

IMPLEMENTING MONETARY POLICY WITH APPLICATION OF SUKUK: CHALLENGES AND POLICY DIRECTIONS

^{*1,2}Md. Aminul Islam, ³Md. Golzare Nabi, ⁴Rafiun Nabi & ¹Md. Sharif Hassan

¹ Faculty of Business & Communication, Universiti Malaysia Perlis,
01000, Perlis, Malaysia.

² Department of Business Administration, Daffodil International University,
Ashulia, Dhaka, Bangladesh.

³ Bangladesh Bank Training Academy (BBTA),
Dhaka 1216, Bangladesh.

⁴ Robi Axiata Limited,
Dhaka 1212, Bangladesh.

*Corresponding author: amin@unimap.edu.my

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ABSTRACT

Each market economy uses monetary policy to attain certain macroeconomic goals of price stability, higher growth and employment. A market economy having an interest-based conventional banking system applies mainly interest-based tools to attain the objectives of monetary policy. In contrast, a market economy with interest-based and interest-free banking needs to apply Shariah-compliant monetary instruments vis-à-vis conventional tools for attaining the goals of the monetary policy. As there is a paucity of quality research on Sukuk-based monetary policy, the current paper will explore Shariah compliant monetary instrument 'Sukuk' for use as a monetary tool in dual banking, examining experiences of Shariah-based monetary operations in different countries. The paper will also examine the challenges of monetary policy operating in the dual banking system of Bangladesh with policy options for addressing the challenges.

Keywords: Dual banking system, monetary policy, Shariah based monetary operations, Sukuk, Qard-al-Hasan.

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1.0 INTRODUCTION

Each market economy uses monetary policy to attain certain macroeconomic goals of price stability, higher growth and employment. A market economy having an interest-based conventional banking system applies mainly interest-based tools to attain the objects of monetary policy. In contrast, a market economy with interest-based and interest-free banking needs to apply Shariah-compliant monetary instruments vis-à-vis conventional tools for attaining the goals of the monetary policy. Due to the significant macroeconomic impacts of monetary policy, the monetary authority needs to formulate and implement monetary policy considering every segment of the banking system. A country with a dual banking system comprising interest-based and interest-free banking needs to use Shariah-compliant monetary instruments vis-à-vis conventional tools to attain the goals of the monetary policy. With the advent of interest-free Islamic banking in Muslim majority and minority countries across the globe and as it has become systematically important in many Muslim majority countries, the monetary authority needs to restructure the framework of monetary policy and rewrite its principles by incorporating Shariah-compliant monetary tools. Though the global Islamic financial system experienced robust growth in Muslim majority and minority countries, there is a dearth of quality research on Shariah-compliant monetary tools. As Muslim-majority countries have dual banking systems, it is imperative to formulate and conduct monetary policy considering the presence of interest-based and interest-free banking systems to attain key macroeconomic goals of price stability, higher growth and employment.

The Islamic finance industry has evolved in Muslim majority and minority countries during the last five decades after the humble opening of the first Islamic bank in Egypt in 1963. The Islamic finance industry has developed based on Shariah principles such as avoidance of *riba* (interest), *gharar* (uncertainty) and *maisir* (gambling) in dealings, following asset-backed transactions and making the investment only in Shariah-approved projects. Due to its unique features, the Islamic finance industry demonstrated its resilience during the recent global financial crisis that stemmed from the sub-prime mortgage problem in the USA in 2008 and has proven itself as a sound and less risky alternative viable sub-sector of the modern finance industry of the globe. The assets of the growing global Islamic finance industry stood at USD

4.0 trillion in 2021 (Refinitiv, 2022). It operates in 76 countries and has 1679 financial institutions.

Following the rising growth of Islamic finance, the policymakers, researchers and academician of countries having Islamic finance have focused on formulating monetary policy based on Shariah-based instruments for managing the money supply, liquidity of Islamic banks and smoothing fiscal operation towards higher economic growth, employment creation and poverty alleviation. Given this, the present paper aims to examine the present status of applying Sukuk as an Islamic monetary instrument in the formulation of monetary policy in the dual banking system of Muslim-majority countries. The key objectives of the paper lie in assessing the Shariah-compliant financial instrument ‘Sukuk’ as a monetary policy tool and its challenges. To attain the paper’s objectives, we follow the qualitative research method. The required information/data has been collected from secondary sources to derive the study’s objectives.

The paper is organized as follows: After the introduction, the second deals with a review of literature on monetary policy operations under a dual banking system; the third section focuses on monetary policy regimes, channels and framework; the fourth section sheds light on monetary policy framework in the presence of Islamic Banks; the fifth section explains transmission mechanisms of monetary policy under Islamic banking and the sixth section is devoted to analyze monetary policy instruments/tools under Islamic banking system. The seventh section examines the challenges of monetary policy in a dual banking System. The eighth section focuses on monetary policy options in the dual banking system. The ninth section concludes.

2.0 LITERATURE REVIEW

Though Islamic banking and finance has recorded robust growth globally, we find few papers on Shariah complaint monetary policy instruments despite their significance in managing money supply in line with Islamic Shariah principles. Initially, Chapra (1983) and Khan and Mirakhor (1989) attempted to find Shariah-based monetary policy tools. Following their noble works, Islamic economists have come forward to devise monetary policy tools from the viewpoint of Islamic Shariah principles.

Awad (2015) discusses the most recent advancements in Islamic monetary policy instruments that central banks can employ to manage monetary policy. The paper discusses Islamic monetary policy instruments proposed by academics and implemented by the Central

Bank of Sudan (CBS), as well as an evaluation of the contribution of Islamic monetary policy instruments applied by CBS to achieving price stability.

According to Khatat (2016), a monetary policy with a dual approach can be used if a country's Islamic financial system is not as popular as conventional banking. In addition, in the study suggested an Islamic financial system, an operational design of Islamic monetary policy and the facilitation of monetary communication. Typically, many Islamic banks in these nations have excess liquidity. Excess liquidity must be effectively managed to improve the transmission of the Islamic financial system. Consequently, the study proposed an effective liquidity management framework for Islamic banks.

Sarker (2016) examines the concepts and operational methods of monetary policy instruments employed by some OIC central banks for Shariah-compliant monetary management. The article analyzes Malaysian, Sudanese, Bahraini, Iranian, and Bangladeshi Islamic monetary policy tools and proposes two new ones: Central Bank Muarabah Sukuk (CBMS) and Government Murabaah Sukuk (GMS). The findings of this paper would aid Bangladesh Bank in governing the liquidity of Islamic banks following Islamic Shariah.

In a dual banking system, Zulkhibri and Sukmana (2017) examine the distributional differences between Islamic bank financing responses to financing rate based on bank-specific characteristics. Using panel data regression methodology, the study was conducted to determine how effectively Malaysian Islamic banks fulfil their obligations as capital providers to businesses and entrepreneurs. In terms of bank characteristics and monetary policy, the report proposes a model for Islamic bank financing that serves as a standard. The results indicate that bank-specific features play a part in influencing Islamic financing behaviour, and that Islamic financing behaviour is comparable to conventional lending behaviour in that Islamic bank financing is contingent on the bank's size, liquidity, and capital. The study also reveals that there is no significant difference between Islamic bank financing and conventional bank lending behaviour in response to changes in monetary policy; however, there are numerous issues and challenges pertaining to Islamic financing instruments, financial markets, and regulations that need to be addressed and resolved.

Aysan, Disli, and Ozturk (2018) uses impulse response functions (IRFs) inferred from the panel-VAR model with quarterly data from Turkey from 2004Q3 to 2012Q4 to measure the response of bank deposits and lines of credit to monetary policy changes in conventional and Islamic banks on both the borrowing and lending sides. The study's main finding is that Islamic banks' credit and deposits are much more sensitive to changes in policy rates. This is because people with Islamic bank accounts don't like taking risks, and Islamic bank interest

rates are fixed. Also, because they depend more on deposits for funding and can't change deposit rates because of interest bans, they are more vulnerable to changes in the money supply. Because Islamic banks focus on lending to small and medium-sized businesses (SME), tightening monetary policy has a bigger effect on a decline in Islamic bank loans. Lastly, the study suggests that because Islamic banks and SMEs are more sensitive to monetary and macroeconomic shocks, central banks should be aware that monetary contractions may affect unemployment and growth through Islamic banks.

Hamza and Saadaoui (2018) look into how the borrowed funds agency of Islamic banks works to move money around the economy. The primary objective of this research is to see if this channel is effective and see if the behavior of Islamic banks on interest rates is affected by their unique characteristics. The study focuses on the possible mitigating impact that profit-sharing investment accounts (PSIA) could have on the debt financing channel, as this source of funding, unique to Islamic banks, is anticipated to be more stable than deposit accounts in conventional banks. The study uses a sample of 50 Islamic banks that is pretty representative and the prediction of a dynamic panel model using data from 2005 to 2014. Since changes in interest rates affect Islamic bank financing and PSIA growth, capitalization, asset liquidity, and size are some of the most important factors that affect Islamic banks' debt assets supply. This shows that monetary policy does affect debt financing. In addition to the liquidity of assets and the size of banks, the growth rate of PSIA deposits reduces the negative effect of interest rates on the growth of debt financing. This shows how important this type of deposit is in monetary transmission, particularly in nations with both Islamic and traditional banking systems.

Using data on Indonesian Islamic banking from 2003 to 2014 and a panel regression approach, Zulkhibri (2018) investigates the variable responses of Islamic banks to changes in financing rates and monetary policy, based on their individual characteristics. The financing rate has a negative effect on financing at Islamic banks, whereas bank-specific characteristics have a positive effect. In Islamic banks, magnitude and capital impact financing more than liquidity. As a result, monetary policy changes have little effect on bank financing, indicating that the transmission of monetary policy through the Islamic banking sector is weak. The study also finds that the insufficient effect of monetary policy on bank financing can be explained by the continued expansion of Islamic banks during the sample period, which resulted in a substantial increase in deposits and a high liquidity position.

Hossain (2020) examined the framework of Islamic monetary policy in Asia's 27 Muslim OIC member nations using secondary data. This study claims that there are over 154 Islamic commercial banks operating in 23 countries with conventional monetary policy and very few

Islamic monetary instruments. Iran, on the other hand, has 30 commercial banks that follow an official Islamic monetary system. The findings also indicate that only 17% of banks overall in the sample countries are Islamic banks, while 83% are still interest-based banks, and that Islamic monetary policy tools are absent from Turkmenistan and Uzbekistan. This study looks into why only 25% of countries developed Islamic banking regulations between 1970 and 2000, despite the fact that 64% of Islamic banks were founded in 27 countries during that time. In contrast, between 2000 and 2015, 75% of the laws governing Islamic banking were passed. The most popular Islamic financial instruments are sukuk, project-based debt instruments, and others.

Using monthly data from Indonesia from January 2010 to September 2019, Ponziani and Mariyanti (2020) examine the role of Islamic banks in the transmission of monetary policy using Granger Causality and Autoregressive Distributed Lag (ARDL) methods. The study found that fluctuations in Islamic deposits and financing are likely to result from any change in the interbank overnight rate. The ARDL results indicate co-integrating relationships in the output and inflation model. Islamic bank financing and deposits could be used to correct output and inflation deviations over the long term. The study also shows that Bank Indonesia has the ability to alter the interbank overnight rate in order to control the amount of liquidity injected into or absorbed by the economy. The Fed will need to take the economy's benefit from financial technology companies into account.

By using the aggregate output and aggregate expenditure model within the context of Islamic Monetary Policy, Selim and Hassan (2020) explore how a central bank can pursue Quard Al- Hasan (QH) Monetary Policy and act as a lender of last resort (LOLR) for both Islamic and conventional interest-based banks. The study concludes that CB acting as LOLR by pursuing Q-H MP will increase Islamic banks' deposit and lending capacity, ultimately increasing loan creation and aggregate expenditures in the overall economy and increasing real GDP and employment.

Caporale et al. (2020) use a VAR model to examine the bank lending channel of monetary transmission from 1994 to 2015 in Malaysia. The results of both high-growth and low-growth regimes show that Islamic credit is less responsive to interest rate shocks than conventional credit. However, sub-sample estimates show that this response has recently increased, becoming quite similar to conventional credit. Furthermore, in the low-growth regime, the significance of Islamic credit surprises in driving macroeconomic performance is notable and has a positive impact. Therefore, the study suggests that when formulating

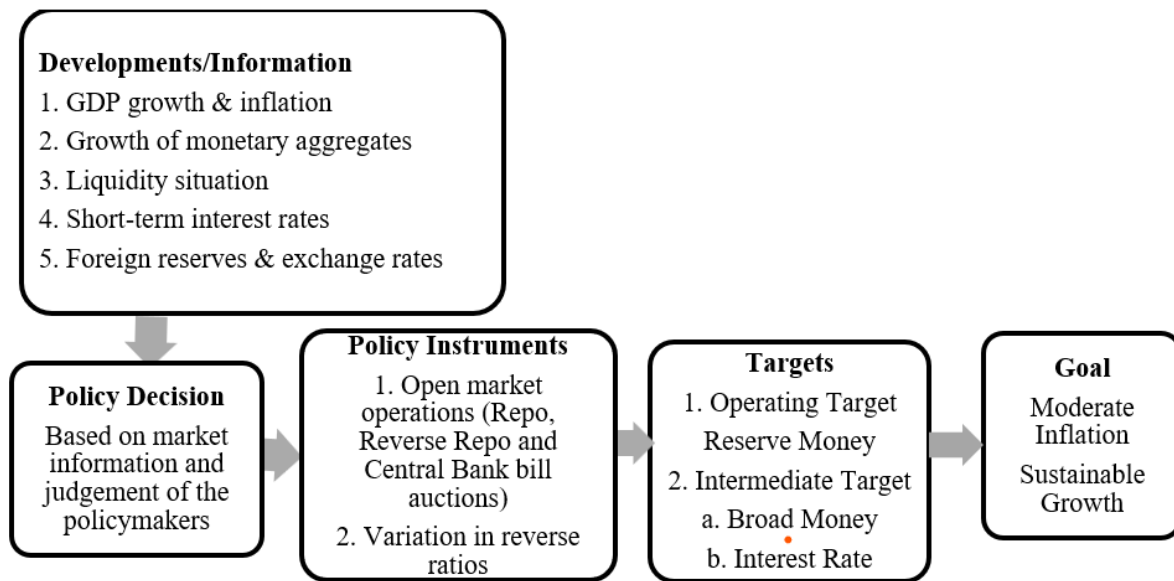
monetary policy in economies with dual (Islamic and conventional) banking, policymakers take into account the Islamic bank lending channel.

3.0 MONETARY POLICY REGIMES, CHANNELS AND FRAMEWORK

Monetary policy refers to measures adopted by the Central Bank to affect national economic activity, GDP by manipulating the money supply and policy rates (bank rate). Every national economy follows a specific monetary policy regime to influence financial and real sector prices toward higher economic growth and employment. According to the leading financial economist Prof. Mishkin (1999), there are four critical monetary policy regimes: exchange rate targeting, monetary aggregates targeting, inflation targeting, and regime with an implicit nominal anchor. The success of different monetary regimes lies in their ability to conduct monetary policy to attain higher growth and price stability.

Economic literature has identified four major channels or mechanisms by which monetary policy can influence the price level and national income: interest rates, financial asset prices, domestic credit, and exchange rates (Mishkin, 1999). Monetary policy transmission mechanisms are the channels through which the evolution of monetary aggregates affects the product level and prices.

The monetary policy framework refers to a logical and sequential set of actions for formulating and conducting monetary policy. The framework is designed on the key information on GDP growth, growth in monetary aggregates, liquidity, inflation, and exchange rate. It is framed using projected GDP growth, targeted inflation rate and applying reserve money (RM) as the operating target and board money (M2) as the intermediate target. The flow chart of the interest-based conventional monetary policy framework is illustrated in Figure 1. Within the framework, changes in policy rate (repo rate) transmit through the money market to the entire financial system, which, in turn, influences financial and real sector prices toward the targeted path of growth and inflation.



Source: Bangladesh Bank (2005)

Figure 1: A typical conventional monetary framework

4.0 MONETARY POLICY FRAMEWORK IN THE PRESENCE OF ISLAMIC BANKS

Due to Islamic principles prohibiting interest payments, requiring the use of money only as a medium of exchange, profit-and-risk sharing, and avoiding uncertain investments like gambling, wine, pork, and other activities not permitted by Shariah, the presence of Islamic banks alters the conventional monetary policy framework.

4.1 Country Experience of Monetary Policy in the presence of Islamic Banks

Khatat (2016) focuses on countries' monetary policy experience in the presence of Islamic Banks. The author names a few nations where monetary policy is effective when there is an Islamic financial sector. The United Arab Emirates (UAE), Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, Bangladesh, Brunei, Iran, Jordan, Malaysia, Pakistan, Sudan, and Yemen are among these countries. While other countries have dual monetary systems, Iran and Sudan practice 100% Islamic banking without conventional banks. Most countries with Islamic banking operate under a fixed exchange rate or a monetary targeting system. Jordan and Brunei, members of the GCC, use an exchange rate anchor, while Bangladesh and Yemen use monetary targeting (Table 1).

Table 1: Monetary policy framework

Monetary Policy Framework							
Exchange Rate Arrangement (number of countries)	Exchange Rate Anchor (9)				Monetary Aggregate Target (2)	Inflation Targeting Framework	Other (3)
	U.S. Dollar (6)	Euro	Composite (2)	Other (1)			
Currency board (1)				Brunei i Darus salam			
Conventional peg (7)	Bahrain Jordan Oman Qatar Saudi Arabia U.A.E.		Kuwait				
Stabilized arrangement (2)				Bangladesh h Yemen			
Other managed arrangements (4)			Iran				Malaysia Pakistan Sudan

Source: Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER) 2014

5.0 MONETARY TRANSMISSION MECHANISM UNDER ISLAMIC BANKING

Khatat (2016) examines three monetary transmission channels under Islamic banking.

5.1 The Interest Rate Channel in the Presence of Islamic Banking

Insufficient Islamic financial instruments can be used to price the credit of Islamic banks because they are equivalent to money market or government security yield curves in the dual banking system and Islamic finance. Islamic banks therefore primarily use traditional interest rates to determine the price of their goods. Monetary policy transmission via the interest rate

channel becomes less effective in the presence of significant Islamic banking when Islamic banks respond slowly to changes in conventional interest rates.

5.2 Relevance of the Bank Lending Channel for Islamic Banks

Reserve balances may be crucial to how monetary policy is carried out in the lending channel. The Central Bank's (CB) capacity to serve as one of the primary liquidity suppliers for Islamic banks and the capacity of Islamic banks to adjust their supply of credit/financing in response to shifts in their reserve balances at the CB will determine the efficiency of the bank lending—or financing—channel for Islamic banks.

5.3 The Profit-sharing Principle and The Signaling Mechanism

The profit-sharing ratios of central banks' Mudarabah transactions with Islamic banks may impact those ratios in the interbank Mudarabah market. The profit-sharing percentages of Islamic contracts with their clients can be set by Islamic banks independently. The success of this monetary policy tool depends on how developed Islamic financial markets are. The Central Bank helps shape market expectations and facilitates monetary transmission through the expectation channel by indicating its stance on monetary policy. The Central Bank might make an effort to inform the public about the interbank markets, the Shariah-compliant operational frameworks, and the liquidity conditions of Islamic banks.

6.0 MONETARY POLICY INSTRUMENTS/TOOLS UNDER ISLAMIC BANKING SYSTEM

The monetary policy instruments under Islamic Banking System are designed to avoid interest as Islamic Shariah does not allow interest in any dealings.

6.1 Use of Conventional Tools

As Shariah prohibits interest, Central Bank cannot use bank rates to influence financial and real prices. Reserve ratios (SLR/CRR) can be used as a direct monetary instrument. The other conventional direct instrument, the 'bank rate' can be replaced by the mudaraba fund rate. Credit ceilings, directed credit, specific lending and refinance facilities are also practised in countries with Islamic banking.

Countries like Iran, Jordan, Kuwait, Malaysia, Bahrain, Bangladesh, Oman, Pakistan, Saudi Arabia, United Arab Emirates, Qatar, and Yemen sometimes use reserves ratios (SLR/CRR). Bangladesh, Iran, and Yemen use Interest rate/profit controls. Jordan, Oman and

United Arab Emirates (U.A.E.) apply Credit ceilings. Iran uses directed credits and specific lending requirements for monetary operations. Bangladesh Bank provides refinancing facilities to Islamic banks and financial institutions for priority sector lending (Khatat, 2016).

6.2 Use of Shariah-Compliant Sukuk as Monetary Policy Tools

In addition to direct instruments, indirect instruments, such as open market operations of Shariah-compliant Sukuk, can be used to manage the money supply. Muslim-majority countries have introduced Sukuk as monetary policy instruments in the presence of the Islamic banking system. Iran and Sudan having 100 percent Islamic banking, have fully adopted Islamic Shariah-compliant instruments, while other countries with dual banking use both Islamic and conventional instruments. Different Types of Sukuk issued in Muslim Majority and Minority Countries are shown in Appendix 1.

7.0 CHALLENGES OF MONETARY POLICY IN DUAL BANKING SYSTEM

Muslim countries encounter challenges in conducting monetary policy in line with Shariah principles.

- i. **Lack of Legal Mandate:** The Central Banks of most Muslim-majority countries lack the necessary mandate for monetary policy in line with the principles of Islamic Shariah.
- ii. **Few Islamic Monetary Policy Instruments-** There is a shortage of adequacy of Sukuk and other Islamic monetary instruments to formulate and implement monetary policy.
- iii. **Paucity of Qualified Human Resources-** Most Muslim-majority countries suffer from a shortage of qualified human resources in formulating and implementing monetary policy based on Sukuk and other Islamic monetary instruments in a dual banking system.
- iv. **Absence of Islamic finance as a financing tool in Planning Documents-** Though most Muslim-majority countries need huge financing for infrastructures and Islamic finance has already proved itself globally as an effective financing tool, Islamic finance is not included in major planning documents like five-year and annual development plan.

8.0 POLICY DIRECTIONS

As most Muslim-majority countries belong to a dual banking system, it is imperative to consider Islamic monetary instruments in the formulation and implementation of monetary policy to attain smooth liquidity management of Islamic banks and motivate Islamic banks to participate in Government fiscal operations actively.

(i) Incorporation of Sukuk in Central Bank Charter as Monetary Policy Tool- The Central Banks of Muslim-majority countries need to incorporate necessary clauses in Central Bank Charter to apply Sukuk and other Shariah-based monetary tools in the formulation and implementation of Monetary Policy.

(ii) Issue of More Islamic Monetary Policy Instruments- Bangladesh needs to increase the supply of Sukuk and other Islamic monetary policy instruments such as Qard-al-Hasan. To this end, public sector projects may be implemented with modes of finance consistent with the Islamic Shariah principles. In addition, Shariah-compliant central bank facilities need to be introduced for designing and implementing market-based instruments for monetary control and government financing that satisfy the Islamic prohibition on ex-ante interest payments. These measures will enhance the supply of Islamic monetary policy instruments and smooth the monetary transaction mechanism in a dual banking system. Qard-al-Hasan can be used instead of the bank rate.

(iii) Establishing Islamic Monetary Policy Cell- The Central Bank of Muslim countries need to establish Islamic Monetary Policy Cell at Monetary Policy Department to monitor developments in Islamic monetary instruments regularly and derive necessary inputs for inclusion in the monetary policy statement. As Islamic banking is growing fast, it should be accommodated properly in monetary policy statements prepared and released by Central Bank Bank's Monetary Policy Department to provide proper signals to the market players.

(iv) Developing Human Resources – In formulating and implementing monetary policy in a dual banking system, it is necessary to develop human resources. If proper training on Islamic monetary instruments is provided to concerned officials, the effects of the monetary policy on the economy will be optimal.

(v) Inclusion of Islamic finance as a financing tool in Planning Documents- As Islamic finance has already proved itself globally as an effective

financing tool, Muslim countries can include Islamic finance in national planning documents like a five-year plan and annual development plan side by side with other financing options. The inclusion of Islamic finance in national planning documents as financing tools may pave the way for the smooth operation of monetary policy with the presence of Islamic banks.

9.0 CONCLUSION

Monetary policy is used to maintain an optimum money supply that influences financial and real sector prices towards achieving macroeconomic objectives of price stability, economic growth, higher employment and a stable balance of payments. Following its significant impacts on the economy, the success of monetary policy in a dual banking system lies in the inclusion of both conventional and Islamic monetary tools in its formulation and implementation. Including all segments of the banking sector in the monetary policy framework can smooth the monetary transmission mechanism to give proper signals to market players. Muslim-majority countries like Malaysia, Sudan, Bahrain and other countries having Islamic banks also conduct monetary policies incorporating interest-based and interest-free Islamic monetary tools. However, key challenges stand in the way of formulating a Sukuk-based monetary policy in most Muslim-majority countries. If major challenges such as the absence of a strong legal mandate for Islamic monetary policy, inadequate supply of Islamic monetary policy instruments, absence of Islamic finance in most planning documents as an alternative financing option and shortage of proper human resources are addressed in formulating and implementing monetary policy under dual banking system, the central banks of Muslim majority countries would be able to provide proper signals to key market players- banks, firms, households and other stakeholders.

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REFERENCES

- Awad, I. (2015). Conducting monetary policy under a fully-fledged Islamic financial system. *Journal of Islamic Economics, Banking and Finance*, 11(1), 23-45.
- Aysan, A. F., Disli, M., & Ozturk, H. (2018). Bank lending channel in a dual banking system: Why are Islamic banks so responsive? *The World Economy*, 41(3), 674-698.

- Bangladesh Bank. (2005). *Monetary policy review*. Bangladesh Bank.
- Bangladesh Bank. (2022). *Developments of Islamic banking in Bangladesh, January-March 2022*. Bangladesh Bank.
- Caporale, G. M., Çatık, A. N., Helmi, M. H., Ali, F. M., & Tajik, M. (2020). The bank lending channel in the Malaysian Islamic and conventional banking system. *Global Finance Journal*, 45(1), 100478.
- Chapra, M. U. (1983). *Monetary policy in an Islamic economy. Money and Banking in Islam*. International Centre for Research in Islamic Economics, King Abdul Aziz University, Jeddah.
- Hamza, H., & Saadaoui, Z. (2018). Monetary transmission through the debt financing channel of Islamic banks: Does PSIA play a role? *Research in International Business and Finance*, 45(1), 557-570.
- Hossain, B. (2020). Islamization of monetary policy of 27 OIC Muslim countries in Asia: The successes, the barriers and the future directions. *Global Review of Islamic Economics and Business*, 7(2), 091-104.
- Khan, M. S., & Mirakhor, A. (1989). The financial system and monetary policy in an Islamic economy. *Journal of King Abdulaziz University: Islamic Economics*, 1(1), 1-19.
- Khatat, M. E. H. (2016). *Monetary policy in the presence of Islamic banking*. International Monetary Fund, WP/16/72, Washington DC, USA.
- Mishkin, F. S. (1999). *International experiences with different monetary policy regimes* (No. w6965). National Bureau of Economic Research, USA
- Ponziani, R. M., & Mariyanti, T. (2020). Islamic bank and monetary policy: The case of Indonesia. *International Journal of Islamic Economics and Finance*, 3(1), 121-142.
- Refinitiv. (2022). ICD – Refinitiv Islamic Finance Development Report 2022. <https://www.refinitiv.com/en/resources/special-report/islamic-finance-development-report-2022>
- Sarker, A. A. (2016). An evaluation of Islamic monetary policy instruments introduced in some selected OIC member countries. *Islamic Economic Studies*, 24(1), 1-47.
- Selim, M., & Hassan, M. K. (2020). Qard-al-Hasan-based monetary policy and the role of the central bank as the lender of last resort. *Journal of Islamic Accounting and Business Research*, 11(2), 326-345.
- Zulhibri, M. (2018). The impact of monetary policy on Islamic bank financing: Bank-level evidence from Malaysia. *Journal of Economics, Finance and Administrative Science*, 23(46), 306-322.

Zulhibri, M., & Sukmana, R. (2017). Financing channels and monetary policy in a dual banking system: Evidence from Islamic banks in Indonesia. *Economic Notes: Review of Banking, Finance and Monetary Economics*, 46(1), 117-143.

APPENDIX 1

Types of Sukuk issued in Muslim Majority and Minority Countries

Name of Sukuk	Issuer	Tenure	Purposes
Sukuk Al Salam (First issue in 2001)	Bank of Bahrain (MOF)	Monthly	Short term financing needs of Government Projects
Sukuk Al Ijarah (Short Term in 2005 & Long term in 2009)	Bank of Bahrain (MOF)	6 Months 2-10 years	Short and long term financing needs of Government Projects
Islamic Sukuk Liquidity Instruments (2008)	Bank of Bahrain	Overnight	Liquidity Management of Islamic banks
Wakalah (alternative to Repo & Reverse repo)	Bank of Bahrain	Short term	To absorb excess liquidity of Islamic retail banks
Sukuk Bank Negara Malaysia Murabaha (2007)	Bank Negara Malaysia	Short term	Commodity Murabaha (tawarruq) is used to manage liquidity
Government Investment Issue based on Murabaha (2013)	Government of Malaysia	Long term	Funding Development expenditures
Sukuk Bank Negara Malaysia Ijarah (2006)	Bank Negara Malaysia	Short term	To absorb excess liquidity from market
Ijarah Sukuk (2005)	Government of Malaysia	5 years (Global)	Developing Government Hospitals, Office complex and Living Quarters
Sukuk Ijarah Muntahiyah bi al-Tamlik (2014)	Government of Pakistan	5 years (Global)	Supporting general budgetary purposes
Sukuk Ijarah Muntahiyah bi al-Tamlik (2012-2016)	Government of Turkey	5 years (Global)	Supporting general budgetary purposes
Wakalah bi al-Istithmar sukuk (2016)	Government of Malaysia	10 years 30 years	To redemption of global wakala sukuk and to finance development expenditures
Wakalah bi al-Istithmar Sukuk (2014)	Government of Indonesia	5 years 10 years	To purchase assets and meet general expenditures requirements
Wakala Sukuk (2015)	Government of Hong Kong	5 years	To purchase commodities for Murabahah Agreement.

Ijara Sukuk (2014)	U.K Government	5 years	Premium for the lease of the Premises for a 99 year term pursuant to the Head Lease
Ijara Sukuk (2020)	Bangladesh Government	5 years	To develop safe drinking water project

Source: ISRA (2018) and Bangladesh Bank (2022)