Bank Indonesia/BI), dan rasio kecukupan modal (CAR) berpengaruh signifikan terhadap NPF; sedangkan rasio financing to deposit (FDR) tidak mempengaruhi

NPF. Dalam konteks jangka pendek, hanya CAR yang berpengaruh signifikan, sedangkan inflasi, BI Rate, dan FDR tidak berpengaruh signifikan terhadap NPF. Dengan demikian, kebaruan dapat menyajikan hasil analisis faktor-faktor yang mempengaruhi NPF dalam jangka panjang dan jangka pendek. Keterbatasan penelitian ini adalah penggunaan data time-series yang sangat memungkinkan terjadinya regresi palsu.

Kata Kunci: NPF; inflasi; Suku Bunga BI; CAR; FDR

Introduction

Discussion of Islamic banking cannot be separated from the Islamic economic system. Islamic economic system is different from liberal or capitalist economic systems (Agriyanto 2015). Islamic banks have a role as an intermediary (Muhammad 2014). Besides the demand to develop, Sharia banks also face several problems and challenges (Meyliana and Mulazid 2017).

Islamic banks rely on financing as the main activity in seeking profit; however, not all channeled financing is categorized as healthy. As a result, financing activities are prone to financing risks. The risk of financing in Islamic banks is realized in the ratio of Non-Performing Financing (NPF). NPF is a ratio used to measure the level of problematic financing in Islamic banks. The high NPF shows how bad the quality of the bank (SE BI No. 9/24/DPbS dated 30 October 2007).

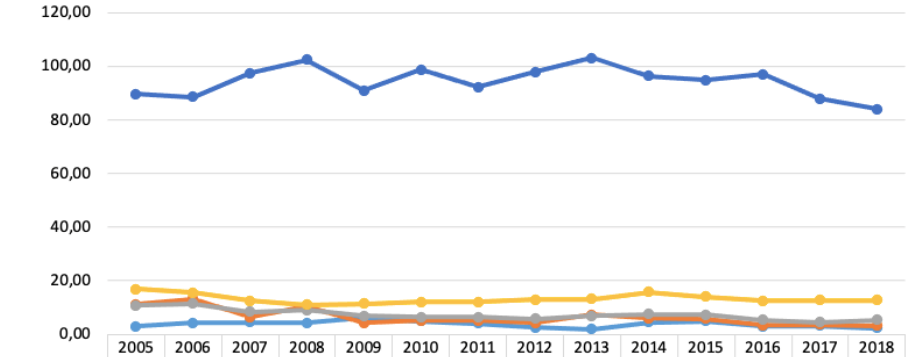
A high NPF will pose a danger to the bank. The amount of NPF is one of the reasons to cause the bank difficulty channeling the financing (Ardana and Irviani 2017). The harmful impact of high NPF makes the Islamic banking in Indonesia, especially Bank Muamalat Indonesia, trying to minimize this. Nevertheless, the business continues to be carried out because, to this extent, the NPF of Bank Muamalat Indonesia continues to experience volatile fluctuations. Bank Indonesia (BI) has set the safe limit for NPF is 5%. However, Bank Muamalat Indonesia's NPF was seen several times above 5% to 8% during the research period.

There are many factors that potentially affect NPF. These factors are grouped into internal and external factors such as the country's macroeconomic conditions and the debtor/*mudharib* factor. This research raises internal factors of Islamic banks and external aspects of macroeconomic conditions. Variables Inflation and the BI Rate are used as representatives of macroeconomic conditions. In addition, CAR and FDR variables are used as

representatives of the internal conditions of Islamic banks that influence NPF. Data of variables used in this research can be seen in Figure 1.

Figure 1 shows the fluctuations from NPF. Fluctuations that touch some of these vulnerable points can occur because Bank Muamalat Indonesia has not maximally handled NPF. Minimalizing activities of the increase in NPF and managerial stability in maintaining the NPF to remain below the threshold set by Bank Indonesia in each period. This problematic financing needs to be resolved effectively and efficiently. Therefore, it is necessary to analyze and determine the possible factors that can affect NPF both in the long term and in the short term.

Figure 1. Research Variables Data 2005 - 2018



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
NPF	2,99	4,21	4,53	4,33	5,99	4,96	4,04	2,47	1,93	4,45	4,98	3,07	3,12	2,28
Inflasi	11,20	13,11	6,45	10,44	4,20	5,15	5,24	4,28	7,15	5,89	5,81	3,29	3,58	3,13
BI Rate	10,75	11,38	8,38	8,94	6,81	6,50	6,50	5,75	6,75	7,50	7,38	5,38	4,44	5,33
CAR	16,92	15,37	12,63	11,01	11,38	12,15	12,18	12,92	13,18	15,75	14,06	12,59	12,74	12,73
FDR	89,70	88,53	97,40	102,37	90,87	98,60	92,29	97,76	102,96	96,28	94,81	97,00	87,70	83,94

Source: Bank Muamalat Indonesia Financial Report and Bank Indonesia Monetary Policy Review (processed)

The purpose of this study is to determine the effect of the macroeconomic factors and fundamentals of Islamic banking on NPF of Bank Muamalat Indonesia in the long term and short term for the period 2005-2018. The benefit of this research is to contribute to developing theory and consider Islamic banking in Indonesia, especially Bank Muamalat Indonesia, in making decisions about the macroeconomic conditions and fundamentals of Islamic banking to minimize the increase in NPF.

Literature review

Several studies on NPF have been carried out, including Damanhur et al. (2018) and Firmansyah (2014), stated that there is a significant influence on the positive relationship of inflation variables to NPF. Supriani and Sudarsono (2018) found that inflation affects NPF negatively in the long and short term. Iriani and Yuliadi (2015) stated that in the long run, inflation has a positive and significant effect on NPF; however, in the long-run context, it does not significantly influence the direction of negative relations. Haifa and Wibowo (2015) stated that inflation has a significant effect in the long run, but inflation has no impact on NPF in the short term. Havidz and Setiawan (2015) and Hernawati and Puspasari (2018) stated the direction of positive influence. Santoso et al. (2019), Vanni and Rokhman (2017), and Faiz (2010) stated that inflation had no significant effect on NPF.

Ardana and Irviani (2017) stated that the BI Rate, in the long run, had a positive and significant effect on NPF with an error rate of 1. In the short term, the BI Rate was not significant enough to NPF in the direction of positive influence. Hernawati and Puspasari (2018), Aryani, Anggraeni and Wiliasih (2016), and Santoso et al. (2019) state that the BI Rate has a positive and significant effect on NPF. Supriani and Sudarsono (2018) stated that the BI Rate in the long term has a positive direction but does not affect the NPF, meanwhile in the short term, the BI Rate is quite significant in influencing NPF but has a negative relationship direction.

Supriani and Sudarsono (2018) and Haifa and Wibowo (2015) stated CAR has a negative and significant effect on NPF in the short term. In the long run, each state's CAR has a positive impact, but only research by Supriani and Sudarsono (2018) states that influential CAR is significant to NPF. Farika, Achsani and Johan (2018) and Poetry and Sanrego (2011) noted that CAR responded positively to NPF. Havidz and Setiawan (2015) also argue this way, even though tir research on CAR results are not significant enough to influence NPF. Aryani, Anggraeni and Wiliasih (2016), Effendi, Thiarany and Nursyamsiah (2017), and Setiawan and Bagaskara (2016) state CAR has a negative and significant effect on NPF.

Supriani and Sudarsono (2018), Haifa and Wibowo (2015), and Wijoyo (2016) explained that FDR has a positive and significant effect on NPF both in the long term and short term. Farika, Achsani and Johan (2018), Poetry and Sanrego (2011), and Vanni and Rokhman (2017) stated that FDR gave a negative response to NPF. Havidz and Setiawan (2015), Damanhur et al. (2018), Firmansari and Suprayogi (2015), Aryani, Anggraeni and Wiliasih (2016) stated that FDR has a positive relationship On the other hand, tiawan and Bagaskara (2016) and Santoso et al. (2018) also stated that FDR had no significant effect on NPF.

Methods

This research is considered causality research that uses quantitative secondary data. The data used in this research was periodic (time series) from the macroeconomic conditions and the fundamentals of Islamic banking. The macroeconomic conditions were seen from the inflation values and BI Rate of 2005-2018 that are obtained from the Monetary Policy Review, published by Bank Indonesia on its official website (https://www.bi.go.id/). Islamic banking fundamentals were seen from the value of NPF, CAR, and FDR for 2005 - 2018 obtained from financial reports published by Bank Muamalat Indonesia on the official website (https://www.bankmuamalat.co.id/).

Methods of collecting data were using literature. This study also used documentation techniques based on the official website of Bank Muamalat Indonesia for further exploration of Bank Muamalat Indonesia's quarterly financial statements in the financial ratio data section and Bank Indonesia in the macroeconomic data section. The research object used in this study was Bank Muamalat Indonesia.

The unit analysis in this study was secondary data in the Bank Muamalat Indonesia Quarterly Financial Statements in 2005-2018. The variables analyzed in this research are (1) Non-Performing Financing (NPF), (2) Capital Adequacy Ratio (CAR), (3) Financing to Deposit Ratio (FDR), and Quarterly Monetary Policy Review by Bank Indonesia in the period 2005-2018 in the form of (1) Inflation, (2) BI Rate.

NPF is a ratio used to measure the level of financing problems faced by the Islamic Bank. The higher NPF shows the quality of the bank is getting worse (SE BI No. 9/24/DPbS dated 30 October 2007). Based on SE BI 9/24/DPbS on 30 October 2007, the NPF equation formula can be formulated as follows:

$$NPF = \frac{Total\ Bad\ FInancing}{Total\ Financing}\ x\ 100\ \% \quad \text{.....(1)}$$

Inflation is a constant increase in the general prices of an economy. Therefore, inflation can cause a decline in the real income of society. In the end, the standard of living of people will also decrease. The fall in real income will undoubtedly affect the weakness of customers' financial ability to pay their obligations to banks (Effendi, Thiarany, and Nursyamsiah 2017). The existence of this financing problem will increase the NPF ratio. This proves that the higher the inflation, the greater the NPF level. Based on the Monetary

Policy Report by Bank Indonesia, the Inflation formula can be formulated as follows:

$$Inflation = \frac{IHKt - IHKt-1}{IHKt-1} \, x \, 100 \, \% \quad \text{.......}(2)$$

The BI Rate is a policy interest rate that reflects the monetary policy perspective or stance organized by Bank Indonesia and announced to the public (Bank Indonesia. Siaran Pers No. 12/05/PSHM. www.bi.go.id). When the BI Rate rises, Islamic banks will also adjust the level of profit sharing. Therefore, the increase in the BI Rate is indirectly used as a benchmark by Islamic banks. When profit margins and profit sharing for Islamic banks are more competitive and increasing, it will trigger growth in problem financing because the *mudharib* must bear is getting bigger. Following the theory of profit margin and the profit-sharing ratio of Islamic banks, in determining margin and ratio, the conventional banking interest rates, in this case, the BI Rate, are used as references by the Islamic bank Asset Liabilities Committee (Hernawati and Puspasari 2018). The study proved that the higher the BI Rate causes the NPF level to increase.

Capital Adequacy Ratio (CAR) is an adequacy ratio that shows the ability of banks to maintain sufficient capital and the ability of bank management to identify, measure, monitor, and control risks that may arise and affect the size of a bank capital (Kuncoro and Suhardjono 2011). The higher the CAR, the higher the capital owned by banks. Capital owned by Islamic banks can function as an absorber of losses and suppress NPF percentage(Supriani and Sudarsono 2018). The increasing CAR means that Islamic banks can manage financing risk problems easier (Effendi, Thiarany, and Nursyamsiah 2017). This proves that the higher the CAR, the smaller the NPF level. Based on SE BI 9/24/DPbS on 30 October 2007, the CAR equation formula can be formulated as follows:

$$CAR = \frac{CAPITAL}{ATMR}\ x\ 100\ \% \quad \text{.....(3)}$$

Finance to Deposit Ratio (FDR) compares the financing provided by banks and third parties managed by banks (Farika, Achsani, and Johan 2018). The greater the funding distribution in the form of financing compared to third party funds in a bank brings the consequences of increasing the risk borne by the concerned bank (Umam 2013), especially high financing for an individual or group. Moreover, it will reduce the quality of the financing itself (Haifa and Wibowo 2015). This proves that the higher the FDR, the greater the NPF level. Based on SE BI 9/24/DPbS on 30 October 2007, the FDR equation formula can be formulated as follows:

$$FDR = \frac{Total\ Financing}{Total\ DPK}\ x\ 100\ \% \quad \text{.....(4)}$$

The estimation model used in this research is a regression analysis with a dynamic model. One dynamic model that is quite well-known and widely used in economic analysis is the Error Correction Model (ECM). ECM exists after long-term relationships exist between variables. ECM can be derived through a simple linear transformation. Thus, CM helps integrate short-term with long-term equilibrium (Morakinyo and Sibanda 2016).

Result and discussion

The stationary test or unit root test aims to verify that the data in the study are static. The stationary test in this study uses the Phillip-Pheron (PP) test by looking at the probability value. If the probability value is greater than the level (5%), the data is not stationary (non-stationary). Conversely, if the

probability value is smaller than the level concludes that the data is stationary. Table 1 shows the stationary test result.

Based on Table 1, it can be seen that at level or I (0), variable data of NPF, CAR, and FDR are stationary, while Inflation and BI Rate variables are non-stationary.

Table 1. Unit Root Test (Level)

Series	Prob.	Bandwidth	Obs
NPF	0.0031	3.0	53
INFLASI	0.1798	1.0	53
BI_RATE	0.5110	1.0	53
CAR	0.0027	0.0	53
FDR	0.0227	4.0	53

Source: Research Data (Processed)

Table 2. Unit Root Test (1st Difference)

Series	Prob.	Bandwidth	Obs
D(NPF)	0.0000	4.0	52
D(INFLASI)	0.0000	2.0	52
D(BI_RATE)	0.0002	4.0	52
D(CAR)	0.0000	6.0	52
D(FDR)	0.0000	51.0	52

Source: Research Data (Processed)

Table 3. Cointegration Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID01(-1)	-0.744844	0.136626	-5.451718	0.0000

Source: Research Data (Processed)

Because there are variable data in the study that are non-stationary at level or I (0), it is necessary to have a degree of integration test to determine to what degree the data will be stationary. The results of the degree of integration test can be seen in Table 2.

Based on the integration degree test results in Table 2, it can be seen that all variable data are stationary at the 1st difference or I (1).

Cointegration relationships indicate a long-term (equilibrium) relationship. This study used the Johansen Cointegration Test to find out the existence of a cointegration relationship. When the value of Trace Statistics is greater than the critical value, it can be understood that there is cointegration. The Johansen Cointegration Test results can be seen in Table 3.

Table 3 shows the results of the Johansen Cointegration Test, which is used to determine the cointegration relationship. The test results show that the Trace Statistic value is greater than the critical value, with a significance level of 5%. Thus, the result can be interpreted that there is a cointegration relationship or long-term relationship between variables.

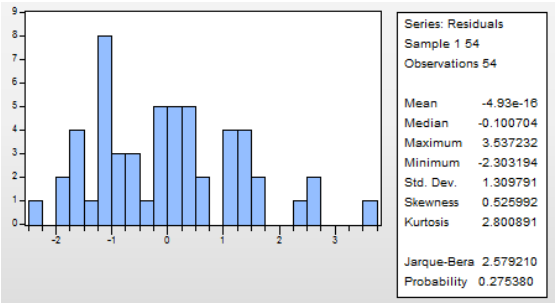
Based on the Jarque-Bera (JB) test results in Table 4, it can be seen that the JB value is 2.579210 with a probability of 0.275380. The probability value is greater than 0.05, so the data is normally distributed. Normal residual data shows no classical assumption deviation used in the study so that the estimation results will not be biased.

Based on Table 5, the multicollinearity test results show that all Centered VIF values are less than 10. Therefore, this matter can conclude that there is no multicollinearity or relationship between independent variables in the regression model.

Based on the results of the heteroscedasticity test in Table 6, the value of Obs * R-squared is 3.216767, with a probability of 0.5222. Therefore, the probability value is greater than 0.05, so there is no heteroscedasticity in the model.

There is no autocorrelation if the DW value is between -2 and +2 or -2 ≤ DW ≤ +2 (Sunyoto 2011). The autocorrelation test results can be seen in Table 7.

Table 4. Normality Test



Source: Research Data (Processed)

Table 5. Multicollinearity Test

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
INFLASI	0.014976	22.55288	5.143645
BI_RATE	0.044227	72.66431	5.186792
CAR	0.011503	59.60716	1.284967
FDR	0.000900	235.4932	1.129454
C	12.10099	352.1525	NA

Source: Research Data (Processed)

Table 6. Heteroscedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.775953	Prob. F (4,49)	0.5462
Obs*R-squared	3.216767	Prob. Chi-Square (4)	0.5222
Scaled explained SS	2.384963	Prob. Chi-Square (4)	0.6653

Source: Research Data (Processed)

Table 7. Autocorrelation Test

R-squared	0.172791	Mean dependent var	-4.93E-16
Adjusted R-squared	0.067190	S.D. dependent var	1.309791
S.E. of regression	1.265024	Akaike info criterion	3.428481
Sum squared resid	75.21337	Schwarz criterion	3.686313
Log likelihood	-85.56900	Hannan-Quinn criter.	3.527917
F-statistic	1.636261	Durbin-Watson stat	1.924448
Prob(F-statistic)	0.158223		

Source: Research Data (Processed)

The Durbin-Watson value is 1, 924448 (Table 7). This number indicates that the Durbin-Watson value is between -2 to +2. Regarding this fact, it can be concluded that there is no autocorrelation in the regression model.

Regression analysis in this study is used to determine the effect of independent variables (Inflation, BI Rate, CAR, and FDR) on the dependent variable (NPF). In the previous test, the variable data in this study were non-stationary but mutually integrated. If data is non-stationary but mutually integrated, there is a long-term relationship or balance between these variables. Therefore, this study used a regression analysis using the Ordinary Least Squares (OLS) method to find the long-term effect. The results of the regression analysis with the OLS method can be seen in Table 8.

Based on Table 8, the regression results with the OLS method in this study note that the F-statistic probability value is 0,000742. It means that Inflation, BI Rate, CAR, and FDR together significantly influence NPF in the long run. The regression testing results with OLS show that the Adjusted R-squared value, which shows the coefficient of determination, is 0.262414. It means that in the long run, Inflation, BI Rate, CAR, and FDR can explain the NPF variation of 26.24%, while the rest, which is equal to 73.76%, is defined by other variables not included in the model. Based on Table 8 the OLS regression equation can be written into the formula:

$$NPF_t = 3{,}269624 - 0{,}387627INFLASI_t + 0{,}869331BI\_RATE_t - 0{,}332169CAR_t + 0{,}011875FDR_t + e_t$$

Table 8. OLS Analysis Results

Variable	Coefficient	t-Statistic	Prob.
INFLASI	-0.387627	-3.167539	0.0026
BI_RATE	0.869331	4.133743	0.0001
CAR	-0.332169	-3.097037	0.0032
FDR	0.011875	0.395747	0.6940
C	3.269624	0.939912	0.3519
R-squared	0.318081		
Adjusted R-squared	0.262414		
F-statistic	5.714016		
Prob(F-statistic)	0.000742		

Source: Research Data (Processed)

Table 9. ECM Analysis Results

Variable	Coefficient	t-Statistic	Prob.
C	-0.031489	-0.185045	0.8540
D(INFLASI)	-0.210177	-1.878069	0.0666
D(BI_RATE)	-0.018132	-0.058997	0.9532
D(CAR)	-0.294774	-2.901220	0.0056
D(FDR)	0.038551	1.280859	0.2065
RES(-1)	-0.708326	-5.024894	0.0000
R-squared	0.428146		
Adjusted R-squared	0.367310		
F-statistic	7.037756		
Prob(F-statistic)	0.000056		

Source: Research Data (Processed)

The ECM model proposed by the Engle-Granger (EG) requires two stages, called by Two Steps EG (Winarno, 2015). The first step is to calculate the residual value from the initial regression equation (OLS method). The second step is to do a regression analysis by entering the residuals from the first step. The test results with ECM analysis techniques can be seen in table 9.

The regression results with the ECM method find that the F-statistic probability is 0.000056 (Table 9). This result indicates that in the short term, Inflation, BI Rate, CAR, and FDR together significantly influence NPF. Furthermore, the results of regression testing with ECM show that the

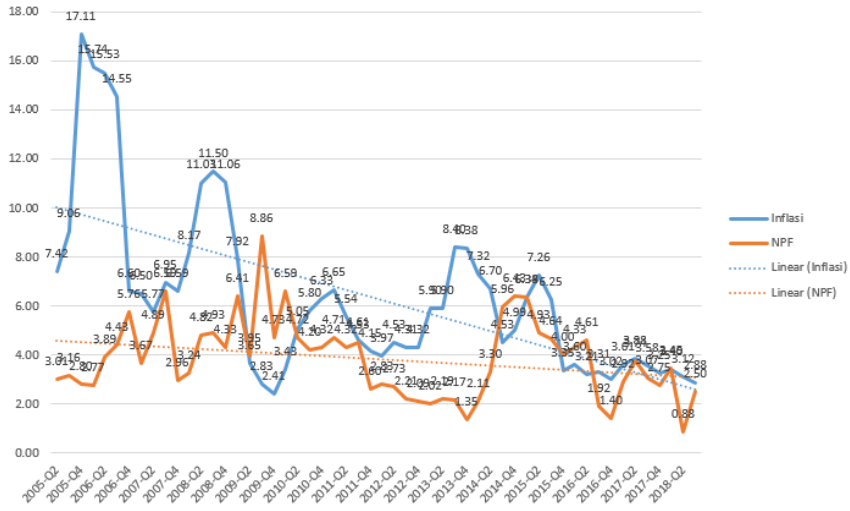
adjusted R-squared value is 0.367310. This case means that the BI Rate, CAR, and FDR can explain the NPF variation of 36.73% in the short term, while the remainder of 63.27% is explained by other variables not included in the model. The form of equations from regression analysis with ECM techniques are as follows:

$D(NPF_t) = -0.031489 - 0.210177D(INFLATION_t) - 0.018132D(BI\_RATE_t) - 0.294774D(CAR_t) + 0.038551D(FDR_t) - 0.708326RES(-1)$

The impact of inflation towards NPF

Inflation has a significant effect on the negative influence towards Non-Performing Financing (NPF) in the long term. The results of this study support the research of Haifa and Wibowo (2015) and Nasih (2013). Inflation and NPF movements in the long term can be seen in Figure 2.

Figure 2. Inflation and NPF Bank Muamalat Indonesia Chart in the Long Term

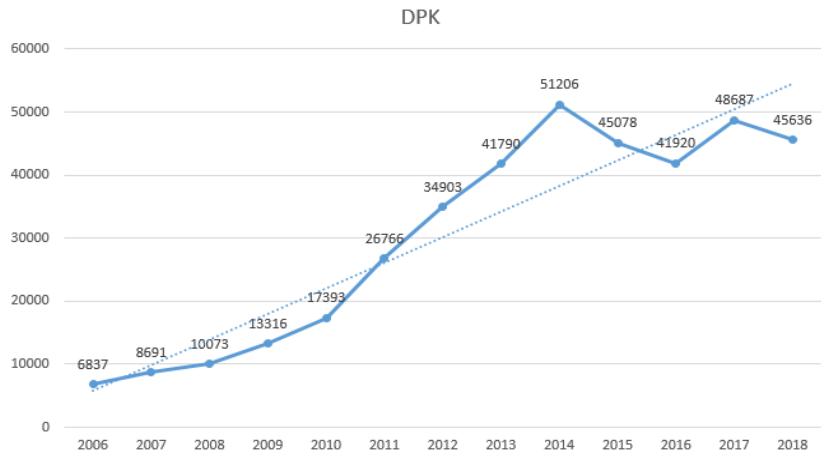


Source: Bank Muamalat Indonesia Financial Report and Bank Indonesia Monetary Policy Review (processed)

Based on Figure 2, it can be seen that changes do not follow the significant decrease in inflation in the long term in NPF. Bank Muamalat Indonesia deposits can continue to crawl up in the long run because the prices of goods and services move normally so that people have more funds to save and invest in Islamic banks. The increase in deposits caused Bank Muamalat Indonesia to expand in the long term. Expansion of financing leads to the emergence of NPF due to the ease with which banks provide loans or make investments because they are required to take advantage of excess liquidity. The increase in Bank Muamalat Indonesia's Deposits in the long term can be seen in Figure 3.

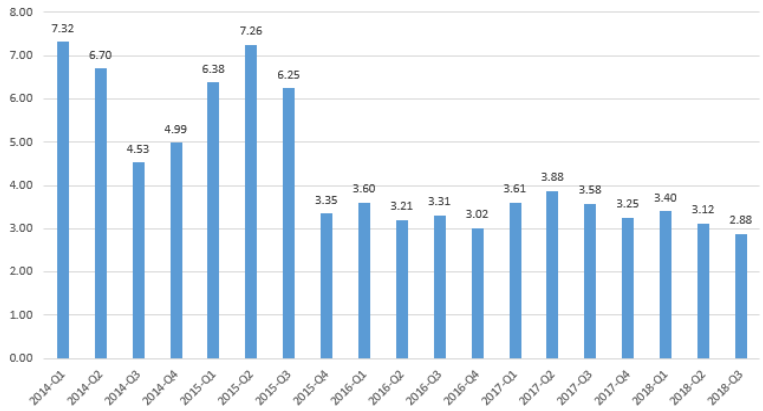
Inflation has no significant effect on the direction of negative influence on Non-Performing Financing (NPF) in the short term. This study support Sifa and Wibowo (2015) and Ardana and Irviani (2017). Inflation movement in the short term can be seen in Figure 4.

Figure 3. Deposits Increase in Bank Muamalat Indonesia Chart in the Long Term



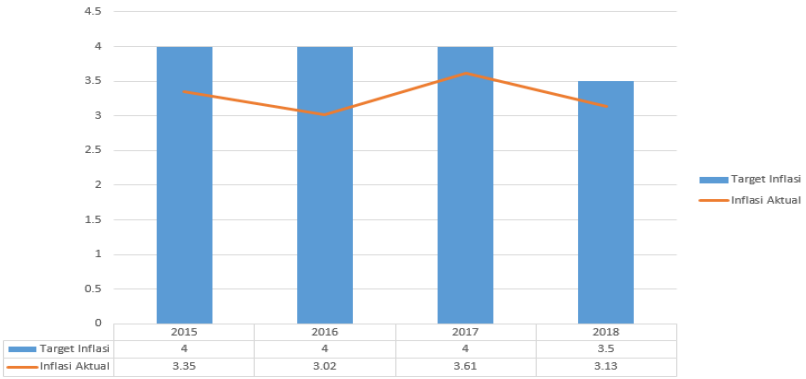
Source: Bank Muamalat Indonesia Annual Report (processed)

Figure 4. Inflation in Indonesia Chart in Short Term



Source: Bank Indonesia Monetary Policy Review (processed)

Figure 5. Inflation Actual and Targets Comparison Chart in Indonesia



Source: Bank Indonesia Monetary Policy Review (processed)

Based on Figure 4, the graph of inflation movements in Indonesia in the short term can be seen. Inflation that occurs fluctuates with a downward trend. The inflation value is also not more than 10%, which means it is still moderate. Therefore, ilation at a reasonable level does not significantly affect

changes in NPF in the short term (Hernawati and Puspasari 2018). In Indonesia, the inflation is always below the inflation target triggered by Bank Indonesia. A comparison of the inflation target and actual inflation in Indonesia can be seen in Figure 5.

Based on Figure 5, the actual inflation occurring in Indonesia is consistently below the inflation target set by Bank Indonesia. However, actual inflation, which is still in the inflation target range, is still reasonable and acceptable to the economy (Wijoyo 2016). This case is understood because previously, Bank Indonesia has published the inflation target for the next three years. This matter occurred because the public has already known about the range of inflation that would occur beforehand.

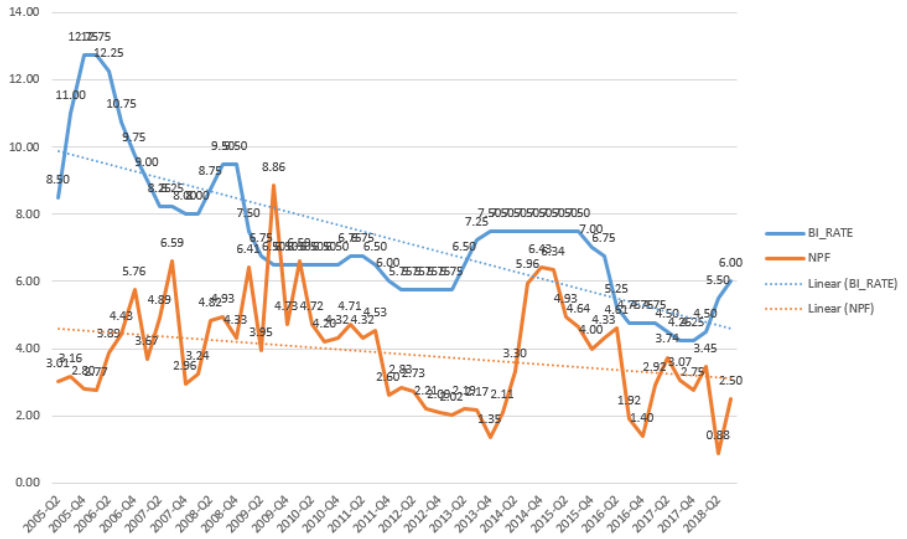
Al-Maqrizi divides inflation into natural inflation and human error (Awaluddin 2017). Natural inflation is very likely to occur in Indonesia, further explaining that this type of inflation is caused by various natural factors that humans cannot avoid. Besides natural factors, Al-Maqrizi stated that inflation could occur due to human error. He has identified three things that cause human error inflation: corruption and poor administration, excessive taxation, and increased currency circulation. As described in the equation MV = PT (Karim 2010). Indonesia has a disruption to the number of goods and services (T) produced in an economy. For example, T falls because of several production controllers' stockpiling (al-ihtikar) in Indonesia, while M and V remain; consequently, P (price) rises. This form of cause and effect of hoarding can be categorized as human error inflation in Indonesia.

The impact of BI rate towards NPF

The BI Rate has a significant effect on the positive influence on Non-Performing Financing (NPF) in the long term. The results of this study support Ardana and Irviani (2017). Changes in the BI Rate and NPF in the long term can be seen in Figure 6.

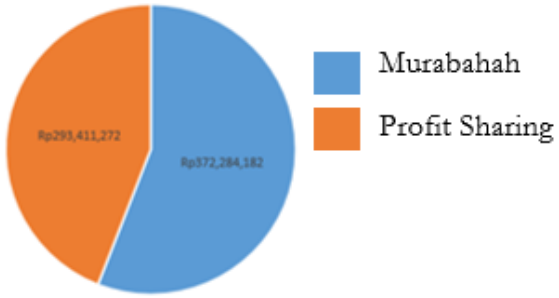
Figure 6 illustrates that the BI Rate and NPF trend lines move in the same direction. Therefore, the BI Rate in Islamic banking acts as a comparison. When the BI Rate rises, there is an increase in the competitiveness of Islamic banks where the profit sharing ratio of Islamic banks (profit/loss sharing) is expected to compete with conventional bank loan interest rates. Therefore, conventional banking interest rates, or the BI Rate, are used as references by the Islamic Bank Asset Liabilities Committee (ALCO) (Hernawati and Puspasari 2018).

Figure 6. BI Rate and NPF Bank Muamalat Indonesia Chart in the Long Term



Source: Bank Muamalat Indonesia Financial Report and Bank Indonesia Monetary Policy Review (processed)

Figure 7. Comparison of the Amount of Murabahah and Profit Sharing Financing of Bank Muamalat Indonesia in the Short Term



Source: Bank Muamalat Indonesia Annual Report (processed)

The BI Rate has no significant effect on negative effects on Non-Performing Financing (NPF) in the short term. A comparison of the amount of *murabahah* financing and profit-sharing can be seen in Figure 7.

Based on Figure 7, the comparison of the amount of murabahah financing and profit-sharing financing can be seen. Financing at Bank Muamalat Indonesia is dominated by *murabahah* financing. In the event of a change in the BI Rate in the short term, consumptive financing customers such as *murabahah* are not budged. The income earned by the bank is permanent or guarantees a more certain rate of return, which makes any amount of the BI Rate referenced by Islamic banks does not affect the *murabahah* margin. That proves that the change in the BI Rate has less effect on NPF in the short term.

Islamic society has a perspective that refers to the Qur'an and Hadith. Disclosure meaning of a concept can be done by semantic, rational, and philosophical analysis. Semantics is the analysis of the intention of a language used in accordance with the meaning of the language and the meaning of the context that occurs. Semantic analysis of BI Rate makes QS. Al-Baqarah verses 278-279 as the basis that the language used is under the meaning of the language written there and the context meaning that occurs around the bank's

interest. The verse is the verses of the *muhakamat* - whose legal provisions are certain and do not require further interpretation.

The rationale is a normative concept that refers to the conformity of beliefs with reasons to believe—rational analysis related to the BI Rate, namely QS. Al-Imran verse 130 as the basis that riba is rationally prohibited is the nature of usury *ad'afan muda'afan*, both in terms of multiple interests with no limits or too high interest rates.

Philosophical is a guide to implementing the understanding that becomes the belief of each individual and group, namely obtaining the truth through logical, systematic, methodical thinking. Philosophical analysis of BI Rate, using the Quranic verse 161 of An-Nisaa', was continued by Hadith Nasa'i No. 4540 to allow the BI Rate because interest-free banking is impossible.

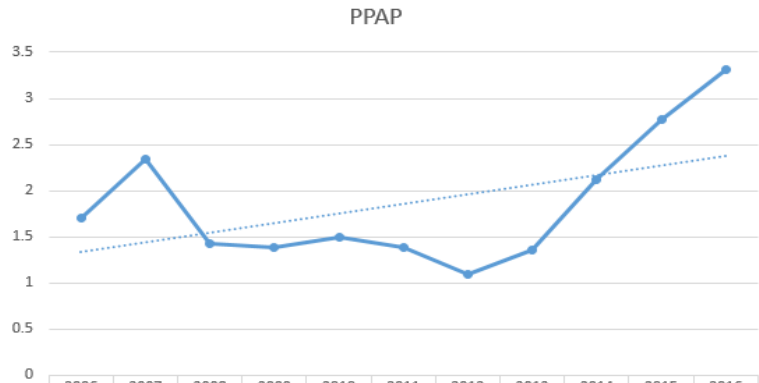
The impact of CAR towards NPF

CAR has a significant effect on the negative influence on Non-Performing Financing (NPF) in the long term. The results of this study are supported by Aryani, Anggraeni and Wiliasih (2016). Changes in CAR that can influence the NPF of Bank Muamalat Indonesia in the long term can be seen in Figure 8.

Based on Figure 8. It can be seen that Bank Muamalat Indonesia's CAR and NPF for the 2005-2018 period have a declining trend. The trend is caused by an increase in NPF in the long run, resulting in Islamic banks having to provide reserves in the form of a larger Earning Assets Allowance (PPAP) to eventually erode capital (Ardana and Irviani 2017).

Based on Figure 9, the continuous increase in the ratio of PPAP to earning assets has also eroded Bank Muamalat Indonesia's capital. The illustration proves that even though CAR has a downward trend, but in the facts, it is still able to accommodate the risk of Bank Muamalat Indonesia's financing in the long term through the fulfillment of the portion of PPAP taken from the bank capital. This case is the same as a large CAR that can back up assets that contain risks, thereby reducing the possibility of problematic financing (Haifa and Wibowo 2015).

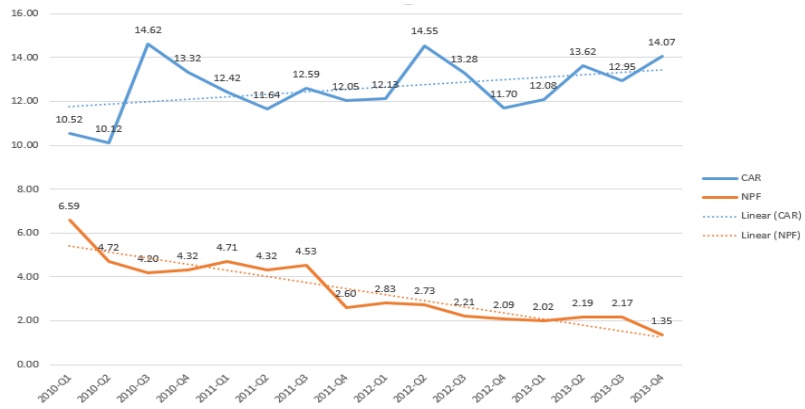
Figure 9. PPAP Ratio to Earning Assets of Bank Muamalat Indonesia Chart



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
PPAP	1.7	2.34	1.42	1.38	1.5	1.39	1.09	1.36	2.12	2.77	3.31

Source: Bank Muamalat Indonesia Annual Report (processed)

Figure 10. CAR and NPF of Bank Muamalat Indonesia Chart in Short Term



Source: Bank Muamalat Indonesia Financial Report (processed)

CAR has a significant effect on the direction of negative influence on Non-Performing Financing (NPF) in the short term. The results of this study are

supported by Supriani and Sudarsono (2018). The movement of CAR and NPF in the short term can be seen in Figure 10.

Based on Figure 10. it can be seen that the CAR and NPF at Bank Muamalat Indonesia experienced several fluctuations with an increasing trend in the short term. This means that an increase in CAR can affect the decrease in NPF at Bank Muamalat Indonesia in the short term. In addition, increasing CAR implies that Islamic banks will manage financing risk issues more easily (Effendi, Thiarany, and Nursyamsiah 2017).

Capital in Islam is also called *ras al-mal*. In al-Mujam al-Wasith, *Ras al-Mal* is interpreted by the amount of property invested. Bank Muamalat Indonesia also functions its capital in terms of investment in financing distribution. Capital growth is considered essential, and every Muslim is expected to invest his money into the business. So that, Bank Muamalat Indonesia continues to strive to improve its capital adequacy ratio and remain in a healthy corridor, according to Bank Indonesia.

The Impact of FDR Towards NPF

Financing to Deposit Ratio (FDR) has no significant effect on positive influence on Non-Performing Financing (NPF) in the long term. This result is supported by Firmansari and Suprayogi (2015). Figure 11 illustrates the long-term trend of FDR and NPF.

Based on Figure 11, it can be seen that the trend of FDR and NPF is positively related. A positive relationship is interpreted as a decrease in FDR affecting NPF reduction, and vice versa. (Aryani, Anggraeni, and Wiliasih 2016). The significant decrease in the FDR did not cause the NPF to fall significantly. Therefore, the financing analysis does not impact the increase in the risk of problematic financing as indicated by the rise in NPF (Supriani and Sudarsono 2018). Bank Muamalat Indonesia proves it through the Good Corporate Governance (GCG) Report. To accelerate the settlement of the aggressive problematic financing of Bank Muamalat Indonesia, a bad bank

management unit was formed, separate from the work unit that manages good banks.

Financing to Deposit Ratio (FDR) has no significant effect on the direction of positive influence on Non-Performing Financing (NPF) in the short term. This result is supported by Firmansari and Suprayogi (2015), who stated that FDR had a positive and not significant effect on NPF. The directional movement of FDR and NPF can be seen in Figure 12.

Based on Figure 12. it can be seen that the trend line FDR and NPF have the same graph direction. In the long run, the same thing happened that a large decrease in the FDR does not cause the NPF to decline significantly in the short term.

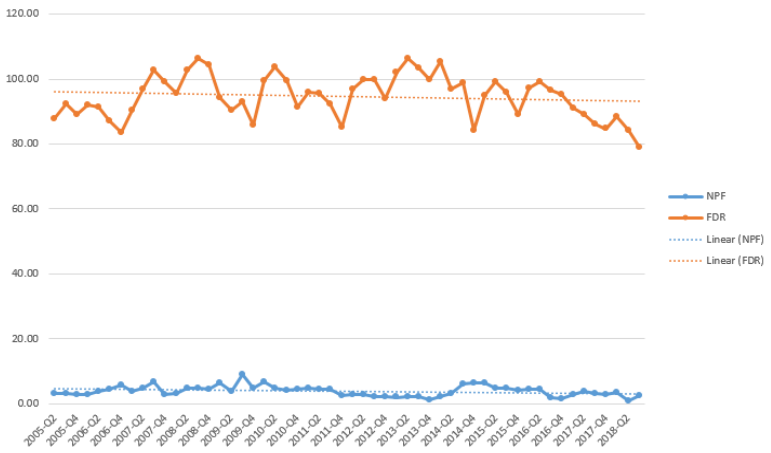
FDR has the direction of a positive relationship to NPF can also be caused by the funds issued for financing the more significant, the higher the FDR, and the possibility of risky financing problems also higher (Wijoyo 2016). The FDR ratio associates large financing disbursements with the high number of Third Party Funds received. The increase in Bank Muamalat Indonesia's Deposits in the short term can be seen in Figure 13.

Based on Figure 13, it can be seen that the number of Bank Muamalat Indonesia Deposits has increased in the short term. Banks certainly face many supporting and obstacles in raising third-party funds and channeling financing (Saekhu 2017). The amount of third-party funds will affect the decision of Islamic bank management to distribute financing (Sudarsono 2017). Increasing third-party funds and the pattern of the FDR approach make Islamic banks expand their financing. In the liquid condition, Islamic Banks will tend to be more flexible in channeling financing, even though congestion increases (Firmansyah 2014). The average Bank Muamalat Indonesia FDR in the short term is 90.87%. According to government regulations, the safe limit for FDRs a maximum of 110% (Kasmir 2016). According to BI regulations, a

high FDR value but still below the maximum limits is considered healthy (Aryani, Anggraeni, and Wiliasih 2016).

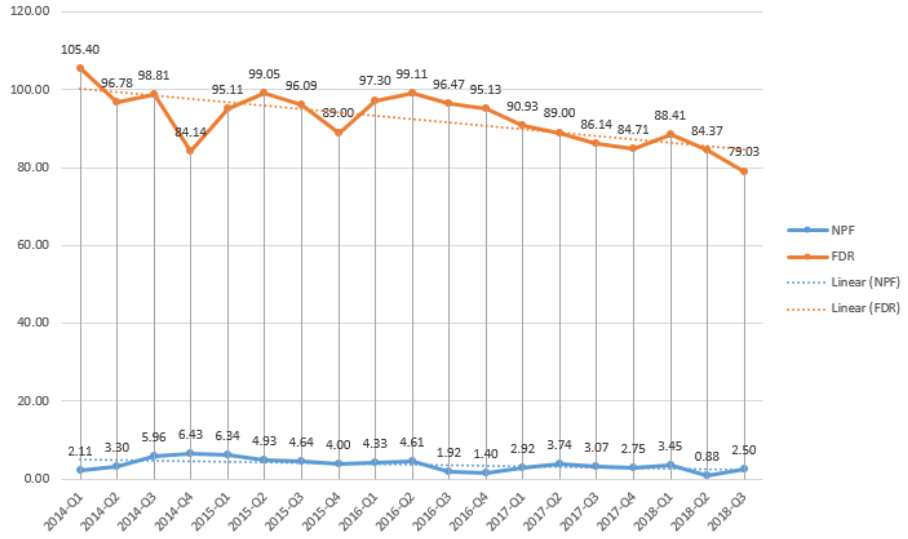
The phenomenon that occurs in this study can be considered that Bank Muamalat Indonesia is not yet maximal in channeling financing. If the FDR continues to decline, there will be a possible idle fund. Idle funds will reduce opportunities for Bank Muamalat Indonesia to obtain profits. Islam forbids capital freezing (idle fund), stated in QS. At-Taubah verse 34. Collecting property is not prohibited in Islam, but freezing it in large quantities is a danger to society and is strictly prohibited. Therefore, all banks, primarily Bank Muamalat Indonesia must distribute the funds deposited to them as well as possible. The distribution of these funds can be seen through the FDR ratio.

Figure 11. FDR and NPF of Bank Muamalat Indonesia Chart in Long Term



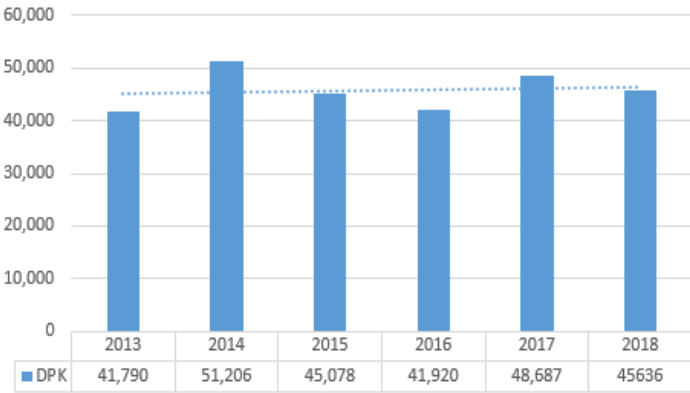
Source: Bank Muamalat Indonesia Financial Report (processed)

Figure 12. FDR and NPF of Bank Muamalat Indonesia Chart in Long Term



Source: Bank Muamalat Indonesia Financial Report (processed)

Figure 13. Third Party Funds of Bank Muamalat Indonesia in Short Term



Source: Bank Muamalat Indonesia Annual Report

Conclusion

This study concludes that the only CAR significantly affects NPF Bank Muamalat Indonesia, both long-term and short-term. This is because a large CAR can back up assets that contain risks, thereby reducing the possibility of problematic financing. On the other hand, other variables such as Inflation, BI Rate, and FDR have a non-significant effect on NPF. Thus, Bank Muamalat Indonesia should continue maintaining the capital adequacy ratio (CAR) in the first rank of more than 12%. Furthermore, substantial capital did not budge even though a very large PPAP eroded it. That means large capital can accommodate problematic financing risks.

This research has been tried and implemented as well as possible but still has limitations and there are opportunities for developing future research. The data period of this study is still limited, and there needs to be an additional period as the more research periods, the better. Many factors influence NPF that have not been included in this research model, both from macroeconomic conditions and the fundamental conditions of Islamic banks. Therefore, adding other variables so that the research conducted can explain the conditions that affect NPF. Different Islamic banks are also possible to become a type of panel data research. A comparison between the discussion of research results with one object and many objects is recommended for future topics.

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