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Central Bank Liquidity Management Instruments in Islamic Banking Systems: A Comparative Analysis of Operational Frameworks and Country Practices

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Abstract

Contemporary financial systems increasingly operate as dual banking systems in which conventional and Islamic banks coexist. Consequently, central banks have developed Shariah-compliant liquidity management instruments to facilitate monetary policy implementation, preserve financial stability, and support the effective functioning of Islamic money markets. This study comparatively analyses the principal liquidity management instruments used for liquidity absorption and provision, focusing on instruments operationally implemented by central banks rather than all theoretically permissible Islamic contracts. It examines the operational structures of wakala, commodity murabaha, qard, partnership-based contracts, sukuk, repo, and collateralized investment arrangements, and develops a qualitative framework for comparing their use across jurisdictions. The findings indicate that, despite differences in regulatory frameworks and market development, Islamic central bank liquidity management converges toward a limited number of core instruments. Sukuk-based instruments form the foundation of contemporary liquidity management frameworks, while wakala and commodity murabaha are the most widely used operational mechanisms. Evidence from Malaysia, Bahrain, the United Arab Emirates, Indonesia, Pakistan, Bangladesh, Oman, Jordan, Türkiye, and the United Kingdom demonstrates convergence toward operationally efficient Shariah-compliant instruments. The study provides a systematic comparative framework for analysing the operational implementation of Islamic central bank liquidity management instruments.

Keywords

Islamic Central Banking, Money Market Operations, Islamic Monetary Policy, Cross-Country Comparision, Islamic Bank Liquidity Management

1. Introduction

The mechanisms used by central banks to provide and withdraw liquidity in Islamic banking systems have attracted increasing attention in both the academic literature and financial practice. As Islamic banking has expanded across jurisdictions, central banks have developed a variety of Shariah-compliant monetary policy instruments and liquidity management frameworks to accommodate the distinctive operational characteristics of Islamic financial institutions while maintaining financial stability and effective monetary policy implementation.

This study examines the principal Shariah-compliant liquidity management instruments employed by central banks in Islamic banking systems, covering both liquidity absorption and liquidity provision operations. The study adopts a descriptive and comparative approach based on official central bank operational frameworks, publications of international standard-setting institutions, and the relevant academic literature. Rather than examining all theoretically permissible Islamic financial contracts, the analysis focuses on instruments that have been operationally implemented by central banks. The study first examines the principal liquidity absorption mechanisms, followed by liquidity provision instruments, and subsequently presents a comparative assessment of country practices. In addition, the structural design and operational flow of each instrument are illustrated through flow-based diagrams to facilitate a clearer understanding of their implementation.

Although liquidity management instruments in Islamic banking systems have become increasingly diversified, their practical application demonstrates a considerable degree of convergence across jurisdictions. The core operational instruments predominantly include sovereign and central bank-issued sukuk, together with facilities based on wakala, murabaha, qard, wadiah, ju'alah, and partnership-based contracts. Despite differences in contractual structures and institutional arrangements, these instruments collectively constitute the foundation of Islamic central bank liquidity management frameworks.

A wide range of Shariah-compliant contracts is theoretically available within Islamic finance; however, only a limited number have been adapted for routine central bank liquidity management operations. Accordingly, this study distinguishes between instruments that are merely permissible under Shariah principles and those that have been operationally implemented by central banks. The analysis therefore emphasizes actual monetary policy operations rather than theoretical contractual possibilities.

On the liquidity absorption side, central banks employ several operational instruments, including qard-based facilities, wadiah models, wakala deposit arrangements, commodity murabaha structures, ju'alah-based facilities, mudarabah models, and various forms of sukuk issuance. Sukuk instruments themselves comprise multiple contractual structures, including ijarah, salam, murabaha, istisna', musharakah, mudarabah, wakala, and hybrid sukuk, each possessing different op-

erational characteristics and levels of market tradability.

For liquidity provision, central banks employ five principal categories of instruments: secured and unsecured commodity murabaha facilities, qard-based financing, repurchase agreement (repo) structures, collateralized wakala arrangements, and collateralized investment-based models. Collectively, these instruments support short-term liquidity management while preserving compliance with Shariah principles and contributing to financial system stability.

Sukuk occupy a central position in both liquidity absorption and liquidity provision operations. Different jurisdictions adopt alternative sukuk structures according to their regulatory frameworks, legal environments, and market development, resulting in differences in underlying asset composition, contractual arrangements, maturity profiles, and secondary-market tradability. Consequently, the liquidity characteristics and operational effectiveness of sukuk instruments vary across countries.

Country experiences demonstrate that although central banks pursue broadly similar monetary policy objectives, they have developed diverse operational frameworks reflecting differences in legal systems, financial market development, and Shariah governance. For example, Bahrain utilizes salam, ijarah, and wakala-based sukuk instruments; the United Kingdom and Oman employ wakala-based liquidity management facilities; Malaysia operates a comprehensive framework incorporating sukuk, wakala, and commodity murabaha instruments; Indonesia applies ju'alah- and musharakah-based instruments in monetary operations; Pakistan has introduced mudarabah-based liquidity facilities and open market operations; while Türkiye utilizes ijarah-based lease certificates (sukuk) in open market operations, repo transactions, and central bank liquidity facilities.

To facilitate meaningful cross-country comparisons, the study distinguishes between liquidity absorption and liquidity provision operations while maintaining a clear boundary between central bank liquidity management instruments, government securities issuance, and interbank market transactions. Only instruments directly employed or administered by central banks are included within the comparative analysis.

In summary, this article provides a comprehensive comparative analysis of Shariah-compliant liquidity management instruments employed by central banks in Islamic banking systems. While many jurisdictions utilize similar contractual foundations, significant differences remain in operational design, implementation practices, collateral arrangements, and institutional frameworks. The study highlights both the convergence and diversity of contemporary Islamic central bank liquidity management practices and contributes to a more systematic understanding of the operational instruments currently employed across different jurisdictions. The findings also provide a comparative reference for researchers, policymakers, and central bank practitioners seeking to evaluate and further develop Shariah-compliant liquidity management frameworks in dual banking systems.

2. Research Methodology

This study adopts a descriptive and comparative research design to examine the Shariah-compliant liquidity management instruments employed by central banks operating in Islamic banking systems. Rather than developing an econometric or statistical model, the study systematically reviews and compares the operational frameworks implemented across different jurisdictions. The analysis focuses on identifying the principal instruments used for liquidity absorption and liquidity provision while examining their contractual structures, operational mechanisms, and practical implementation.

The analysis is based on a comprehensive review of official publications issued by central banks, international standard-setting institutions, and the relevant academic literature. Primary sources include central bank operational frameworks, monetary policy guidelines, annual reports, legal and regulatory documents, and publications of institutions such as the Islamic Financial Services Board (IFSB), the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), the International Islamic Liquidity Management Corporation (IILM), the Islamic Development Bank (IsDB), the International Monetary Fund (IMF), and the Bank for International Settlements (BIS). These sources were complemented by peer-reviewed academic studies addressing Islamic monetary operations and liquidity management practices.

Country cases were selected to represent jurisdictions with established Islamic banking sectors and documented central bank liquidity management operations. The objective was not to provide an exhaustive survey of all countries offering Islamic financial services but rather to include representative jurisdictions for which sufficient official evidence on operational practices was available. Accordingly, the comparative analysis includes countries employing different contractual approaches and institutional arrangements, enabling the identification of both common practices and country-specific operational characteristics.

The study distinguishes between instruments that are legally permissible under Shariah principles and those that have been operationally implemented by central banks. Accordingly, an instrument is classified as operational only where evidence of actual implementation through official central bank facilities, monetary policy operations, or published operational frameworks was identified. Instruments discussed solely in theoretical or legal terms without documented operational use were excluded from the comparative assessment. Furthermore, the analysis distinguishes central bank liquidity management operations from government securities issuance and interbank market transactions unless these instruments are directly employed by central banks for monetary policy implementation. The comparative assessment presented in this study is therefore based on documented operational evidence rather than theoretical availability.

To facilitate cross-country comparison, the study develops a qualitative classification framework to evaluate the operational use of liquidity management instruments across jurisdictions. The assessment is based on documented evidence ob-

tained from official central bank publications, operational frameworks, annual reports, and publications of international standard-setting institutions. Each instrument is classified into one of four categories—High, Moderate, Limited, or No Use—according to the extent of its documented operational implementation. High indicates that the instrument is actively and routinely employed as part of the central bank's monetary policy operations; Moderate denotes regular but more selective or less extensive operational use; Limited refers to instruments that are available but employed only occasionally or under specific circumstances; and No Use indicates that no documented evidence of operational implementation was identified during the review period. The same classification criteria were applied consistently across all country-instrument combinations to ensure comparability. The resulting framework reflects actual operational practice rather than the mere legal availability of an instrument and is intended to provide a consistent qualitative basis for comparative analysis rather than a quantitative performance ranking.

3. Central Banks Liquidity Witdrawal Methods

Central banks employ various instruments to withdraw liquidity from Islamic banks. These instruments can be categorized into seven principal methods: qard, the wakala deposit method, wakala deposit certificates, the commodity murabaha deposit model, juala based models, mudaraba models and sukuk issuances. Furthermore, sukuk issuances themselves comprise five distinct underlying models.

3.1. Qard

The qard-based liquidity absorption method refers to a situation in which an Islamic bank deposits its excess liquidity with the central bank under a qard agreement. Since qard is a benevolent loan contract, no additional payment or return is stipulated. Under this arrangement, the Islamic bank places its surplus funds with the central bank, which returns only the principal amount upon maturity without any additional compensation (IFSB, 2023).

Although qard-based instruments are more commonly associated with liquidity provision facilities, several jurisdictions have also utilized qard arrangements for liquidity absorption purposes. Under this structure, Islamic banks place excess funds with the central bank as an interest-free loan, and the principal amount is repaid at maturity without any predetermined return. In practice, qard-based liquidity absorption facilities have been observed in countries such as Malaysia and Nigeria, where Islamic banks may place surplus liquidity with the central bank under non-remunerative arrangements. While these facilities effectively withdraw excess liquidity from the banking system, their use remains relatively limited compared with sukuk-, wakala-, and commodity murabaha-based instruments because they do not provide a market-based return to participating institutions (IFSB, 2023; Hanif & Shaikh, 2010; Mohamed et al., 2020).

The practical use of qard for liquidity absorption varies across jurisdictions ac-

cording to institutional arrangements and central bank operational requirements.

3.2. Wadiah Based Models

Another method is based on the concept of trust (wadiah), whereby the central bank accepts deposits from Islamic banks and financial institutions. In this arrangement, the principal amount is guaranteed, and the deposited funds may be utilized for investment purposes with the consent of the depositors. Although the central bank is not contractually obliged to provide any return on these deposits, it may, at its discretion, grant a bonus upon maturity. Such bonuses are generally linked to the average return generated through interbank mudarabah investments.

Wadiah is derived from the Arabic word wada'a, which means "to deposit", "to entrust", or "to keep". It refers to a trust-based relationship involving the safekeeping of assets. Under a wadiah arrangement, the bank acts as a custodian and trustee responsible for safeguarding the deposited funds, while depositors retain the right to withdraw their funds at any time. Unlike profit-sharing contracts, wadiah does not involve a predetermined return; however, the custodian may voluntarily provide a hibah (discretionary gift) to depositors.

In theory, wadiah can be classified into two categories: Wadiah Yad al-Amanah (trustee custody) and Wadiah Yad al-Damanah (guaranteed custody). Under the former, the custodian merely safeguards the assets and is liable only in cases of negligence or misconduct. Under the latter, the custodian is permitted to utilize the deposited funds for investment purposes and is fully responsible for returning the principal amount regardless of the investment outcome.

In the context of liquidity management, central banks may hold Islamic banks' deposits under a wadiah arrangement. Islamic banks may authorize central banks to invest these funds in compliant instruments and generate returns. Any profits earned may subsequently be distributed to Islamic banks in the form of a hibah after deducting operational expenses. Conversely, if the central bank is not authorized to invest the deposited funds, Islamic banks may be required to bear the associated operational costs (Bello, 2022; BOE, 2017).

Several countries, including Malaysia, Indonesia, and Bahrain, employ the wadiah method in their Islamic liquidity management frameworks. For example, the Central Bank of Malaysia accepts overnight deposits from Islamic banks and repays them on the following day together with a discretionary hibah. The amount of the hibah is not predetermined and is therefore not stipulated in the wadiah contract. Historically, wadiah-based liquidity management instruments were employed in jurisdictions such as Indonesia through the Sertifikat Wadiah Bank Indonesia (SWBI) and in certain liquidity placement arrangements in Bahrain. However, many jurisdictions have subsequently shifted toward sukuk-, wakala-, and ju'alah-based instruments that provide greater operational flexibility and marketability (Alam & Rizvi, 2016). Current practices indicate that the operational importance of wadiah varies across jurisdictions according to the structure

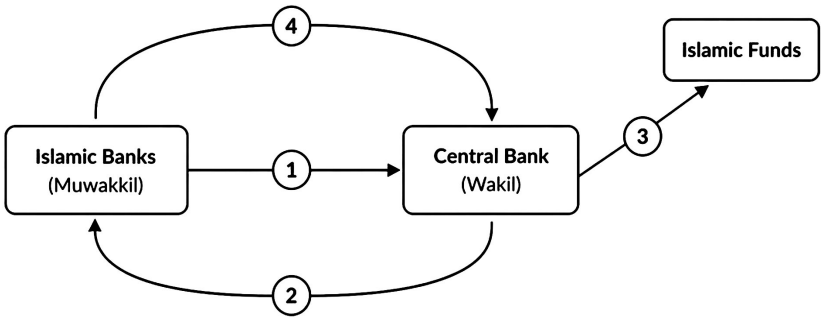
of domestic Islamic financial markets.

3.3. Wakala Deposit Models (Figure 1)

The term *wakala* is derived from the Arabic word meaning "agency" or "delegation". A wakala contract involves two parties: the *muwakkil* (principal), who provides the capital, and the *wakil* (agent), who manages and invests the funds on behalf of the principal. Under this arrangement, the wakil does not contribute capital and is generally not liable for financial losses unless such losses result from negligence, misconduct, or a breach of contractual terms. In return for its services, the wakil receives a predetermined management fee rather than a share of the investment profits (Aliefendic, 2024).

Within the framework of Islamic liquidity management, Islamic banks may place their excess liquidity with the central bank through a wakala agreement. In this arrangement, the central bank acts as the *wakil* and invests the funds on behalf of the Islamic banks, which serve as the *muwakkil*. To facilitate these operations, central banks may establish dedicated Shariah-compliant investment funds managed under wakala principles. Such funds typically comprise Islamic financial instruments, including sukuk, Islamic money market instruments, and other Shariah-compliant assets (BOE, 2017; IFSB, 2023).

Under this mechanism, the central bank specifies the issuance conditions, maturity date, and expected rate of return. Although the anticipated return may be announced in advance, the actual return generated by the underlying assets may differ at maturity. To minimize uncertainty regarding investment performance, central banks may allocate funds to relatively stable assets such as *ijarah sukuk*, whose cash flows are generally more predictable. Interbank wakala placements are typically short-term in nature, with maturities ranging from overnight to one week. Since the central bank acts as the wakil in these transactions, it is entitled to receive a management fee for its fund administration services.



Source: Author's illustration based on BOE (2017), CBB (2015), and IFSB (2023). **Notes:** (1) Islamic banks appoint the central bank as their *wakil* (agent) through a *wakala* agreement and agree to pay a management fee for the services provided. (2) Islamic banks place their excess liquidity with the central bank. (3) The central bank invests the pooled funds in a dedicated Shariah-compliant investment fund or portfolio under its management. (4) At maturity, the central bank returns the principal amount to the Islamic banks along with the profits generated from the underlying investments.

Figure 1. Operational structure of a wakala-based liquidity absorption facility.

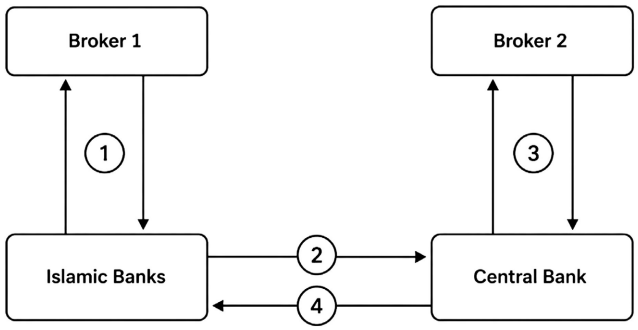
The Central Bank of Bahrain (CBB) utilizes a wakala-based facility to absorb excess liquidity from Islamic banks. Transactions are conducted on either an overnight or weekly basis, with funds invested in a portfolio of cash and sukuk. Prior to each issuance, the CBB announces the issue date, maturity date, and expected rate of return. Upon maturity, the principal and realized returns are paid to participating institutions (CBB, 2015).

The Bank of England (BOE) employs a similar mechanism through its Alternative Liquidity Facility (ALF). Under this arrangement, the BOE accepts deposits from participating institutions and invests them in Shariah-compliant, non-interest-bearing asset portfolios, primarily comprising sukuk. At maturity, participants receive the principal together with the investment returns (BOE, 2025).

The Central Bank of Oman (CBO) also utilizes wakala agreements as an Islamic money market instrument with maturities ranging from one day to three months. Islamic banks place U.S. dollar-denominated deposits, which the CBO invests in eligible Shariah-compliant instruments in exchange for an agency fee. Returns are market-based rather than predetermined, and these instruments are generally not tradable in secondary markets (CBO, 2022b).

3.4. Commodity Murabaha Deposit Model (Figure 2)

Commodity murabaha, also referred to as tawarruq, is a liquidity management technique based on a series of murabaha transactions. In this structure, the central bank purchases a commodity from the Islamic bank on a deferred payment basis. Upon maturity, the central bank pays the bank the agreed commodity value together with a pre-agreed profit margin specified at the inception of the contract.



Source: Author's illustration based on BOE (2017), CBB (2015), and IFSB (2023). **Notes:** (1) Islamic banks purchase commodities from Broker 1 on a spot basis. (2) The banks sell the commodities to the central bank on a deferred-payment basis with a pre-agreed mark-up. (3) The central bank sells the commodities to Broker 2 on a spot basis. (4) At maturity, the central bank pays the principal amount together with the agreed mark-up to the participating banks.

Figure 2. Operational structure of the commodity murabaha deposit model.

After acquiring the commodity, the central bank immediately sells it in the spot market through a different broker. In practice, Islamic banks purchase commodities in either local or foreign currency from commodity exchanges, such as metal

exchanges, on a cash basis and subsequently sell them to the central bank on a deferred payment basis. The central bank then liquidates the commodity in the spot market to obtain cash and repays the bank at maturity, including the agreed profit margin (Cole & Soufani, 2014; Dusuki, 2007).

According to the Islamic Financial Services Board (IFSB), commodity murabaha is widely used in Islamic liquidity management frameworks and is implemented in approximately 57 percent of jurisdictions (IFSB, 2023).

In some structures, the Islamic bank may act as an agent of the central bank in selling the commodity to Broker 2 during the third step. However, in all cases, immediate sale and repurchase of the same asset (bay' al-'īnah) is not permitted in Islamic finance, and therefore the brokers involved must be independent and distinct entities (BOE, 2017).

Commodity murabaha is widely used in several jurisdictions, including Kuwait, Saudi Arabia, the United Arab Emirates, and Malaysia, for both liquidity absorption and deposit management purposes. For instance, the Central Bank of Malaysia employs a commodity murabaha structure in its liquidity management operations, using commodities such as crude palm oil as underlying assets (IILM, 2023; Dusuki, 2007).

More recently, the Central Bank of the United Arab Emirates (CBUAE) introduced an overnight murabaha facility to manage excess liquidity in the banking system. In addition, the central bank offers a one-week commodity murabaha-based Islamic certificate of deposit facility for liquidity management purposes (CBUAE, 2020; CBUAE, 2025).

3.5. Ju'alah Based Models

Ju'alah is a contractual arrangement based on a unilateral promise of payment in return for the completion of a specified task or the achievement of a defined outcome. Unlike bilateral contracts, ju'alah does not require mutual commitment at the outset; instead, payment is only made upon successful completion of the agreed task. In this context, central banks may accept deposits from Islamic banks while allowing flexibility in the execution of underlying investment or liquidity management activities.

The Central Bank of Indonesia utilizes ju'alah-based structures to absorb liquidity from the market, particularly through one-day maturities and standing facilities. In addition, ju'alah contracts are employed in open market operations and in the issuance of Bank Indonesia Sharia Certificates (*Sertifikat Bank Indonesia Syariah*, SBIS), which serve as liquidity absorption instruments with maturities ranging from one day to twelve months. These instruments are also applied in foreign currency term deposit operations to help manage liquidity in the foreign exchange money market. Foreign exchange term deposit auctions are conducted with maturities ranging from overnight to twelve months.

In the Indonesian model, the underlying basis of the ju'alah contract is the participation of Islamic banks in Bank Indonesia's monetary operations. By placing

funds with the central bank through SBIS and related liquidity absorption instruments, Islamic banks assist the central bank in withdrawing excess liquidity from the financial system. In return, Bank Indonesia promises a predetermined reward (*ju'l*) for contributing to the achievement of its liquidity management objectives. Consequently, the compensation paid to participating banks is structured as a ju'alah reward rather than interest, profit-sharing income, or rental income. (DSN-MUI, 2007; Mohamed et al., 2020; Bank Indonesia, 2020).

3.6. Mudaraba Based Models

Unlike wakala- and murabaha-based structures, mudaraba-based liquidity management instruments rely on profit-and-loss sharing principles. Although their application remains relatively limited in central bank liquidity management frameworks, Bangladesh represents one of the most notable examples of their use (AAOIFI, 2018).

Bangladesh differs from many other jurisdictions by relying primarily on mudaraba-based instruments rather than wakala- or commodity murabaha-based structures. In particular, the Government Islamic Investment Bond (GIIB) has long served as the principal instrument for Islamic liquidity management and liquidity absorption operations.

Under mudaraba-based liquidity absorption arrangements, Islamic banks with excess liquidity invest their funds through instruments structured on mudaraba principles, including GIIB. In these arrangements, funds are mobilized and invested in Shariah-compliant activities, while profits generated from the underlying investments are distributed according to a predetermined profit-sharing ratio. Through such instruments, excess liquidity is temporarily withdrawn from the Islamic banking system while maintaining compliance with profit-and-loss sharing principles (BB, 2024).

3.7. Sukuk Models

Sukuk structures in Islamic finance are commonly classified into seven main categories. Four of these are asset-based, sale-related sukuk structures with more predetermined return profiles, namely *ijarah* sukuk, *salam* sukuk, *istisna* sukuk, and *murabaha* sukuk. The remaining three are equity- or partnership-based structures, namely *mudarabah* sukuk, *musharakah* sukuk, and *wakala* sukuk.

In asset-based sukuk, investors typically hold ownership rights over the underlying assets, whereas in equity-based sukuk, investors generally hold beneficial ownership and share in the performance of the underlying investment portfolio rather than direct ownership of specific assets.

In the context of liquidity management, central banks may withdraw liquidity from the market by issuing sukuk through intermediary institutions, typically special purpose vehicles (SPVs). When sukuk are structured on fixed-income-like underlying assets, they tend to be more attractive to investors and more actively traded in secondary markets. For this reason, in practice, *ijarah* sukuk or *ijarah*-

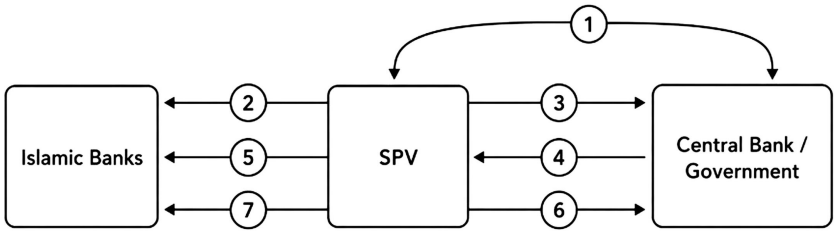
based asset pools are most commonly utilized in liquidity management operations.

3.7.1. Ijarah Sukuk Models (Figure 3)

Ijarah sukuk are based on Islamic lease contracts. In an ijarah structure, the lessor first acquires the underlying asset and subsequently leases it to the lessee. During the lease period, legal ownership of the asset remains with the lessor, while usufruct rights are transferred to the lessee.

In the context of sukuk, these instruments represent proportional ownership in the underlying leased assets. Sukuk holders are therefore entitled to receive periodic rental income generated from the underlying asset.

Due to their tradability in secondary markets and their compliance with Shariah principles, ijarah sukuk are among the most widely used and preferred instruments in Islamic finance transactions (DIRE, 2006; IFSB, 2023).



Source: Author's illustration based on BOE (2017), CBB (2015), and IFSB (2023). **Notes:** (1) The central bank appoints an SPV for the issuance of sukuk. (2) The SPV issues *ijarah* sukuk to investors. (3) The SPV acquires rentable assets from the government or the central bank and subsequently leases these assets back to the originator (government or central bank). (4) The government or central bank makes periodic rental payments under the lease agreement. (5) The SPV distributes the rental income to sukuk holders in accordance with the agreed schedule. (6) At maturity, the government or central bank repurchases the underlying asset from the SPV. (7) The proceeds from this transaction are used to settle the principal and returns owed to sukuk investors.

Figure 3. Operational structure of the ijarah sukuk model.

In Bahrain, the government issues *ijarah* sukuk through the Central Bank of Bahrain (CBB) as part of its liquidity management framework. Short-term sukuk are issued on a monthly basis with maturities of up to six months. For both short-term and long-term issuances, the central bank invites eligible participants to submit bids for the desired issuance amounts. On each lease payment date, the central bank transfers rental payments to the accounts of participating institutions. The CBB is supported by a Central Sharia Board, which reviews and approves Islamic securities issuance structures through formal fatwas. In addition, *ijarah* sukuk are also used as a liquidity management instrument for Islamic banks in Bahrain (COMCEC, 2017; Hanif & Shaikh, 2010).

In this structure, the liquidity management process typically involves three parties. Bank A (the originator) sells eligible sukuk assets to Bank B (market maker) in exchange for liquidity. Bank B then sells the sukuk to the central bank, thereby

facilitating the liquidity transfer within the banking system. At maturity, the central bank sells the sukuk back to Bank A, the original asset owner.

This arrangement is based on two main contractual undertakings: a binding purchase undertaking by Bank A to repurchase the sukuk on a predetermined date, and a sale-and-purchase arrangement in which the central bank participates in a Sharia-compliant liquidity facility. Accordingly, Bank A agrees to sell the sukuk under the terms of the central bank's repurchase facility, while the central bank agrees to purchase the Sharia-compliant securities to provide liquidity to the banking system.

The Central Bank of Malaysia also actively employs *ijarah* sukuk in its liquidity management operations. When liquidity absorption is required, the central bank sells eligible *ijarah* assets to an intermediary institution, which finances the purchase through sukuk issuance. The underlying assets are then leased back to the central bank, generating periodic lease payments that are distributed to sukuk investors. At maturity, the central bank repurchases the underlying assets, and the principal and returns are settled with investors (DIRE, 2006; IFSB, 2023).

The Central Bank of Bangladesh similarly issues *ijarah* sukuk through intermediary arrangements. These sukuk have maturities ranging from one to ten years, with profit distributions occurring at semi-annual intervals or at other specified periods. Early redemption is not permitted. The instruments are accessible to various banking groups and may also be traded on the stock exchange, subject to applicable regulations (Bangladesh Bank, 2023; IFSB, 2023).

3.7.2. Salam Sukuk Models (Figure 4)

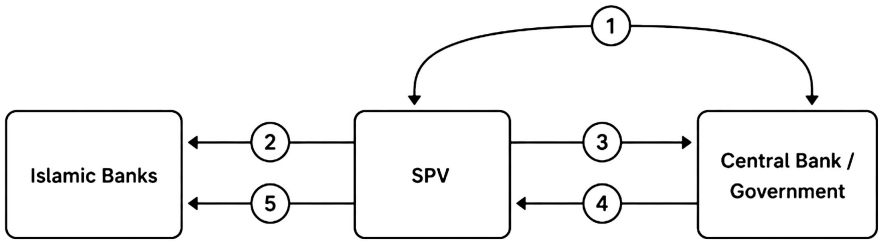
Salam sukuk is a liquidity management instrument used by central banks and governments to absorb excess liquidity from the financial system. This structure is based on a forward sale (bay' al-salam), in which a specified commodity is sold in exchange for a purchase price paid in advance, with delivery deferred to a future date.

In salam sukuk structures, an intermediary institution, typically a Special Purpose Vehicle (SPV), issues sukuk certificates to investors and uses the proceeds to enter into a salam contract for the future delivery of a specified commodity. The SPV may also enter into a parallel salam arrangement with another institution to secure the future delivery of the commodity.

The commodity is generally sold at a price that reflects a pre-agreed margin, and the difference between the purchase and sale prices is passed on to sukuk holders and the SPV as return. Salam sukuk typically have short maturities, usually ranging from 30 to 90 days. However, due to the nature of the underlying structure, these instruments are generally not tradable in secondary markets, as trading of salam receivables is restricted under Shariah principles (DIRE, 2006; IFSB, 2023).

The Central Bank of Bahrain (CBB) issues *salam* sukuk linked to nationally significant commodities, primarily crude oil produced by government-owned oil companies. In this structure, the central bank enters into arrangements with the Ministry of Finance to purchase a specified quantity of oil on a forward basis at a

spot price agreed at the inception of the contract, with the resale price determined at a later stage.



Source: Author's illustration based on BOE (2017), CBB (2015), and IFSB (2023). **Notes:** (1) The central bank appoints an SPV for the issuance of salam sukuk. (2) The SPV issues salam sukuk certificates, which are purchased by Islamic banks and other investors. (3) The SPV enters into a salam contract with the government or central bank, purchasing a specified commodity on a forward basis with spot payment made at the inception of the contract. (4) At maturity, the government or central bank delivers the agreed quantity of the commodity to the SPV. (5) The SPV then sells the commodity to a third party in the spot market and distributes the proceeds to sukuk holders.

Figure 4. Operational structure of the salam sukuk model.

In addition to crude oil, residual gas has also been utilized as an underlying commodity in *salam* sukuk arrangements. Investors are informed that settlement will occur upon delivery of the underlying commodity within a three-month period. The Central Bank of Bahrain invites Islamic banks to participate in these issuances through a fixed-rate tender process, where the yield is determined by the Central Bank's Monetary Policy Committee. At maturity, the agreed sale proceeds are paid to participating banks in US dollars (CBB, 2024).

3.7.3. Murabaha Sukuk Models (Figure 5)

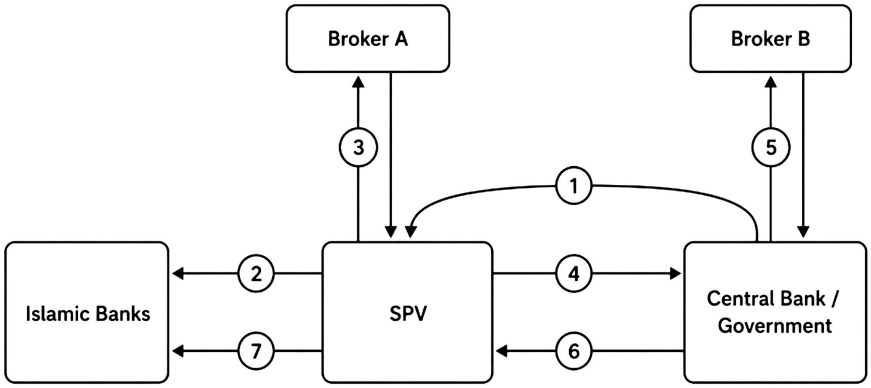
Murabaha sukuk is a liquidity management instrument used by central banks and governments to absorb excess liquidity from the financial system. This structure is based on a series of murabaha transactions facilitated through an intermediary institution, typically a Special Purpose Vehicle (SPV).

In this arrangement, the SPV issues murabaha sukuk to investors and uses the proceeds to purchase commodities from Broker A. The central bank subsequently acquires these commodities, typically through a deferred-payment murabaha arrangement, and may resell them in the spot market through a different broker.

Murabaha sukuk are primarily employed for short- to medium-term liquidity absorption and provide central banks with a Shariah-compliant alternative to conventional interest-based securities. By mobilizing excess liquidity through underlying commodity transactions, these instruments support the implementation of monetary policy while ensuring compliance with Islamic finance principles. However, because the underlying assets predominantly consist of receivables arising from deferred-payment sales, murabaha sukuk generally cannot be traded in secondary markets under Shariah standards, making them more suitable for buy-and-hold liquidity management strategies.

At maturity, the central bank pays the SPV the commodity value together with an agreed profit margin. The SPV then distributes the proceeds to sukuk holders in accordance with the contractual arrangement. Due to their structure, murabaha sukuk are generally not tradable in secondary markets prior to maturity, which limits their liquidity and makes them relatively illiquid instruments (DIRE, 2006; IFSB, 2023).

The Central Bank of Malaysia employs this structure, typically using commodities such as crude palm oil as the underlying asset. In this framework, the SPV issues sukuk and uses the proceeds to purchase commodities, which are then sold to the central bank on a deferred payment basis. The central bank may subsequently dispose of the commodity in the spot market. The structure provides return certainty, as it is based on pre-agreed purchase and sale prices and fixed mark-ups. At maturity, the central bank repays the principal and profit component, which is then used for sukuk redemption.



Source: Author's illustration based on BOE (2017), CBB (2015), and IFSB (2023). **Notes:** (1) The central bank assigns an SPV (Special Purpose Vehicle) responsibility for issuing murabaha sukuk. (2) The SPV issues and sells murabaha sukuk to Islamic banks and other investors. (3) The SPV uses the proceeds from investors to purchase commodities from Broker A. (4) The SPV then sells the commodity to the central bank on a deferred payment basis, incorporating a pre-agreed cost and profit margin. (5) The central bank subsequently sells the commodity in the spot market through Broker B. (6) At maturity, the central bank pays the SPV the principal amount together with the agreed profit margin. (7) The SPV distributes the proceeds to sukuk holders in accordance with the contractual terms.

Figure 5. Operational structure of the murabaha sukuk model.

In addition, the Central Bank of Malaysia acts as an intermediary in government-related financing operations through *murabaha*-based sukuk structures. In such arrangements, the central bank may act as a commodity agent, purchasing commodities on behalf of successful bidders and subsequently selling them to the government at an agreed price with a deferred payment structure. The government then securitizes these assets and issues them to investors. Profit payments are typically distributed semi-annually. At maturity, the government repays the principal and profit while redeeming the underlying securities.

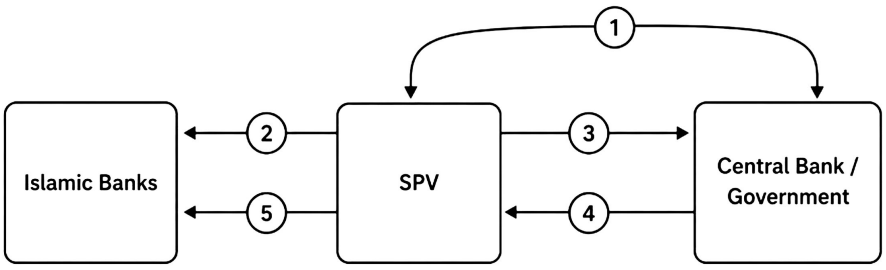
Issuances are conducted through competitive auctions, with issuance sizes typi-

cally ranging between RM 2 billion and RM 5 billion. Maturities are pre-announced and may range from 3 to 20 years. The difference between the purchase and sale prices represents the return to participating financial institutions[1]. These instruments are actively traded in the Malaysian interbank Islamic money market; however, their acceptability may vary across Shariah boards, and their use is therefore often limited to domestic Islamic banking institutions (Bank Negara Malaysia, 2023).

The Central Bank of Bangladesh also issues *murabaha*-based sukuk to finance commodity transactions between sellers and the government. These instruments are used to finance commodities supplied by both banking and non-banking institutions. At maturity, the government pays the central bank a predetermined profit margin, while investors receive their principal and returns. These sukuk typically have maturities ranging from one month to one year, and the underlying commodities may include both food and non-food items, such as oil[2].

3.7.4. Istisna Sukuk Models (Figure 6)

Istisna contracts are generally used for the manufacturing and construction of goods to be delivered in the future. These contracts may be structured with either advance payment or installment-based payment schedules, depending on the nature and duration of the underlying project.



Source: Author's illustration based on BOE (2017), CBB (2015), and IFSB (2023). **Notes:** (1) The central bank appoints an SPV (Special Purpose Vehicle) for the issuance of istisna sukuk and for managing the underlying manufacturing or construction process. (2) The SPV issues istisna sukuk, which are purchased by Islamic banks and other investors. (3) The SPV enters into an istisna contract with the state or the central bank for the future delivery of a specified manufactured or constructed asset, with payment made either in advance or in instalments. (4) At maturity or upon completion of the project, the state or central bank delivers the completed asset to the SPV. (5) The SPV then sells the completed asset to a third party and distributes the proceeds to sukuk holders in accordance with the contractual terms.

Figure 6. Operational structure of the istisna sukuk model.

In *istisna*-based sukuk structures, the manufacturer or supplier typically acts as the issuer of the sukuk, while subcontracting arrangements may be used to delegate the actual production or construction work to third parties. Sukuk investors acquire ownership rights over the underlying asset during the production phase

[1]https://www.bnm.gov.my
[2]https://www.bb.org.bd

and are entitled to the proceeds generated from the sale or delivery of the completed asset.

Istisna sukuk are particularly suitable for financing long-term infrastructure and construction projects. Their structure ensures that financing remains directly linked to the creation of tangible productive assets.

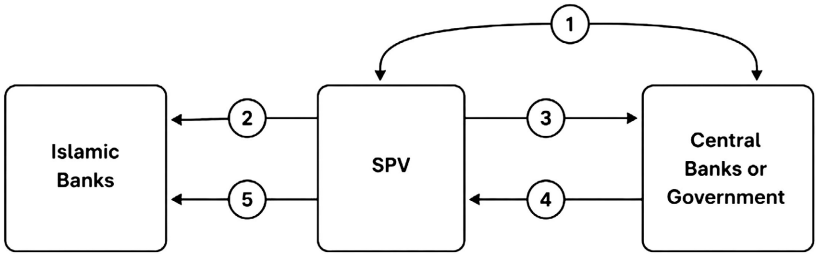
Thus, returns to investors are derived from the revenue generated by the final sale of the manufactured or constructed asset (DIRE, 2006; Nabi & Rahman, 2023; IFSB, 2023).

3.7.5. Musharaka Sukuk Models (Figure 7)

Musharakah sukuk is based on the principle of profit-and-loss sharing. In this structure, central banks may facilitate the financing of public sector projects through equity participation mechanisms. The intermediary institution typically invests the pooled funds in a diversified portfolio of assets, including fixed income instruments, *ijarah*-based assets, and other public-sector-related investments.

The returns distributed to sukuk holders depend on the performance of the underlying asset portfolio. In this structure, the central bank establishes an SPV to issue *musharakah* sukuk and manage the associated public-sector investment pool. Islamic banks utilize their surplus liquidity to purchase these sukuk certificates, thereby becoming partners in the underlying investment.

The SPV transfers the proceeds to the government or relevant public authority, which utilizes the funds for project financing. At maturity, the government repurchases the sukuk holders' shares in the underlying investment at market value or a pre-agreed mechanism, depending on the structure. Consequently, sukuk holders are exposed to the market risk associated with the underlying assets.



Source: Author's illustration based on BOE (2017), CBB (2015), and IFSB (2023). **Notes:** (1) The central bank appoints an SPV (Special Purpose Vehicle) to issue musharakah sukuk and manage the underlying investment fund. (2) The SPV issues musharakah sukuk, which are purchased by Islamic banks and other investors. (3) The SPV invests the pooled funds in government or central bank-related assets, including fixed-income and income-generating instruments. (4) At maturity, the SPV divests or resells the underlying assets to the government or central bank, depending on the contractual structure. (5) The SPV distributes the proceeds from the asset disposal to sukuk holders in accordance with their participation shares.

Figure 7. Operational structure of the musharaka sukuk model.

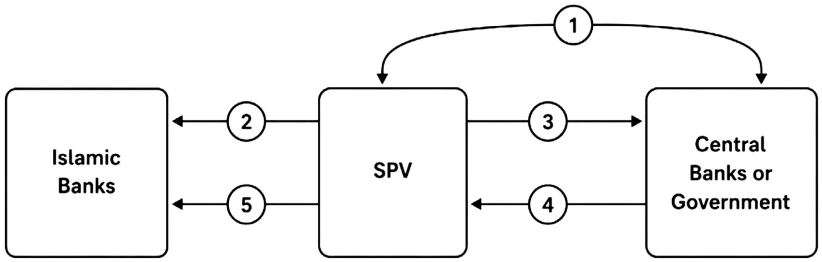
Musharakah sukuk can be used in repurchase agreements and interbank money market operations, making them relatively liquid instruments. However, due to their equity-based nature, returns and potential losses are shared among investors. The *mudarabah* sukuk structure follows a similar investment logic, with periodic distributions made to sukuk holders based on the performance of the underlying assets (DIRE, 2006; AAOIFI, n.d.; IFSB, 2023).

Indonesia provides a recent example of the application of musharakah-based central bank instruments through Sukuk Bank Indonesia (SUKBI) and Foreign Currency Sukuk Bank Indonesia (SUVBI). These instruments are used to absorb excess liquidity from the banking system and support monetary operations, demonstrating the practical use of musharakah structures in central bank liquidity management (Bank Indonesia, 2023a, 2023b, 2026).

3.7.6. Mudaraba Sukuk Models (Figure 8)

Mudarabah contracts involve two parties: the capital provider (*rabb al-mal*) and the fund manager (*mudarib*). In this structure, the capital provider supplies the funds, while the *mudarib* is responsible for managing and investing these funds in specific projects with the aim of generating profit. The intermediary institution, typically structured as an SPV, may act as the *mudarib* by evaluating investment opportunities and managing the allocated funds.

In *mudarabah* sukuk structures, the *mudarib* does not contribute capital and is not liable for investment losses unless such losses arise from negligence, misconduct, or breach of contractual terms. The sukuk holders, as capital providers, bear the investment risk associated with the underlying assets. However, profits are distributed according to pre-agreed profit-sharing ratios between the parties (DIRE, 2006; IFSB, 2023).



Source: Author's illustration based on BOE (2017), CBB (2015), and IFSB (2023). **Notes:** (1) The central bank appoints an SPV (Special Purpose Vehicle) for the issuance of mudarabah sukuk and for fund management purposes. (2) The SPV issues mudarabah sukuk, which are purchased by Islamic banks and other investors. (3) The SPV invests the pooled funds in Shariah-compliant assets consistent with mudarabah principles. (4) At maturity, the SPV realizes the returns generated from the underlying investments. (5) The SPV distributes the profits to sukuk holders according to pre-agreed profit-sharing ratios.

Figure 8. Operational structure of the mudaraba sukuk model.

Unlike *musharakah* sukuk, where all partners contribute capital and therefore

share both profits and losses proportionally, *mudarabah* sukuk involve a structure in which only the capital providers (sukuk holders) bear the financial risk of investment losses, except in cases of negligence, misconduct, or breach of contract by the *mudarib*. In contrast, the *mudarib* does not provide capital but is responsible for managing the investment. However, in both structures, losses arising from negligence or breach of duty may shift liability to the responsible party (AAOIFI, 2018). The separation of capital ownership and investment management distinguishes mudarabah sukuk from other partnership-based structures. This feature makes them particularly suitable for professionally managed investment projects.

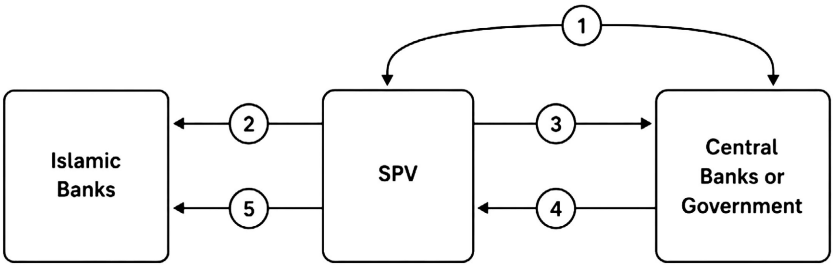
3.7.7. Wakala Sukuk Models (Figure 9)

In the *wakala*-based sukuk model, Islamic banks enter into an agency agreement with an intermediary institution, typically structured as a Special Purpose Vehicle (SPV), and appoint it as their investment agent (*wakil*). Both parties enter into a *wakala* agreement, under which the agent is entitled to receive a pre-agreed management fee for its services.

The SPV invests the funds received from Islamic banks in Shariah-compliant assets, including fixed-income and public-sector investment instruments. The generated returns are then distributed to the banks in accordance with a pre-agreed target profit rate or expected return structure.

This type of sukuk may also be utilized in repurchase agreements and interbank money market operations due to its structured return profile. At maturity, both the principal and the agreed profit are paid to sukuk holders in line with the contractual terms (DIRE, 2006; AAOIFI, n.d.; IFSB, 2023).

Overall, wakala-based sukuk represent one of the commonly adopted structures for Islamic liquidity management, although their operational features vary across jurisdictions.



Source: Author's illustration based on BOE (2017), CBB (2015), and IFSB (2023). **Notes:** (1) The central bank appoints an SPV (Special Purpose Vehicle) to issue wakala sukuk and manage the underlying investment portfolio. (2) The SPV issues wakala sukuk, which are purchased by Islamic banks and other investors. (3) The SPV invests the pooled funds in Shariah-compliant government or central bank assets, including sukuk and other fixed-income-like instruments. (4) At maturity, the SPV divests or sells the underlying assets back to the government or central bank, depending on the structure. (5) The SPV distributes the proceeds from the investment returns to sukuk holders in accordance with the pre-agreed terms.

Figure 9. Operational structure of the wakala sukuk model.

3.7.8. Hybrid Sukuk Models

In response to the evolving requirements of Islamic financial markets, the need to enhance liquidity and tradability across sukuk instruments has led to the development of hybrid sukuk structures. Hybrid sukuk combine two or more underlying Shariah contracts within a single issuance framework.

These structures typically consist of a dominant proportion of *ijarah*-based assets, supplemented by other contracts such as *murabaha*, *istisna*, *mudarabah*, or similar Islamic financial instruments. The primary objective of this composition is to ensure that the sukuk represents a diversified asset pool that is sufficiently liquid and tradable in secondary markets, while also enabling efficient utilization of available financial resources.

In practice, regulatory or structural requirements often stipulate that at least 51 percent of the underlying asset pool must consist of *ijarah*-based assets to ensure tradability and compliance with Shariah screening requirements (DIRE, 2006).

The Central Bank of Bahrain issues hybrid sukuk that combine *ijarah* and *murabaha* structures on behalf of the government, typically with maturities of up to one year. Similarly, the Islamic Development Bank (IsDB) employs hybrid *wakala*-based structures incorporating a mix of *murabaha*, *ijarah*, and *istisna* assets to enhance diversification and liquidity management efficiency (COMCEC, 2017; CBB, 2025a). By combining multiple Shariah-compliant contracts within a single structure, hybrid sukuk provide greater flexibility in asset composition while supporting market liquidity and broader investor participation.

4. Methods Used by Central Banks to Provide Liquidity

Central banks provide liquidity to Islamic banks through five main instruments. These include collateralized and uncollateralized commodity *murabaha* arrangements, *qard*-based facilities, repurchase agreement (repo) structures, wakala based and collateralized investment-based liquidity management models.

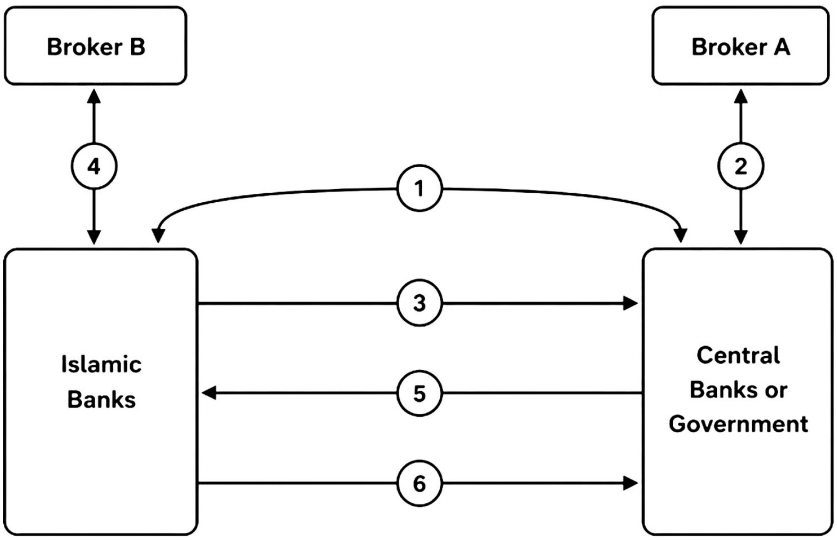
4.1. Collateralized/Uncollateralized Commodity Murabaha (Figure 10)

This instrument is one of the short-term liquidity management tools used in Islamic finance. Under this structure, the central bank sells a commodity to an Islamic bank at a cost price plus a pre-agreed mark-up, with payment deferred to a specified future date. The Islamic bank then obtains liquidity by selling the commodity to a third-party broker in the spot market. At maturity, the Islamic bank repays the central bank the principal amount together with the agreed mark-up.

In some cases, brokerage fees incurred in the commodity transaction may also be incorporated into the overall mark-up structure. The central bank may either directly purchase the underlying commodity or appoint an SPV as its agent to execute the transaction. In collateralized commodity *murabaha* structures, Islamic banks are required to provide eligible securities, such as sukuk, as collateral at the outset of the transaction. Commodities may be denominated in either local or

foreign currency, and banks may also act as agents in commodity procurement processes (Cole & Soufani, 2014; Dusuki, 2007; IFSB, 2023).

The Central Bank of the United Arab Emirates (CBUAE) and Malaysia are examples of jurisdictions that employ collateralized *murabaha* facilities. The CBUAE, in particular, utilizes a collateralized *murabaha* facility on an overnight basis to address temporary liquidity imbalances within the banking y (CBUAE, 2022).



Source: Author's illustration based on BOE (2017), CBB (2015), and IFSB (2023). **Notes:** (1) Islamic banks apply to the central bank for liquidity and request the purchase of a specified commodity. (2) The central bank purchases the commodity from Broker A on a spot basis. (3) The central bank sells the commodity to the Islamic bank on a deferred payment basis at maturity, while the Islamic bank provides eligible collateral as security. (4) The Islamic bank immediately sells the commodity to Broker B on a spot basis and obtains cash liquidity. (5) At maturity, the central bank returns the collateral to the Islamic bank. (6) The Islamic bank repays the cost of the commodity together with the pre-agreed mark-up to the central bank at maturity.

Figure 10. Operational structure of the collateralized commodity murabaha model.

4.2. Qard

Qard is used as a short-term liquidity facility to meet intraday or overnight funding needs. Under this arrangement, the borrowing institution receives funds on a benevolent loan basis and is required to repay only the principal amount without any additional return.

In practice, collateral—typically in the form of government sukuk or government-guaranteed securities—may be required to secure the transaction. This instrument is generally utilized by central banks in cases of urgent liquidity shortages within the banking system. However, central banks tend to use this facility less frequently, as it does not generate a financial return beyond the principal repayment.

In some cases, compensation mechanisms may be considered to account for the effects of inflation or administrative costs, although such arrangements depend on regulatory and Shariah interpretations (Selim & Hasan, 2020; IFSB, 2023).

The Central Bank of Oman and the Central Bank of Jordan are among the institutions that utilize *qard al-hasan* facilities to provide intraday liquidity support during business days (CBO, 2022a; Central Bank of Jordan, n.d.; IFSB, 2023).

Bank Negara Malaysia (BNM) utilizes the Qard Acceptance facility as part of its Islamic money market operations to absorb excess liquidity from Islamic financial institutions. Under this mechanism, Islamic banks place their surplus funds with the central bank based on a *qard* contract, whereby BNM undertakes to repay an equivalent amount at maturity. The facility is used for both overnight and term placements, enabling the central bank to manage surplus liquidity within the Islamic Interbank Money Market (IIMM) through a Shariah-compliant framework (Bank Negara Malaysia, 2023; IFSB, 2023).

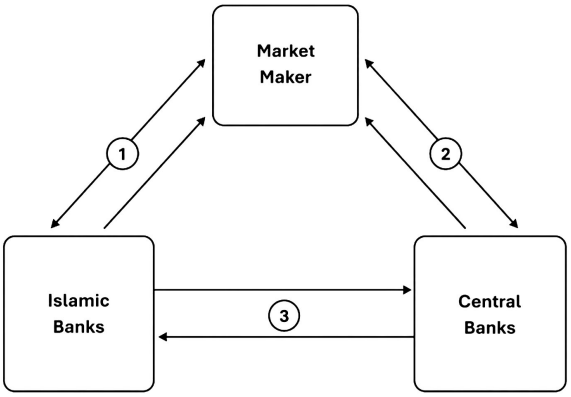
4.3. Repurchase Agreement (Repo) (Figure 11)

In a repurchase agreement (repo) transaction, an Islamic bank obtains liquidity by selling eligible securities to the central bank, with the agreement that the securities will be repurchased at a pre-agreed price at maturity. Although the sale and repurchase agreements are executed as separate contracts, they are economically linked within the overall structure. Once the initial sale is completed, ownership of the securities is transferred to the central bank. At maturity, the Islamic bank repurchases the securities at the predetermined price in accordance with the repo agreement (BOE, 2016; IFSB, 2023: pp. 40-41).

From a Shariah perspective, some scholars argue that conventional repo structures may resemble interest-based transactions, as they involve the sale and repurchase of the same asset at different prices, which may be interpreted as generating return on debt-like instruments. For this reason, certain jurisdictions have developed alternative structures involving an intermediary institution (market maker or SPV). In such arrangements, Islamic banks sell securities to a market maker to obtain liquidity, while the market maker subsequently sells the securities to the central bank. At maturity, the securities are repurchased through a structured sequence involving the original counterparties, thereby maintaining Shariah compliance under approved contractual arrangements.

Türkiye provides a notable example of the use of Shariah-compliant repo operations by a central bank. Participation banks are eligible to participate in the one-week repo auctions conducted by the Central Bank of the Republic of Türkiye (CBRT) and may obtain short-term liquidity by pledging lease certificates (sukuk) as collateral. In addition, participation banks can access funding through the CBRT's repo quotation facility using Turkish lira-denominated lease certificates. To further strengthen the Islamic money market infrastructure, the CBRT started conducting repo transactions in the Borsa İstanbul Committed Transactions Market at the end of 2018, enabling overnight repo transactions in accordance with participation finance principles. In Türkiye, the central bank is granted a unilateral right to withdraw liquidity, and sukuk are accepted as eligible collateral within the

liquidity management framework (Central Bank of the Republic of Türkiye, 2025).



Source: Author's illustration based on BOE (2017), CBB (2015), and IFSB (2023). **Notes:** (1) Islamic banks apply to a market maker for liquidity and sell eligible securities on a spot basis. (2) The market maker subsequently sells the securities to the central bank at face value on a spot basis. (3) The Islamic banks repurchase the securities from the central bank at the original face value plus an agreed return at maturity, which is typically short-term (e.g., one week). Prior to this transaction, the banks enter into a unilateral promise (wa'd) agreement to ensure the future repurchase of the securities.

Figure 11. Operational structure of the repo.

The Bangladesh Bank has proposed the use of government-issued ijarah sukuk (Bangladesh Government Ijarah Sukuk, BGIS) in Shariah-compliant repo operations to inject short-term liquidity into Islamic banks. Under this framework, repo maturities may range from overnight to one year depending on prevailing liquidity conditions (Islamic Banking System & Potential Monetary Policy Tools, 2023).

Bahrain has developed a Shariah-compliant liquidity provision mechanism that serves a function similar to a conventional repurchase agreement (repo). The Central Bank of Bahrain operates the Islamic Sukuk Liquidity Instrument (ISLI), which enables Islamic banks to obtain short-term liquidity by using Government Ijarah Sukuk as the underlying asset. Under this arrangement, participating banks sell eligible sukuk to a designated market maker with a commitment to repurchase them at a predetermined date and price. Although the economic objective resembles that of a conventional repo transaction, the structure is based on sale and purchase contracts rather than interest-bearing lending, thereby ensuring compliance with Shariah principles. The facility is primarily used for short-term liquidity management and is typically available with a one-week maturity (CBB, 2025b).

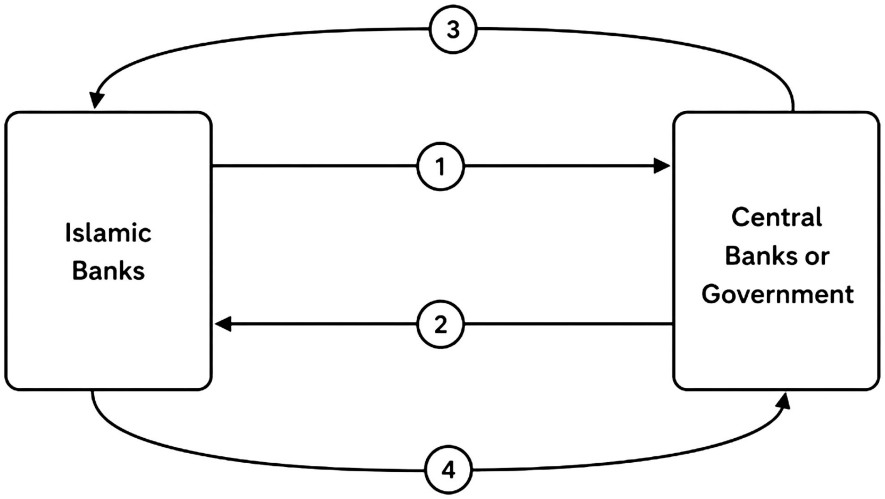
4.4. Collateralized Wakala Model (Figure 12)

In a collateralized *wakala* model, the central bank provides liquidity to the Islamic bank, while the bank assumes responsibility for investing the funds in accordance with Shariah-compliant principles. The Islamic bank is appointed as an agent

(*wakil*) and, in return, receives a predetermined agency fee for managing the investment.

Under this arrangement, the bank invests the received funds in approved Shariah-compliant assets, and at maturity repays the principal along with the realized profit to the central bank. The return is therefore dependent on the performance of the underlying investments. Prior to execution, both parties enter into an agency agreement, and the Islamic bank provides a commitment to invest the funds in accordance with agreed Shariah principles.

In addition, the Islamic bank provides eligible securities as collateral to secure the transaction, which are returned upon maturity. This liquidity management tool is commonly used for overnight to one-week funding needs and may also be employed as part of open market operations when central banks conduct liquidity-providing auctions (IFSB, 2023).



Source: Author's illustration based on BOE (2017), CBB (2015), and IFSB (2023). **Notes:** (1) Islamic banks apply to the central bank for short-term liquidity and provide eligible sukuk as collateral. (2) The central bank appoints the Islamic bank as its agent (wakil) under a wakala agreement and pays a predetermined agency fee. (3) The central bank transfers the funds to the Islamic bank for investment purposes. (4) At maturity, the central bank transfers the funds, and at maturity the bank repays the principal together with a pre-agreed target profit rate, subject to actual investment performance.

Figure 12. Operational structure of the collateralized wakala model.

In this structure, the return is typically defined ex ante as a target profit rate rather than a guaranteed outcome, and the final payment may depend on actual investment performance in accordance with the contractual arrangement.

The Central Bank of Jordan provides short-term liquidity to Islamic banks through an Unrestricted Investment Wakalah facility. Under this arrangement, eligible collateral is pledged by the participating Islamic bank, which acts as wakil by investing the funds in Shariah-compliant assets. The facility is available for overnight and up to one-week maturities, making it a practical example of a collateral-

ized wakala-based liquidity-provision mechanism (Central Bank of Jordan, 2024).

Overall, collateralized wakala arrangements represent a practical mechanism for short-term liquidity provision while maintaining Shariah compliance. Their specific operational features, collateral requirements, and implementation practices vary across jurisdictions according to institutional and regulatory frameworks.

4.5. Mudaraba Based Model

Unlike commodity murabaha and other debt-based liquidity facilities, mudaraba-based liquidity provision models are founded on profit-and-loss sharing principles. Under a mudaraba arrangement, one party provides the capital (rab al-mal), while the other party (mudarib) manages and invests the funds in Shariah-compliant activities. Profits generated from the investments are distributed according to a predetermined profit-sharing ratio, whereas financial losses are borne by the capital provider unless they result from negligence, misconduct, or a breach of contractual terms by the mudarib. Although the application of mudaraba-based liquidity provision facilities remains relatively limited in practice, they represent a fully Shariah-compliant alternative to debt-based liquidity support mechanisms.

Despite these practical limitations, mudaraba-based liquidity facilities remain important from a theoretical perspective because they embody the core principles of Islamic finance, particularly risk sharing and the linkage between finance and productive economic activity. Consequently, they are often regarded as a benchmark model for equity-based central bank liquidity support.

Bangladesh provides one of the few examples of a mudaraba-based liquidity provision framework. Under this structure, the central bank acts as the provider of capital (rab al-mal), while the Islamic bank acts as the entrepreneur (mudarib). Funds are invested in Shariah-compliant activities and profits are distributed according to a pre-agreed profit-sharing ratio. Unlike collateralized commodity murabaha facilities, the mechanism is based on profit-and-loss sharing principles rather than debt-based financing arrangements. The Bangladeshi experience demonstrates that mudaraba-based structures can be utilized not only for investment purposes but also as a mechanism for providing liquidity support to Islamic banks (Bangladesh Bank Head Office, 2019; AAOIFI, 2018).

Under a classical mudaraba arrangement, financial losses are borne by the capital provider unless they result from negligence or misconduct on the part of the mudarib. This feature may limit the practical application of mudaraba-based liquidity provision facilities by central banks, which generally seek to minimize exposure to investment risk.

In practice, the successful implementation of mudaraba-based liquidity facilities requires robust governance arrangements, transparent profit calculation methodologies, and effective monitoring of the underlying investments. In addition, clear contractual provisions and regular disclosure of investment performance are essential to maintain transparency and strengthen market confidence.

5. Country's the Main Liquidity Tools and Programs of Central Banks

Although central banks operating within Islamic financial systems employ a wide range of Shariah-compliant liquidity management instruments, the practical implementation of these tools exhibits considerable convergence across jurisdictions. Most central banks rely on a limited set of core instruments, including sovereign and central bank-issued sukuk, wakala-based facilities, commodity murabaha arrangements, qard facilities, and Shariah-compliant repo mechanisms.

To illustrate these similarities and differences, this section presents representative country examples drawn from the preceding discussion. Rather than providing an exhaustive list, the selected countries demonstrate the principal approaches adopted by central banks for both liquidity absorption and liquidity provision, highlighting how common contractual structures are adapted to different institutional and regulatory environments.

The heatmap below summarizes the principal Shariah-compliant liquidity management tools employed by selected central banks. It provides a comparative overview of instrument use across jurisdictions, highlighting common practices and country-specific implementations. It complements the preceding analysis by presenting a cross-country view of Islamic central bank liquidity management frameworks (Table 1).

The choice of instrument therefore reflects not only Shariah compliance but also operational considerations, including market depth, transaction costs, legal certainty, and the availability of high-quality liquid assets. Instead, jurisdictions have adopted instruments reflecting the structure and maturity of their Islamic financial markets, resulting in different combinations of liquidity absorption and provision facilities despite similar contractual foundations. More developed Islamic money markets generally employ a wider range of liquidity management instruments, whereas less mature markets rely on a smaller number of standardized facilities.

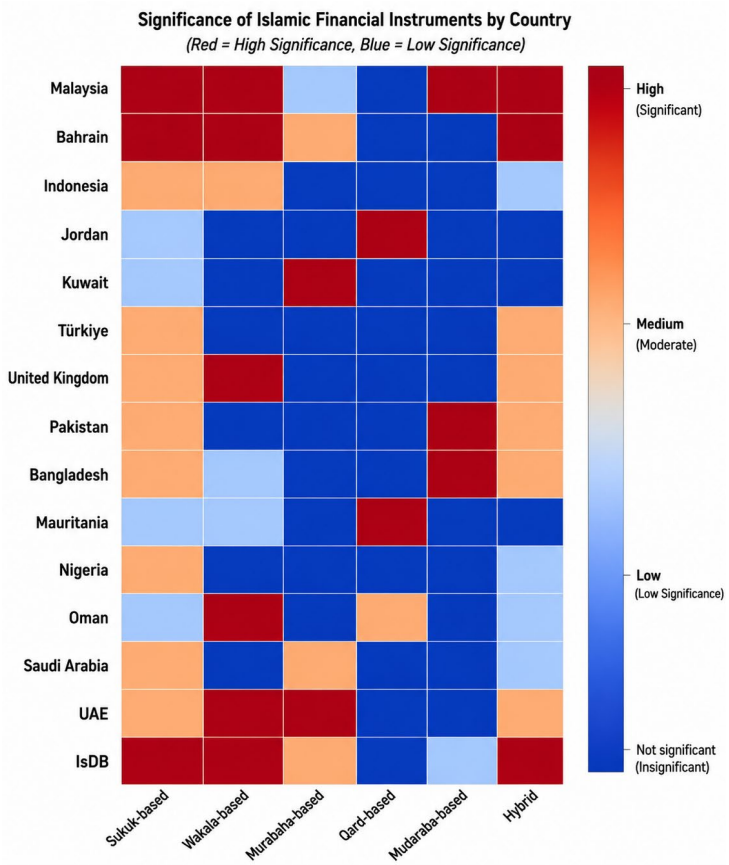
The country comparison table and heatmap indicate that Islamic central bank liquidity management frameworks have gradually converged around a limited number of Shariah-compliant instruments despite differences in institutional and legal environments (Table 1, Figure 13). The findings suggest that sukuk-based instruments constitute the backbone of Islamic liquidity management systems, as they are the most widely adopted instruments across jurisdictions and are used for both liquidity absorption and liquidity provision. Countries with more developed Islamic liquidity management frameworks, such as Malaysia, Bahrain, Indonesia, the United Arab Emirates and Oman, employ a broader range of instruments, including sukuk, wakala, murabaha and hybrid structures, whereas emerging markets tend to rely on a narrower set of tools and sovereign sukuk issuances.

Table 1. Global comparison of central bank islamic liquidity management instruments.

Country	Liquidity Provision Tools	Liquidity Absorption Tools	Sukuk/Instruments Used	Contracts	Typical Tenor	Key Characteristics
Bangladesh	Mudaraba-Based Liquidity Support Facility, Repo (Government Ijarah Sukuk)	Mudaraba-Based Liquidity Absorption Facility, Government Islamic Investment Bond (GIIB)	Mudaraba Sukuk, Ijarah Sukuk, GIIB	Mudaraba, Ijarah (collateral)	Overnight-short term (facilities); 3 months-8 years (GIIB)	Profit-sharing liquidity support; sukuk mainly collateral-based
Bahrain	Islamic Sukuk Liquidity Instrument (ISLI), Sukuk Sale & Purchase Facility	Wakalah Facility, Government/, CBB Sukuk	Central bank sukuks	Wakala, Salam, Ijarah, Hybrid	Overnight, 1 week, 91 days, 182 days, up to 1 year	Benchmark issuer; SPV-based active money market
Brunei	Sukuk-based arrangements	Sukuk al-Ijarah	Government Sukuk al-Ijarah (SIA)	Ijarah	91 days	Conservative system; limited instrument diversity
Indonesia	FASBIS, PASBI, FLISBI, SBIS or SBSN repo	SBIS SUKBI, Sharia&FX term deposits	SBIS, SUKBI, SBSN repo	Mainly Ju'alah, sukuk-based structures; musharakah only as possible/legal basis	1 day - 12 months	Auction-based monetary sterilization
Jordan	Qard al-Hasan liquidity support, Colleteralized Wakala	Qard-based withdrawal tools	Limited sukuk usage	Qard	Intraday - overnight	Emergency liquidity support
Kuwait	Commodity murabaha financing facilities	Commodity murabaha deposits	Murabaha instruments	Murabaha	Overnight 1 week	Short-term interbank liquidity market
Malaysia	Collateralized, Uncollateralized Commodity Murabaha, Qard Facilities, SBBA	Commodity murabaha, Wakala deposits, BNM Sukuk	Ijarah, Murabaha, Musharakah, Mudarabah, Wakala, Hybrid sukuk	Murabaha, Wakala, Qard, Ijarah, Musharakah, Mudarabah	Overnight 12 months	Highly developed dual system
Mauritania	Limited, not clearly identified	Islamic Treasury Bills (ITBs)	Limited instruments	Islamic Treasury Bills based	Intraday - overnight	Early-stage Islamic liquidity system
Nigeria	CBN Non-Interest Notes (CNIN)	CBN Non-Interest Asset-Backed Securities (CNI-ABS), CBN Special Bills	CNI-ABS, CNIN, CBN Special Bills	Asset-Backed Structures, Qard, Wadiah	Overnight - short term	Emerging non-interest liquidity management system.
Oman	Qard Hasan (Intraday)	Wakala-based Monetary Policy Tools, ICDs, Islamic T-Bills, Ijarah Sukuk, Restricted Mudaraba Accounts	WMMI, ICDs, Islamic T-Bills, Ijarah Sukuk	Wakala, Mudaraba, Ijarah, Qard Hasan	Overnight - 1 year	Diversified wakala-based liquidity management framework
Pakistan	Standing Ceiling Facility (SCF), Mudarabah Based OMO Injections	Mudarabah-Based Open Market Operations	MFF, GIS	Mudaraba, Ijarah	Overnight Short term	Mudarabah-based framework supported by Ijarah Sukuk
Saudi Arabia	Commodity Murabaha Facilities, Standing Facilities	Commodity Murabaha	Commodity Murabaha	Murabaha	Overnight 12 Months	Commodity Murabaha-based liquidity management framework
Turkiye	Repo, Late Liquidty Window, Intraday Liquidity Facility	Outright Purchase and Sale of Lease Certificates	Lease Certificates (Sukuk al-Ijarah)	Ijarah	Intraday 1 year	Sukuk-based open market operations framework
UAE (CBUAE)	Collateralized Murabaha Facility (CMF), Overnight Murabaha Facility (OMF)	Wakala Deposits, Islamic Certificates of Deposit (ICDs), Dirham-denominated (Dirham T-Sukuk), Overnight Deposit Facility	Islamic Certificates of Deposit (ICDs), Dirham T-Sukuk	Murabaha, Wakala, Ijarah	Overnight - 1 year	Strong short-term liquidity toolkit
United Kingdom	Alternative Liquidity Facility (ALF)	Wakala-based structure	Sukuk pooled asset structure	Wakala, Ijarah	Overnight - 1 week	SPV-based Islamic liquidity corridor

The analysis also reveals a distinction between the breadth of adoption and the

operational use of liquidity instruments. While sukuk structures are the most prevalent instruments across countries, commodity murabaha remains one of the most frequently used instruments in day-to-day liquidity management operations, particularly in GCC countries and Malaysia. Wakala-based arrangements serve as an important operational mechanism for liquidity placement and investment management, whereas mudaraba-, musharakah- and ju'alah-based structures are concentrated in a smaller number of jurisdictions but provide important examples of contractual diversity in Islamic monetary operations. Overall, the results indicate that contemporary Islamic liquidity management has evolved into a predominantly sukuk-centered ecosystem supported by wakala and murabaha structures, while selected jurisdictions have developed alternative frameworks based on mudaraba, musharakah and ju'alah contracts to address specific liquidity management objectives.



Notes: The heatmap illustrates the relative prevalence of liquidity management instruments used by central banks operating within Islamic financial systems. Color intensity represents the relative level of instrument utilization across jurisdictions based on country practices and central bank frameworks. Dark red indicates high usage, light red moderate usage, light blue limited usage, and dark blue no significant use. The figure reflects the relative importance and frequency of each instrument rather than the number or volume of transactions.

Figure 13. Cross-country usage of Islamic Central Bank liquidity instruments.

6. Conclusion

This study has examined the role of central banks in managing liquidity within Islamic banking systems through a comparative analysis of Shariah-compliant liquidity management instruments and documented country practices. The analysis demonstrates that central banks employ a diverse range of liquidity management tools derived from classical Islamic contracts, including wakala, murabaha, qard, ijarah, salam, istisna, mudaraba, and musharaka, as well as various sukuk structures and hybrid arrangements.

Despite differences in legal frameworks, regulatory environments, and market development, the findings reveal a significant degree of convergence in the design of Islamic liquidity management systems. Across jurisdictions, sukuk-based instruments have emerged as the backbone of liquidity management frameworks, serving as the principal instruments for both liquidity absorption and liquidity provision. Sovereign and central bank sukuk are widely employed in central bank liquidity operations and also contribute to the development and functioning of Islamic money markets by providing eligible collateral for liquidity management facilities.

The comparative analysis further highlights an important distinction between the breadth of adoption and the operational intensity of liquidity instruments. While sukuk structures are the most widely adopted instruments across jurisdictions, commodity murabaha-based facilities remain among the most frequently utilized instruments in day-to-day liquidity management operations, particularly in GCC countries and Malaysia. In addition, wakala-based arrangements play a crucial role as operational mechanisms for liquidity placement and investment management, whereas qard and mudaraba-based facilities tend to be confined to specific jurisdictions and policy objectives.

Country-level evidence suggests that jurisdictions such as Malaysia, Bahrain, the United Arab Emirates, Indonesia, Bangladesh, Oman, Pakistan, and the United Kingdom have developed increasingly sophisticated liquidity management frameworks, although differences remain in the choice of contracts, maturity structures, collateral arrangements, and market practices. More developed Islamic financial systems generally rely on a broader range of tradable liquidity instruments, whereas emerging jurisdictions continue to depend on a narrower set of operational tools and sovereign sukuk issuances.

Overall, the study indicates that contemporary Islamic liquidity management has evolved into a sukuk-centered ecosystem supported primarily by wakala and commodity murabaha structures. Although Islamic liquidity instruments originate from diverse contractual foundations, their practical implementation increasingly converges toward a limited number of widely accepted, operationally efficient, and Shariah-compliant mechanisms. This convergence reflects the combined influence of regulatory pragmatism, financial market development, and the objective of maintaining liquidity, financial stability, and effective monetary policy implementation within Islamic banking systems.

Beyond documenting the diversity of Shariah-compliant liquidity management instruments, this study develops a systematic comparative framework for analysing their operational implementation across jurisdictions. By distinguishing between contracts that are theoretically permissible under Shariah principles and instruments that are demonstrably employed by central banks in practice, the study contributes to a more consistent understanding of Islamic monetary policy operations. The comparative classification framework developed in this study provides a structured basis for evaluating cross-country liquidity management practices and may serve as a useful reference for researchers, policymakers, and central banks seeking to assess existing operational arrangements or design new Shariah-compliant monetary policy instruments.

Future research may extend this framework by incorporating quantitative measures of instrument usage, market depth, operational effectiveness, and the relationship between liquidity management instruments, monetary policy transmission, and financial stability. Such analyses would further strengthen the empirical understanding of Islamic central bank liquidity management and support the continued development of more efficient and resilient Islamic finance compliant monetary policy frameworks.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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