

Does Islamic Bank Financing Promote Economic Growth? Evidence from Indonesia

Ratna Mutia¹, Raja Masbar², M. Shabri Abd. Majid³, Bismi Khalidin^{4*}

^{1,2,3}Faculty of Economics and Business, Universitas Syiah Kuala, Aceh, Indonesia

¹Faculty of Teacher Training and Education, Universitas Serambi Mekkah, Aceh, Indonesia

⁴Faculty of Islamic Law, Universitas Islam Negeri Ar-raniry, Aceh, Indonesia

Corresponding author: bkhalidin@ar-raniry.ac.id

Abstract. *Over the past decade, Islamic banking has become an important sector in shaping the economy of Muslim-majority countries. This study aims to analyze the impact of Islamic banking on Indonesia's economic growth. This study employs quantitative methods, using Johansen cointegration testing and cointegrating regression. Quarterly data for the years 2010-2022 are used in this investigation. The results show that, in the long run, the variables of Islamic banking financing and economic growth are cointegrated. Furthermore, the causality test results show that Islamic bank financing contributes positively to economic growth in the short run, while in the long run, it contributes negatively. Despite the low contribution of Islamic banks to the economy, Islamic bank financing still has a vital role in the Indonesian economy.*

Keywords: *causality, cointegration, economic growth, islamic bank financing*

1. Introduction

The financial sector plays a vital role in driving a country's economic growth, namely as a driver of growth in the real sector. This can be seen from the ability of the financial sector to mobilize savings. According to the Global Islamic Finance Report – GIFR (2019), Indonesia scored 81.93 on the 2019 Islamic Finance Country Index (IFCI) for the first time. With this high score, it shows that Indonesia is one of the crucial players in the global Islamic financial market. However, in 2020, Indonesia was ranked second after Malaysia.

The financial sector plays a very significant role in triggering a country's economic growth. The financial sector is the locomotive for growth in the real sector through capital accumulation and technological innovation. More precisely, the financial sector can mobilize savings. The financial sector provides borrowers with a wide range of high-quality and low-risk financial instruments. This will increase investment and ultimately accelerate economic growth. On the other hand, the occurrence of asymmetric information, manifested in the form of high transaction costs and information costs in financial markets, can be minimized if the financial sector functions efficiently.

Within the scope of macroeconomic policy, a financial sector is a transmission tool for monetary policy. Thus, the shock experienced by the financial sector also affects the effectiveness of the monetary policy. Ingrid (2006) identified several impacts on monetary policy transmission resulting from shocks in financial markets. First, the symptoms of monetization, the process of converting securities into a currency that can be used to buy goods and services, and securitization, the process of forming illiquid assets or a group of assets through a financial mechanism into securities in the form of innovative financial products, causing the definition, scope, and behavior of the money supply to change. This phenomenon can create instability in the relationship between prices (inflation) and money supply and reduce the central bank's ability to control

monetary amounts. Second, the growing development of the financial sector has led to a tendency for decoupling between the monetary and real sectors. Consequently, the causality between monetary and various variables in the real sector is becoming increasingly complex and challenging to predict. The money demand function, used as a monetary tool, is less stable in behavior.

Levine (1997) proves that the development of the financial sector will affect the economy, especially in encouraging economic growth. This is because the financial sector can reduce risk, mobilize savings, reduce transaction and information costs, and encourage specialization. However, there is still debate about the role of the financial sector in the economy. The debate focuses on whether the financial sector is driving economic growth (supply-leading) or if economic growth is driving the financial sector's development (demand-following). The debate about the relationship between the financial sector and economic growth lies in the direction of the relationship.

According to Graff (2001), four possible relationships could occur between the development of the financial sector and economic growth. The relationship that can occur is that there is no relationship between the development of the financial sector and economic growth, the development of the financial sector that encourages economic growth, economic growth that encourages the development of the financial sector, and the development of the financial sector (although in the short term) will have a negative impact on economic growth.

Since 1992, the Indonesian banking sector has implemented a dual banking system. This means that conventional and Islamic banking systems are allowed to operate simultaneously. This system was marked by the establishment of Bank Muamalat Indonesia (BMI), the first Islamic bank in Indonesia. One of the crucial players in the Islamic financial market is Islamic banking. The Islamic Corporation for the Development of the Private Sector – ICD (2020) notes that Islamic banking was 70% of the total assets of the global Islamic finance industry in 2018, or US\$ 1.76 trillion. There are 72 countries worldwide with Islamic banks, 61 of which report their assets. The majority of Islamic banks are commercial. Of the world's 520 Islamic banks, 219 Islamic banks are part of conventional banks.

In Indonesia, the Islamic banking industry is a financial institution that has an important role in a country's economy. The development of the Islamic banking sector has grown rapidly and dominated Indonesia's economic activities. The first Islamic bank was born, namely Bank Muamalat Indonesia, in 1992. In 1998 Law No. 10 of 1998 provided direction for conventional banks and gave licenses to conventional banks to open Sharia Business Units.

The Islamic banking sector has a very large role in the economy of Indonesia. Even though the contribution of Islamic banking is still low to the national banking industry, the existence of Islamic banking is significant for economic growth and is expected to drive the real sector in this country with the largest Muslim population in the world. During 2015-2019, OJK reported that, in terms of total assets, conventional banking was still in the lead compared to the banking sector that implemented the Sharia system. The market share of Islamic banking from 2015-2019 has averaged 5% of the total banking market (OJK, 2021). The performance of Islamic banking has also increased, which can be seen from the business activity data of Islamic commercial banks and the accumulation of deposit funds from year to year. The most extensive composition of deposit funds is in the form of mudharabah deposits.

They know the banking sector's role in Indonesia is important for decision-makers.

Suppose the banking sector is considered to have a significant influence. In that case, the government must promote the development of the financial sector, including the development of the banking sector, non-bank financial institutions, and the capital market, to encourage economic growth. However, if the financial sector does not affect economic growth, it will waste resources if the government focuses on developing the financial sector. Development funds will be more helpful if allocated for other purposes, such as increasing the workforce's capability and developing technology.

Literature Review

According to the Department for International Development-DFID (2004), the financial sector is all large or small companies, formal and informal economic institutions that provide financial services to consumers, business people, and other financial institutions. In a broader sense, it includes everything related to banking, stock exchanges, insurance, credit unions, microfinance institutions, and money lenders.

According to DFID (2004), the financial sector is said to be developing if it fulfils several conditions. First, the efficiency and competitiveness of the financial sector are increasing. Second, the scope of available financial services is increasing. Third, the diversification of financial institutions is increasing. Fourth, the amount of money intermediaries in the financial sector is increasing. Fifth, the level of capital allocation by financial institutions to private business entities in response to market signals (compared to direct government loans from state banks) is increasing. Sixth, the regulation and stability of the financial sector is increasing.

According to Mukhlis (2005), developments in the ratio of financial assets to GDP indicate financial deepening. A minor development in this ratio indicates a shallower financial sector in a country. The higher the financial deepening, the greater the use of money in the economy and the more significant and broader it is. Conversely, the greater the ratio, the deeper a country's financial sector. In this case, the greater the ratio of the money supply to GDP, the more efficient the financial system is in mobilizing funds to accelerate economic growth.

Activities of financial institutions and money markets. The financial deepening (M2/GDP) indicator measures the role of the financial system in mobilizing savings. The size of a country's financial deepening is indicated by the ratio between the wealth expressed in money (financial assets) and national income. The higher the ratio means that the use of money in a country's economy is getting deeper. The higher the financial deepening, the greater the use of money in the economy and the more significant and broader the activities of financial institutions and money markets. The use of this ratio is because it is the most common ratio used to measure the development of a country's financial sector. The results of this ratio will show the ratio of M2 used to produce each GDP. Financial deepening is also known as the level of monetization.

According to Lynch (1996), there are several indicators to determine how big the financial sector's development level is. These indicators include quantitative, structural, financial sector price, product scale, and transaction cost indicators. Among these indicators, quantitative indicators are often used to determine the level of development of a country's financial sector. Concerning quantitative indicators to see the development of the financial sector, progress can be measured using the ratio between domestic financial assets to GDP (such as the ratio M1/GDP, M2/GDP, M3/GDP, M4/GDP).

In connection with the development of the financial sector, according to Levine (1997), there are four stages of development of the financial sector. First, the financial

sector began to experience development. Second, the banking sector is increasingly playing an important role in lending compared to the central bank. Third, the development of the non-bank financial sector, such as insurance, pension funds, and financial institutions, and fourth, the stock market development.

Banks and non-bank financial institutions have the function of transferring funds (loanable funds) from savers or surplus units (lenders) to borrowers or deficit units. These funds are allocated by negotiation between the owners of funds and using funds through the money and capital markets. The products transacted in the transaction process of banks and financial institutions are primary securities (stocks, bonds, promissory notes, etc.) and secondary securities (current accounts, savings, deposits, policies, pension plans, stocks, etc.). Secondary securities issued by banks and non-bank financial institutions are offered to surplus units. Surplus units will receive income, for example, interest income, from these banks and non-bank financial institutions. Funds collected from surplus units are channeled back to deficit units.

A bank financial institution is a business entity whose activities collect funds from the public and channel them back as a credit to the community to improve the standard of living of the common people. Currently, bank financial institutions consist of conventional banks and Islamic banks. Both have the same function, but Islamic banks are banking businesses that apply Islamic law in conducting their business. In their activities, Islamic banks do not charge or pay interest to customers. The rewards received by Islamic banks and those paid to customers depend on the contracts and agreements between the customer and the bank. Agreements (contracts) contained in Islamic banking must comply with the terms and pillars of the contract as stipulated in Islamic sharia.

Many studies have been conducted regarding the relationship between the banking sector and economic growth. These studies include Abusharbeh (2017), who conducted a study in Palestine; Abdurrahman (2003), who conducted a study in Indonesia; Daly & Frikha (2016) for ten countries in the Middle East region, Majid (2008) and Majid & Salina (2015) in Malaysia. These studies have proven that both the conventional and Islamic banking sectors promote economic growth.

2. Method

2.1. Data

This study uses secondary data from Statistics Indonesia (BPS) and the Financial Services Authority (OJK). A summary description of the data is shown in Table 1.

Table 1. Data and variable measurement

Variable	Description	Period	Source
lnGDP	Natural logarithm of Gross Domestic Product (constant 2010 IDR)	2010Q1-2022Q4	BPS, Statistics Indonesia
lnGFCF	Natural logarithm of Gross Fixed Capital Formation (constant 2010 IDR)	2010Q1-2022Q4	BPS, Statistics Indonesia
lnIBF	Natural logarithm of Islamic bank financing	2010Q1-2022Q4	OJK

2.2. Model Specification

Following the literature on previous studies (e.g., Abduh & Omar (2012); Furqani & Mulyany (2009); Majid & Salina (2015)) to understand the relationship between Islamic banking financing and economic growth. The basic modeling formula for this study is written as follows:

$$\ln GDP_t = f(\ln GFCF_t, \ln IBF_t) \quad (1)$$

where $\ln GDP$ is the natural logarithm of real GDP, $\ln GFCF$ is the natural logarithm of gross fixed capital formation, and $\ln IBF$ is the natural logarithm of Islamic banking financing.

Based on the basic model in Equation (1), the model for this study is rewritten in Equations (2) and (3) as follows:

$$\ln GDP_t = \beta_0 + \beta_1 \ln GFCF_t + \beta_2 \ln IBF_t + \varepsilon_t \quad (2)$$

where β_0 is a constant β_1 , β_2 , and β_3 is the coefficient of the estimated variable, $\ln GDP$, $\ln GFCF$ is the natural logarithms of real GDP, gross fixed capital formation, and Islamic banking financing.

2.3. Methodology

Investigating the impact of Islamic banking financing on Indonesia's economic growth is carried out through three stages: the first stage, pre-estimation testing, is carried out, namely testing the unit roots of the observed data to ensure that the data is stationary. This test used the Augmented Dickey-Fuller (ADF) method (Dickey & Fuller, 1979). The second stage is conducting cointegration testing of the data series to be observed. This test investigated the long-term relationship between the dependent and independent variables using Johansen's cointegration test method (Johansen (1991, 1995). In the third stage, to ensure the strength of the results of the investigation, a causality test through VECM was applied (e.g., Furqani & Mulyany, 2009; Mardhani et al., 2021). This causality test was introduced by Granger (1980).

3. Results and Discussions

3.1. Descriptive Statistics

This section begins by explaining the descriptive statistics of the variables used in this study, as shown in Table 2. The highest value of the variable is $\ln GDP$, and the lowest is $\ln IBF$. The probability value of $\ln GDP$ is above 10%, and $\ln IBF$ is below 10%, with 52 quarters of data observations during 2010Q1-2022Q4.

Table 2. Descriptive statistics

	$\ln GDP$	$\ln GFCF$	$\ln IBF$
Mean	14.65324	13.51984	12.26992
Median	14.67704	13.54596	12.33929
Maximum	14.91033	13.78008	13.09770
Minimum	14.31164	13.12809	10.82390
Std. Dev.	0.170025	0.177931	0.597996
Skewness	-0.309712	-0.460678	-0.788969
Kurtosis	1.882278	2.148480	2.769383
Jarque-Bera	3.538142	3.410299	5.509992
Probability	0.170491	0.181745	0.063609
Observations	52	52	52

3.2. Unit Root Test Results

Based on the research model presented in the previous section, the first step that must be taken is to test the stationarity of the data. This test uses the Augmented Dickey-Fuller (ADF) method. The stationarity test results in Table 3 show that at the level and constant, only the *lnGFCF* variable is stationary at a level below 5%. At the first difference level, all variables are stationary below 1%.

Table 3. Unit root test results

Variables	Constant	
	Level	First difference
<i>lnGDP</i>	-1.220135 (0.6579)	-11.86897*** (0.0000)
<i>lnGFCF</i>	-1.590003 (0.4795)	-7.998511*** (0.0000)
<i>lnIBF</i>	-2.027608 (0.2744)	-4.451432*** (0.0009)

Note: ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively. The number of lag is based on the fixed. The maximum number of lags is 1.

3.3. Cointegration Test Results

The next step is to carry out a cointegration test to ensure that there has been a long-term balance or not in the time series model based on the Johansen method. Cointegration test results for Islamic banking financing are shown in Table 4.

Table 4. Result of Johansen cointegration test

Unrestricted cointegration rank test (Trace value)				
Hypothesis	Eigenvalue	Trace	Critical Value	Probability
		Statistic	(0.10)	
None *	0.605547	69.95454	42.91525	0.0083
At most 1 *	0.228727	23.44181	25.87211	0.0383
At most 2 *	0.188704	10.45614	12.51798	0.0599
Unrestricted cointegration rank test (Trace value)				
Hypothesis	Eigenvalue	Trace	Critical Value	Probability
		Statistic	(0.10)	
None *	0.605547	46.51272	25.82321	0.0000
At most 1 *	0.228727	12.98567	19.38704	0.3292
At most 2 *	0.188704	10.45614	12.51798	0.1079

Note: ***, **, * indicate significant at the 1%, 5%, and 10% levels, respectively

The cointegration test results in Table 4 show that the trace statistical value and maximum eigenvalue at $r = 0$ is significant than the critical value with a significance level of 5%. This means the null hypothesis, which states no cointegration, is rejected. Otherwise, the alternative hypothesis that states cointegration cannot be rejected. Based on the econometric analysis above, it can be seen that among the five variables in this study, it is stated that there is a long-term relationship and balance between variables so

that it can be continued to carry out causality tests through the Vector Error Correction Model (VECM) approach.

3.4. Granger Causality Results

After confirming the long-term relationship, the Granger Causality test was conducted to see whether the two variables have a unidirectional, reciprocal relationship. The Granger causality test in this study used the VEC Granger causality/block homogeneity Wald tests with a significance level of 1 percent. Table 5 presents the results of the VEC Granger causality test analysis.

Table 5. Results of granger causality

Dependent Variable	Short-run			Long-run
	$\Delta \ln GDP$	$\Delta \ln GFCF$	$\Delta \ln IBF$	ECM_{t-1}
$\Delta \ln GDP$	-	33.03926***	18.10137***	0.069221*
$\Delta \ln GFCF$	6.033559**	-	23.95166***	0.265639*
$\Delta \ln IBF$	1.068837	1.329847	-	-0.180654*

Note: ***, **, * indicate significant at the 1%, 5%, and 10% levels, respectively

Table 5 shows that, in the short run, there is a two-way causality relationship between the gross fixed capital formation and economic growth variables—a unidirectional relationship from economic growth and gross fixed capital formation to Islamic bank financing. In the long run, there is a unidirectional relationship between the gross fixed capital formation variable and the Islamic bank financing variable to economic growth. However, Islamic bank financing to economic growth has a negative relationship direction. It can be concluded that in the short term, Islamic bank financing contributes positively to economic growth, while in the long term, it contributes negatively. The results of this study are generally in line with research findings by Abduh & Omar (2012) for Indonesia, Abusharbeh (2017) for Palestine, Chazi et al. (2020) for 14 countries, Ledhem & Mekidiche (2022) for Turkey, Majid & Salina (2015) and Yusof & Bahlous (2013) for Malaysia.

In the long run, the weak causality from Islamic bank financing to economic growth is in line with the study conducted by Gani & Bahari (2021) in Malaysia. Proactive policies from the government are needed to continue to build the Islamic banking institutional ecosystem toward glory (Boukhatem & Ben Moussa, 2018). This finding proves that in the short term, there is a stronger relationship than in the long term, such as the findings by Gudarzi & Dastan (2013) for nine selected countries, namely Malaysia, Indonesia, Bahrain, UAE, Saudi Arabia, Egypt, Kuwait, Qatar, and Yemen.

4. Conclusions

In recent decades, global attention to developing the Islamic banking sector has encouraged Islamic financial inclusion, especially in Muslim-majority countries. Islamic banking financing has played an important role in the country's economy. Therefore, this article examines the impact of Islamic banking financing on economic growth in Indonesia. We use cointegration and causality estimation techniques to examine the relationship between Islamic banking financing and real GDP by including inflation as a control variable over the period 2010Q1-2022Q2. The study found that Islamic bank financing has a positive relationship with economic growth in the short run.

Conversely, there is a weak relationship between Islamic banking financing and

economic growth in the long run. This finding gives us an understanding that, although the contribution of Islamic banking is still low in the economy, its existence needs to be nurtured to grow into a sizable Islamic banking industry. Government policies are needed to encourage the growth of the Islamic banking industry in Indonesia.

5. References

- Abduh, M., & Omar, A. M. (2012). Islamic banking and economic growth: the Indonesian experience. *International Journal of Islamic and Middle Eastern Finance and Management*, 5(1), 35–47.
- Abusharbeh, M. T. (2017). The Impact of Banking Sector Development on Economic Growth: Empirical Analysis from Palestinian Economy. *Journal of Emerging Issues in Economics, Finance and Banking*, 6(2), 2306.
- Boukhatem, J., & Ben Moussa, F. (2018). The effect of Islamic banks on GDP growth: Some evidence from selected MENA countries. *Borsa Istanbul Review*, 18(3), 231–247. <https://doi.org/10.1016/j.bir.2017.11.004>
- Chazi, A., Mirzaei, A., Zantout, Z., & Azad, A. S. (2020). Does the size of Islamic banking matter for industry growth: international evidence. *Applied Economics*, 52(4), 361–374. <https://doi.org/10.1080/00036846.2019.1645288>
- Daly, S., & Frikha, M. (2016). Banks and economic growth in developing countries: What about Islamic banks? *Cogent Economics and Finance*, 4(1), 1–26.
- Department For International Development (DFID). (2004). The Importance of Financial Sector Development for Growth and Poverty Reduction. Policy Division Working Paper.
- Dickey, D. A., & Fuller, W. A. (1979). Distribution of the estimators for autoregressive time series with a unit root. *Journal of the American Statistical Association*, 74(366a), 427–431. <https://doi.org/10.1080/01621459.1979.1048253>
- Furqani, H., & Mulyany, R. (2009). Islamic banking and economic growth: Empirical evidence from Malaysia. *Journal of Economic Cooperation and Development*, 30(2), 59–74.
- Granger, C. W. J. (1980). Testing for causality: A personal viewpoint. *Journal of Economic Dynamics and Control*, 2, 329–352. [https://doi.org/https://doi.org/10.1016/0165-1889\(80\)90069-X](https://doi.org/https://doi.org/10.1016/0165-1889(80)90069-X)
- Graff, M. (2001). Financial Development and Economic Growth in Corporatist and Liberal Market Economies. 30th Annual Conference of Economists, Perth.
- GIFR. (2019). Global Islamic Finance Report 2020. <http://www.gifr.net/publications/>.
- Gudarzi, F., Y., & Dastan, M. (2013). Analysis of Islamic banks' financing and economic growth: a panel cointegration approach. *International Journal of Islamic and Middle Eastern Finance and Management*, 6(2), 156–172. <https://doi.org/10.1108/17538391311329842>
- ICD (2020). Islamic Finance Development Report 2020. Jeddah: https://icd-pps.org/uploads/files/ICDRefinitiv%20IFDI%20Report%2020201607502893_2100.

- Johansen, S. (1991). Estimation and hypothesis testing of cointegration vectors in Gaussian vector autoregressive models. *Econometrica*, 59(6), 1551–1580. <https://doi.org/10.2307/2938278>
- Johansen, S. (1995). *Likelihood-based Inference in Cointegrated Vector Autoregressive Models*. Oxford: Oxford University Press.
- Ledhem, M. A., & Mekidiche, M. (2022). Islamic finance and economic growth: the Turkish experiment. *ISRA International Journal of Islamic Finance*, 14(1), 4–19. <https://doi.org/10.1108/IJIF-12-2020-0255>
- Levine, R. (1997). Financial Development and Economic Growth: Views and Agenda. *Journal of Economic Literature*, 35, 688-726.
- Lynch, D. (1996). Measuring Financial Sector Development: A Study of Selected Asia-Pacific Countries. *The Developing Economies*, XXXIV-1.
- Majid, M. S. A. (2008). Does financial development matter for economic growth in Malaysia? An ARDL bound testing approach. *Journal of Economic Cooperation*, 29(1), 61-82.
- Majid, M.S.A., & Salina. (2015). Assessing the contribution of Islamic finance to economic growth: Empirical evidence from Malaysia. *Journal of Islamic Accounting and Business Research*. 6(2), 292-310.
- Mardhani, M., Majid, M. S. A., Jamal, A., & Muhammad, S. (2021). Does international tourism promote economic growth? Some evidence from Indonesia. *Geojournal of Tourism and Geosites*, 37(3), 775–782. <https://doi.org/10.30892/GTG.37306-708>
- Mukhlis. (2005). Analisis Financial Deepening di Indonesia Tahun 1975-2000. *Jurnal Ekonomi Pembangunan*. FE UM.
- Yusof, M. R., & Bahlous, M. (2013). Islamic banking and economic growth in GCC & East Asia countries: A panel cointegration analysis. *Journal of Islamic Accounting and Business Research*, 4(2), 151–172. <https://doi.org/10.1108/JIABR-07-2012-0044>.