



Research Paper

Causality of Banking Sector (Sharia and Conventional) and Economic Growth: Case Studies in Indonesia and Malaysia

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ABSTRACT: This study aims to prove the existence of a causal, short-term, and long-term relationship between total assets, total third party funds, total financing, and total credit at Islamic banks and conventional banks on economic growth in Indonesia and Malaysia empirically. Research that deliberately takes the population of Islamic banks, conventional banks, and economic growth in Indonesia and Malaysia for quarterly data for the period 2010 to 2019. The analysis model used in this study is the Vector Error Correction Model (VECM). The statistical tests results show a one-way causality relationship in Indonesian Islamic banks between the total assets variable, total third party funds, and total financing to the GDP variable or vice versa. Malaysian Islamic banks and Indonesian conventional banks have similar results to the previous one, on the variable of total assets and total third party funds to the GDP variable or vice versa, and the total credit variable to the GDP variable or vice versa in Malaysian conventional banks. Then there is a two-way causality relationship in Indonesian conventional banks between the total credit variable and the GDP variable or vice versa. Furthermore, there is a long-term relationship between the total third party funds variable and the GDP variable in Indonesian Islamic banks. Meanwhile, there is a long-term relationship between the variable total assets and total financing to the GDP variable in Malaysian Islamic banks. In conventional Indonesian banks, there is a short-term relationship between the total credit variable and the GDP variable, while there is a long-term relationship between the total assets variable and the total third party funds to the GDP variable. Finally, there is a long-term relationship between the total assets variable, total third party funds, and total credit to the GDP variable in Malaysian conventional banks.

KEYWORDS: Total Assets, Total Third Party Funds, Total Financing, Total Credit, GDP

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I. INTRODUCTION

Indonesia and Malaysia are countries that have practised a dual banking system (conventional and Islamic) simultaneously on a fairly long scale. In the 1940s, Malaysia was one of the originating countries that practised the principle of sharing with Pakistan (Karim, 2008). In 1983, the first Islamic bank in Malaysia emerged, namely Bank Islam Malaysia Berhad (BIMB). Meanwhile, in 1992, Indonesia began promoting Islamic banks, which would later be used as guidelines for transactions as a financial institution, namely the Muamalat Bank (Antonio, 2007).

Countries in the Southeast Asian region that have implemented Islamic banking include Indonesia, Malaysia, Brunei Darussalam, Singapore, Thailand and the Philippines. Although the periods faced are different, the growth and development of Islamic banking are very encouraging and quite promising (Ghozali et al., 2019). Indonesia and Malaysia are Southeast Asian countries that have consistently opened up more sharia banking compared to Brunei Darussalam, Singapore, Thailand and the Philippines. The total assets, total third party funds, and total financing are greater than the Islamic banks in Brunei Darussalam, Singapore, Thailand, and the Philippines. Furthermore, as predominantly Muslim countries, Indonesia and Malaysia try to develop sharia-based investments by increasing their economic growth (Fauzi, 2019).

One of the factors to measure the success of economic growth is the financial sector. The financial sector includes the capital market, other financial institutions, and banking, which is a sector that functions to encourage the economic development of a country. This is due to the ability of parties to collect funds from excess funds to be invested in various economic sectors that require funds (Listiyani, 2016). The relationship between the financial sector and economic growth has become a topic that is often raised in development economics throughout the period. This idea was first expressed by the neo-classical economist Schumpeter (1911) because the financial sector has an important role in the development of the real sector. Then some economists after Schumpeter also investigated the relationship between these two sectors, with the assumption that achieving a steady rate of economic growth requires support from advances in the financial sector (Gurley and Shaw, 1960; Goldsmith, 1969; McKinnon, 1973; Shaw, 1973). However, as a stronghold of the opposition, Robinson (1952) said that the financial sector has absolutely no effect on the growth of the real sector, or in other words, as the opinion of Lucas (1998) says that the relationship between the real sector and the financial sector is not so strong (Herwartz dan Walle, 2014). This is similar to research conducted by Singh (1997), Ductor and Grechyna (2015), Fabya (2015), Caporale and Helmi, (2018), Salman and Nawaz (2018), providing several opinions and evidence finding that there is an inverse relationship between financial sector development towards economic growth (Bist, 2018). Furthermore, this hypothesis was tested by several other economists, and they succeeded in identifying the relationship between the financial sector and the real sector (Levine, 1997; Wachtel, 2001; King and Levine, 1993a, 1993b; Beck et al., 2000; Abduh and Omar, 2012; Abduh and Chowdhury, 2012; Zhang et al., 2012; Herwartz, 2013; Marques et al., 2013; Rama, 2013; Tabash and Dhankar, 2013; Ayyubi et al., 2017; Durusu-Ciftci et al., 2017).

Previously and Patrick (1966) had also investigated and found a form of causality between financial sector development and economic growth. The first part is known as the demand-following hypothesis, which says that the creation of modern financial services through assets and liabilities responds to increased service demand by savers and investors from the real sector. This section indicates that the growth that occurs in the real sector has implications for the financial sector for growth. The second hypothesis is called the supply-leading hypothesis, which states that creating financial services, especially for entrepreneurs, will encourage growth in the real sector. The emergence of the supply-leading hypothesis then gave birth to an analysis that the development of the financial sector can contribute to the growth of the real sector. Through efficient capital allocation, this process mobilizes savings by providing attractive savings instruments and facilities, providing means for trading, pooling, and diversifying risks, reducing costs. Information gathering and management thereby improving resource allocation and increasing specialization in production, entrepreneurship development and adoption of new technologies. Thus it can be concluded that the existence of an optimally managed financial sector will also increase economic growth through the flow of funds from surplus units to deficit units which in turn can increase effective and efficient resources (Kar et al., 2011).

According to the theory initiated by Schumpeter in 1911, it has four approaches that can describe the causal relationship between finance and growth, namely as follows: (1) finance, which is an aspect of driving economic growth (finance-led growth hypothesis) or referred to as the term supply-leading view, (2) finance follows economic growth (growth-led finance hypothesis) or what is called the demand-following view, (3) the interplay between finance and growth or what is called the bidirectional causality view, (4) finance and growth are not related or what is known as the independent hypothesis.

In the literature, two proxies of the financial industry sector are the Islamic banking industry sector and the conventional banking industry sector. The relationship between financial sector development and economic growth has long been the object of research in the field of development economics. The development of the financial sector cover increasing the capacity of commodities and banking services, other intermediary institutions, and the financial business in the capital market. Bank financial institutions still dominate the economy in Indonesia. In terms of assets, bank financial institutions still have the largest percentage in the share of assets compared to assets of other financial institutions. In the early stages of Islamic banking being introduced in Indonesia, the assets of Islamic banks developed at a low point. Meanwhile the assets of Islamic banks have grown by 38% in 2005-2009 and 47% for 2011 (Rasyad et al., 2016). In 2014, the assets of bank financial institutions dominated the share of assets of more than 79% (Utami, 2016).

The bank acts as an agent of development; namely, the bank's business activities can have an impact on national development, which in turn can improve the standard of living of the community. Rama (2013) states that the financial sector has a very important role in driving diversified economic growth. This is because banking institutions can collect excess funds from the wider community to invest in the economic sector, requiring financing. As part of national banking, Islamic banking has an important task in realizing the economy. The growth of Islamic banking can be seen from the total assets, total third party funds, and total financing. Meanwhile, conventional banks can be seen from the total assets, total third party funds, and total loans. The variables described above are interesting to study in relation to their relationship to economic growth in Indonesia and Malaysia. From the description above, the researcher is interested in conducting research on

"Causality in the Banking Sector (Sharia and Conventional) and Economic Growth: Case Studies in Indonesia and Malaysia 2010-2019".

II. RESEARCH METHODS

This research uses a quantitative approach, namely research with a deductive paradigm that aims to test a theory against the reality of the problem (Sekaran dan Bougie, 2016). Also, quantitative research is a research approach required to use numbers, starting from data collection, interpretation of data and appearance of results (Arikunto, 2006). Furthermore, the analysis tool used in this research is the *Vector Auto Regression (VAR)* model with *Eviews 8 software*. The population used in this study are Islamic banks, conventional banks, and economic growth in Indonesia and Malaysia. While the method of determining the sample used in this research is the *purposive sampling method*, which means how to take samples with prioritized considerations so that they are suitable to be sampled (Noor, 2015). In determining the sample used based on criteria including Islamic bank and conventional bank data in the form of total assets, total third party funds, total financing, and total credit in Indonesia and Malaysia in the quarterly period from 2010 to 2019 and economic growth data in the form of gross domestic product in Indonesia and Malaysia in the quarterly period from 2010 to 2019. The data source comes from secondary sources. The equation model is as follows:

$$\begin{bmatrix} GDP \\ ASTS \\ DPKS \\ PEM \\ ASTK \\ DPKK \\ KRT \end{bmatrix} = \begin{bmatrix} \alpha 1 \\ \alpha 2 \\ \alpha 3 \\ \alpha 4 \\ \alpha 5 \\ \alpha 6 \\ \alpha 7 \end{bmatrix} + \begin{bmatrix} a_{11} & \dots & a_{17} \\ \vdots & \ddots & \vdots \\ a_{71} & \dots & a_{77} \end{bmatrix} \begin{bmatrix} GDP_{t-1} \\ ASTS_{t-1} \\ DPKS_{t-1} \\ PEM_{t-1} \\ ASTK_{t-1} \\ DPKK_{t-1} \\ KRT_{t-1} \end{bmatrix} + \begin{bmatrix} \varepsilon 1_t \\ \varepsilon 2_t \\ \varepsilon 3_t \\ \varepsilon 4_t \\ \varepsilon 5_t \\ \varepsilon 6_t \\ \varepsilon 7_t \end{bmatrix}$$

$$Y_t = \begin{bmatrix} GDP \\ ASTS \\ DPKS \\ PEM \\ ASTK \\ DPKK \\ KRT \end{bmatrix}; A_0 = \begin{bmatrix} \alpha 1 \\ \alpha 2 \\ \alpha 3 \\ \alpha 4 \\ \alpha 5 \\ \alpha 6 \\ \alpha 7 \end{bmatrix}; A = \begin{bmatrix} a_{11} & \dots & a_{17} \\ \vdots & \ddots & \vdots \\ a_{71} & \dots & a_{77} \end{bmatrix}; \varepsilon = \begin{bmatrix} \varepsilon 1_t \\ \varepsilon 2_t \\ \varepsilon 3_t \\ \varepsilon 4_t \\ \varepsilon 5_t \\ \varepsilon 6_t \\ \varepsilon 7_t \end{bmatrix}$$

From the above equation, the simplest model of the VAR equation can be written in this study, namely:

$$Y_t = A_0 + AY_{t-1} + \varepsilon$$

Information:

GDP	= Gross domestic product
ASTS	= Islamic assets
DPKS	= Sharia third party funds
PEM	= Financing
ASTK	= Conventional assets
DPKK	= Conventional third party funds
KRT	= Credit

III. RESULT AND DISCUSSION

This study discusses the Causality of the Banking Sector (Sharia and Conventional) and Economic Growth: Case Studies in Indonesia and Malaysia in 2010-2019. This study aims to prove the existence of a causal, short-term, and long-term relationship between total assets, total third party funds, total financing, and total credit at Islamic banks and conventional banks on economic growth empirically. Furthermore, the aim of the researcher in taking banking in Indonesia and Malaysia is to find out how much influence each bank has on economic growth, not to compare between banks in Indonesia and Malaysia.

1. Granger causality test

The granger causality test is carried out to see whether the two variables are interrelated or not. In other words, this test can indicate whether a variable has a significant two-way or only one-way relationship with other variables. Therefore, each variable in the study has the opportunity to become an endogenous or exogenous variable. To determine whether there is a causality relationship between variables, if the probability value < 0.05, then there is a causality relationship. The following is the researcher conveying the test results.

Table 1
Granger Causality Test

Null Hypothesis:	Obs	Syariah Indonesia Bank		Syariah Malaysian Bank		Conventional Indonesia Bank		Conventional Malaysian Bank	
		F-Statistic	Prob.	F-Statistic	Prob.	F-Statistic	Prob.	F-Statistic	Prob.
Total Asset does not Granger Cause GDP	36	1.705	0.177	0.534	0.711	3.480	0.020	0.910	0.472
GDP does not Granger Cause Total Asset		5.387	0.002	3.081	0.032	1.449	0.245	1.787	0.160
Total DPK does not Granger Cause GDP	36	1.700	0.179	0.607	0.661	3.623	0.017	1.159	0.350
GDP does not Granger Cause Total DPK		6.116	0.001	3.610	0.017	2.019	0.120	1.000	0.424
Total Financing/Credit does not Granger Cause GDP	36	1.208	0.330	1.074	0.388	4.959	0.004	2.844	0.043
GDP does not Granger Cause Total Financing/Credit		4.543	0.006	1.529	0.221	9.350	7.E-05	2.384	0.076
Total DPK does not Granger Cause Total Asset	36	0.884	0.486	0.739	0.573	0.548	0.701	0.378	0.821
Total Asset does not Granger Cause Total DPK		0.235	0.915	1.833	0.151	0.482	0.748	0.721	0.585
Total Financing/Credit does not Granger Cause Total Asset	36	4.650	0.005	0.930	0.461	1.994	0.123	2.378	0.076
Total Asset does not Granger Cause Total Financing/Credit		4.893	0.004	0.367	0.829	0.877	0.490	1.992	0.124
Total Financing/Credit not Granger Cause Total DPK	36	3.188	0.028	1.458	0.242	1.341	0.280	3.722	0.015
Total DPK does not Granger Cause Total Financing/Credit		3.380	0.022	0.467	0.758	1.023	0.413	3.129	0.030

Source: Data processed in 2020

Based on the Granger causality test results in Table 1, **Indonesian Islamic banks** show that there is only one-way causality between the GDP variable on the total assets variable, total third party funds, and total financing. However, the total assets variable to the total financing variable or vice versa, the total third party funds variable to the total financing variable or vice versa has a two-way causality. This contrasts with the variable of total assets to the total third party funds variable or vice versa. The two variables do not occur any causality in either one direction or two directions.

The results of the **Malaysian Islamic bank's** granger causality test show that there is only one-way causality between the GDP variable on the total assets variable and the total third party funds. However, in the GDP variable against the financing variable or vice versa, the total assets variable against the third party total funds variable or vice versa, the total assets variable against the total financing variable or vice versa, and the total third party funds variable against the total financing variable or vice versa, there is no causality either one both directions and two directions.

The Granger causality test results for **conventional Indonesian banks** show that there is only one-way causality between the total assets variable on the GDP variable and the total third party funds variable on the GDP variable. However, the total credit variable to the GDP variable or vice versa has a two-way causality relationship. This is in contrast to the variable of total assets to the total third party funds variable or vice versa, the total assets variable to the total credit variable or vice versa. The total third party funds variable to the total credit variable or vice versa, and there is no causality in either one direction or two directions.

The Granger causality test results for **conventional Malaysian banks** show that there is a one-way causality between the total credit variable and the GDP variable. However, there is a two-way causality relationship in the variable total third party funds to total credit or vice versa. This is in contrast to the total assets variable and the total third party funds variable to the GDP variable or vice versa, the total third party funds variable and total credit to the total assets variable or vice versa, and there is no causality in either one direction or two directions.

2. VECM model estimation

The cointegration test results found that there was cointegration between the independent variables in Islamic and conventional banks in Indonesia and Malaysia. In this condition, it is then continued by using the *Vector Error Correction Model (VECM)* to determine the short-term behaviour towards long-term behaviour. The following researchers present the results of the data processing.

Table 2
VECM Estimation Short Term

Syariah Indonesia Bank		
Variable	Coefficient	t-Statistic
D(GDP(-2),2)	-0.494369	-2.03205**
D(Total Asset(-2),2)	0.000119	0.30889
D(Total DPK(-2),2)	-0.000358	-0.82987
D(Total Financing(-2),2)	1.72E-05	0.03133
Syariah Malaysian Bank		
D(GDP(-2),2)	0.237973	1.11242
D(Total Asset(-2),2)	-0.134979	-1.43821
D(Total DPK(-2),2)	-0.008815	-0.13741
D(Total Financing(-2),2)	0.236137	1.89960*

Conventional Indonesia Bank		
D(GDP(-2),2)	-0.606053	-3.27731***
D(Total Asset(-2),2)	-0.002293	-0.05258
D(Total DPK(-2),2)	-0.011933	-0.24260
D(Total Credit(-2),2)	-0.065377	-2.26027**
Conventional Malaysian Bank		
D(GDP(-2),2)	-0.042906	-0.22539
D(Total Asset(-2),2)	-0.044177	-1.40043
D(Total DPK(-2),2)	0.018214	0.54842
D(Total Credit(-2),2)	0.068319	0.63403
t table	($\alpha = 0,1$)*	1,68830
	($\alpha = 0,05$)**	2,02809
	($\alpha = 0,01$ ***)	2,71948

Source: Data processed in 2020

Based on the estimation results of the short-term *VECM* model of **Indonesian Islamic banks**, it can be seen that the GDP variable has a significant negative effect on the GDP variable itself in the short term. Meanwhile, the variable of total assets, total third party funds, and total financing did not significantly affect the GDP variable in the short term. As for the estimation results of the short-term *VECM* model of **Malaysian Islamic banks**, it can be seen that the variable GDP, total assets, total third party funds, and total financing do not have a significant effect on the GDP variable in the short term.

Furthermore, the estimation results of the short-term *VECM* model of **conventional Indonesian banks** can be seen that the GDP variable and total credit have a significant negative effect on the GDP variable in the short term. Furthermore, the variables of total assets and third-party funds do not significantly affect the GDP variable in the short term. Then the short-term *VECM* estimation results of **conventional Malaysian banks** can be seen that the GDP variable, total assets, total third party funds, and total credit do not have a significant effect on the GDP variable in the short term.

Table 3
VECM Estimation Long Term

Syariah Indonesia Bank			
Variable	Coefficient	t-Statistic	
D(GDP(-1))	-	-	
D(Total Asset(-1))	0.000925	1.34292	
D(Total DPK(-1))	-0.002998	-4.17017***	
D(Total Financing(-1))	0.000546	0.95538	
Syariah Malaysian Bank			
D(GDP(-1))	-	-	
D(Total Asset(-1))	-0.243763	-2.11633**	
D(Total DPK(-1))	-0.094700	-1.55192	
D(Total Financing(-1))	0.437701	3.67129***	
Conventional Indonesia Bank			
D(GDP(-1))	-	-	
D(Total Asset(-1))	0.712772	4.38742***	
D(Total DPK(-1))	-0.868962	-4.43675***	
D(Total Credit(-1))	-0.024278	-0.23368	
Conventional Malaysian Bank			
D(GDP(-1))	-	-	
D(Total Asset(-1))	-0.243174	-2.65198**	
D(Total DPK(-1))	-0.269441	-2.43790**	
D(Total Credit(-1))	0.755258	3.69249***	
t table	($\alpha = 0,1$)*	1,68830	
	($\alpha = 0,05$)**	2,02809	
	($\alpha = 0,01$ ***)	2,71948	

Source: Data processed in 2020

Based on the estimation results of the long-term *VECM* model of **Indonesian Islamic banks**, it can be seen that the variable total third party funds have a significant negative effect on the GDP variable in the long term. Meanwhile, total assets and total financing variables do not significantly affect the GDP variable in the long run. As for the estimation results of the long-term *VECM* model of **Malaysian Islamic banks**, it can be seen that the total asset variable has a significant negative effect on the GDP variable in the long term, while the total financing variable has a significant positive effect on the GDP variable in the long term. Furthermore, the total third party funds variable does not significantly affect the GDP variable in the long run.

Furthermore, the estimation results of the long-term *VECM* model of **conventional Indonesian banks** can be seen that the total assets variable has a significant positive effect on the GDP variable in the long term, while the total third party funds variable has a significant negative effect on the GDP variable in the long term. The total credit variable does not have a significant effect on the GDP variable in the long run. Finally, the long-term *VECM* estimation results of **conventional Malaysian banks** can be seen that the variable of total assets and total third party funds have a significant negative effect on the GDP variable in the long run, while the total credit variable has a significant positive effect on the GDP variable in the long run.

From the data processing results above, we can find out the causality, short-term, and long-term relationships of each independent variable on the dependent variable by looking at the Granger causality test and short and long-term *VECM* estimates. The interpretation is as follows:

1. The causal relationship between total assets, total third party funds, total financing, and total credit at Islamic banks and conventional banks on economic growth in Indonesia and Malaysia

Referring to the results of the granger causality test for Islamic banks and conventional banks in Indonesia and Malaysia, it can be concluded as follows:

Table 4
Granger Causality Test

Variable	Syariah Indonesia Bank	Syariah Malaysian Bank	Conventional Indonesia Bank	Conventional Malaysian Bank
Total Asset → GDP	One Way	One Way	One Way	Has No Direction
GDP → Total Asset				
Total DPK → GDP	One Way	One Way	One Way	Has No Direction
GDP → Total DPK				
Total Financing → GDP	One Way	Has No Direction	-	-
GDP → Total Financing				
Total Credit → GDP	-	-	Two Ways	One Way
GDP → Total Credit				

Source: Data processed in 2020

Based on the research results on **Indonesian Islamic banks**, it can be concluded that there is a one-way causality relationship between the total assets variable, total third party funds, and total financing to the GDP variable or vice versa. Then in **Malaysian Islamic banks** and **conventional Indonesian banks** have similar results as before, on the variable of total assets, and total third party funds have a one-way causality relationship to the GDP variable or vice versa, then followed by the variable of total credit to the GDP variable or vice versa at the **conventional Malaysian banks**. This condition is in line with the *finance-led growth hypothesis*, namely finance that drives economic growth. The initiators of this theory assume that the existence of the financial sector, which acts as a liaison institution between groups that are excess funds and groups that are underfunded, will provide efficient distribution of funding sources which will later encourage economic sectors in their growth process.

One of the main characteristics of Islamic banking, which has a positive impact on the growth of the real sector and the economy, is that Islamic financial institutions place more emphasis on increasing productivity. The main source of income for banks to date is productive assets in the form of financing because banks collect funds from owners of capital and distribute them to the public. The lower the funds channelled in the form of financing, the lower the growth in total assets reported each year.

The acceleration of growth in the real sector also affects the growth of total banking assets and the increase in financing provided. Sharia banking assets consist of Sharia Commercial Banks, Sharia Business Units, and Sharia Rural Banks. Meanwhile, conventional banking assets consist of Conventional Commercial Banks, Rural Banks, and other banks. In terms of growth in total financing and credit provided by banks to the public, especially productive businesses. In addition to the financing and bank credit sectors, which had quite a significant impact on the slowdown in total asset growth, Bank Indonesia also stated that in line with the condition of the national banking industry, apart from financing provided by the public, the slowdown in economic growth also affected the growth rate of total banking assets in Indonesia.

With the financing pattern of the real sector and the financial sector that will move in balance, because Islamic banks are growing every year, it will give great dedication to economic performance and growth. This matter will directly reduce the amount of poverty and unemployment in the society. Then referring to the Granger causality test results in Rama's (2013) study, the first hypothesis, *the finance-led growth hypothesis*, finds that the development of Islamic banking encourages economic growth in Indonesia. Meanwhile, the second hypothesis, *the bidirectional causality hypothesis*, finds that there is a two-way relationship between

Islamic banking and economic growth in Indonesia. If there is growth in the Islamic banking sector, it will drive economic growth significantly. Vice versa, if there is economic growth, Islamic banking will experience significant development.

Then the results of existing research and theories are also strengthened by the results of previous studies that have supported this hypothesis, such as those conducted by Arestis and Demetriades (1996), Horrison et al. (1999), Blackburn and Hung (1998), Xu (2000), Fase and Abma (2003), found that the financial sector has a significant effect on economic growth. Then Rafsanjani and Sukmana (2014), Hasyim (2016), Putra and Nafik (2017), and Prastowo (2018) also found the same results, the Islamic banking sector will encourage economic growth. However, many researchers are doubtful about the *finance-led growth hypothesis*. Research conducted by Demetriades dan Hussain (1966) in their research in Asian countries proved that only Sri Lanka showed the *finance-led growth hypothesis*. Then Acaravei et al. (2007), in their research in Turkey, found that the financial sector and economic growth have a one-way relationship, but there is an insignificant long-term relationship between the financial sector and economic growth. Furthermore, it is supported by research by Rizki dan Fakhruddin (2015), which found that there is a one-way causality relationship between total financing into the real sector economy and economic growth.

Furthermore, referring to the research results of **conventional Indonesian banks**, it can be concluded that there is a two-way causality relationship between the total credit variable and the GDP variable or vice versa. This matter is in line with *the bidirectional causality view*, which shows a two-way relationship between the financial development sector and economic growth. This hypothesis reveals that if a country has good financial sector development, it will drive high economic development through advances in information on technology, product and service innovation (Schumpeter in Rama, 2013). In general, the main function of a bank is as a *financial intermediary* or collector of funds from people who have excess funds and channel them back to people who need funds for various purposes (Ismail, 2016). The ability of a bank to extend credit depends very much on its expertise to raise funds from the public. This situation depends on competition for banking industry employees, both Islamic and conventional banking, to collect third-party funds and channel them to profitable business sectors.

The results above are reinforced by other empirical research that has supported this hypothesis, such as those researched by Hasyim (2016) and Luintel dan Khan (1999), proving that there is a two-way relationship between the financial sector and economic growth. This shows a similar signal to the research studied by Demetriades dan Husaen (1996), proving that the *"finance-led growth"* hypothesis and the *"growth-led finance"* hypothesis between the financial sector and economic growth in Asia. However, it also proves a two-way relationship between the financial sector and economic growth in India, South Korea and Thailand. In addition, Habibullah (1999), in his research, found something similar to the previous one. Meanwhile, in Turkey, Unalmis (2000) proves that there is a two-way relationship between the financial sector and long-term economic growth. Ingrid (2006) found that there is a two-way causal relationship between economic growth and credit volume.

Finally, the test results of **Malaysian Islamic banks** can be concluded that there is no one-way or two-way causality relationship between the total financing variable and the GDP variable or vice versa. When there is a decrease in total disbursed financing, it will reduce capital, and businesses will then result in a decline in the real sector economy. Meanwhile, the variables of total assets and total third party funds or vice versa in **conventional Malaysian banks** have the same results as before; namely, there is no one-way or two-way causality relationship. The total asset variable is not significant to the GDP variable because the establishment of an Islamic bank by implementing a profit-sharing system so that conventional bank customers switch to Islamic banks will decrease the total assets of conventional banks. At the same time, the total third party funds variable is not significant to the GDP variable because conventional banks are less than optimal in utilizing the funds raised. When the funds raised are not carried out according to procedures, it will reduce economic growth.

This matter is in line with *the independent hypothesis*: there is no causal relationship between finance and economic growth. Lucas introduced this hypothesis in Rama (2013), which states that there is no causal relationship between the financial sector and economic growth. Many other empirical studies have supported this hypothesis. Guryay dan Cavusoglu (2007) found that there was no causal relationship between the economic sector and economic growth in Cyprus.

2. Short and long term relationship between total assets, total third party funds, total financing, and total credit at Islamic banks and conventional banks on economic growth in Indonesia and Malaysia

Referring to the short and long term *VECM* estimation test results, it can be concluded as follows:

Table 5
VECM Estimation Short and Long Term

Variable	Syariah Indonesia Bank		Syariah Malaysian Bank		Conventional Indonesia Bank		Conventional Malaysian Bank	
	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term
Total Asset → GDP	There is no significant	There is no significant	There is no significant	Negative, Significant	There is no significant	Positive, Significant	There is no significant	Negative, Significant
Total DPK → GDP	There is no significant	Negative, Significant	There is no significant	There is no significant	There is no significant	Negative, Significant	There is no significant	Negative, Significant
Total Financing → GDP	There is no significant	There is no significant	There is no significant	Positive, Significant	-	-	-	-
Total Credit → GDP	-	-	-	-	Negative, Significant	There is no significant	There is no significant	Positive, Significant

Source: Data processed in 2020

From the test results of Indonesian and Malaysian **Islamic banks**, it can be concluded that the total asset variable is significant to the GDP variable in the long term because Islamic banking plays an important role in the growth of the economy, Islamic banks are proven to be resilient in facing the global crisis, but the effect is not as big as conventional banking. However, this is enough to show significant progress compared to previous years. While on the other hand, the total asset variable is not significant to the GDP variable because the total existing Islamic banking assets are still widely used for purposes such as banking expansion or improving quality. In addition, the total assets of Islamic banking are still relatively small compared to the total assets of conventional banks, so that the assets of Islamic banking are not too influential in driving economic growth.

Furthermore, in the same table, the total third party funds variable is significant to the GDP variable in the long term because the higher the third party funds, the increase in economic growth occurs. While on the other hand, the total party funds variable is not significant to the GDP variable due to the problem of *displacing commercial risk*. In the sense that when the interest rate for third party funds from conventional banking increases, the customer will decide to transfer his savings to conventional banking rather than continue to choose savings at Syariah banking. This matter states that the thoughts of Islamic banking customers still depend on the rate of return. In addition, the public's interest in collecting funds is still relatively small, so banking employees should provide concrete evidence to convince people to save in banking.

Finally, in the same table, the total financing variable is significant to the GDP variable in the long run because when the total financing channel increases, it will impact increasing capital in businesses, leading to an increase in the real sector economy. An increase in the real sector economy means an increase in economic activity, which will increase economic growth. On the other hand, the total financing variable is not significant to the GDP variable. When there is a decrease in the total financing channeled, it will impact a decrease in capital and businesses, which will then result in a decline in the real sector economy. A decline in the real sector economy means a decline in economic activity, which will cause economic growth to decline.

Referring to the test results of **conventional banks** in Indonesia and Malaysia, it can be concluded that the total asset variable is significant to the GDP variable in the long term. Conventional banks are proven to be resilient in facing the global crisis compared to Islamic banks; this is because the total assets of conventional banks are greater than Islamic banks. While on the other hand, the total asset variable is not significant to the GDP variable due to the establishment of a sharia bank by implementing a profit-sharing system so that conventional bank customers switch to Islamic banks, thus the total assets of conventional banks will decrease. Furthermore, in the same table, the total third party funds variable is significant to the GDP variable due to the efficiency of the allocation of productive resources in the short term, so that excess liquidity is channelled into developing its income through lending to the real sector. However, only a small amount is allocated to the relatively less productive investment components in increasing the output of the economy, such as securities. Meanwhile, on the other hand, the total third party funds variable is not significant to the GDP variable because conventional banks are less than optimal in utilizing the funds raised. When the funds raised are not carried out according to procedures, it will reduce economic growth.

Finally, in the same table, the total credit variable is significant to the GDP variable in the short term because credit products distributed to UMKM customers have a good impact on customers' survival. Meanwhile, in the long term, this is because the financial sector plays an important role in economic growth. The increasing number of services that are promoted by the banking sector will motivate the public to save more money in the bank and cause the funds collected in the banking sector to become bigger, allowing banks to channel larger loans to the real sector and working capital. On the other hand, the total credit variable is not significant to the GDP variable because there is only a slight time adjustment in processing the allocation of credit channelled by banks to increase economic output, especially for the types of investment and working capital.

Suppose the independent variable is significant to the dependent variable. In that case, it is in line with the investment theory, which states that investments owned by one or more assets are usually long-term with the desire to obtain benefits at a later date (Sunariyah, 2000). The rate of economic growth has a relationship with investment, as stated by Adam Smith, which is the stage of inventory fertilization. In terms of the concept stated by Adam Smith that the level of economic growth is related to investment, or it is often called the inventory fertilization stage (Jhingan, 2007). Then Smith argues that the accumulation of the supply is one of the real conditions for economic development. Hence, in general, the problem of economic development defines that people are advised to save and invest, which are expected to be determined by the level of savings and savings that are completely invested.

Then Islam looks further ahead to investment and economic growth, which is oriented to worldly problems and problems in the hereafter. Investments that violate sharia will receive a reward in kind, as well as investments that comply with sharia. Sharia investment is the sacrifice of resources in the present with the desire to obtain greater results in the future, either directly or indirectly, in accordance with the principles of sharia as a whole (*kaffah*). Besides, all forms of investment are made to increase piety to Allah to achieve inner and outer happiness in the world and the hereafter, both for present and future generations.

The conventional investment aims to emphasize worldly things without caring about the hereafter. Conventional investment is an agreement between two or more parties in order to get the maximum benefit, which sometimes does not care about halal and haram (Kompasiana, 2020). In a conventional economic system, a person invests in different ways, including meeting liquidity needs, raising funds to obtain greater benefits, preparing future savings, taking risks, and so on. In the same sense, Sumantono mentions three main things that drive investment, namely obtaining a better survival in the future, avoiding a shortage of assets due to inflation, and exploiting the government's economic breadth (Wordpress, 2020).

After discussing the theory, it is further strengthened by recent research conducted by Tabash and Dhankar (2013), which found that there is a significant relationship between growth and bank financing in the long run. Then supported by research researched by Rama (2013), Rizki and Fakhruddin (2015), and Ayyubi et al. (2017), found that there is a relationship between the Islamic banking sector and long-term economic growth. Meanwhile, research conducted by Abduh and Chowdhury (2012), Abduh and Omar (2012), Yusof and Bahlous (2013), dan Kassim (2016) found that there is a significant relationship between Islamic banking and economic growth in the long and short term. Examining different objects from before, conducted by Nisa (2017), Suhendra and Ronaldo (2017), found that there is a two-way relationship between conventional banks and economic growth in Indonesia in the short and long term. This matter is supported by (Bist, 2018), finding that financial development has a significant effect on economic growth in the long term but does not find a significant effect in the short term between the two.

IV. CONCLUSION

Based on the results of testing and discussion that have been described in the previous section, the following conclusions can be drawn: First, there is a one-way causality relationship in Indonesian Islamic banks between the variable of total assets, total third party funds, and total financing to the GDP variable or vice versa. Then in Malaysian Islamic banks and conventional Indonesian banks have similar results as before. The variable of total assets and total third party funds have a one-way causality relationship to the GDP variable or vice versa, followed by the total credit variable to the GDP variable or vice versa in conventional Malaysian banks. Furthermore, there is a two-way causality relationship in Indonesian conventional banks between the total credit variable and the GDP variable or vice versa. Finally, there is no one-way or two-way causality relationship in Malaysian Islamic banks between the total financing variable to the GDP variable or vice versa. Meanwhile, in conventional Malaysian banks, the variables of total assets and total third party funds or vice versa have the same results as before; namely, there is no one-way or two-way causality relationship.

Second, there is a short and long term relationship between the variable of total assets and total financing to the GDP variable, while the total third party funds variable does not have a short and long term relationship to the GDP variable in Indonesian Islamic banks. Then, there is no short and long-term relationship between the variable of total assets, total third party funds, and total financing to the GDP variable in Malaysian Islamic banks. Furthermore, there is a short and long-term relationship between the total asset variable and the GDP variable, while the total credit variable only has a long-term relationship with Indonesian conventional banks. It is different from the variable total third party funds, in which there is no short and long term relationship to the GDP variable in Indonesian conventional banks. Finally, the total asset variable only has a short-term relationship to the GDP variable, while the total third party funds and total credit variables have no short and long-term relationship to the GDP variable in Malaysian conventional banks. The results of short and long term relationships will provide future prospects for sharia banking practices, namely that banking activists do not have to doubt the prospects of the sharia banking business, because Islamic banking services will soon become the main thing in the eyes of the public. Then the public today has doubts about the lawful prohibition

of interest in conventional banks. Therefore, it is hoped that all parties involved in the banking world will see this phenomenon and look for a way out to keep the business going. The most important thing to do is optimize banking services that are oriented towards the blessings of the people, namely the Islamic banking system.

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