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Analysis of The Relationship Between Islamic Banking And Economic Growth: A Comparative Study of Indonesia And Malaysia

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ABSTRACT

Purpose — *Indonesia and Malaysia are two countries that are driving the development of the Islamic finance and banking industry in the Southeast Asian region. The dual banking system implementation in the two countries, however, differs in the approach to developing its sharia banking, where Malaysia uses a state driven while Indonesia uses a market driven.*

Method — *This study aims to determine the relationship between Islamic banking and economic growth in Indonesia and Malaysia. This study uses quarterly data (2008Q1-2019Q4) the paper utilizes Bound Testing of approach Cointegration and Error Correction Model, developed within an Autoregressive Distributed Lag (ARDL) framework.*

Result — *The results show that the relationship between Islamic banking and economic growth in Indonesia and Malaysia is bi-directional causality. In Indonesia, Islamic banking and economic growth influence each other in both the short and long term. Meanwhile in Malaysia, Islamic banking has no effect on long-term economic growth, but economic growth has contributed to the development of Islamic banking. In the short term, the two influence each other*

Keywords: *Islamic Banking, Economic Growth, ARDL*

INTRODUCTION

The financial sector growth causes the economy to grow and developing the financial sector (Odedokun, 1992; Luintel & Khan, 1999). Currently, almost all business sectors, especially in developing countries, are highly dependent on bank financing as source of financing capital. Banking as an important sector in the financial industry can be used as an economic driver. The positive performance of banking sector will cause positive impact of economic performance of country (Nafik & Putra, 2017). In the global financial industry, Islamic banking industry or sharia banking has contribution for development of financial industry. Basically, the differentiation of between sharia and conventional banking is the principle of financial and operational transaction. On the theoretical perspective, sharia banking is contained in the Al Quran and al-Hadist.

According to Chapra (2008), the paradigm of Islamic finance and banking concept is risk sharing wich will encourage depositors and banks to share business risks together. This concept will encourage depositors to be careful in choosing a bank, and bank management bill be motivated to be careful in distributing financing and/or making investments at the same time. Therefore, Islamic finance more focuse emphasis on equity financing, because the fund owner will participate in the risk so that they will be careful in managing risk and continue to supervise the borrower's activities. Another financing model is sale-based financing (sale-based modes of financing). This sharia banking financing model will greatly support increasing production of goods and services in real terms. Finally, the concept of profit sharing (musyarakah and mudharabah) and buying and selling and renting will have an impact on the growth of the real economic sector and ultimately support national economic growth.

Sharia banking as sector in the financial system can contribute to economic growth. The International Monetary Fund (2016) released that the growth of sharia banking in the financial industry was the largest, namely 10-15 % in the last decade. Based on data from the Islamic Financial Services Industry Stability Report, the sharia banking market share controlled the global sharia financial market (71.7%), sukuk (24.2%), Islamic Funds (2.8%) and takaful (1.3%) in 2018. In several countries that implement the sharia financial system, sharia banking occupies the highest position in market share control.

One of reasons that the Islamic banking has positive impact on economic growth is the main characteristic of Islamic financial institutions which places greater emphasis on productivity. Sharia financial institutions are financial institutions that emphasize the concept of asset and production based systems as their main

idea which are mudarabah and musharakah are the important things of this idea. Through this financing scheme, the real sector and the financial sector will move in a balanced manner (Rama, 2011). As a result, the more sharia banking grows, the greater its contribution to economic performance and growth.

The development of the sharia financial and banking industry in Indonesia and Malaysia has become a driving force for the development of the sharia financial and banking industry in the Southeast Asia region. In a report released by the Islamic Financial Services Industry, in 2018, Malaysia and Indonesia each contributed 10.8% and 1.9% of total sharia banking assets in the world. Indonesia is developing the sharia financial and banking industry using a market driven approach (driven by the community), while Malaysia is using a state driven approach. Malaysia is a country with a fairly rapid development of the sharia banking industry with a total market share reaching 26.5% in 2018Q2 (IFSB, 2019). Meanwhile, sharia banking in Indonesia currently only controls 5.4% of the total national banking market share. Indonesian sharia banking has experienced accelerated growth since there was support from the government through the enactment of Law no. 21 of 2008 concerning Sharia Banking.

The development of the global sharia financial sector is still limited in research using sharia banking which represents the financial sector in relation to its relationship with economic growth. The relationship between the financial sector and economic growth is still ambiguous, leading to several hypotheses emerging, namely that the financial sector influences economic growth, economic growth drives the development of the financial sector, influences each other or even has no influence between the two. So further research is needed to determine the relationship between the two, and can be used as a basis for decision making in related economic policies. This research aims to analyze the relationship between Islamic banking and economic growth in Indonesia and Malaysia in the long and short term.

RESEARCH METHODS

This research uses secondary data in the form of quarterly data for the period 2008Q1-2019Q4. The data used are total assets and total financing (Total Financing) of sharia banking as a representation of the sharia banking financial sector. Real GDP (Gross Domestic Product) growth as a representation of economic growth. Data was obtained through the report pages of Bank Indonesia, Financial Services Authority, Bank Negara Malaysia and CEIC data.

Data analysis in this research uses the Autoregressive Distributed Lag (ARDL) method. This method was first introduced by Pesaran and Shin (1995) with a cointegration test approach using the Bound Test Cointegration test . The ARDL method has several operational advantages, namely that it can be used on short series data and does not require pre-estimated classification of variables so it can be carried out on variables I(0), I(1) or a combination of both. The cointegration test in this method is carried out by comparing the F-statistic value with the F table value prepared by Pesaran & Pesaran (1997) .
By estimating, the first step is taken in the ARDL Bound Test approach to see the F-statistics obtained. The F-statistic obtained will explain whether or not there is a long-term relationship between variables. If the F-statistic value obtained from the Bound Test computing results is greater than the upper critical value I(1), then reject H0 , so that in the model there is a long-term relationship or there is cointegration, if the F-statistic value is below the lower value critical value I(0) then does not reject H0 , so that in the model there is no long-term relationship or no cointegration. If the F-statistic value is between the upper and lower critical values then the results cannot be concluded. In general, the ARDL model (p,q,r,s) in the long term equation can be written as follows:

$$Y_t = \beta_0 + \beta_{1t} + \sum_{i=1}^{p} \beta_2 Y_{t-i} + \sum_{i=0}^{q} \beta_3 X_{1t-i} + \sum_{i=0}^{r} \beta_4 X_{2t-i} + \sum_{i=0}^{S} \beta_5 X_{3t-i} + \omega_t \quad (1)$$

The approach using the ARDL model requires a lag. Selecting the optimum lag will utilize information criteria obtained from the Akaike Information Criteria (AIC). The optimum lag will be found in the model specification that provides the minimum AIC value. In the Bound Test approach , you can see the F-statistics which can then be used to estimate whether there is a variable relationship or not. This is done by comparing the F-statistics with the F-table prepared by Pesaran & Pesaran (1997) . The next step in the ARDL method is to estimate parameters in the short run or short term. This can be done by estimating the model with the Error Correction Model (ECM). Estimates with ECM based on the long-term equation above are as follows:

$$\Delta Y_t = a_0 + a_{1t} + \sum_{i=1}^{p} \sigma_i \Delta Y_{t-i} + \sum_{i=0}^{q} \theta_i \Delta X_{1t-i} + \sum_{i=0}^{r} \lambda_i \Delta X_{2t-i} + \sum_{i=0}^{S} \beta_i \Delta X_{3t-i} + \gamma ECT_{t-1} + e_t \quad (2)$$

Where ECT $_t$ is the Error Correction Term (ECT) which can be written as follows:

$$ECT_t\ Y_t - \beta_0 + \beta_{t1} + \ + \sum_{i=1}^{p} \beta_2 Y_{t-i} + \sum_{i=0}^{q} \beta_3\ X_{1t-i} + \sum_{i=0}^{r} \beta_4 X_{2t-i} + \sum_{i=0}^{S} \beta_5 X_{3t-i} + \omega_t \quad (3)$$

ECT is representation of the long-term model, which must be negative and significant. All coefficients in the short-term equation above are coefficients that connect the dynamic model in the short-term to converge to equilibrium and ϑ represents the speed of adjustment from the short-term to the long-term equilibrium. This shows how the imbalance due to the shock in the previous year is adjusted to the long-term balance this year.

This research uses the Autoregressive Distribution method Lag (ARDL) Bound Test created by Pesaran & Shin (1995) . Then Pesaran et al. (2001) introduced the bound test and ARDL cointegration which are used to estimate and see the influence of independent variables on dependent variables in the long term and short term. In other words, the ARDL model regresses variables on their own past plus the current and past values of a number of exogenous variables (Fabozzi et al., 2006). The ARDL method does not involve pre-testing variables, which is especially problematic in unit root-cointegration where the power of the unit root test is usually very low and there is a switch in the distribution of the test statistical function, therefore, eliminating uncertainty (Narayan, 2004) . The estimation model in this research refers to the research of Abduh & Omar (2012) and Farahani & Sadr (2012) where without knowing the direction of the relationship between variables previously, and by using automatic selection in selecting the lag with the help of Eviews 9, the long-term equation in the research these are as follows:

Model 1: $GDP_t = \alpha_1 + \beta_1 IBTF_{t-i} + \beta_2 IBTA_{t-i} + \omega_t$ (4)
Model 2: $IBTF_t = \alpha_2 + \beta_3 GDP_{t-i} + \beta_4 IBTA_{t-i} + \omega_t$ (5)
Model 3: $IBTA_t = \alpha_3 + \beta_5 GDP_{t-i} + \beta_6 IBTF_{t-i} + \omega_t$ (6)

where GDP is Real GDP growth, IBTA is Total Sharia Banking Assets, IBTF is Total Sharia Banking Financing. Next Error Correction Model (ECM) can be derived from the ARDL model through a simple linear transformation (Banaerjee et al., 1993) . The ARDL approach used to view long-term relationships between variables can be applied regardless of variables that are estimated to be stationary at level, first difference and second difference . The short-term model of this research is as follows:

Model 1:

$$\Delta GDP_t = \alpha_0 + \sum_{i=1}^{k} \sigma_i \Delta GDP_{t-i} + \sum_{i=0}^{k} \theta_i \Delta IBTF_{t-i} + \sum_{i=0}^{k} \lambda_i \Delta IBTA_{t-i} + \gamma ECT_{t-1} + e_t \quad (7)$$

Model 2:

$$\Delta IBTF_t = \alpha_0 + \sum_{i=1}^{k} \delta_i \Delta IBTF_{t-i} + \sum_{i=0}^{k} \varepsilon_i \Delta GDP_{t-i} + \sum_{i=0}^{k} \epsilon_i \Delta IBTA_{t-i} + \gamma ECT_{t-1} + e_t \quad (8)$$

Model 3

$$\Delta IBTF_t = \alpha_0 + \sum_{i=1}^{k} \emptyset_i \Delta IBTF_{t-i} + \sum_{i=0}^{k} \partial_i \Delta GDP_{t-i} + \sum_{i=0}^{k} \mu_i \Delta IBTA_{t-i} + \gamma ECT_{t-1} + e_t \quad (9)$$

where ECT $_t$ is the Error Correction Term (ECT) which can be written as:

Model 1:

$$ECT_t = \Delta GDP_t - a_0 + \sum_{i=1}^{k} \sigma_i \Delta GDP_{t-i} + \sum_{i=0}^{k} \theta_i \Delta IBTF_{t-i} + \sum_{i=0}^{k} \lambda_i \Delta IBTA_{t-i} + e_t \quad (10)$$

Model 2:

$$ECT_t = \Delta IBTF_t - \alpha_0 + \sum_{i=1}^{k} \delta_i \Delta IBTF_{t-i} + \sum_{i=0}^{k} \varepsilon_i \Delta GDP_{t-i} + \sum_{i=0}^{k} \epsilon_i \Delta IBTA_{t-i} + e_t \quad (11)$$

Model 3:

$$ECT_t = \Delta IBTA_t - \alpha_0 + \sum_{i=1}^{k} \emptyset_i \Delta IBTA_{t-i} + \sum_{i=0}^{k} \partial_i \Delta GDP_{t-i} + \sum_{i=0}^{k} \mu_i \Delta IBTF_{t-i} + e_t \quad (12)$$

Error Correction Term (ECT) is a representation of the long-term model, which must be negative and significant.

DEVELOPMENT HYPOTHESIS

The hypothesis of this research is that sharia banking and economic growth in Indonesia and Malaysia have short-term and long-term influences. Literature showing the relationship between Islamic banking and economic growth is very limited. Of these limited studies, there are more theoretical studies than empirical studies. Ahmed (2005) is of the view that Islamic banks are facing several operational problems, one of which is related to the use of equity-based instruments to finance different projects. This creates inefficiencies in the Islamic financial system. If these inefficiencies can be overcome, then the Islamic financial system can play an important role in economic growth. His study found that there is a need to develop Islamic banks so that the(Mohd. Yusof & Bahlous, 2013)y can contribute to economic growth.

El-Galfy & Khiyar (2012) theoretically explains that Islamic banking not only contributes to growth, but also helps in macroeconomic stability. Beck et al. (2013) show that Islamic banks generally have good asset quality, better capital, and are more stable even in financial crisis situations compared to conventional banks. Certain features of Islamic banks have helped them to overcome the 2008 financial crisis in a better way compared to conventional banks. Nagaoka (2010) is another theoretical study examining the relationship between banking and Islamic growth. His study shows that Islamic finance has the ability to invest in two sectors (financial and real), which then have greater capabilities for sustainable growth. On the basis of the results, this study concludes that Islamic finance does have the potential to influence growth due to its close relationship with the real sector of the economy. Nedra & Gharar), speculation and the nature of the instruments used which are based on profit and loss, help.

Islamic banking in capital accumulation, which positively influences growth. The resulting growth is characterized by a more even distribution of resources, thus having the ability to reduce poverty. Apart from that, they also discussed several policy reforms in Islamic banking before it can start producing positive results.

Mohd. Yusof & Bahlous (2013) used panel co-integration, variance decomposition and impulse response function techniques, comparing the Gulf Cooperation Council (GCC) countries and selected Asian countries to see the effect of Islamic finance on growth. Their research results showed significant effects in both the long and short term. Moreover, the short-term effects are stronger for Indonesia and Malaysia compared to the GCC countries. Tajgardoon et al. (2013), Hachicha & Amar (2015), Lebdaoui & Wild (2016), Zirek et al. (2016), El Mehdi & Mghaieth (2017), Zarrouk et al. (2017) and Boukhatem & Ben Moussa (2018) also found a positive role of Islamic banking instruments on economic growth in several groups of countries using panel co-integration. Imam & Kpodar (2016) show that economic growth is positively influenced by sharia banking. Kassim (2016) shows a positive relationship between Islamic banking and growth for Malaysia using data from 1998-2004. His study using the Autoregressive Model Distributed Lag (ARDL) shows that Islamic banking does not cause growth in the short term, but in the long term.

RESULTS AND DISCUSSION

Results

Stationarity test

Data stationarity testing is carried out in order to see whether the data variables are integrated in the same order or otherwise. The stationarity of the data in this study can be seen from the results of the Augmented Dickey Fuller test. If the ADF t-stat value is smaller than the MacKinnon critical value, this can be concluded

that the data is stationary (does not have a unit root). Based on the results of the stationarity test in table 1, the variables used in this study are stationary at different order levels, both Indonesia and Malaysia.

Table 1 . Stationarity Test Results

Variable	Indonesia		Malaysia	
	ADF t-stat		ADF t-stat	
	I(0)	I(I)	I(0)	I(I)
Growth	-2.812333***	-5.811490*	-2.761380***	-4.180226*
LN_IBTF	-5.056285*	-3.624960**	-1.114943	-7.451941*
LN_IBTA	-1.028658	-4.054758**	-4.559900*	-6.837603*

In the data in this study as a whole, in the stationarity test there are no variables that are stationary at the second difference order so that Bound Testing Cointegration can be carried out in ARDL estimation .

Granger Causality Test

Testing with Granger causality is intended only to test the relationship between variables and not to estimate the model. Granger Test causality will show the relationship between Islamic banking and economic growth. This test is also intended to determine the model that will be used in ARDL estimation.

Table 2. Granger Causality Test

Null Hypothesis	Indonesia		Malaysia	
	F-stat	Prob	F-stat	Prob
ln_ibtf does not granger cause growth	6.45038	0.0005	8.82044	0.00005
growth does not granger cause ln_ibtf	3.68757	0.0131	4.58130	0.0044
ln_ibta does not granger cause growth	1.47080	0.2320	1.38649	0.0006
growth does not granger cause ln_ibta	3.22643	0.0235	0.21127	0.2587

Based on the Table 2, this shows that there is bi-directional causality relationship between sharia banking and economic growth in Indonesia and Malaysia. In Indonesia, ln_ibtf and Growth have two-way relationship as indicated by the F-statistic value which is significant at the 1% level for ln_ibtf on growth and 5% growth on ln_ibtf. Meanwhile, for ln_ibta and growth, there is a unidirectional relationship where growth influences ln_ibta. From these results, the next ARDL estimation will use the entire model. Furthermore, for Malaysia, ln_ibtf and Growth also have two-way relationship or mutual influence as indicated by the F-statistic value which is significant at the 1% level or the probability value is below 0.01. Meanwhile, for ln_ibta and growth, there is a unidirectional relationship where ln_ibta affect growth . This result is the basis that the next ARDL estimation will only use models 1 and 2.

Optimum Lag Test

The next step is selection the best lag from each estimation model through the optimum lag test. This is necessary to determine the appropriate lag for the model to be selected, using the Akaike Information Criteria (AIC) basis. The optimum lag test is used to find out how long the influence of one variable has on other variables. The best model has the smallest criterion value. The lag selected depends on the extent to which the lag is cointegrated. In this research, determining the optimal lag uses the smallest AIC value. These lags will provide residual results that are free from heteroscedasticity and autocorrelation problems. In this test, it is known that the optimum lag for each model for Indonesia is (3.14), (4.4.1) and (4.2.1). Meanwhile, for Malaysia which uses the 1 and 2 lag models, the optimum is (7,8,7) and (8,4,7).

Test Bound Test

Next, to find out whether the variables are cointegrated in the long term, a Bound Testing approach is carried out. In this test, cointegration can be seen from the F-statistic value which is compared with the critical value. If the F-statistic value obtained from the Bound Test computing results is greater than the upper critical value I(1) then in the model there is a long-term relationship or there is cointegration, if the F-statistic value is below the lower critical value I(0) then in the model there is no long-term relationship or no cointegration, if the F-statistic value is between the upper and lower critical values then the results cannot be concluded. Based on the results of the Bound test, it shows that for Indonesia the entire function in the estimation model has an F-statistic value (model 1: 12.67992, model 2: 16.21521 and model 3: 13.4569) which is greater than the critical value at the upper limit (upper bound) both at the 1%, 5% and 10% significance levels. So H0 is rejected and it can be concluded that there is short-term to long-term balance in the model. Then for Malaysia the entire function in the estimation model also has an F-statistic value (model 1: 9.800882, and model 2: 6.712931) which is greater than the critical value at the upper bound both at the 1% significance level , 5% or 10%. So H0 is rejected and it can be concluded that there is short-term to long-term balance in the model.

Long Term ARDL Estimation Results

To see the long-term relationship between Islamic banking and economic growth, an ARDL model estimation is carried out. Table 3 . shows that in Indonesia sharia banking financing does not have a significant effect on economic growth and economic growth is also not significant on sharia banking financing. On the other hand, total Islamic banking assets in the long term show a positive and significant two-way relationship with economic growth. A positive relationship means that the development of sharia banking can encourage economic growth and economic growth is also important for the development of the sharia banking sector. Meanwhile, in Malaysia financing and total sharia banking assets are not significant to economic growth in the long term. However, economic growth contributes positively and significantly to sharia banking financing. These results support the concept that economic growth drives the development of sharia banking.

Table 3 . Long-run Results

Variables	Indonesia			Malaysia		
	Dependent Variable			Dependent Variable		
	growth	**ln_ibtf**	**ln_ibta**	**growth**	**ln_ibtf**	**ln_ibta**
coefficient of growth	-	0.03 1	1,557**	-	0.028 *	-1.92 8***
coefficient ln_ibtf	-0.388	-	0.29 8	4,975	-	0.757*
coefficient ln_ibta	0.56 4**	1.07 4***	-	-8.115	1,260***	-

Note: significant at: *10, **5 and ***1 percent levels

Based on table 3 , the long-term estimation results for Indonesia in the first estimation model show that the LN_IBTF variable has a coefficient of -0.388 and has a negative but not significant effect on growth. Meanwhile, the LN_IBTA variable has a coefficient of 0.56 4 and has a positive and significant effect at the 5% level on economic growth. This means that if there is an increase of one unit in total sharia banking assets, it will increase economic growth by 56 percent assuming ceteris paribus. So it can be concluded that sharia banking is able to contribute to economic growth in Indonesia in the long term. In the second estimation model, the growth variable has a coefficient of 0.03 1 and has a positive but not significant effect on LN_IBTF. Next, the LN_IBTA variable has a coefficient of 1.07 4 and has a positive and significant effect on LN_IBTA. In the third estimation model, the growth variable has a positive and significant effect on LN_IBTA at a significance level of 5% with a coefficient of 1.557. This means that every increase in economic growth by one percent will increase total sharia banking assets by 155 percent with ceteris paribus assumptions. Meanwhile, LN_IBTF has a positive but not significant effect on LN_IBTA with a coefficient of 0.29 8 . So it can be concluded that real sector economic growth is able to encourage the development of sharia banking in Indonesia.

Based on table 3 , the long-term estimation results for Malaysia in the first estimation function show that the LN_IBTF variable has a coefficient of 4,975 and has a positive but not significant effect on growth. This is indicated by the probability being greater than the 10% significance level. Meanwhile, the LN_IBTA variable has a coefficient of -8.115 and has a negative but not significant effect on real sector economic growth. This is demonstrated by the probability being greater than the 10% significance level. So it can be

concluded that sharia banking has not been able to contribute to real sector economic growth in Malaysia in the long term.

In the second estimation model, the growth variable is confirmed to have a positive and significant influence on LN_IBTF. This is proven by the coefficient which is 0.028 and is significant at the 10% level. This means that every increase in real economic growth by one percent will increase total sharia banking financing by 0.28 percent with ceteris paribus assumptions. Next, in the third estimation model, the growth variable is confirmed to have a positive and significant influence on LN_IBTA. This is proven by the coefficient which is -0.019 and is significant at the 10% level. This means that every increase in real sector economic growth by one percent will reduce total sharia banking assets by 0.19 percent with ceteris paribus assumptions. Thus, it can be concluded that in the long term sharia banking has not been able to contribute to real sector economic growth in Malaysia and real sector economic growth has contributed to sharia banking in Malaysia.

Short Term ECM Estimation Results

In short-term relationships, an Error Correction Model (ECM) estimation is carried out on the entire model that has been determined. In ECM estimation, the Error Correction Term (ECT) must be negative to indicate that the estimated model is valid. The ECM results will be presented in table 4 .

Table 4 . Error Correction Model Result (short-run)

Variables	Indonesia			Malaysia		
	Dependent Variable			Dependent Variable		
	Δgrowth	**Δln_ibtf**	**Δln_ibta**	**Δgrowth**	**Δln_ibtf**	**Δln_ibta**
ECT $_{t-1}$	-0.622***	-1,639***	-0.045**	-0.912***	-0.295***	-0.571
coefficient Δgrowth	-	0.070***	0.020***	-	0.006*	-0.013
coefficient Δln_ibtf	0.153	-	-0.008	7,883**	-	0.990***
coefficient Δln_ibta	2,022*	-0.174	-	4,044*	0.704**	-

Note: significant at: *10, **5 and ***1 percent levels

In Indonesia, in the short term sharia banking financing has a positive but not significant effect on economic growth. However, total Islamic banking assets show positive and significant results on economic growth. Economic growth shows a positive and significant relationship to sharia banking financing and total sharia banking assets. Malaysia's estimation results show that in the short term sharia banking financing and total sharia banking assets have a positive and significant effect on economic growth. Likewise, economic growth shows a positive and significant relationship to sharia banking financing. The ECT coefficients for all tested equations are significant and negatively correlated. This shows evidence of causality in at least one direction. The overall ECT coefficient shows convergence to the equilibrium level.

Discussion

The Relationship between Total Sharia Banking Financing and Indonesia's Economic Growth

The estimation results show that in the short and long term total sharia banking financing has not been able to contribute significantly to economic growth in Indonesia. This is caused by sharia banking financing which is still relatively low so it has not been able to significantly increase capital accumulation which will later encourage economic growth. Likewise, the market share of sharia banking is still relatively low compared to conventional banking, meaning that the contribution of sharia banking to real sector economic growth in Indonesia is not significant.

The domination of murabahah products in Islamic banks rather than cooperation products such as musyarakah and mudharabah will make people more consumptive. Otherwise, mudharabah and musyarakah financing shows that business activities are being carried out so that can increase community productivity which means this will be encourage the economic growth rate. This cause the sharia banking has not been able to optimally encourage the productive sector so that this not impact economic growth. On the other side, the economic growth has contribution to sharia banking in Indonesia. This research shows that economic growth has a positive effect on total sharia banking financing in Indonesia. The Indonesian government's policy of accelerating economic growth through the investment sector encourages sharia banking to provide financing to the real sector, including consumer financing. If the increase in investment

is responded well by the real sector with increased economic performance, then the growth in economic activity will be able to encourage demand for financing that will be offered by sharia banking.

The Relationship between Total Sharia Banking Assets and Indonesia's Economic Growth

The estimation results show that total sharia banking assets have a positive effect on real sector economic growth in the short and long term. Likewise, economic growth also has a positive and significant effect on total sharia banking assets in Indonesia, both in the short and long term. These results are in accordance with research conducted by (Jawad & Christian, 2019) though study of 24 countries. The increasing of the total sharia banking assets during periodically shows the improvement in sharia banking performance in the economy. As previously explained in the relationship between sharia banking financing and economic growth, an effective banking response in the economy will provide encouragement for increased economic growth, good performance and increasing profit sharing which obtained sharia banking on its operations. Some of this will be retained which will be used to expand the bank's capacity by increasing the total assets of sharia banking.

The Relationship between Total Sharia Banking Financing and Malaysian Economic Growth

In the short term, the results in this study confirm that total sharia banking financing contributes positively to real sector economic growth in Malaysia. Likewise, real sector economic growth also contributes to increasing sharia banking financing. Islamic banking in Malaysia has effectively played its role as an intermediation institution that facilitates capital mobility from surplus to deficit units, economic sectors that have excess capital to economic sectors that require financing. Success in financing allocation will have an impact on increasing economic productivity. Banking will be encouraged for productive sector financing demand need so that total sharia banking financing will increase. This is same with sharia financial principles which provide a close link between the financial sector and the real economic sector. This is same also with research conducted by (Yazdan & Hossein, 2012) in Iran and Indonesia, (Mohd. Yusof & Bahlous, 2013) in Malaysia.

In the long term, Islamic banking in Malaysia has not been able to contribute significantly to real sector economic growth. This could be caused by the market share of sharia banking in Malaysia which has only reached 26.5 % compared to the rest which is controlled by conventional banking in national banking (IFSB, 2019). This means that the contribution of sharia banking is not visible in the long term. However, on the contrary, real sector economic growth shows a positive contribution to the development of sharia banking financing in Malaysia. With the support of policies and instruments to improve the economy that involve sharia banking, this has a positive influence on the development of sharia banking in Malaysia.

The Relationship between Total Sharia Banking Assets and Malaysian Economic Growth

This research shows that total sharia banking assets have a significant positive effect on real sector economic growth in Malaysia in the short term. This relates to the transmission of sharia banking asset flows through financing mechanisms. The total assets owned by sharia banking, apart from operations, are also allocated to the productive investment sector. One of them is through financing products in the real sector. When the allocation is correct, it will of course help the economy in its productive activities and be able to move the economy to achieve economic growth.

In the long term, Malaysia total sharia banking assets have not been able to contribute significantly to real sector economic growth. This is related to the asset components in sharia banking, not all of which are intended for financing the real sector economy. Some investments made by sharia banking are also allocated to other financial sectors. Likewise, with total third party funds which are also part of the asset component, some savers prefer to invest safely through wadiah contracts. In such cases, the amount of savings that can be allocated to the investment sector also decreases.

This finding caused also by the total assets of sharia banking which are still mostly used for expansion purposes, increasing assets and improving the quality of sharia banking. As known, sharia banking in almost every country in the world is intensively increasing assets and expanding the market share of sharia banking (IFSB, 2019). This result is relatively new finding because in other literature there are just a little studies that use total Islamic banking assets to see its relationship with economic growth.

Analysis of the Causality Relationship between Sharia Banking and Economic Growth in Indonesia and Malaysia

The finding in this research confirm the flow of " the bi-directional causality " in the relationship between sharia banking and economic growth in both Indonesia and Malaysia. This flow explains the existence of a two-way relationship or mutual influence between Islamic banking and economic growth. The hypothesis

in this school states that a country that has good financial sector development will encourage the level of economic expansion through technological progress and product and service innovation (Abduh & Azmi Omar, 2012). This condition will then create a high level of demand for banking products and services (Levine, 1997). If banking institutions respond effectively, this will provide a stimulus for better economic performance. This finding is in line with research conducted by (Choong et al., 2005) and (Abduh & Azmi Omar, 2012).

Both Indonesia and Malaysia, government policies in accelerating economic growth through investment instruments are able to encourage the development of the financial and banking sectors, including sharia banking, through financing instruments as alternative capital for productive sector business expansion. The increasing of investment which is facilitated by banking institution will increase economic growth. Otherwise, economic growth through increased economic activity and investment requires more capital or liquidity which be supplied or provided by financial institutions. This encourages the various financial innovation products.

CONCLUSION AND RECOMMENDATION

Based on the results of the Granger causality test, this confirms a two-way relationship or mutual influence (bi-directional causality) between Islamic banking and economic growth in both Indonesia and Malaysia. In Indonesia, in the long term sharia banking is able to contribute to real sector economic growth as represented by total sharia banking assets. Thus, real sector economic growth also contributes to the development of sharia banking. In the short term, total sharia banking assets have an effect on real sector economic growth. And real sector economic growth also contributes to the development of sharia banking in Indonesia through financing and sharia banking assets. In the long term sharia banking does not contribute to real sector economic growth in Malaysia. However, on the contrary, economic growth contributes to encouraging the development of sharia banking through sharia banking financing. Then, in the short term, sharia banking financing and assets contribute to increasing real sector economic growth. Likewise, real sector economic growth also give impacts to total sharia banking financing.

The development of the sharia banking industry is one of relevant policy option to encourage economic growth in both Indonesia and Malaysia. This research shows that Islamic banking has the opportunity to contribute to economic growth through its role as an intermediation institution that facilitates capital mobility from economic sectors that have excess capital to economic sectors that need financing. The government or central bank and other relevant authority institutions can develop a comprehensive Islamic financial system as long as the development of the financial sector and real sector economic growth have a strong relationship. Increasing sharia banking infrastructure and regulations need to be developed so that sharia banking can provide benefits to long-term economic growth for economic development and community welfare.

This research has several shortcomings, first, this research only analyzes the comparison of two countries, Malaysia and Indonesia. Second, this research adopts a direct relationship model between the variables studied without involving other variables as control variables in the equation model. So, in improving future research, we recommend to combine several countries that implement the sharia banking system as a study. You can also compare several countries with a single sharia banking system with countries with a dual banking system.

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