Analysis of Islamic Bank Financing in Indonesia

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Abstract: This study is aimed at analyzing the factors that influence the Islamic banks financing in Indonesia. Inflation, exchange rates, exports, consumer confidence index and third party funds are used as dependent variables while Islamic bank financing is a dependent variable. Financing is limited to working capital and investment financing for the period of January 2015 to December 2017 distributed by 13 Islamic commercial banks and 21 Islamic business units operating in Indonesia. The analysis method used is multiple linear regressions. The simultaneous testing shows that inflation, exchange rates, exports, consumer confidence index and third party funds have a significant effect on Islamic bank financing. The partial testing shows that only exchange rates and third party funds have a positive and significant effect on financing. Variation of all dependent variables can affect the dependent variable by ninety-eight percent.
Keywords: Islamic bank, working capital financing, investment financing.

INTRODUCTION

Economic growth can not be separated from the decisions of business activity that conduct financial transactions through banking services.

It is because the function of the bank as an intermediary between people whose surplus of funds and lack of funds. In addition, the bank's function is as an agent of development, which can be a government tool that helps to develop the nation's economy, one of which is through bank financing services in all types of businesses. Banking is one of the factors that influence economic growth [1].

Data from the Financial Services Authority shows that national banking assets reached 7,387.144 trillion rupiahs or grew by 9.8 percent from last year. Market share of Islamic banks was only 5.74 percent or 424.18 trillion rupiahs of the total national banking industry. This condition shows that banking in Indonesia is still dominated by conventional banking while the composition of the Indonesian population is predominantly Muslim. However, Islamic banking still contributes to economic growth both in the long term and short term [2].

In running its business, Islamic bank has activities such as raise funds, channel funds and other services. Distribution of financing is a form of contribution of Islamic banking in the economy. Hasyim [3] revealed that Islamic bank financing activities contributed significantly to real economic activities both in the short and long term, with strong long-term contributions. The composition of Islamic bank financing is still dominated by the financing of the productive sector, namely financing that is used to meet business production needs where 35 percent is in working capital financing while 23 percent is investment financing. Furthermore, 42 percent was channeled to consumer financing.

Seen in figure 1 outstanding financing disbursement over the last three years continues to increase from 118.47 trillion rupiah in January 2015 to 166.67 trillion rupiah at the end of 2017. Average monthly growth in the last three years amounted to 0.94 percent. The highest growth occurred in June 2017 namely an increase of 4.71 percent while the highest decline was in January 2017 which was down 2.63 percent.

Macroeconomic indicators such as inflation, exchange rates, GDP, import exports and others are a reflection of a country's economic stability so that this indicator will certainly be a reference for business people. Macroeconomic variables have a significant effect on financing [4]. Improvements in macroeconomic conditions will increase financing growth, increase financing demand and the willingness of banks to channel financing [5]. In addition the performance of Islamic banks in Indonesia is influenced by fluctuations in macroeconomic variables in the short term [6].
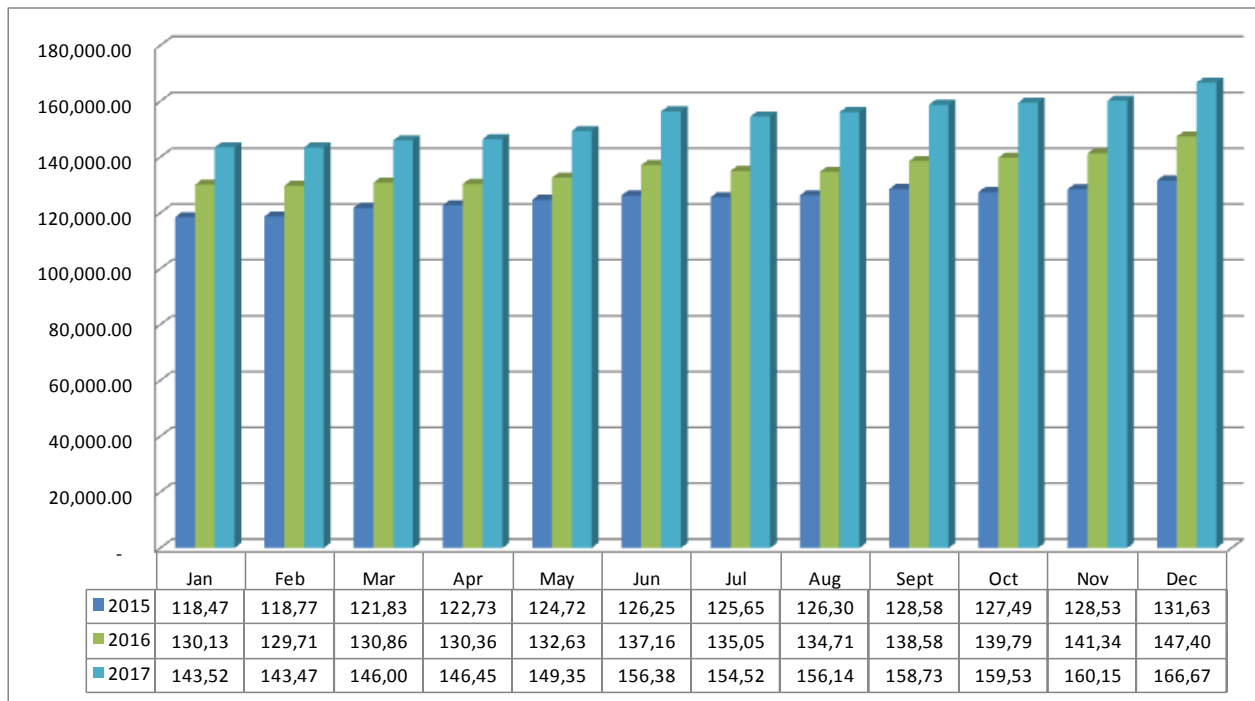
Fig-1: Development of Islamic Bank Working Capital and Invesment Financing

For customers, macroeconomic indicators and consumer confidence index can be a consideration for applying for financing in Islamic banks. Current and future economic conditions will determine repayment capacity for financing to be proposed. In terms of banks, macro indicators are external factors while internal factors can be in the form of capital, assets, third party funds, quality of financing and other factors.

Previous research more generally discussed the financing of Islamic banks such as the latest studies conducted by Rifai, Susanti, & Setyaningrum [7] which includes macro variables such as inflation, exchange rates, money supply and exports as independent variables and financing of Islamic banks as dependent variables. Another study conducted by Vivi & Cahyo [8] also discussed the financing of Islamic banks in general. Some previous studies have more specifically discussed Islamic bank financing but only based on financing agreements such as the research of Rima Dwijayanti [4], Rahman, Suzan, & Muslih [9], Nurdiwaty & Faisol [10] which discussed *murabahah* financing for Islamic banks, while Choirudin & Praptoyo [11], Amelia & Hardini [12] discuss Islamic bank *mudharabah* financing.

Based on the description of the development of variables that will be studied and based on previous studies, the researcher will examine the influence of inflation factors, exchange rates, exports, consumer confidence indices and third party funds on financing (working capital and investment) of Islamic banking in Indonesia. Updates made by researchers are found in the more specific Islamic banking financing variables to productive financing, namely working capital and investment because they are considered more sensitive and responsive to macroeconomic changes.

METHODS

The analysis technique used is descriptive qualitative and quantitative techniques. The estimation method that can be applied to this equation is Ordinary Least Square (OLS). The type of data used in this study is time series data from January 2015 to December 2017 and is secondary data, namely data issued by certain institutions or agencies such as Indonesia Central Bank, the Financial Services Authority, the Ministry of Trade of the Republic of Indonesia and the Central Statistics Agency. The population in this study is contained by 13 Islamic commercial banks and 21 Islamic business units operating in Indonesia. The proposed model is:

$$iBF = \alpha + \beta 1 INF + \beta 2 ER + \beta 3 EXP + \beta 4 CCI + \beta 5 TPF + \varepsilon \dots\dots\dots\dots\dots .. (1)$$

Where:

iBF	= Islamic Bank Finance
α	= Constant
β	= Coefficient
INF	= Inflation
ER	= Exchange Rate

EXP = Export
CCI = Consumer Confidence Index
TPF = Third party funds

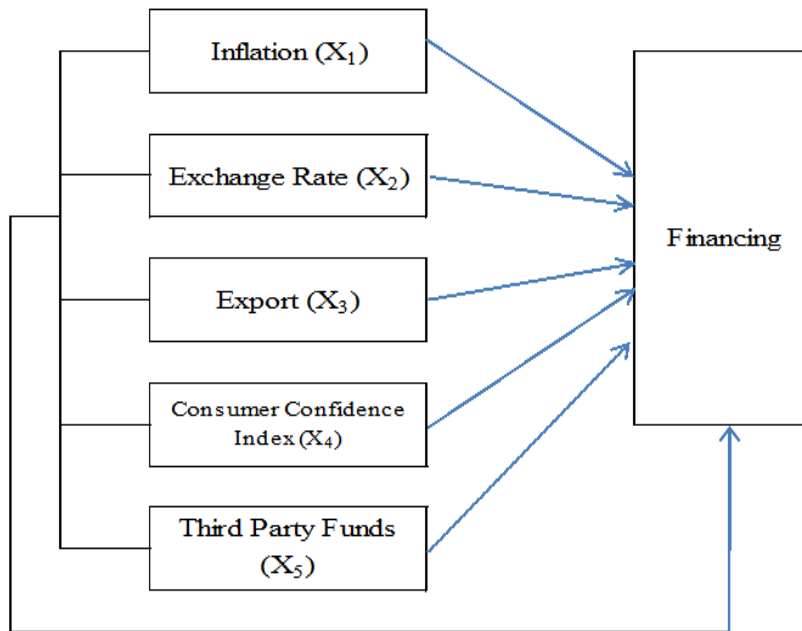Based on the formulation of the problem described previously, the framework of the study can be described as follows:

Fig-2: Framework of The Study

According to figure-1, in this study the independent variables inflation, exchange rates, exports, consumer confidence index and third party funds will be tested for its effect on the dependent variable, namely Islamic bank financing.

Based on the theoretical foundation, previous research, and the framework outlined previously, the hypothesis of this study is the influence of inflation, exchange rates, exports, consumer confidence index and third party funds on Islamic bank financing in Indonesia for the period January 2015- December 2017.

RESULTS
The results of multiple regressions obtained are as follows:

Table-1: Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXP	-0.259010	0.351922	-0.735986	0.4675
TFP	0.350774	0.020068	17.47940	0.0000
INF	3.235186	297.4258	0.010877	0.9914
CCI	-109.5809	82.33637	-1.330893	0.1933
ER	2.273068	1.085332	2.094352	0.0448
C	33349.47	18897.88	1.764720	0.0878

Source: Results of data processing using Eviews 9.0

From the regression table above obtained multiple linier equation models as follow:

iBF = 3,3349 + 3.24INF + 2.27ER - 0.259EXP - 109.58CCI + 0.35TFP + ε...(2)

Classic Assumption Test
The classic assumption is the conditions that must be met in the Ordinary Least Square (OLS) linier regression model so that the model becomes valid as an estimator. It's test consists of multicollinearity test, autocorrelation test, normality test, linearity test and heteroscedasticity test [13].

Multicollinearity Test
Multicollinearity test is used to detect whether the independent variables in the regression model are correlated.

Table-2: Multicollinearity Test

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
EXP	0.123849	199.7553	2.410388
TFP	0.000403	320.8953	7.169973
INF	88462.11	24.28397	2.297191
CCI	6779.278	1067.099	3.895909
ER	1.177946	2512.502	1.750344
C	3.57E+08	4242.351	NA

Source: Results of data processing using Eviews 9.0

Based on the results of multicollinearity test obtained centered VIF values for each independent variable namely inflation of 2.297191, exchange rate of 1.750344, export of 2.410388, third party funds of 7.169973 and consumer confidence index of 3.895909. There is no centered VIF value with a value greater than 10 so it can be concluded that there is no multicollinearity in the four independent variables. Thus the model has been free from multicollinearity.

Autocorrelation Test
Autocorrelation test is used to find out whether in the regression model there is a correlation between confounding errors in period (t) with period t-1 (before).

Table-3: LM (Lagrange Multiplier) test

F statistic	Obs* R-Squared	Prob. F (2.28)	Prob. Chi-Square(2)
0.8512	2.0633	0.4377	0.3564

Source: Results of data processing using Eviews 9.0

Based on the results of the autocorrelation test with the Brusch-Godfrey or LM (Lagrange Multiplier) test method, the calculated probability value of F is 0.4377. The calculated F value is greater than the alpha level of 0.05 (5 percent) so that based on the H_0 hypothesis test is accepted it means that there is no autocorrelation.

Normality test
Normality test is used to see whether (data) residuals formed linear regression are normally distributed or not.

Table-4: Jarque-Bera Test

Jarque-Bera	Probability
4.363404	0.112849

Source: Results of data processing using Eviews 9.0

Based on the results of the test for normality using Jarque-Bera Test obtained a probability value of 0.112849 or greater than 0.05 so that it can be concluded that the residuals are normally distributed which means that the classical assumptions about normality have been fulfilled.

Linearity Test
Linearity test aims to determine whether two variables have a linear or not significant relationship.

Table-5: Ramsey Reset Test

	Value	df	Probability
t-statistic	1.686483	29	0.1024
F-statistic	2.844226	(1. 29)	0.1024
Likelihood ratio	3.368169	1	0.0665

Source: Results of data processing using Eviews 9.0

Based on the results of the linearity test using the Ramsey Reset test obtained the calculated F probability value of 0.1024 or greater than the alpha level of 0.05 (5 percent) so that it can be concluded that the regression model has met linearity assumptions.

Heteroscedasticity Test
Heteroscedasticity test is used to determine whether the residuals and predictive values have a correlation or pattern of relationships.

Table-6: Glejser Test

F statistic	Obs* R-Squared	Prob. F (5.30)	Prob. Chi-Square(5)
0.327233	1.861854	0.8925	0.8679

Source: Results of data processing using Eviews 9.0

Based on the results of heteroscedasticity test using Glejser test obtained the calculated F probability value of 0.8925 or greater than the alpha level of 0.05 (5 percent) means that heteroscedasticity does not occur.

Statistic Test
T test
T test is used to determine the effect of independent variables on the dependent variable partially. The value of the t-statistic probability of third party funds is 0.0000. Because the t-statistic probability is smaller than 0.05, the H_0 hypothesis is rejected meaning that partially the third party funds have a significant effect on the productive financing of Islamic banks. The value of the probability of t-statistics for the exchange rate variable is 0.0448. Because the probability of t-statistics is smaller than 0.05, the hypothesis H_0 is rejected meaning that partially the exchange rate has a significant effect on the productive financing of Islamic banks.

The t-statistic value of the inflation variable is 0.9914 thus the inflation variable does not significantly influence the financing of Islamic banks. The t-statistics value of the export variable is 0.4675 (greater than 0.05) meaning that the export has no significant effect on the financing of Islamic banks. The t-statistic value for the variable consumer confidence index is 0.1933. Because the t-statistic value is greater than 0.05, H_0 is accepted meaning that the consumer confidence index variable has no significant effect on the financing of Islamic banks.

Test F
F test is used to determine whether the independent variables simultaneously or together have a significant effect on the dependent variable. Based on the regression results obtained F statistic value of 0.000000, with a 95 percent confidence level ($\alpha = 0.05$) the null hypothesis of the study is rejected because the F-statistic probability value is smaller than α which means the independent variable (inflation, exchange rate, export, consumer confidence index and third party funds) together have a significant effect on changes in the financing of Islamic banks.

Determination Coefficient Test (R^2)
The determination coefficient is used to determine the variation of the effect of independent variables on the dependent variable. Based on the regression results obtained R-squared value of 0.984951 means that the variation of all dependent variables (inflation, exchange rate, export, consumer confidence index and third party funds) can affect the dependent variable (financing of Islamic banks) by ninety-eight percent (0. 984951). The remaining two percent is influenced by other variables outside the study.

DISCUSSION
Influence of Inflation on Islamic Bank Financing
The analysis shows that the inflation variable partially does not have a significant effect on financing, meaning that if there is a change in inflation it will not affect the financing of Islamic banks. The results of the study are in line with research conducted by Satia & Rita [14] where the inflation variable does not significantly affect the financing of Islamic banks. Study by Effendi & Yuniarti [15] also show the same result that inflation has insignificant effect on credit risk in Islamic banks. Different results are shown in the study of Ali & Miftahurrohman [16] where inflation has a significant influence on Islamic bank financing. Differences in the results of this study occur because in the previous research used was financing based on the contract that is *mudharabah* while in this study the financing was distinguished based on the use of the productive sector.

The inflation rate in Indonesia in the last three years is quite controlled; it is in the target of 4.0 ± 1 percent. At the beginning of 2015 the inflation rate was at 6.69 percent. The figure gradually declined and was at the target of 4.0 ± 1 percent towards the end of 2015 until the end of 2017. Thus despite inflation fluctuations in the span of three years last but it does not affect the volume of distribution of Islamic bank financing because the fluctuations are still considered reasonable by both Islamic banks and customers.

Effect of Exchange Rates on Islamic Bank Financing
Based on the t-test the exchange rate variable has a significant effect on financing of Islamic banks. The exchange rate regression coefficient is positive showing the unidirectional relationship between the exchange rate and the financing of Islamic banks. The regression coefficient value of the exchange rate is 2.273068 so that each US Dollar increase of one rupiah will increase financing by 2.273068 billion rupiah. The results of this study are in line with the research conducted by Satia & Rita [14] where the exchange rate variable has a significant effect on Islamic bank financing. Likewise with the study of Hong & Pham [17] which shows the results that the exchange rate has a significant influence on the financing of Islamic banks.

The exchange rate in January 2015 was at the level of 12,625 rupiah per US Dollar depreciating to reach 14,657 and experienced a significant appreciation in October 2015 to 13,639 rupiah per US Dollar. From October 2015 to December 2017 the rupiah exchange rate ranged from 12,998 to 13,846 per US Dollar. In line with the rupiah exchange rate, the volume of Islamic banks' productive financing distribution also continued to increase from 118.47 trillion rupiah in January 2015 to 166.67 trillion rupiah in December 2017. When the rupiah appreciated significantly in October 2015, financing also decreased from 128 .58 trillion rupiahs to 127.49 trillion rupiah or down 1.08 trillion rupiah.

The Influence of Exports on Islamic Bank Financing
The analysis shows that the export variable partially does not have a significant effect on productive financing, meaning that if there is a change in exports it will not affect the productive financing of Islamic banks. This result contrasts with the research of Ditria, Vivian, & Widjaja [18] where the number of exports goes in line with the number of credits and the three types of credit (working capital, investment and consumption) where if exports increase then all three types of credit also increase.

Ministry of Commerce data in December 2017 shows that the composition of exports of 70% comes from the industrial sector, 20 percent from mining and 4 percent from agriculture, the rest from other sectors. Where as productive financing distributed to these three sectors only reached 749.30 billion rupiah or 5.60 percent of total exports. This figure is very small compared to the national total exports which reached 13,363.40 billion. So despite the increase in national exports, the impact on Islamic banks' productive financing will not be significant.

Effect of Consumer Confidence Index on Islamic Bank Financing
Based on the t-test of the variable consumer confidence index (CCI) does not significantly influence the productive financing of Islamic banks, meaning that changes in the CCI will not have any impact on the distribution of financing in Islamic banks. The results of this study are not in line with several previous studies such as Islam & Mumtaz [19] which conclude that the CCI has an important role for decision makers in determining public policy also in business decisions. Furthermore Heim [20] concluded that CCI is systematically related to investment. Business and investment decisions are directly related to productive financing because they are channeled to business people for working capital and investment purposes.

The consumer confidence index data for the period January 2015 to December 2017 is a majority of above 100 points, meaning that although there is a change in or down in the index, the level still shows public optimism about the economy. Thus despite changes to the CCI, there will be no significant impact on Islamic business operators and banks because the changes are still at the level of fairness.

Influence of Third Party Funds on Islamic Bank Financing
Based on the t-test variable of third party funds has a significant effect on the productive financing of Islamic banks. The regression coefficient of third party funds is positive shows the same direct relationship between exchange rates and financing of Islamic banks. The regression coefficient value of third party funds of 0.350774 means that each increase in third party funds of one billion rupiahs will increase productive financing by 0.350774 billion rupiah. This result is in line with research conducted by Ali & Miftahurrohman [16] where third party funds have a positive effect on *Murabahah* financing in Islamic banking in Indonesia. Another study by Kalkarina, Rahayu, & Nurbaiti [21] also show third party funds partially have a significant influence on the volume of profit-based financing.

Islamic banking statistics show an increase in third party funds from 210.76 trillion rupiah in January 2015 to 334.71 trillion rupiah in December 2017. This increase is in line with the increase in financing channeled by Islamic banks of 118.47 trillion the rupiah in January 2015 rose to IDR 166.67 trillion in December 2017. This relationship was also caused by the provision of financing to deposit ratio (FDR) which must be maintained by Islamic banks so that the quality and performance of the bank remains good.

CONCLUSIONS AND RECOMMENDATIONS
From the results of testing in this study, the following conclusions can be drawn:

1. Simultanios testing results show that inflation, exchange rates, exports, consumer confidence indices and third party funds together have a significant effect on the financing of Islamic banks.
2. Individual testing results show that:
   - Exchange rate and third party fund have a positive and significant effect on the financing of Islamic banks.
   - Inflation, export and consumer confidence index variables have no significant effect on the productive financing of Islamic banks.

The coefficient of determination (R^2) is 0.982442 which means that the variation of all independent variables (export, Inflation, exchange rate, third party funds and consumer confidence index) can affect the dependent variable (productive financing of Islamic banks) by 98 percent (0.984951). While the remaining 2 percent is influenced by other variables outside the study.

For further research when researching with the same variables so that the research period can be extended for example the study period is added to the last fifteen years. Testing variables can also be added for example by entering other macro variables outside inflation, exchange rates and exports as dependent variables. Researchers can also more specifically examine the productive financing of Islamic banks for example by examining working capital or investment financing separately. Scope research is also not limited to the national level, can be expanded for example the financing of Islamic banks throughout Asia or international level.

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