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# The Effect of Monetary Instrument of Islamic Banking Financing Channel Towards The Economic Growth in Indonesia

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**Abstract:** Monetary policy is closely related to activities to achieve economic growth, which eventually gives welfare to the community. This study aims to analyze the description of the transmission flow of financing channels, the effect of monetary policy instruments, and their effectiveness to achieve economic growth. The variables used are Islamic Banking Finance (FIN), return of Sharia Bank Indonesia Certificate (SBIS), return of PUAS, and Industrial Production Index (IPI). This study used Vector Error Correction Model (VECM) to determine short- and long-term relationships using the time series data. First, the result of the study showed that the transmission flow could not be identified clearly, because the flow stopped in FIN, and it could not affect IPI, according to the Granger Causality test. Second, the result of VECM estimation showed that all variables only affected long term period and did not affect the short-term period. Third, monetary policy transmission of Islamic banking financing channel was not effective enough, which was proven with the result of IRF simulation, which showed that the effect of shock on financing channel variable (FIN) towards IPI was subsided and stable in the 10th period later. Meanwhile, the result of the FEVD simulation showed that the financing channel variable (FIN) only gave a contribution of as much as 0.14 percent towards IPI. The contribution and policy implications are also discussed in this study.

**Keywords:** Islamic Monetary Instruments; Islamic Banking Financing Channel; Economic Growth; Vector Error Correction Model (VECM)

**JEL Classification:** E42; E52; G21; O42



## Introduction

The rate of economic growth illustrates the role of the government in achieving public welfare in a country (Ha et al., 2020). Bank Indonesia (BI), as the central bank in Indonesia, always tries to maintain exchange rate stability as the ultimate goal by regulating the money supply, and contributing to economic growth (Johari, 2014). Since the enactment of the Central Bank Act in Indonesia No. 23 of 1999, Indonesia became one of the countries that implemented a dual banking system, namely conventional banks and Islamic banks (Islamic Banks), intending to increase financing capacity for the national economic sector. To achieve this goal, it is necessary to have a central bank policy that regulates the economy in the aggregate through monetary policy.

According to the Law in Indonesia No. 3 of 2004 article 7 on monetary policy, the monetary sector must be linked to the real sector. The purpose of monetary control in Islam is to achieve full employment conditions, a condition where the property is disinfectated between the financial sector and the real sector to achieve public welfare (Biancone & Radwan, 2018). However, the conventional economic view of monetary operation stipulates that monetary contraction/expansion may not directly link with the real projects or business activities (Rabin, 2004). Moreover, monetary policy in Indonesia also aims to achieve and maintain rupiah exchange rate stability. "The stability of the rupiah's value is closely related to the amount of money circulating in the community" (Hapsari, 2013). To that end, the government created several sharia monetary instruments through the Central Bank, one of which was the Bank Indonesia Wadiah Certificate (SWBI) in 2000. Later, it was replaced with a Sharia Bank Indonesia Certificate (SBIS) since 2008.

Thus, Bank Indonesia (BI) has dual authority; therefore, the transmission of monetary policy does not only have an impact on conventional banking but also on Islamic banking. Banking is expected to be the main instrument in achieving economic goals. The role of Islamic banking in moving the real sector can be seen from the financing side. The steps taken by BI to achieve this goal are: by transforming it through six channels such as interest rates, credit, asset prices, the balance of payments, exchange rates, and inflation expectations. Therefore, the closest transmission line and strong linkage with the real sector are through credit or bank financing (Bernanke & Gertler, 1995).

The monetary policy adopted by BI is to influence and direct various economic and financial activities to the goal to be achieved, namely price stability, while taking into account economic growth. The result of research by Setiawan and Karsinah (2018) explained that increasing Islamic banking financing is expected to encourage growth in the real sector. This is reinforced by the result of Ascarya's research (2012), which states that the contract of respect and sharing of losses (Mudharabah and Musyarakah) in Islamic banking positively affects the output of the real sector. Because the purpose of Islamic economic activity is to support productive activities, assist the community in accumulating capital, and distribute wealth to achieve prosperity for all.

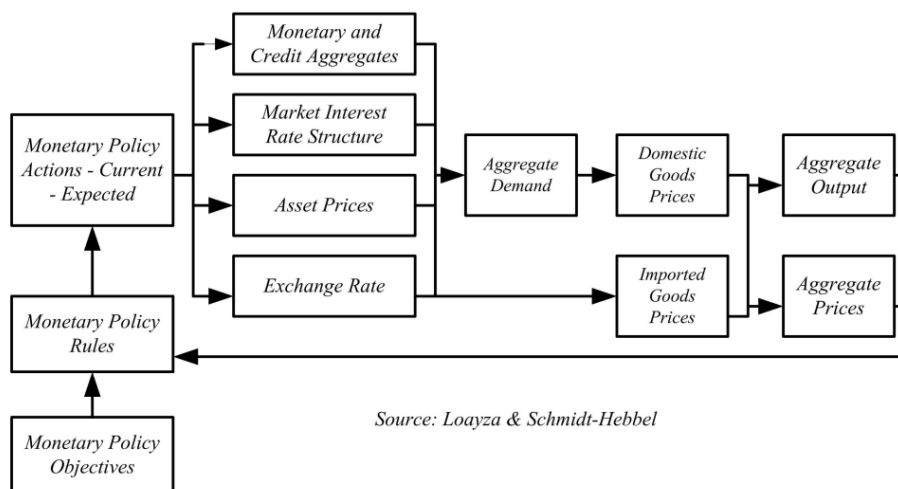
However, despite the rapid growth of the Islamic banking industry, central banks continue to face challenges in implementing monetary policy and transmitting it in the presence of Islamic banks (CBs). Indeed, the problem of the monetary policy transmission mechanism is increasing, from time lag to alternative solutions using the dual monetary system, such as the sharia banking financing line as a complement to the banking credit line (Caporale et al. 2020). The challenges stem from Islamic finance's core principles and the macroeconomic as well as monetary policy frameworks of the countries where Islamic banks operate (Ahmed, 2018).

Typically, financial systems with systemic Islamic banking are dual and underdeveloped. The Islamic banks are impacted by "standard" monetary policy instruments and conditions and flourish alongside conventional banks. The efficiency of monetary policy in Islamic banking is difficult to assess since it necessitates looking at it from a variety of

angles, some of which are at odds. Therefore, the transmission of dual monetary policy through the Islamic banking financing channel is essential to study continuously. Thus, this study analyzes the flow of the transmission mechanism of Islamic monetary policy through the influence and effectiveness of the monetary instrument of the Islamic banking financing channel on economic growth in Indonesia.

Economic growth is to increase the real national income in long term as well as short-term (Phung et al., 2019). The main source of the output of a country is not sourced from its economic growth alone but rather the increase in output sourced from economic activities (Boediono, 1982). The Industrial Production Index (IPI) has long been a key macroeconomic indicator for monitoring Indonesia's industrial sectors (Saadillah, 2019). Thus, IPI is one of the most important indicators for assessing the real economy (Wulandari & Saleh, 2015; Nguyen & Darsono 2022). Because real GDP or GNP statistics are not available on monthly basis, the index is frequently employed as a proxy for economic activity or national revenue (Kasri & Kassim, 2009; Hamori & Kume 2018).

According to Law No. 23 year 1999 concerning Bank Indonesia, it is stated that "monetary policy is policies established and implemented by Bank Indonesia to achieve and maintain stability in the value of the rupiah, which is carried out among others through controlling the money supply and (or) interest rates." Thus, the monetary policy transmission mechanism is the path that a monetary policy passes through to influence the final goal of national aggregate output and prices. In each channel in transmission, each economic activity is different and has an interaction with each other. For example, an increase in the policy rate affects market interest rates and therefore affects credit and investment activity since investment is the activity that adds value to the economy. Besides, interest rates are also used to regulate inflation; when inflation is high, interest rates impact inflation as expected or not through the efficiency of the transmission mechanism (Wiranata Kusuma & Kassim, 2013). According to Loayza and Schmidt-Hebbel (2002), the Figure 1 shows the monetary policy rule and transmission mechanisms that impact national output.



Source: Loayza & Schmidt-Hebbel

Figure 1 Monetary Policy Rule and Transmission Mechanisms

The monetary policy transmission mechanism operates through various channels, affecting numerous variables and markets at varying speeds and intensities. The most effective collection of policy instruments, the timing of policy changes, and thus the primary constraints that central banks confront in making choices are all determined by identifying these transmission channels (Boukhatem & Ben Moussa, 2018). While in the Islamic Monetary management policy, the stability of demand for money directs it to a crucial objective: productive activities (Hamza & Saadaoui, 2018). Therefore, any instrument that leads to instability and allocates unproductive sources of funds will be abandoned. The goal is to ensure the appropriate monetary expansion but is sufficiently capable of producing adequate growth and can result in equitable welfare for the community. The target growth rate must be continuity, realistic, and long-term.

Therefore, the process of transmitting monetary policy is not separated from the interaction between the monetary authorities, the central bank with the national banking, and other financial institutions and economic actors in the real sector. This interaction is conducted through two stages. The first stage is the interaction between the central bank and the banking as well as other financial institutions in various financial transactions. Second, interaction relates to the function of intermediation, namely the interaction between banking and other financial institutions with the economic actors in the activities in the real economic sector (Wiranata Kusuma & Kassim, 2013).

In Figure 1, the credit channel is a virtual channel in countries where banks play a core role in the financial system. When there is no full redundancy in economic entities' bank deposits or other sources of funds, the bank credit channel of monetary transmission will operate as follows: (a) Expansive monetary policy results in an increase in bank reserves and deposits, which affect the growth of bank loans and debt, as well as increased investment and gross domestic product. (b) Restrictive monetary policy decreases bank loans and debt, with the opposite effects on investment and gross domestic product.

Similarly, financing in Indonesia is one of the main tasks of the banking system, which ensures the provision of funds to meet the needs of the parties, which include: (a) Sharia Interbank Money Market (PUAS) is an interbank short-term (less than one year) financial transaction activity based on sharia principles, both in rupiah and foreign currency. Sharia bank financing has a significant role in the economic pace. In general, financing can increase the usability of money, the use of goods, the circulation of money, generate excitement in trying, economic stability, and is a bridge to increase national income (Biancone & Radwan, 2018; Ngoc et al., 2021). (b) To support establishing and implementing monetary policy, Bank Indonesia, as the central bank, conducts monetary control through open market operations based on Sharia principles (OPTS). BI has the authority to establish the OPT-in instruments used. Therefore, BI needs to issue a Bank Indonesia Sharia certificate (SBIS) as one of the open market operating instruments conducted based on sharia principles. SBIS is a Bank certificate in rupiah currency issued by Bank Indonesia Short term based on sharia principles. Based on the literature, the effectiveness of the monetary policy transmission mechanism can be measured by two indicators: (a) The speed in the grace period (time lag); The speed indicator is measured by the amount of time lag required by the variables in a path to respond to the shock of

policy instruments until the intermediate and final targets are achieved. (b) The strength of the variables in the monetary transmission line in response to the BI rate shock until the final target is realized (Ascarya, 2012).

From the theoretical standpoint, Islamic banking differs from regular banking since interest is prohibited in Islam (the bank and interest cannot fix the rate of return on deposits that cannot be charged on loans). The profit- and loss-sharing (PLS) paradigm, which is mostly based on the Mudarabah (profit-sharing) and musharakah (equity participation) notions of Islamic contracts, is a distinctive aspect of Islamic banking. Therefore, reviewing empirical studies will focus on the Islamic banking sector.

Previously, using VAR-VECM analysis, Haron and Wan Azmi (2005) discovered evidence that Islamic bank depositors are influenced by both financial and economic factors (money supply, composite index, inflation rate, and gross domestic product ratio), which contradicts Islamic saving theories. Then, Kassim and Majid (2009) also looked at how monetary policy changes affect Islamic banks versus conventional banks. Using two key tests, the paper investigates the dynamic interrelationships between Islamic and conventional bank deposits and loans in the context of monetary policy. The Auto-Regressive Distributed Lag (ARDL) model is used to investigate the long-run relationship between the variables, while the Vector Error-Correction Model (VECM) is used to investigate the short- and long-run dynamics. In comparison to conventional banks, the balance sheet items of Islamic banks were found to be more susceptible to monetary policy changes. As a result, the influence of monetary policy on Islamic banks is more destabilizing than on conventional banks.

Rama (2013) then conducted a study in Indonesia to investigate and understand the dynamic relationship between the development of Islamic banking, capital markets, trade, inflation, and economic growth. According to the study, there is a bi-directional connection between Islamic banking development and economic growth. This discovery is consistent with the "feedback hypothesis" or "bidirectional causality perspective" theory. These empirical findings show that the expansion of Islamic banking in Indonesia can spur rapid economic growth by providing sharia-compliant products and services. Of course, this is consistent with the nature of Islamic banking, which is pro-business and prioritizes the real economy. These adjustments will drive improved economic performance if Islamic banking financial institutions respond efficiently to increased demand as a result of strong economic growth. The financial sector and the economy will eventually require each other's development, and their interaction will stimulate bi-directional causality. Islamic banking has effectively played its role as an intermediary institution, facilitating the mobilization of money from surplus units to deficit units and economic sectors with excess capital to economic sectors in need of finance, as demonstrated by the previous study's findings.

Setiawan (2020) led a conversation on the role of banking in Indonesian economic growth: Islamic banks vs. conventional banks. This study evaluates the contribution of Islamic banks to economic growth via the role of financing and the contribution of conventional banks to economic growth through the role of credit. The findings of this study show that

both conventional and Islamic bank lending has a substantial impact on the country's economic growth. Credit and financing expansion has a favorable impact on economic growth. A one percent increase in traditional bank loans leads to a 0.322 percent boost in economic growth. Then, for every 1% rise in Islamic bank financing, there is a 0.126 percent boost in economic growth. The coefficient value indicates that the change is not excessively huge, is inelastic, but has a considerable influence. Any increase in the value of credit and financing in the domestic banking industry could lead to economic growth. Thus, based on theories and empirical studies, we develop our hypothesis as follows:

*H<sub>1</sub>: Monetary transmission of the Sharia banking financing line has a clear flow*

*H<sub>2</sub>: Monetary instrument of the Sharia banking financing line has a long-term influence on economic growth in Indonesia*

*H<sub>3</sub>: Islamic banking Financing Line's monetary instrument promotes economic growth in Indonesia*

## **Research Method**

The data used in this study is secondary data, in the form of time series data with a monthly scale, namely the period of January 2012 to December 2019 or as many as 96 samples. The data was obtained from the Financial Services Authority (OJK), Bank Indonesia Economic and Banking Statistics (SEKI-BI), Bank Indonesia Sharia Banking Statistics (SPS-BI) and the Central Bureau of Statistics (BPS).

The variables used in this study are as follows; IPI is a monthly production index of Large and Medium Industries as a proxy for economic growth in Indonesia for the monthly period from January 2012 to December 2019 obtained from the Central Statistics Agency (BPS). FIN is the total financing provided to third parties by the Islamic banking industry for the monthly period from January 2013 to December 2020 obtained from Bank Indonesia's Economic and Banking Statistics (SEKI BI). PUAS is the monthly rate of return on the Islamic Interbank Money Market (PUAS) from January 2012 to December 2019 obtained from Bank Indonesia's Economic and Banking Statistics (SEKI BI). SBIS is a short term SBIS return in rupiah currency issued by Bank Indonesia. The data used is SBIS return rate data for the monthly period from January 2012 to December 2019 obtained from BI Sharia Banking Statistics (SPS-BI)

The variables in this study include Industrial Production Index (IPI) data Islamic banking financing data (FIN), PUAS data and SBIS data,. This model allows an error correction form which reflects in two relationships: long-term relationship and the short-run dynamics between the variables. This econometric approach tries to explain the impacts of Islamic monetary instruments on financing in Islamic banking in Indonesia on other variables in cointegrated relations. This model is presented by the following:

$$\begin{aligned} \Delta IPI_t = & \beta_{12} + \beta_{13} \begin{bmatrix} \gamma \\ \mu \end{bmatrix} IPI_{t-i} \\ & + \sum_{i=1}^n \varphi_{11i} \Delta IPI_{t-i} + \sum_{j=1}^m \varphi_{12j} \Delta SBIS_{t-j} + \sum_{k=1}^q \varphi_{13q} \Delta PUAS_{t-k} \\ & + \sum_{k=1}^q \varphi_{13q} \Delta FIN_{t-k} + \varepsilon_t \end{aligned}$$

An important parameter in the estimation of the VECM dynamic model is the coefficient of the error correction term ( $\theta ECM_{t-1}$ ), which measures the speed of adjustment of economic growth to its equilibrium level. In VECM, IPI, SBIS, PUAS and FIN are assumed as endogenous in order to establish the long and short-run relations (Adams, 2009; Andrei and Andrei, 2015; Szkorupová, 2015).  $\beta_{12}$  is an unrestricted intercept in this model,  $\sum_{i=1}^n \varphi_{11i}$  is a matrix of coefficients measuring short-run effects,  $\sum_{j=1}^m \varphi_{12j}$  and  $\sum_{k=1}^q \varphi_{13q}$  are the matrix of coefficients measuring short-run effects of exogenous variables,  $\gamma$  presents the matrix of long-run coefficients,  $\mu$  is the restricted intercept in the co-integrating vector,  $\alpha_{13}$  is a matrix of coefficients measuring the speed of adjustment to equilibrium and  $\varepsilon_t$  is the error term.

## Result and Discussion

Before estimating VAR/VECM, this study went through several stages of pre-estimation tests:

### Stationary Test

**Table 1** Stationary Test Result

Variable	Level		First Difference	
	ADF-Statistics	Critical Values (5%)	ADF-Statistics	Critical Values (5%)
LIPI	-2.288544	-2.892200	-11.24047*	-2.892536
LFIN	-1.487506	-2.892879	-3.310538*	-2.892879
PUAS	-1.661708	-2.892536	-13.66648*	-2.892536
SBIS	-3.631214*	-2.892536	-7.007628*	-2.892879

\* Stationary on a real level 5 percent

The test is to find out whether time series data has a unit root (not stationary) or not. Non-stationary data will also produce spurious regression, namely a regression that describes the relationship between two or more variables that looks statistically significant, when in fact it is not. This stationary test was carried out using the Augmented Dickey Fuller (ADF) root test using a 5 percent significance level (Widarjono, 2013).

From Table 1, it is found that of the four variables, only the SBIS variable is stationary at the level, while the IPI, FIN and PUAS variables are not stationary. So the VAR model needs to be checked for stationarity at the first difference level. At the first difference level, it is

found that all variables are stationary, meaning that these variables already have a consistent mean and variance.

### Optimum Lag Test

In VAR, determining the optimal lag is very important because determining the optimal lag is useful for eliminating autocorrelation problems in a VAR system. If the optimal lag is entered too short, it is feared that it cannot explain the overall dynamics of the model. However, a lag that is too long will also result in an inefficient estimation due to the reduced degree of freedom (Basuki & Yuliadi, 2015). Determination of optimal lag is also useful to show how long the reaction of a variable to other variables. Order or lag was selected based on the Akaike Information Criterion (AIC), Schwarz Information Criterion (SC) and Hannan Quinnon (HQ) criteria. The selected lag is the model with the smallest value of AIC and SC, and the largest value of HQ (Gujarati, 2010).

**Table 2** Optimum Lag Test Results

Lag	LogL	LR	FPE	AIC	SC	HQ
0	- 197.6655	NA	0.001038	4.481456	4.592559	4.526259
1	343.7739	1022.719	8.82e-09	-7.194975	- 6.639462*	-6.970960
2	370.1166	47.41696*	7.03e- 09*	- 7.424814*	-6.424890	- 7.021586*
3	382.1814	20.64415	7.71e-09	-7.337364	-5.893030	-6.754924
4	394.5734	20.10263	8.44e-09	-7.257187	-5.368442	-6.495534
5	401.5255	10.65989	1.05e-08	-7.056123	-4.722967	-6.115258
6	419.6223	26.13976	1.03e-08	-7.102718	-4.325151	-5.982640

\* Smallest value (indicates selected lag)

Determination of the optimal lag used in this study is based on the smallest lag using the Akaike Information Criterion (AIC). Based on the results of the optimum lag test contained in Table 2 that the optimum equation model is in the second lag (2).

### VAR Stability Test:

**Table 3** VAR Stability Test Results

Root	Modulus
0.981387	0.981387
0.949178	0.949178
0.754538	0.754538
0.419807 - 0.255069i	0.491221
0.419807 + 0.255069i	0.491221
-0.311356	0.311356
-0.061034 - 0.074160i	0.096047
-0.061034 + 0.074160i	0.096047



The stability of VAR can be seen from the value of the inverse roots characteristic of the AR polynomial. The VAR system is said to be stable if all the roots in the AR roots table have a modulus less than one (1) and all of them lie within the unit circle

Based on the results of the VAR stability test, it can be concluded that the estimated VAR to be used for IRF and FEVD analysis is stable at its optimal lag, because the tested unit has a modulus range of less than one, which ranges from 0.096047-0.981387.

### Granger Causality Test

Causality test is conducted to determine whether an endogenous variable can be treated as an exogenous variable. This stems from ignorance of the influence between variables. If there are two variables y and z, then whether y causes z or z causes y or applies both or not both (Basuki & Yuliadi, 2015). The causality test in this study was carried out using Granger causality and error correction of the causality model. In this study, the Granger causality method was used to test the causal relationship between two variables. Impulse Respond Function (IRF).

Estimation of the Impulse Response Function (IRF) was carried out to see the shock response of the innovation variable to other variables. In addition, this method aims to see how long the shock of one variable affects other variables (Rusydiana, 2009).

**Table 4** Granger Causality Test Results

Hipotesis	Probability	Conclusion
IPI does not <i>Granger</i> Cause FIN	0.0015	IPI → FIN
SBIS does not <i>Granger</i> Cause FIN	0.0002	SBIS → FIN
PUAS does not <i>Granger</i> Cause FIN	1.E-05	PUAS → FIN
PUAS does not <i>Granger</i> Cause SBIS	7.E-05*	PUAS → SBIS
SBIS does not <i>Granger</i> Cause PUAS	0.0391*	SBIS → PUAS

\* Have causal relationship between variables

Based on the results of the Granger causality test in this research model, it can be seen that a one-way relationship occurs in the variables SBIS with FIN, PUAS with FIN and IPI with FIN. While a two-way relationship (cause and effect) occurs between the SBIS variable and PUAS.

### Johansen Cointegration Test

If the data that has been observed in the unit root test is not stationary, then the next step is to perform a cointegration test. Cointegration is a long-term relationship between non-stationary variables that will become stationary if the variables are combined linearly. If there is cointegration in the variables, it can be ascertained that there is a long-term relationship between the variables. Cointegration test was carried out using the Johansen's Cointegration Test method.

**Table 5** Johansen Cointegration Test Results

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE (s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.571669	118.2101	47.85613	0.0000
At most 1 *	0.207146	39.35925	29.79707	0.0030
At most 2*	0.152321	17.77243	15.49471	0.0223
At most 3	0.025517	2.403929	3.841466	0.1210

\* Cointegrated

Cointegration test results based on the trace statistics in Table 5 show that the model has 3 (three) cointegrated ranks at a five percent significance level. Thus, the results of the integration test indicate that the IPI, FIN, SBIS and PUAS movements have a relationship of stability or balance and similarity of movements in the long term.

#### Estimation of VECM Tes

**Table 6** VECM Short Term Estimation Results

Short Term		
Variable	Coefficient	t-Statistics
CointEq1	0.000428	0.53769
D(LIPI(-1))	-0.158889	-1.45739
D(LIPI(-2))	-0.170790	-1.56294
D(SBIS(-1))	0.007840	1.01590
D(SBIS(-2))	0.003587	0.47771
D(PUAS(-1))	-0.006719	-0.66646
D(PUAS(-2))	-0.017371	-1.94410
D(LFIN(-1))	-0.251611	-0.74038
D(LFIN(-2))	0.306392	0.84528
C	-0.001391	-0.16058

\* Significant real-level five percent

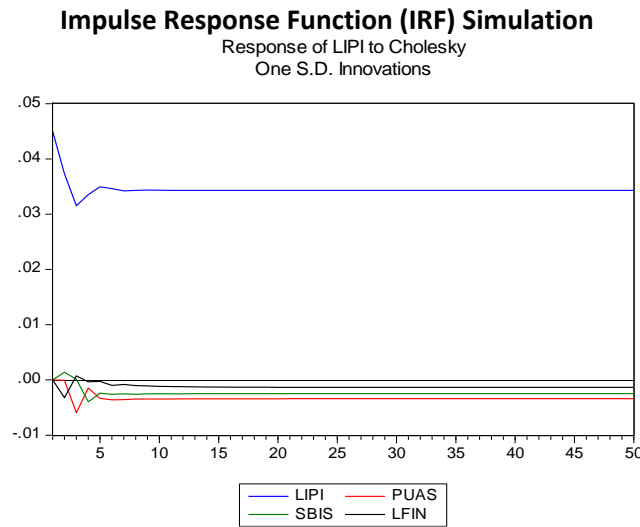
The result of the short-term VECM estimation test in Table 6 showed that it does not explain the relationship in the short term, because there is no variable that significantly affects economic growth. This happens because the model in this study is a monetary transmission model, so that a variable takes time or lag to react to other variables so that generally the reaction of a variable to other variables occurs in the long run.

**Table 7** Long-term VECM Consensus Estimation

Long Term		
Variable	Coefficient	t-Statistics
SBIS(-1)	-0.970091	-10.1676*
PUAS(-1)	1.110815	8.38526*
LFIN(-1)	0.372269	2.46028*

\* Significantly on real levels five percent

Based on the Table 7, the only variable that has a negative effect on economic growth is SBIS, while the PUAS and FIN variables have a positive effect.



**Figure 2** Impulse IPI response to other variables

In this case the author uses a period of up to 50 or equal to the next 50 months. While the vertical axis shows changes in IPI due to shock of certain variables, where this change is expressed in standard deviation units (SD). Overall, IPI's response to the shock of monetary instruments, namely SBIS and PUAS, stabilized more quickly than the shock of the FIN variable. Where the fastest stability point occurs when there is a shock to the SBIS variable in period 7 and the longest response is given when there is a shock to the FIN variable, which is period 10.

**Simulasi Forecast Error Variance Decomposition (FEVD)**

Forecast Error Variance Decomposition is a method used to see how changes in a variable indicated by changes in error variance are affected by other variables. This analysis is used to calculate how big the influence of random shocks from certain variables to endogenous variables. With this method we can see the strengths and advantages of each variable in influencing other variables over a long period of time (Basuki & Yuliadi, 2015).

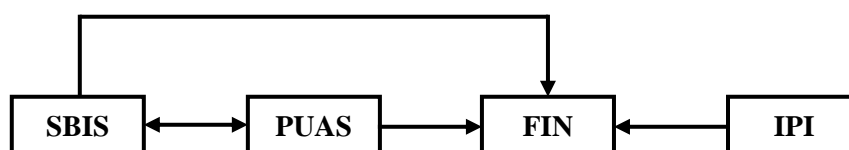
**Table 8** FEVD test result for IPI

Periode	S.E.	Variance Decomposition of LIPI			
		LIPI	SBIS	PUAS	FIN
1	0.044975	100.0000	0.000000	0.000000	0.000000
5	0.082701	98.78877	0.679637	0.370092	0.161498
10	0.113321	98.58467	1.049785	0.239560	0.125987
15	0.137200	98.51710	1.165718	0.190523	0.126663
20	0.157497	98.48058	1.223649	0.164843	0.130927
25	0.175460	98.45783	1.258558	0.149080	0.134528
30	0.191747	98.44238	1.281980	0.138430	0.137212
35	0.206755	98.43122	1.298815	0.130755	0.139213
40	0.220745	98.42279	1.311508	0.124964	0.140740
45	0.233900	98.41620	1.321423	0.120438	0.141938
50	0.246354	98.41091	1.329384	0.116804	0.142901

Overall, the variables SBIS, PUAS and FIN only have a very small contribution to the variability of economic growth, which is only 1.59 percent. The contribution of Islamic monetary instruments in influencing output growth is still small, so changes in SBIS returns have not been able to have a real impact on changes in output.

## Discussions

### Transmissive Monetary Policy Transmission of Sharia Banking Financing Line



**Figure 3** The Transmission Mechanism of Sharia Monetary Policy Financing Line  
(Source: Results of Granger Causality Test, Processed)

From the results of the Granger Causality test, overall it can be seen that the transmission path of Islamic monetary policy cannot be clearly identified. This shows that changes in the rate of return on the monetary controlling variable (SBIS) have an effect on PUAS returns. This is in accordance with the theory that if there is an increase in yields on SBIS, in general it will also be followed by an increase in PUAS yields. Then the level of return on PUAS also affects changes in the volume of financing disbursed by Islamic banking (FIN), but FIN has not been able to influence the final destination, namely output or IPI. This is in accordance with the behavior of banks that look first at the condition of the domestic economy before distributing financing for entrepreneurs or the public, namely adverse selection, as one of the banking efforts to reduce financing risk by being more careful in distributing financing.

The results of this study are in line with Daniar (2016) and Ascarya (2012), which state that the flow of the transmission mechanism of Islamic monetary policy is not able to influence economic growth. The results of Daniar's research show that the flow stops at financing while the results of Ascarya's research show that the transmission line stops at PUAS.

### **Influence of monetary variable Sharia banking financing line on Indonesian economic growth**

Based on the results of the VECM estimation test, the estimation results do not explain the existence of a relationship in the short term. Hence there are no variables that significantly affect economic growth in Indonesia. This happens because the model in this study is a monetary transmission model. However, the VECM estimation results show that all variables have a long-term effect on economic growth.

### **Effectiveness of Sharia Transmission Mechanism Through Sharia Banking Financing Line**

From the results of this research it can be concluded that the mechanism of transmission of monetary policy through financing lines is less effective. It can be analyzed based on IPI response rate against FIN variable shock and FIN contribution to IPI. The time span required by the IPI variable to respond to the presence of FIN variable changes to achieve a balanced condition is 10 months. However, FIN has a relatively small contribution of only 0.14 percent. Thus, the Sharia banking financing line has not yet contributed to economic growth. In addition, Islamic monetary policy objectives are the benchmark of the effective monetary policy transmission line in achieving the final target, one of which is economic growth, but apparently this goal cannot be achieved due to the transmission flow, which stops until financing only.

### **Conclusion**

In line with the previous research, the monetary policy transmission mechanism does operate through various channels. Therefore, the Islamic banking financing channel that has not been clearly identified and disconnected in the FIN becomes a natural thing, because it is affected by many variables and markets with varying speed and intensity. However, the target of using Islamic monetary policy has begun to show success; this can be seen in the results of research where transmission through the financing channel has a positive effect on real sector output. This means that monetary policy has been directed to the right goal, namely productive activities. Like the debate at the beginning of this research, the implementation of monetary policy will always face many challenges. The challenges include the results of positive policies that cannot always be seen in the near future. Therefore, the long-term impact of this policy projection is the right thing.

This study aims to analyze the description of the transmission flow of financing channels, the effect of monetary policy instruments, and their effectiveness to achieve economic growth. Using time series data from 96 banks, this study used the Vector Error Correction Model (VECM) to detect short- and long-term correlations. First, based on the Granger causality test, the transmission path of monetary policy in the Islamic banking financing channel has not been clearly identified and is interrupted in the FIN. However, monetary transmission through the financing channel has a positive effect on real sector output. Second, from the VECM estimation results, it shows that the SBIS, PUAS and FIN variables only affect the long term and have no effect on the short term. This is because the variables used are monetary variables that require a grace period or time lag to be able to influence the final target. Third, based on the IRF and FEVD simulations, the transmission mechanism in the Islamic banking financing channel has proven to be less effective. Shocks in the financing channel variable (FIN) to IPI, subsided and stabilized in a period of less than one year, namely period 10. Meanwhile, in terms of the amount of its contribution, the financing variable (FIN) only had a very small contribution in encouraging economic growth, which was 0.14 percent. The results of research showing that the transmission mechanism in the Islamic banking financing channel has proven to be ineffective, can be used as an evaluation material for banking policy makers in Indonesia,

because it turns out that Islamic banking financing so far still has a very small contribution to economic growth in Indonesia.

This study has limitations, and due to the limits of the data and the research methods, it is possible that this study will be unable to detect significant tripler-dimensional correlations. Additionally, the role of transmission shocks and financial technology's impacts are beyond the scope of this study and may be an intriguing area to focus on more thoroughly in future studies. Moreover, the future study should develop prior studies about monetary policy and risk-taking behavior of banks, giving more debates between Islamic and commercial banking system (Ha & Quyen, 2018a, 2018b).

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