ISLAMIC FINANCIAL SERVICES BOARD

TECHNICAL NOTE ON ISSUES IN STRENGTHENING LIQUIDITY MANAGEMENT OF INSTITUTIONS OFFERING ISLAMIC FINANCIAL SERVICES: THE DEVELOPMENT OF ISLAMIC MONEY MARKETS

March 2008

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ACRONYMS

IAH	Investment Account Holders
BNM	Bank Negara Malaysia
BNMNi	Bank Negara Monetary Notes
CBB	Central Bank of Bahrain
CBK	Central Bank of Kuwait
CBIC	Central Bank *Ijārah* Certificate
CBOS	Central Bank of Sudan
CHATS	Clearing House Automated Transfer System
CIC	Central Bank *Ijārah* Certificate
CMC	Central Bank *Mushārakah* Certificate
CRR	Cash Reserve Requirements (also referred to as SRR in some jurisdictions)
DVP	Delivery versus Payment
GIC	Government Investment Certificate
GII	Government Investment Issue
GIIB	Government Islamic Investment Bond
GMC	Government *Mushārakah* Certificate
GOP	Government of Pakistan
IBI	Islamic Banking Institutions
IDB	Islamic Development Bank
IFSB	Islamic Financial Services Board
IIFS	Institutions (other than Insurance institutions) offering only Islamic Financial Services
IIMM	Islamic Interbank Money Market
iTB	Islamic Treasury Bills
LLR	Lender of Last Resort
LMC	Liquidity Management Centre
MNS	Multi-Netting System
MTB	Market Treasury Bills
NBFC	Non-Banking Finance Companies
OMO	Open Market Operation
OTC	Over the Counter
PIB	Pakistan Investment Bonds
PSIA	Profit-Sharing Investment Account
PVP	Payment versus Payment
RENTAS	Real-Time Electronic Transfer of Funds and Securities
REPO	Repurchase Agreement
RTGS	Real-Time Gross Settlement
SAMA	Saudi Arabian Monetary Agency
SARIE	Saudi Arabian Riyal Interbank Express
SBP	State Bank of Pakistan
SECP	Securities and Exchange Commission of Pakistan
SFSC	Sudan Financial Services Company
SLR	Statutory Liquidity Requirement
SPV	Special Purpose Vehicle
SRO	Self-Regulatory Organisation
SRR	Statutory Reserve Requirements (also referred to as CRR in some jurisdictions)

Bismillahirrahmanirrahim

Allahumma salli wasallim 'ala Sayyidina Muhammad wa'ala ālihi wasahbihi

EXECUTIVE SUMMARY

1. In view of the lack of adequate *Sharī`ah*-compliant money market instruments for liquidity management, and the underdevelopment of Islamic money markets in IFSB member countries, the IFSB Technical Committee, at its 7th Meeting on 10 May 2005 in Amman, mandated the IFSB Secretariat to (1) conduct a study on the existing practices and infrastructures of Islamic money markets across countries, and (2) propose recommendations to address impediments to the development of efficient Islamic money markets. To fulfil this mandate, the Task Force on Markets and Instruments for *Sharī`ah* Compliant Liquidity Management and Monetary Operations (Islamic Money Market Task Force) was formed. *(See Appendix 1 for the detailed Task Force mandate.)*

2. The strategy for Islamic money market development proposed in this Technical Note can be summarised in the form of five recommendations:
   - Design Islamic money market and Islamic Government financing instruments with the desirable characteristics – i.e. relatively low risk, simply designed, regularly issued, widely held, and supported by a robust payment and settlement system.
   - Incorporate Islamic Government finance instruments as an integral part of the overall public debt and financing programme, and foster the development of an Islamic Government securities market.
   - Actively use Islamic Government finance instruments in market-based monetary operations of the central bank to manage liquidity in the Islamic money market.
   - Develop efficient trading arrangements and the associated market microstructure for Islamic money and Government finance instruments, and develop in parallel the foreign exchange markets.
   - Provide supervisory guidance and incentives for effective liquidity risk and asset liability management by IIFS, and in parallel foster privately issued Islamic money market securities.

Existing practices and infrastructure of Islamic money markets

3. Attempts to develop Islamic money markets that could facilitate liquidity management by central banks and other financial institutions have met with only limited success to date, due to inadequate availability of suitable *Sharī`ah*-compliant instruments and the weaknesses in the supporting infrastructure needed for active Islamic money markets.

4. The current structure of the Islamic money market is dominated by transactions among IIFS, and special arrangements with conventional banks. In many countries this takes the form of interbank mutual financing facilities within the profit-sharing framework. In several countries, IIFS have also designed special arrangements for interbank transactions with conventional and Islamic counterparties based on a Commodity *Murābahah* contract, or special arrangements for holding compensating non-interest-bearing deposits with each other. The reliance on the central bank for liquidity management is still low, as most short-term borrowing facilities from the central bank have not been adapted to accommodate the *Sharī`ah*. The reliance of IIFS on interbank arrangements with other IIFS, and on special arrangements between IIFS and conventional banks, implies that the interbank money market is likely to be segmented between Islamic and conventional banks. At present, Islamic money markets are not well integrated into the overall money markets in most jurisdictions.

5. Several innovative Islamic financial instruments have been developed to facilitate interbank transactions and trading by IIFS, and monetary operations of the central bank. However, the designs of these instruments have many limitations in terms of their tradability and flexibility, restricting their use for open market operations by central banks. For example, most of the existing *Sharī`ah*-compliant money market and monetary policy instruments are currently dominated by *Muḍārabah*-type contracts (with potentially volatile returns linked to profits), or *Murābahah*-type contracts with linkages to commodity markets (and the associated market risks). These types of instruments are not negotiable, and hence are not well suited for active secondary market trading, thus hampering the development of the Islamic money market. In addition, the use of long-term instruments, *Sukūk*, for short-term liquidity management purposes through outright sales and purchases is also constrained by: (1) the limited development of secondary markets; (2) insufficient supply of these instruments; and (3) the higher market risks associated with the use of long-term instruments for short-term liquidity management.

6. Nevertheless, country experiences suggest that the Islamic asset securitisation techniques used in recent capital market products seem to provide a sound basis for designing Islamic money market instruments. These long-term instruments, based on securitisation of various underlying *Sharī`ah*-compliant contracts, have created opportunities to design innovative Islamic money market and public financing instruments, and also operations based on *Sukūk* suitable for interbank money market transactions, and monetary management. Country experiences also suggest that instruments based on securitisation of Government finance contracts, such as Government Investment Certificates (GICs), seem most promising for monetary and public financing operations and interbank transactions, as these seem amenable to the designing of a regular issuance programme of sufficient volume to build market liquidity. In addition to such *Sukūk*-based money market transactions, Interbank *Muḍārabah* investments can remain a supplementary instrument for unsecured interbank dealings.

7. The differing interpretations of *Sharī`ah* rulings, or *fatāwā*, on financial matters across jurisdictions has led to differing methods of structuring or packaging financial instruments, and to non-validity or non-recognition of some contracts or terms of practice in certain jurisdictions. This factor would also affect the development of Islamic money markets, particularly on a cross-border basis. The most urgent *Sharī`ah* issues identified by the Task Force are related to the sale of debt to a third party, and to securitisation of receivables for debt trading (*Bay` al-Dayn*). Contracts based on revenue sharing, floating *Ijārah* and diminishing *Mushārakah* (or *Mushārakah Mutanaqisah*), however, are accepted as *Sharī`ah* permissible in a majority of the jurisdictions surveyed. For risk mitigation instruments (in particular, derivatives) such as the Islamic profit rate swap, foreign exchange swap, forward (using the *Salam* principle), forward foreign exchange (using the *Wa`d* principle), options (using the *`urbūn* principle), futures contract and *Bay` al-Istijrār* contracts, only half of the jurisdictions surveyed accepted these contracts as *Sharī`ah* permissible. The different *Sharī`ah* interpretations among jurisdictions – and among *Sharī`ah* boards of IIFS – have also resulted in non-uniformity in the acceptance and design of *Sharī`ah*-compliant alternatives to (REPO)-type transactions.

8. The broader legal framework, as well as taxes and tax incentives play a significant role in fostering the development of the Islamic money market, particularly in reducing the cost of issuing Islamic securities. With the need to enter into multiple contracts, and the requirement to get endorsement for *Sharī`ah* compliance, the cost of issuance, especially for instruments that are designed through asset securitisation, will exceed that for conventional issues. Although a majority of the countries surveyed have made some form of modifications to the laws related to banking, insurance and the capital market to accommodate Islamic finance, many have yet to modify the laws related to duties and taxes. In many countries, further development of trust laws and securities laws e.g..to facilitate the operation of SPVs, Islamic asset securitisation, and public debt laws; would be

essential to support the design and issuance of Islamic money and capital market instruments.This situation of varied legal and tax arrangements has resulted in an uneven playing field for Islamic institutions, indirectly affecting the speed of development of the Islamic money market. However, since the decision on tax structures and legal frameworks generally depends on an individual country's Government policy and is beyond the power of central banks and supervisory authorities, this Technical Note will not attempt to cover any tax, cost and legal issues. Nevertheless, its significance in the process of developing the Islamic money market deserves to be highlighted here.

Monetary policy operations and regulation

9. Adaptations to the framework of monetary policy instruments and operations designed to accommodate the specificities of IIFS and influence their liquidity are not well developed in most jurisdictions. Only a few central banks in the countries surveyed have lending or deposit facilities that have been adapted to accommodate the requirements of *Sharī`ah* law. Typically, they tend to be on a *Muḍārabah* or Commodity *Murābahah* basis, or some form of facility that does not charge interest. These types of arrangements are not suitable for promoting active interbank trading. The IIFS surveyed also highlighted that a significant weakness is the absence of transparent LLR facilities in their jurisdiction. Under these circumstances, IIFS tend to maintain a very high level of excess reserves.

10. In the majority of countries surveyed by the Task Force, the use of market-based monetary operations using tradable Islamic instruments is not well developed. This in part reflects the lack of well-designed Islamic money market products that are suitable for both monetary management by central banks and liquidity management by IIFS. Although most central banks surveyed use OMOs and OMO-type operations[1], only a few have adapted these operations to accommodate transactions with IIFS.

11. Five central banks in the jurisdictions surveyed do not apply reserve requirements to PSIAs, although most supervisory authorities require other *Sharī`ah*-compliant current and savings accounts to be included as part of the base on which reserve requirements apply. In regards to most features of the reserve requirement system (such as the length of the base period, the reserve maintenance arrangement, etc.), the central bank applies the same treatment to IIFS and conventional banks. A majority of the central banks also do not give a return on the required reserves (as well as the excess reserves) of IIFS. However, all central banks impose penalties on reserve shortfalls, although the method of charging the penalties differs in some jurisdictions. These practices have resulted in differences between conventional and Islamic banks in terms of the demand for central bank balances. Nevertheless, most countries did not take into account this difference in the demand for reserve money in the liquidity-forecasting framework used for day-to-day monetary operations.

12. In some countries, regulatory liquidity requirements for IIFS are lower than for conventional banks. The difference in the treatment of IIFS is due to the limited availability of liquid *Sharī`ah*-compliant instruments. Nevertheless, regulations to limit liquidity mismatch in different maturity buckets, based on liquidity projections, are used in a majority of the countries surveyed. Central banks of these countries, however, do not differentiate between the liquidity mismatch regulations of conventional banks and the Islamic banks. In addition to monitoring and limiting the mismatches in different maturity buckets, various

[1] OMO-type of operations are market –based operations conducted by central banks, such as (a) Lending and borrowing on auction basis against underlying assets as collateral (b) Primary market issuance of central bank or Government securities for monetary policy purposes(c) Auctions of term deposits(d) Foreign exchange auctions (as a tool for both banking system's liquidity management and foreign exchange)

simple liquidity ratios (such as liquid assets to short-term liabilities) are also used to assess IIFS liquidity risk management.

13. A review of the currently used *Sharī`ah*-compliant money and capital market instruments for liquidity management by central banks and IIFS highlights some of the key issues that need to be addressed in order to facilitate monetary operations with IIFS and Islamic money market development. The survey indicates that most of these instruments are based on securitisation of *Sharī`ah*-compliant contracts, such as *Muḍārabah* and *Mushārakah* certificates, and securities based on *Murābahah* and leasing-based financing (see Section 3 for details).Only some of these instruments are negotiable in secondary markets. Even if negotiable, , the volumes of these instruments are relatively small and are not yet suitable for flexible asset–liability management by IIFS and monetary operations by central banks. In view of the small volumes and shortage of papers, most instruments are generally bought to hold rather than trade. Thus, liquidity is a problem and price determination and mark-to-market is difficult. This lack of market liquidity is a major constraint that needs to be addressed through a comprehensive market development strategy.

14. Central banks in many countries have used, and are still using, foreign exchange swaps to influence domestic monetary conditions (hence the money market liquidity), particularly in the absence of domestic markets for Government securities. However, certain *Sharī`ah* Boards do not approve foreign exchange swaps, and this limits the use of foreign exchange operations as tools to influence domestic monetary conditions. For example, forward purchases or sale of foreign currencies versus other currencies are generally not recognised as *Sharī`ah* compatible. Even if this issue is resolved, the use of swaps ideally requires a deep forward exchange market, which is not always available. In most countries, a well-functioning interbank foreign exchange market already exists for spot transactions. Even when forward markets are available, access to that market by IIFS may at times be constrained by *Sharī`ah* restrictions.

Public debt and financing management

15. Currently, most jurisdictions do not incorporate the issuance of Government Islamic securities as part of the regular Government securities issuance arrangements. As the Government is a major issuer, it can, in principle, generate a programme of regular issues of financing instruments in sufficient volume, and in standard maturities, thereby providing a basis for a liquid market in instruments suitable for both monetary and public financing[2] operations, and which can be used as convenient benchmarks for the pricing of other Islamic financial instruments. Such public debt and financing management practices supported by adequate coordination with monetary operations can help both conventional and Islamic money markets. However, experiences in several countries suggest that public debt and financing management that includes *Sharī`ah*-compliant financing instruments requires a high degree of coordination between Government funding and expenditure decisions, in addition to the usual areas of coordination between monetary operations and public debt and financing operations.

16. In a majority of jurisdictions, central bank securities and Government securities coexist, in part because Government securities may not be available in sufficient volume for both monetary and public financing purposes. While such coexistence may thus simplify the task of coordinating the issue volumes of these instruments – one used for monetary purposes, and the other for public finance operations – this approach has the significant disadvantage of segmenting the market and limiting the liquidity of the secondary market in each

[2] The term "public debt" is replaced throughout with "public financing", since the latter allows for non-debt instruments such as *Ijārah* and similar instruments.

instrument. The later consideration would often warrant primary reliance on Islamic Government financing instruments for both monetary and public financing purposes.

17. In half of the jurisdictions surveyed, the legal framework for public debt and financing arrangements does not explicitly allow for the design and issuance of Islamic financial instruments. Appropriate modifications to the law could facilitate Islamic money market development.

Payment and settlement systems

18. Certain features within the existing payment and settlement system will require adaptations in order to ensure that payment transactions can be made within the rules of *Sharī`ah*. In particular, adaptations are required in the types of collateral, the loss-sharing arrangements, the interbank lending arrangements, and the availability of central bank LLR facilities (if any) to support settlements by the IIFS. While half of the jurisdictions surveyed have adopted the RTGS system, most of them have not adapted the system to allow for collaterals permissible for IIFS. In addition, the use of a *Muḍārabah* credit facility to support end-of-day settlement makes the cost of the facility non-transparent. Therefore, an alternative money market and LLR arrangements that are more transparent are needed to facilitate the operation of the payment system.

19. Practices for secondary trading include the use of exchanges for the listed *Sharī`ah*-compliant instruments (e.g. globally issued *Sukūk*), and the OTC markets for most money market and Government finance instruments. In particular, a majority of the countries surveyed use a primary dealer system for trading in Government securities, with dealers having access to central bank credit facilities. The central depository of securities also exists in most jurisdictions. These arrangements could be adopted readily to support secondary markets in Islamic financial instruments. Also, in many jurisdictions, the buy-back facilities or REPO facilities provided by the central bank provide an additional source of liquidity for the instruments, and hence the design of central bank facilities plays a critical role in setting up the incentives for accessing secondary markets.

Recommendations for development of Islamic money markets at the national level

20. The design of market-based monetary operations, supported by well-structured LLR facilities, typically plays a critical role in the effective functioning and development of money markets. Therefore, high priority should be given to the use of market-based monetary operations using tradable Islamic instruments suitable for both monetary management by central banks and for liquidity management by IIFS. Since most central banks surveyed already use OMOs, or open market-type operations with conventional banks, the adaptations of these operations also to accommodate IIFS becomes particularly pressing. Notably, central banks should focus on encouraging the development and design of tradable *Sharī`ah*-compliant instruments that (1) carry low risk and can set a benchmark for other instruments; (2) can be issued in adequate volume and on a regular schedule to meet the needs of monetary policy, Government financing and the portfolio needs of investors; and (3) can be held by both Islamic and conventional banks, as well as non-banks, to avoid continued segmentation of money markets.

21. More specifically, develop a regular issuance programme of Government finance instruments in sufficient volume and integrate this into the public debt and financing management framework. This would require a combination of *Ijārah* and other *Sharī`ah*-compliant contracts based on a close linkage between funding and spending decisions of the Government. As a general principle, it is best to avoid segmenting the market between

central bank and Government financing instruments. While central bank instruments can play a role as an occasional instrument to absorb liquidity in exceptional circumstances, the reliance on Government finance instruments for both monetary and Government financing operations would facilitate market development.

22. Actively use these Government finance instruments in monetary operations by the central bank, including by developing short-term instruments such as *Sharī`ah*-compliant alternatives to REPOs based on Government finance instruments. Operations using these instruments shall then be integrated into the design of standing facilities as well as market-based monetary operations, in order to manage market liquidity and market rates of return. Appropriate designs of *Sharī`ah*-compliant alternatives to REPOs based on *Sukūk* are currently subject to differing *Sharī`ah* interpretations, and these differences need to be resolved and a common design agreed among central banks.

23. Adapt the payment and settlement system to accommodate the requirements of Islamic finance, including the settlement of Islamic money and capital market securities and the use of collateral and financing facilities suitable for IIFS in their settlement arrangements. As the range of tradable *Sharī`ah*-compliant instruments expands and markets in them evolve, the legal, risk management, and other operational feautures of the payment settlement system and securities settlement systems would need to be further reviewed and adapted to ensure their adequacy to support a robust market in Islamic money and Government finance instruments.

24. Encourage the primary dealer systems and other market-making arrangements for trading in *Sharī`ah*-compliant instruments. More generally, development of a network of financial intermediaries that would originate /underwrite securities that meet the return, risk, and liquidity profile demanded by investors on one hand; and the size, cost, maturity, and flexibility required by issuers, on the other; that are *Sharī`ah*- compliant would be central to Islamic money market development.

25. Encourage active liquidity management by IIFS, including through supervisory guidance on liquidity risk management. The use of Government finance instruments can be integrated into the liquidity monitoring and liquidity risk management framework.

26. A coordinated effort across jurisdictions to promote harmonised approaches to designing and developing Islamic money market instruments should contribute to the development of regionally and internationally integrated Islamic money markets. However, priority should be given to the creation of domestic Islamic money markets, based on the agreed general framework and guidelines. This could then lay the basis for creating regional and sub-regional markets for Islamic money market instruments.

27. Other non-tradable instruments such as Commodity *Murābahah* and Interbank *Muḍārabah* could still play a supplementary role in facilitating the liquidity management of the IIFS. Harmonisation of contract design for these arrangements would be desirable but over time, the market should be deepened by broadening the range of securities to allow different risk profiles and varied maturities, and to enable the hedging of risks

28. The issue of developing *Sharī`ah*-compatible forward and swap contracts in foreign exchange transaction should be addressed to allow for proper asset–liability management by IIFS and to bring about a level playing field in liquidity management by IIFS.

29. As money and foreign exchange markets continue to develop, the issues of market transparency and disclosure, including dissemination of market information, rating assessments by credit rating agencies and financial analysis community, would all need to be reviewed and adapted as needed, to enhance market efficiency and depth.

30. Implementation of the recommendations 20-29 will necessarily involve the adaptations of the legal and regulatory framework i.e the trust laws, the banking and securities laws, the public debt laws, etc. and appropriate adjustments in the tax regime to facilitate the operation of Islamic money and capital markets.

31. Implementation of the "Strategy for Islamic Money and Government Securities Markets Development", contained in paragraphs 20–30, can benefit from continued exchange of experiences through such implementation. One option is to establish a new "Task Force on Implementation of Islamic Money Market Development Strategy" (perhaps a continuation of the present Task Force with a revised mandate), which could help to promote and review experiences as progress is made in the implementation of the strategies. In order to kick-start this process, specific areas for further guidance could be identified and some of the IFSB member countries could volunteer to implement the strategy. Another option is for IFSB to prepare a more detailed analysis and guidelines on some of the issues and recommendations through an in-depth study of country experiences and market developments, with technical assistance support, and discuss the findings in a workshop of concerned authorities and market players.

32. The focus of the current Task Force *(see Appendix 1 for details)* is on two components of the money market, namely: (1) the market for Government and/or central bank securities; and (2) the interbank transactions of the IIFS and between the IIFS and the central bank based on Government and central bank securities. The intention of the Task Force is to encourage and facilitate liquidity management of IIFS and monetary operations of the central bank using a benchmark that is derived from low-risk *Sharī`ah*-compliant instruments. In this regard, the Task Force fully acknowledges the efforts undertaken by other applicable international associations in developing product standards, standard documentation, and guidelines for IIFS to manage their liquidity on the interbank/inter-IIFS market using various complementary instruments.

SECTION 1: RATIONALE FOR ISLAMIC MONEY MARKET DEVELOPMENT AND AN OVERVIEW OF THE WORK OF THE TASK FORCE

The rationale for Islamic money market development

33. The phenomenal growth in Islamic finance, especially in the last decade, has brought IIFS into direct competition with their conventional counterparts in terms of attracting individual savings and institutional funds. The investors, in return, expect their investments to have comparable liquidity and returns commensurate with risks. As a fiduciary agent, the IIFS are naturally concerned with maintaining adequate liquidity of their assets, while optimising profitability.

34. The success in developing IIFS spurred efforts to extend *Sharī`ah*-compliant practices in other market segments, namely *Takāful* and Islamic capital markets. With the establishment of IIFS and *Takāful*, the management of balance sheet liquidity becomes a major challenge due to the scarcity of both *Sharī`ah*-compliant capital and money market instruments. The pressing need to address liquidity management for IIFS prompted several countries such as Bahrain, Iran, Malaysia and Sudan to introduce instruments that comply with the *Sharī`ah* requirements. Efforts were and are continuously being made by both the central banks (money market) and securities commissions (capital market) focusing on the regulatory foundations and issuance of diverse *Sharī`ah*-compliant financial instruments, ranging from short-term papers to long-term *Sukūk*, to meet the liquidity and investment needs.

Table A: Average daily volume of interbank transactions (unsecured interbank financing, Repos, etc. of less than one year maturity in USD millions) and average rate of return on the transactions, 2006

	IIFS						Conventional banks			
	With other IIFS	Rate of return (%)	With conv. banks	Rate of return (%)	With central bank	Rate of return (%)	With other conv. banks	Rate of return (%)	With central bank	Rate of return (%)
Indonesia	3.5	5.11	3	7.62	25	5.45	925	8.90	2,419	10.73
Malaysia[3]	269	3.47	NA	NA	778	3.36	928	3.51	2,443	3.46
Pakistan	0.03	8.75	1	10.22	NA	NA	548	9.28	97	9.02
Qatar	1,087	NA	1,709	NA	NA	NA	11,252	NA	NA	NA
Saudi A.	1,464	5.0	18,250	2.97	13	4.50	117,726	4.63	2,264	4.50
Singapore	NA	NA	NA	NA	NA	NA	3,400	3.44	1,600	3.27

Source: Data provided by the country authorities

[3] Excluding Repos

35. The average daily volume of interbank transactions in selected jurisdictions shown in Table A indicates that money market transactions among IIFS, between IIFS and conventional banks, and between IIFS and the central bank are very low compared to the trades in the conventional money market. Except for Kingdom of Saudi Arabia, the table also indicates that IIFS are more inclined to transact with the central bank for their liquidity needs. The large differences in the rates of return between the Islamic money market and the conventional money market are indicative of the significant segmentation of the two markets in terms of instruments used and their tradability and liquidity.

36. In most countries, efficient money and interbank markets for *Sharī`ah*-compliant instruments have not yet developed, in part because of weaknesses in the available instruments, and the small number and size of IIFS *(see Table 1 in Appendix 2)*. These two factors have limited the liquidity in the money markets. Since IIFS, unlike their counterparts, cannot borrow at interest to meet unexpected withdrawals from their depositors, it is more complex for them to manage mismatched asset and liability portfolios. However, the impact of mismatching on IIFS may be somewhat mitigated, insofar as this impact is shared with the IAH under *Muḍārabah* arrangements. Several initiatives have been taken to promote money market transactions among the IIFS, including placement or acceptance of funds with their counterparts on a *Muḍārabah* basis, or on a Commodity *Murābahah* basis, or on the basis of arrangements for compensating balances. However, in general, the way IIFS have most commonly solved this problem is to maintain a larger amount of cash—excess reserve balances with the central bank—than would be the case with their conventional counterparts *(see Table B below).* This has adversely affected the profitability and competitiveness of IIFS.

Table B: Excess reserves[4] as a percentage of total deposits, 2002 and 2006

	IIFS		Conventional bank	
	Average %		Average %	
	2002	**2006**	**2002**	**2006**
Indonesia	23.65	20.45	2.80	2.07
Iran	6.79	2.81	NA	NA
Malaysia[5]	NA	NA	4.0	6.0
Pakistan	3.31	3.81	0.24	0.27
Kingdom of Saudi Arabia	6.95	5.06	2.52	2.38
Singapore	NA	NA	6.59	5.27
Sudan	7.4	7.0	NA	NA
Bangladesh	69.8	57.3	28.2	24.1

Source: Data provided by the country authorities

37. Table B above shows that on average, IIFS maintain more excess reserves at the central banks (reserve deposits in excess of the required statutory amount) than the conventional banks. This situation may be driven by the fact that it is more difficult for the IIFS to manage their liquidity positions owing to the limited availability of *Sharī`ah*-compliant money market instruments in their jurisdiction However, the size of excess reserves (as a percentage of deposits) of IIFS has declined somewhat between 2002 and 2006, probably reflecting the increased availability of *Sharī`ah*-compliant instruments to manage liquidity. In the case of

[4] A standard definition of excess reserves is the amount of balances held with central banks (whether in two accounts or one account) over and above the statutory requirements. Excess reserves as defined above can never be zero, regardless of investment opportunities available, as banks will always need some balances to settle interbank payments on the books of the central bank.The more efficient and liquid the money market is , the less the level of working balances needed at the central bank. Banks with access to well developed lender of last resort, and active money markets will keep less amount of cash in their current account held at the central bank.

[5] Excess reserves = $\frac{\text{(Total statutory deposits with BNM – Statutory Reserve Requirements)}}{\text{Eligible liabilities}}$

Malaysia, although data are not available separately for IIFS, the development of a range of *Sharī`ah*-compliant money market instruments *(see Case Study in Appendix 3)* have reportedly allowed the IIFS to effectively manage their excess reserve positions at levels similar to their conventional counterparts.

38. Several *Sharī`ah*-compliant money and capital market instruments that can be used for both investment and liquidity management have been developed in recent years. IIFS, central banks and Governments have been experimenting with asset securitisation to develop *Sharī`ah*-compatible instruments that can be traded. However, these instruments are relatively small in volume and are not yet suitable for flexible asset–liability management by IIFS, and monetary operations by central banks *(see Table 2 in Appendix 2).* The securitised products can then be sold to investors in the form of units or certificates. *Sharī`ah*-compliant financial instruments such as funds in stocks, *Muḍārabah* and *Mushārakah* certificates, and securities based on *Murābahah* and leasing-based financing have been issued in countries such as Bahrain, Iran, Malaysia and Sudan, and also by the IDB. Although these instruments are tradable, most of the papers are generally bought to hold rather than trade because of the attractive yield of these instruments in some countries and shortage of papers generally. Thus, liquidity is a problem, and price determination and mark-to-market is difficult. This lack of market liquidity reflects an absence of programme issues in sufficient volumes to generate liquidity, and this factor is often seen as a major constraint in the further development of Islamic financial markets.

39. While IIFS could use these instruments for both investment and liquidity management, the central banks also need liquid money market instruments that can be used in monetary operations with IIFS to control market liquidity. Such operations would require *Sharī`ah*-compliant money market and Government finance instruments that can be used by both IIFS and central banks. This would enable central banks to exercise their responsibility for both monetary and financial stability more flexibly, by managing market liquidity more actively, as well as providing emergency liquidity assistance at an appropriate price where necessary. The active use of such instruments by central banks for their monetary operations can then serve as a catalyst for their use by IIFS, thereby stimulating active interbank money markets. Such operations by central banks are still not well developed owing primarily to the lack of adequate instruments and the supporting infrastructure. This has left some central banks with little or no alternative instruments to offer to their IIFS *(see Table 3 in Appendix 2).*

Role of money market and consequences of its absence

40. The fast pace of growth in the Islamic financial services sector has brought critical attention to the need to develop a well-functioning Islamic money market, which, as argued above, is an essential precondition for both the effective supervision and risk management of IIFS as well as the development of well-functioning capital markets generally. In particular, the existence of an Islamic money market and the supporting infrastructure should create a more stable financial system and provide the basis for broad-based market development as follows:

    - Pricing of banking and capital market products would be facilitated by establishing benchmark rates of return that are linked to domestic financial conditions. Currently, IIFS have to rely on interest-based indices such as the *London Interbank Offer Rate* to make financing decisions. Though benchmarking based on interest-based indices does not violate the principles of *Sharī`ah*, IIFS should price investments and facilities based on the rate of return on capital in the national markets where they operate and not on the opportunity cost of capital in unrelated outside markets. However, the absence or

limited development of Islamic money market and Government borrowing instruments has prevented the emergence of benchmark rates of return in the national markets.

- By facilitating more efficient market-based monetary operations and more effective management of market liquidity, the central bank can help to promote deep and liquid money markets at the national level, as the first step towards regional and, subsequently, international integration of these markets. While the forms in which such international money markets would develop will depend upon market forces, coordinated and harmonised development of the instruments and the necessary liquidity infrastructure at the national level would both speed up development of markets and facilitate their international integration.

41. Insufficient progress in the above areas has led to the following consequences:

- *Lack of well-suited interbank instruments*
  The most commonly used *Sharī`ah*-compliant money market instruments are based on the *Muḍārabah* principle or links to commodity markets and as such are not well suited for active interbank trading or for monetary and Government finance operations. However, recent developments in domestic and international issuance of Islamic securities based on securitisation of *Sharī`ah*-compliant contracts seem to offer a promising avenue for further progress.

- *Insufficient utilisation of securitisation technique*
  It is becoming increasingly recognised that the situation of excess liquidity has discouraged commercial banks from more active use of asset securitisation techniques to manage the maturity and risk spectrum of assets and liabilities. Hence, the absence of money markets has tended to blunt incentives to securitise assets and manage risks by trading in such assets to match the maturity and risks in the balance sheet.

- *Non-availability of risk management instruments*
  Alternative tools of risk management based on hedging instruments are still not widely available for IIFS. The development of *Sharī`ah*-compliant hedging instruments would require (a) active spot markets in commodities that are efficient, and (b) design of hedging contracts that are both *Sharī`ah*-compliant and financially feasible. This will require a resolution of various legal, institutional and accounting issues, and will necessarily take some time. Pending the resolution of these issues, commercial banks should be encouraged to use asset securitisation and to trade in securitised assets more actively to manage on-balance sheet risks. Such a development, however, requires that the constraint on risk management posed by the absence of Islamic money markets be eased.

- *Lack of a comprehensive and integrated approach in the development of money and security markets*
  Innovative applications of asset securitisation have helped to bring about many Islamic capital market products. The same approach also has the potential to promote active Islamic money markets and the establishment of benchmark rates of return based on central bank operations in such markets. The realisation of this potential, however, will require a comprehensive approach to develop money and security markets and mitigate the associated risks.

Functions of the Task Force: Its work, programme and outputs

42. The focus of the Task Force is on two components of the money market, namely: (1) the market for Government and/or central bank securities, and (2) the interbank transactions of

the IIFS and between the IIFS and the central bank based on Government and central bank securities *(see Appendix 1)*. The intention of the Task Force is to encourage and facilitate liquidity management of IIFS and monetary operations of the central bank using *Sharī`ah*-compliant benchmark instruments of low risk. In this regard, the Task Force fully acknowledges the efforts undertaken by other applicable international associations in developing product standards, standard documentation and guidelines for IIFS to manage their liquidity on the interbank/inter-IIFS market using various complementary instruments.

SECTION 2: SYSTEMIC LIQUIDITY ARCHITECTURE AND INFRASTRUCTURE OF IIFS: AN OVERVIEW OF FACTORS AFFECTING THE MONEY MARKET, INCLUDING LEGAL AND *SHARĪ`AH* ISSUES

Overview of factors affecting the money market

43. Systemic liquidity infrastructure refers to "a set of institutional and operational arrangements – including the key features of central bank operations and of money and securities markets – that have a first order effect on market liquidity and on the efficiency and effectiveness of liquidity management by financial firms".[6] The components of systemic liquidity infrastructure can be grouped into the following four categories:
    - Payment settlement/securities settlement systems;
    - Monetary policy instruments and monetary and exchange operations (lender of last resort, open market operations, etc.);
    - Public financing and foreign exchange reserve management arrangements; and
    - Microstructure of money, exchange and securities markets.

44. These four infrastructure components are interlinked, with the design and features of one component influencing the design and features of other components, and hence a comprehensive approach is needed in order to develop Islamic money markets. For example, the scope and structure of monetary and exchange operations by the central banks (to implement monetary and exchange policy) will affect the structure and liquidity of money and exchange markets and vice versa. The operational features of monetary policy will depend upon the structure of money markets and the features of the payment system. The development of market-based monetary operations, in turn, can have a first-order impact on the evolution and liquidity of money markets. These infrastructure elements taken together not only influence the day-to-day conduct of monetary, public financing and fiscal policy, and the pace of development of money and securities markets, but also affect the profitability and efficient operations of financial institutions. In light of these linkages, strategies for the development of Islamic money markets and of monetary management arrangements with Islamic finance have to be addressed jointly.

45. The IIFS and the supervisory authorities have perceived that the most important money market issues and challenges are the insufficient *Sharī`ah*-compliant money market instruments in their jurisdiction *(see Table 1 in Appendix 2).* Most of the existing *Sharī`ah*-compliant money market instruments are currently dominated by *Muḍārabah*-type instruments or those with linkages to commodity markets. These types of instruments and arrangements are not well suited for active secondary market trading, and hence hamper the development of the Islamic money market. A list of instruments and their characteristics are covered in Section 3 of this Technical Note.

46. The inadequate development of market-based monetary operations using *Sharī`ah*-compliant tradable instruments, and limitations on the scope of LLR privileges with central banks (such as *Discount Windows* and *Lombard Facilities* for day-to-day liquidity management of IIFS), have also been perceived as significant constraints on Islamic money market development. In the case of the central banks, the majority of supervisory authorities indicate that the currently available options for central banks to conduct effective open-market or open-market-type operations using *Sharī`ah*-compliant tools are limited *(see Table 1 in Appendix 2)*.

[6] World Bank and International Monetary Fund (2005); Dziobek, Hobbs and Marston (2000)

Background laws, *Sharī`ah* issues and tax considerations

47. Modifications to the existing laws to accommodate the specificities of Islamic finance are very crucial in developing the Islamic money market *(see Table 5 in Appendix 2).* In this context, the Task Force found that almost all countries consider that amendments to the laws, particularly banking and securities laws are important for a well-functioning Islamic financial services industry. In many countries, further development of trust laws and securities laws e.g. to facilitate the operation of SPVs and Islamic asset securitisation; and public debt laws were considered essential to support the design and issuance of Islamic money and capital market instruments.The survey revealed that more than three-quarters of the respondents had made some modifications to laws related to central banking, banking, securities, insurance and anti-money laundering to accommodate the specificities of Islamic finance. However, only a few countries have modified their trust and stamp duty laws to accommodate Islamic finance In this regard, supplemental guidelines such as guidance notes, circulars, conduct codes, etc. issued by the central bank or the Ministry of Finance (or jointly prepared with the private sector or through SROs and industry associations) also considered important for effective development of the Islamic money market.

48. The differing interpretations of *Sharī`ah* rulings, or *fatāwā*, on financial matters across jurisdictions has led to differing methods of structuring or packaging financial instruments and the non-validity or non-recognition of some contracts or terms of practice in certain jurisdictions. Responses to the survey indicate that the most urgent *Sharī`ah* issues are the sale of debt to a third party and securitisation of receivables for debt trading (*Bay` al-Dayn*). In general, *Sharī`ah* permissibility of sale of debt, or *Bay` al-Dayn*, and purchase undertaking agreements is very limited. However, contracts based on revenue sharing (as opposed to profit sharing), *Floating Ijārah* and *Diminishing Mushārakah* are accepted as *Sharī`ah* permissible in the majority of jurisdictions. Responses also indicate that *Sharī`ah* permissibility of other risk mitigation instruments (in particular, derivatives) such as the Islamic profit rate swap, foreign exchange swap, forward (using the *Salam* principle), forward foreign exchange (using the *Wa`d* principle), options (using the *`urbūn* principle), futures and *Bay` al-Istijrār* is accepted by only half of the jurisdictions in the survey *(see Table 6 in Appendix 2).*

49. In addition to the broader legal framework, taxes and tax incentives can play big roles in supporting the development of the Islamic money market. The survey indicates that only a few countries have provided tax incentives to help develop the Islamic money market and foreign exchange transactions. The survey also revealed that similar tax treatment is imposed on Islamic and conventional securities in the majority of jurisdictions. This is another disadvantage for Islamic money market development. The cost to issue a new Islamic instrument is higher than that for a conventional instrument, due to the various contracts required in order to fulfil the *Sharī`ah* requirement. Nevertheless, only a few countries regard the costs of money market and foreign exchange-related issuance and trading as significant. However, since the decision on legal and tax structures depends on the individual government's policy and is beyond the power of central banks and supervisory authorities, this Technical Note will not cover in detail these legal, tax and cost issues.

SECTION 3: THE STRUCTURE AND INSTRUMENTS OF THE ISLAMIC MONEY MARKET AND THE ROLE OF MONETARY OPERATIONS

Structure of Islamic money markets

50. While the central banks, banking and near-banking IIFS, *Takāful* operators and corporate end-users are the major participants in the money and foreign exchange markets, the particular focus of this Technical Note is on interbank money markets, where liquidity is influenced by central banks through their monetary operations. Typical instruments of such interbank money markets are unsecured interbank placements, and transactions in various tradable instruments. Several countries have adapted these instruments to meet the needs of the IIFS by designing *Sharī`ah*-compliant variants such as Interbank *Muḍārabah* deposits, Commodity *Murābahah* arrangements, short-term *Sukūk* and transactions in long-term *Sukūk*, and in a few countries, short term *Sukūk.*

51. Nevertheless, in most jurisdictions, the Islamic money markets remain thin, and in some countries interbank markets do not exist for a variety of reasons. As a result, many IIFS managed their liquidity by maintaining higher levels of excess reserves, as already noted. Table C below shows the end-period value of all Islamic and conventional money market instruments outstanding for 2004-2006. Although small compared to the conventional money market, the growth of Islamic money market has been encouraging.

Table C: End-of-period value of all Islamic and conventional money market instruments outstanding for the last three years (USD millions), as at 31 December

	ISLAMIC as at 31 December			CONVENTIONAL as at 31 December		
	2004	**2005**	**2006**	**2004**	**2005**	**2006**
Bahrain	37	168	107	509	577	803
Indonesia	NA	268	260	12,000	15,000	29,000
Kuwait	142	158	854	1,271	813	NA
Malaysia	29,347	36,688	44,866	84,956	89,388	91,872
Pakistan	6	11	143	10,534	92,944	11,775
Qatar[7]	900	936	3,129	4,768	7,840	11,252
Kingdom of Saudi Arabia	19,475	24,655	31,841	33,245	30,802	36,440
Singapore	NA	NA	NA	47,300	47,800	71,600

Source: Data provided by the country authorities

52. Most countries already have in place the infrastructure components (as described in the previous section) needed to support conventional money and foreign exchange markets. The challenge is to adapt these to meet the requirements of the IIFS. Some of the components – namely, microstructure of markets, payment settlement systems, public debt and financing arrangements, and foreign exchange trading arrangements – are taken up in later sections of this report. This section will highlight the development and issues relating to monetary operations of central banks as the key infrastructure to support Islamic money markets. The active use of market-based monetary operations plays a key role in influencing the liquidity conditions in the market, and provides the incentives for the market participants to manage their liquidity and liquidity risks actively, thereby contributing to the

[7] Interbank transactions between Islamic banks and conventional banks through placements based on commodity *Murābahah* contracts include transactions inside and outside Qatar.

development of Islamic money markets. Liquidity management instruments used by IIFS will be discussed in this section.

Instruments used by IIFS for interbank transactions and liquidity management

53. Active treasury activities of the IIFS bring greater liquidity to the market. These activities can be carried out on a centralised or non-centralised structure, depending on the size of the IIFS. In most of the jurisdictions, liquidity and funding management, as well as cash flow and cash position forecasting, are centralised across all business units.

54. The types of instruments used for managing liquidity vary among jurisdictions, and also differ among IIFS. This Technical Note will not propose any specific types of instruments but rather, will highlight the use and design of major instruments in different jurisdictions, from the perspective of Islamic money market development.

55. The availability of *Sharī`ah*-compliant money market instruments is quite limited and highly varied among countries. Instruments such as Commodity *Murābahah* Interbank *placement of funds under various profit sharing arrangements,* and *Islamic mutual funds*, are the most commonly used instruments by IIFS in many jurisdictions *(see Table 2 in Appendix 2)*. The reliance on central banks for liquidity management is still low, as most short-term financing from central banks has not been adapted to comply with *Sharī`ah* rules and principles. *Islamic mutual funds*, *Islamic Government Investment Certificates*, and *Short term Sukūk Al-Ijārah* are most commonly cited money market instruments by the central banks. ..

56. The reliance of IIFS mainly on interbank arrangements with other IIFS, together with a limited use of special arrangements between IIFS and conventional banks, confirms that the interbank money market is generally segmented, as also seen from the rate of return data on Table A. This segmentation could pose a challenge to the implementation of monetary policy and for the further development of a liquid market for Islamic money market instruments. Table D provides a further explanation of selected instruments used by IIFS for their interbank transactions with other IIFS or conventional banks.

Table D: Selected money market instruments used by IIFS

Instrument	**1. Commodity *Murābahah***
Design	Interbank funds are used to execute a *Murābahah* transaction in a commodity, with the proceeds (net of commissions) passed on to the bank providing the fund. Another variation, used in Kingdom of Saudi Arabia, is for a bank with surplus funds to buy metals (other than gold and silver) on the London Metals Exchange (or some other international commodity market) and then sell them the same day to a counterparty for a deferred payment at a price equal to the purchase price plus mark-up.
Country	Bahrain, Kingdom of Saudi Arabia,[8] Qatar, Malaysia, Pakistan, Kuwait[5], UAE
Features	• Used by the majority of IIFS. • Such *Murābahah*, even if standardised, are not tradable under *Sharī`ah* rules. • May carry some market risk in addition to counterparty risks, and are not flexible enough for monetary operations.
Instrument	**2. Interbank *Muḍārabah* investments**
Design	An investment facility where interbank placement of funds for a period ranging from overnight to 12 months produces returns based on an agreed profit ratio, with the formula for profit computation typically being based on that used for *Muḍārabah* investments of one year, or *Muḍārabah* investments of comparable maturity, in the bank receiving the interbank funds.
Country	Malaysia, Indonesia, Bangladesh
Features	• Not easily tradable or trading is typically limited. • Profit calculation that is based on ex-post does not provide clear rate of return signals for monetary policy. • While the same procedure for profit calculation can be used for the provision of financing by the central bank, these investments are not well suited to absorb liquidity (central bank receiving funds from the IIFS) by the central bank. • Indonesia allows Interbank *Muḍārabah* certificates to be issued by the receiving bank, but restricts their negotiability prior to maturity.

[8] This instrument is also used by SAMA and the Central Bank of Kuwait, to manage liquidity in the market.

Instrument	3. Compensating mutual balances
Design	Exchange of interest-free deposits with arrangements to ensure that net balances average to zero in a defined period.
Country	Kingdom of Saudi Arabia, Kuwait
Features	Returns on fund placement or financing not transparent.

Instruments used by central banks and Governments

Central bank credit facilities

57. Standing credit facilities are aimed at providing short-term liquidity at the initiative of commercial banks, signalling the general stance of monetary policy and limiting the volatility in overnight market interest rates. The standing credit facilities provided by central banks can be in the form of a discount window (credit provided by discounting short-term paper or using long-term eligible collateral) and Lombard facilities (very short-term advances against collateral or based on REPOs to facilitate payment settlements). Although the majority of jurisdictions surveyed agree that the central bank's credit facilities, as lender of last resort, are important for the development of the Islamic money market, the structure of these facilities varies across jurisdictions *(see Table 3 in Appendix 2)*. In certain countries, credit facility is provided in the form of Commodity *Murābahah* arrangements, or arrangements to an exchange of deposits on a mutually offsetting basis, or temporary accommodation of money on a free-of-charge basis. In others, central banks may provide credit with returns tied to *Muḍārabah* deposit rates of banks receiving credit, or may provide liquidity through buyback arrangements for specified *Sukūk* held by the banks. These arrangements for central bank credit may not provide incentives for interbank/inter-IIFS markets to develop, either because these arrangements are not sufficiently flexible (and banks still need to keep large excess reserves) or because the arrangement itself is making it more attractive (in terms of yields and transaction costs) to access the central bank credit than to approach the market. For these reasons, it would be desirable to develop some form of *Sharī`ah*-compliant alternatives to REPO (based on *Sukūk*) or other form of short-maturity transactions using tradable instruments that are more flexible, and that can be priced in relation to market returns at an appropriate level so as to encourage the development of Islamic money markets.

Central bank deposit facilities, required reserves and excess reserves

58. Central banks in all jurisdictions impose reserve requirements on IIFS, but only half of the jurisdictions surveyed treat PSIAs as liabilities on which reserve requirements are applied. Thus, in half the countries surveyed, PSIAs are excluded from cash reserve requirements, even though PSIAs are included as part of Broad Money. There are two methods used by the central bank to determine the method of reserve maintenance during the reserve-holding period (the period during which banks are required to hold an agreed level of reserves at central banks). The first method is based on the period-average maintenance requirement i.e. the level of required reserves is to be maintained as an average during a specified period (weekly, monthly, quarterly) and are reset periodically. The second method is based on the same-level-each-day maintenance requirement i.e. applicable required reserves have to be held at the same level each day until a new level of required reserves is computed for the subsequent reserve maintenance period. At present, the reserve

maintenance method is the same for both conventional banks and IIFS, and penalties are imposed for any shortfall in reserves below the minimum reserves requirement. The choice of reserve maintenance method indirectly influences the demand for excess reserves, with typically the period average system requiring less excess reserves on average. The majority of central banks reported using the period-average reserve maintenance method.

59. Almost all of the central banks surveyed do not provide returns for the required reserves and the excess reserves. The majority of central banks surveyed also do not provide deposit facilities for IIFS that are *Sharī`ah*-compliant and provide some returns. However, one central bank under the survey offered a deposit facility on a Commodity *Murābahah* arrangement, allowing the IIFS in that jurisdiction to obtain some form of return. Another central bank offered *Wadī`ah* certificates as evidence of deposits placed with it, with returns tied to the average of the return on Interbank *Muḍārabah* investments.

Box 1: Central bank's standing facilities for IIFS in various jurisdictions

Kingdom of Saudi Arabia

IIFS have access to a REPO facility at SAMA based on the deposit collateral linked to a *Murābahah* contract on commodities, which is described in Box 2. IIFS can obtain up to 75% of such holdings, subject to offsetting the debit with credit balances in the cash management account of the bank with SAMA on a quarterly basis.

Pakistan

No special deposit facilities are available to banks in Pakistan (conventional or Islamic), other than the current account for holding the required and excess reserves. No return is paid on excess reserves. Conventional banks have access to a range of securities for holding their funds on a short-term or long-term basis, but the options for Islamic banks are limited.

While LLR facilities are available to conventional banks, these have not been adapted to suit the needs of Islamic banks in Pakistan.

Malaysia

No special deposit facilities are available to banks in Malaysia (conventional or Islamic), other than the current account for holding the required and excess reserves. No return is paid on excess reserves. A range of short-term securities – such as Islamic Treasury bills, Islamic BNM notes, etc. *(see case study on Malaysia in Appendix 3)* – are available for IIFS, similar to the case for conventional banks. BNM also provides deposit placement facility to IIFS via Commodity *Murābahah* transaction.

Several instruments are also available for IIFS wanting to obtain financing from the central bank, including placements based on *Wadī`ah*, *Rahn* or *Muḍārabah* principles, and through a sale-and-buyback facility on the underlying *Sukūk*.

Bahrain

The special deposit facilities available for conventional banks is not available to IIFS, as these are not *Sharī`ah* compatible. Thus, IIFS rely only on non-interest-bearing excess reserves held in their current accounts with CBB. However, IIFS have access to a range of *Ijārah* and *Sukūk Al-Salam* for their liquidity management.

Central bank financing through a *Sharī`ah*-compliant alternative to REPOs is not yet available to IIFS, as approval from the CBB *Sharī`ah* board is still pending.

Sudan

No special deposit facilities are available to banks in Sudan (conventional or Islamic), other than the current account facilities for holding the required and excess reserves. No return is paid on excess reserves. However, IIFS have access to a range of *Sukūk* available on auctions for investing their surplus funds *(see case study on Sudan in Appendix 3)*. Financing from the central banks is now made available through repurchases of *Sukūk* and auctions of investment financing. The earlier method (of obtaining zero-cost financing for up to one week and then converting the balances into a *Muḍārabah* investment with banks) has been phased out with the availability of repurchases of *Sukūk*.

Indonesia

IIFS have an opportunity to place their excess liquidity in a Bank Indonesia Wadiah Certificate (SWBI), an instrument issued by the central bank. The rate of bonus of SWBI is the lower of the rate of return of the Islamic interbank money market and the rate of return of a *Muḍārabah* time deposit. The IIFS can obtain financing from the central bank through a short-term *Sharī`ah* financing facility (FPJPS) for an Islamic bank based on a *Muḍārabah* contract. FPJPS shall be guaranteed by the receiving bank with a high-quality and liquid collateral the value of which shall be at least equal to the amount of the accepted financing.

Kuwait

Reverse *Murābahah*-type contracts *(Tawaruq)* are now routinely used by CBK as a means to absorb structural longer-term liquidity from Islamic banks. The provision and withdrawal of liquidity through such contracts are governed by a standardised agreement, pre-formulated with each counterparty. The short-term liquidity operations are facilitated through the exchange of deposits without any capital gain to either party; While OMOs with conventional banks have been adjusted to take into account the limited supply of Government Debt through the issuance of bonds issued in the name of CBK, similar market operations with IIFS are still under development, as explained below

Instruments similar to Repo are not available in Kuwait. ; Islamic banks in Kuwait normally use an exchange of deposits with other Islamic banks. The CBK is in the process of specifying the creation of an SPV to assimilate the assets currently owned by the Government and produce returns linked to the lease-back of such assets to specific Government agencies. The SPV will issue *Sukūk Al-Ijārah* (possibly for a 3-year term, against which a net return would be linked to a benchmark rate equivalent to T.Bill/bond yield). The issuance of such instruments would facilitate OMOs with Islamic banks.

Box 2: Kingdom of Saudi Arabian Monetary Agency *Murābahah* programme

Structure of *Murābahah* transactions

The objective of the *Murābahah* programme is to enable the domestic bank[9] to invest surplus liquidity with SAMA through the following mechanism:

1. The domestic bank buys aluminium from a commodity broker for e.g. SAR100 million equivalents for spot payment and spot delivery of the commodity.

2. The domestic bank sells the commodity to another bank (acting as a facilitator) for spot delivery and deferred/forward payment – e.g. one year.

3. The facilitator sells the commodity to the commodity broker for spot delivery and spot payment.

4. The facilitator pays the cash proceeds (SAR100 million equivalent) to SAMA.

5. SAMA issues a confirmation advice to the domestic bank for payment of SAR100 million equivalents plus a premium on the maturity date.

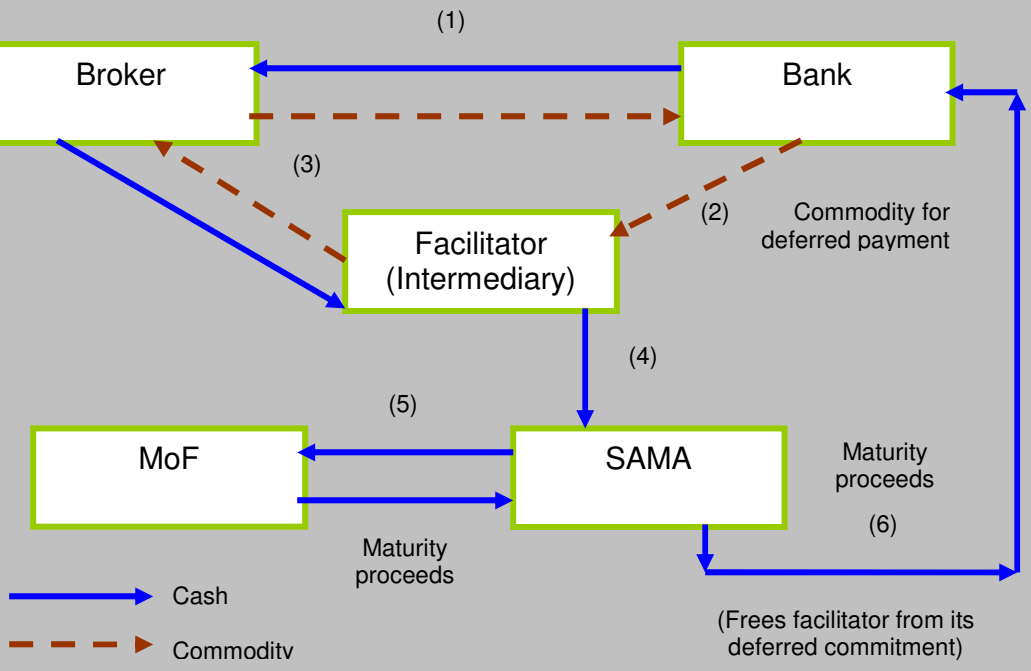
6. Upon receipt of SAMA confirmation, the domestic bank advises the facilitator accordingly, and this notification releases the facilitator from its obligation to the domestic bank under the *Murābahah* transaction.

REPO arrangement

Murābahah investments are subject to a REPO facility along the lines applicable to Government securities (up to 75% of holdings). The mechanism works on the basis of offsetting debit and credit balances in the Cash Management Account of the domestic bank with SAMA on a quarterly basis.

[9] Al-Rajhi Bank, Bank Al-Bilad and Bank Al-Jazirah

***Murābahah* transaction: Tripartite agreement between SAMA, bank and facilitator**



Central bank's market-based instruments for open market operations and Government financing instruments

60. The development of OMOs using *Sharī`ah*-compliant alternatives to REPOs and outright sale or purchase is crucial for efficient monetary operations of the central bank. Although most central banks use OMOs and OMO-type operations, only some have adapted these operations to accommodate transactions with IIFS. For example, buying and selling of assets under a repurchase agreement (REPO and reverse REPO operations) is practised by 60% of the survey respondents. However, only 20% indicated that these operations have been adapted to accommodate transactions involving IIFS *(see Table 2 in Appendix 2).* It is important, therefore, that suitable instruments are designed, particularly to accommodate *Sharī`ah*-compliant alternatives to REPO-like transactions for effective monetary operations with IIFS and for the development of the Islamic money market.

61. In most jurisdictions under the survey, central bank or Government Islamic securities are issued generally on a regular basis in various maturities. (The domestically issued central bank or government instruments are listed in Table E.) In most of these jurisdictions, central banks continue to rely on primary issues or outright buyback arrangements to influence monetary policy. Transactions in secondary markets, or through *Sharī`ah*-compliant alternatives to REPOs on these instruments, are rare. In some cases, the buyback arrangements do not involve any discount on market prices or face value, resulting in the absence of any incentives for IIFS to transact in the interbank or other available secondary markets, thereby limiting the development of the secondary market.

62. A programme of regular issuance in sufficient volume on a predictable schedule is one of the requirements for developing a liquid market. To fulfil these requirements, there is a need to encourage the issuance of "plain vanilla" type of instruments, as it is difficult to

develop a liquid secondary market using complex and excessively engineered *Sukūk*. These *Sukūk* should also not be based on fixed, exhaustible resources, such as buildings or land that are sold and leased-back. Mortgage-backed securities are another source for creating "plain vanilla" instruments in order to develop a liquid market. The sale of primary issues through an auction system (whereby successful bids are allotted in the order of ascending yield, and pricing is based on accepted quotes that take up the full amount on offer) will help provide an efficient pricing mechanism that also facilitates secondary market transactions.

Table E: Market-based instruments used by central banks and Governments

Instrument	**1. Central Bank *Mushārakah* Certificates**
Design	An instrument based on a profit- and loss-sharing contract. A CMC is an asset-based security issued against central bank and Ministry of Finance equity participation in a commercial bank's assets. The CMC is sold through auction. The return on investment of the CMC is determined by the expected return on the underlying asset where a pro-rata share of the income stream is distributed between the partners.
Country	Sudan
Features	• Can be used by a central bank to conduct monetary operations. • Offers bank an investment opportunity for their excess reserves. • It has medium-term maturity, is transferable and is tradable in the stock exchange. However, access to CMCs is limited to commercial banks, Government-owned companies' funds and insurance companies.
Instrument	**2. Government *Mushārakah* Certificates**
Design	An instrument based on a profit- and loss-sharing contract. A GMC is an asset-based security issued against a certain percentage of Government ownership in more profitable and joint venture enterprises. GMC returns are determined by the expected return on the underlying asset where a pro-rata share of the income stream is distributed between the partners.
Country	Sudan
Features	• Fixed short-term maturity (one year). • Listed on and traded in the stock exchange (transferable and fully negotiable). • Accessible to all. • Provides financing for Government's budget deficit through a non-inflationary instrument. • Can be used as a tool for open market operations.

Instrument	**3. Government Investment Certificates**
Design	An asset-based security issued against a number of contracts, including *Ijārah*, *Salam*, *Muḍārabah* and *Istisnā'*. The relationship between the holder of a GIC and the issuer is based on a restricted *Muḍārabah* contract. The instrument's maturity profile ranges from two to six years. The expected return is determined by the fixed rental income on *Ijārah* plus the income from the sale of *Murābahah*, *Salam* and *Istisnā'* contracts. Profit is distributed every three or six months. Sales of primary issues are made through an auction system. The GIC is listed on the stock exchange. *(See case study on Sudan in Appendix 3 for details.)*
Country	Sudan; (Pakistan is in the process of developing a similar instrument).
Features	• Appears promising in terms of market acceptance, cost to the Government, and prospects for secondary markets. • Instrument can be readily tradable so long as the proportion of the underlying *Ijārah* assets exceeds the percentage specified by the relevant *Sharī`ah* board. • Requires close coordination between the Government's expenditure execution and debt issuance programmes.
Instrument	**4. Government Investment Issues**
Design	The specified Government assets are sold to investors at an agreed cash price decided on an auction basis, with an agreement to buy back the assets at the nominal value at maturity. The difference between the buying price and the selling price is the profit for the participating financial institutions, through which all interested parties place their orders.
Country	Malaysia
Features	• Actively traded in the Islamic interbank money market in Malaysia. • In principle, the use of this instrument is limited by the availability of assets for sale, may not be accepted by all *Sharī`ah* boards, and is limited to trading among IIFS primarily, thereby limiting the liquidity of the market for GIIs.

Instrument	**5. Central Bank Participation Papers**
Design	Issued on a *Mushārakah* basis (i.e. yields in principle linked to central bank's profit, excluding the cost of monetary operations), but with a guarantee on yields and principal.
Country	Iran
Features	Tradable only at par, and hence not suited for more flexible monetary operations. However, this instrument is suitable for Iran in order to absorb the huge amount of liquidity in its economy.
Instrument	**6. Government Participation Papers**
Design	Issued on a *Mushārakah* basis (i.e. yields in principle linked to Government's profit from its share in profitable state-owned enterprise or projects under construction) with the aim of financing the Government's budget deficit. The instrument provides a guarantee on yields and principal.
Country	Iran
Features	Limited to the availability of assets held by the Government.
Instrument	**7. Central Bank *Wadi'ah* Certificates**
Design	Issued by the central bank as evidence of funds placed with the central bank for varying maturities. The central bank may pay a bonus on the funds at maturity tied to the average return on Interbank *Muḍārabah* investments.
Country	Bahrain, Indonesia, Malaysia
Features	• Not readily tradable. • The rate of return is tied to market rates, which are in turn tied to recent realised profits.
Instrument	**8. Central Bank (or Government)*Ijārah* Certificates**
Design	The certificate represents part ownership of the assets that have been leased to the central bank (or Government) typically its buildings and/or other assets it might acquire and sell to a special purpose vehicle, which issues the securities. The contract between the SPV and the investor is based on restricted *Muḍārabah* in Sudan. In the case of Bahrain, the Central Bank arranges the issuance of *Sukūk* (without an SPV) on behalf of the Government, which guarantees the rental payment to *Sukūk* holders and the repurchase of assets at maturity. The expected return is determined by the fixed rental income from the *Ijārah*. In the case of Sudan, the sale of primary issue is made through auction, and the maturity of the CIC may vary from three to ten years. Short term *Sukūk Al-Ijārah* is also issued by Brunei and Bahrain.
Country	Sudan, Malaysia, Bahrain, Brunei

Features	• Used by central banks for open market operations. • Listed on the exchange, but can only be repurchased by the central bank. • Supply is limited to the availability of assets for sales and lease-back.
Instrument	**9. Sale and Buyback Agreements (*Sharī`ah*-compliant alternatives to REPOs)**
Design	Involves one contract to sell a security outright at an agreed price, with a second contract for a forward purchase of the security at a specified price and on a specified future date. The undertaking made by both the buyer and the seller to sell and buy back the instrument, respectively, at the maturity date is based on promise. *(See case study on Malaysia in Appendix 3 for details.)*
Country	Malaysia
Features	Requires an active secondary market for a long-dated security, in which outright spot and forward transactions can be executed, or a strong counterparty, or a central bank that can quote firm buy and sell prices. These requirements could limit the potential of *Sharī`ah*-compliant alternatives to REPO as a money market instrument.
Instrument	**10. Government Islamic Investment Bond**
Design	Governed on the principles of *Muḍārabah*, bondholders will get an interim profit on the maturity date of the bond. This interim profit will be adjusted after finalisation of the investment accounts. The interim provision of profit is based on the received monthly profit realised on the invested funds in the Islamic banks or financial institutions. The trading of the GIIB will be based on the interim profit rate derived from the investments of those with the Islamic banks. The interim profit rate will be reviewed on a monthly basis.
Country	Bangladesh
Features	• Can be purchased by any individual, private or public companies, Islamic banks and financial institutions for a minimum investment of Taka 100,000 (one hundred thousand and multiples thereof). • Can be used as collateral for a loan or investment from any financial institution. • Considered as qualified securities for the purpose of complying with the liquid assets requirement to be maintained by the banks and non-bank financial institutions. The central bank may provide the discount window facility for banks and financial institutions to buy or sell GIIB.

Instrument	11. *Sukūk Al-Salam*
Design	*Sukūk Al-Salam* are created and sold by an SPV under which the funds mobilised from investors are paid as an advance to the company SPV in return for a promise to deliver a commodity at a future date. An SPV can also appoint an agent to market the promised quantity at the time of delivery, perhaps at a higher price. The difference between the purchase price and the sale price is the profit to the SPV and hence to the holders of the *Sukūk. (See case study on Bahrain in Appendix 3 for details.)*
Country	Bahrain
Features	In a *Salam* contract the *Sharī`ah* allows the purchased goods to be sold to other parties before actual possession at maturity. This however must be done in a separate sale and purchase contract (also referred to as *Parallel Salam*) to avoid sale of receivables (*Bay` al-Dayn*) which is not acceptable by *Sharī`ah*. This constraint renders the *Salam* instrument illiquid and hence somewhat less attractive to investors as the investor will only buy a *Salam* certificate if he or she expects prices of the underlying commodity to be higher on the maturity date.

Source: Data provided by the country authorities

63. Despite the existence of a broad array of instruments, tradability is generally limited. Most IIFS purchase these instruments and tend to hold the securities until maturity, instead of trading them in the secondary market. IIFS adopt this practice for the following reasons:
    - The high yields offered by these instruments make it attractive for IIFS to hold them until maturity.
    - The motivation to trade in a secondary market is also hampered by insufficient trading volume of these instruments. The fact that these instruments are not widely held by diverse types of investors exacerbates this problem.

64. The lack of programme issues of tradable *Sukūk* on a predictable schedule in sufficient volume is a key weakness in many countries, as this situation provides no assurance of a continuous future supply of these instruments, thus limiting volumes, diversity of ownership, and incentives to invest in dealership, and hence limiting the development of secondary markets. The lack of programme issues in sufficient volume in many countries reflects the technical limitations on the availability of assets and *Sharī`ah*-compliant contracts based on them. Overcoming this limitation of insufficient availability of assets would require appropriate design of Islamic Government finance instruments based on systematic linkage between Government spending and its funding (using *Sharī`ah*-compliant contracts). Such a linkage will be the key to raising the volume of issuance, widening the range of holders, and fostering secondary markets. *(See Section 4 for a further discussion of this issue.)* The range of holders of *Sharī`ah*-compliant instruments used for Government financing should be as broad as possible, and should not be limited only to banks, as would be the case for instruments that are strictly focused on a central bank's monetary operations. Public offering allows for greater diversity of the market and thus allows for greater liquidity. The objective of widening the range of holders of *Sharī`ah*-compliant instruments would be best served if the system for offering and tendering of new issues in the primary market (for securities issued by the central bank and/or Government) were market based so that prices reflect market conditions, and well-designed secondary trading arrangements were put in place. The system for ensuring *Sharī`ah* compliance of the instruments – e.g. involving a designated *Sharī`ah* board – should also be transparent. Finally, a system for dissemination of information must also be present in order to provide near or real-time

prices or quotes, data on past prices, reporting of or updates on done deals/transactions/trades, and other market-related information especially to facilitate the pricing of new issues.

Supervisory incentives for liquidity management

65. In order for the central bank to gauge the short-term ability of IIFS to match the different maturities of their assets and liabilities, an explicit liquidity mismatch and liquidity management guidelines for IIFS could be made available by the supervisory authorities. For example, the IFSB Capital Adequacy Standard details the minimum capital adequacy requirements in respect of both credit risk and market risk for different types of *Sharī`ah*-compliant financing and investment instruments. The IFSB Guiding Principles of Risk Management highlight the estimation of liquidity flows by types of funding, and the need to take into account ease of access to *Sharī`ah*-compliant funding sources in order to meet liquidity shortfalls.

66. There are a number of methods for measuring liquidity mismatch, but most supervisory authorities set it out in the form of prudential limits or regulation of the extent of maturity and/or currency mismatches. For the central bank, an appropriate liquidity-forecasting framework provides short-horizon inputs to determine potential variations in bank reserves and the scope of market-based monetary operations needed to implement its monetary policy.

SECTION 4: COORDINATION OF MONETARY OPERATIONS AND PUBLIC DEBT AND FINANCING MANAGEMENT TO PROMOTE THE DEVELOPMENT OF MONEY AND GOVERNMENT SECURITIES MARKET

67. In most jurisdictions, central banks/monetary authorities act as bankers to the Government within a clear legal framework that allows for the issuance of Islamic instruments *(see Table 4 in Appendix 2)*. Also in most countries, central bank securities co-exist with Government securities. While such central bank instruments have a clear role to play in supporting monetary policy, the development of active money markets could be facilitated if Government financing instruments are also used for monetary management purposes. Government financing instruments can be issued in sufficient volume to build up market liquidity, and the primary reliance on Government finance instruments, instead of splitting the holdings between central bank and Government obligations, will prevent segmentation of the markets. By concentrating the issues of simple instruments in some popular and standard maturities, Governments can assist in the development of liquidity in these securities and enable markets to use such issues as convenient benchmarks for pricing a range of other securities.[10]

68. The core principles and guidelines on public debt management with conventional securities apply equally well to public debt and financing management that incorporate *Sharī`ah*-compliant financing instruments.[11] In order to develop an active market for Government *Sharī`ah*-compliant instruments, these instruments should be integrated into the primary market arrangements and the risk management framework. The arrangements for coordination between central bank operations and public debt and financing management operations should be clear and transparent. The areas of coordination include primary debt issues, secondary market arrangements, including any buyback or *Sharī`ah*-compliant alternatives to REPO facilities offered by the central banks, depository facilities, and clearing and settlement arrangements. While such coordination is critical for both conventional and *Sharī`ah*-compliant instruments, additional considerations arise in the issuance of Islamic instruments for financing Government expenditures, as explained below.

69. A regular issue programme for *Sharī`ah*-compliant instruments by the Government would require a systematic link between funding and spending decisions within the Government; while with conventional instruments, debt management can be separated from day-to-day expenditure management. Creating a link between funding and spending can support the design and issuance of Government *Sukūk* of different tenures on a regular basis. Creating such a link would, however, require adaptations in the institutional arrangements for public debt and financing management.

70. Primary dealers play an important role in the development of money and Government securities markets, especially in underwriting central bank or Government primary securities issuance, in distributing securities to ultimate investors, and subsequently in providing market-making services. A majority of countries have arrangements for primary dealers who trade in money market and Government instruments, and with access to central bank credit facilities. Such arrangements could be readily adapted to facilitate secondary trading in *Sharī`ah*-compliant instruments.

[10] See World Bank and IMF, *Developing Government Bond Markets: A Handbook* (2001), Chapter 4, on issues in developing benchmark securities.
[11] See IMF and World Bank, *Guidelines for Public Debt Management* (2001).

SECTION 5: MARKET MICROSTRUCTURE, PAYMENT AND SETTLEMENT SYSTEM, AND FOREIGN EXCHANGE MARKETS

Market microstructure

71. A sizeable number of active market participants is important in order to produce market liquidity and improve efficiency through greater competition, especially in the secondary market. For this to happen, it is important to issue instruments that are widely held, and to support this with an efficient dealership and broking system that can provide two-way quotations for trading of papers and ensure success in primary issuance of Islamic financial instruments.

72. Practices for secondary trading vary widely among jurisdictions, but there is a need to enhance the use of an exchange-traded system for listed securities. This would further strengthen secondary trading in addition to the activities done through OTC markets based on dealers providing two way quotes and immediacy of execution. However for exchange traded system it would be appropriate to adapt it through incorporating a quote driven model with Primary Dealers/Lead Managers providing two way quotes. For non-listed securities, the majority of jurisdictions uses the OTC markets and already has good information dissemination arrangements. A central depository of securities is also already in existence for Islamic securities.

73. The trading system in foreign exchange markets requires the use of a direct inter-dealer/inter-broker system, and most jurisdictions already have such systems in place.

Payment and settlement system

74. The key component of a payment mechanism includes: (1) the payment instrument; (2) the network arrangements for communication between the participants and the system provider; and (3) the facilities for clearing and settlement operated by the system provider. The issue of adaptation of the payment and settlement system to meet the *Sharī`ah* requirements of IIFS arises mainly in the clearing and settlement process, as this involves mutual extension of credit and management of the resulting risks. A delivery versus payment (DVP) and/or RTGS and/or deferred/designated-time net settlement system is already present in many jurisdictions, although the use of PVP for cross-border transactions and hybrid systems (systems combining net and gross settlements) is relatively rare.

75. Adoption of the RTGS system eliminates the systemic risks to IIFS, as credit risk is transferred outside of the system. Through RTGS, all inter-IIFS payments will be final, and irrevocable debits or credits are directed to the IIFS's current account at the central bank. However, the system has to be programmed to allow only Islamic securities to be pledged as collateral at the central bank in order for the IIFS to obtain an intra-day credit facility. (*see Box 3 for an illustration of the adaptations to support clearing and settlement systems for IIFS*).

76. In order to develop a liquid market, interbank transactions should also include transactions between IIFS and the conventional bank. Few IIFS have designed special arrangements for interbank transactions with conventional counterparties based on Commodity *Murābahah*, or special arrangements for holding compensating non-interest-bearing deposits with each other.

77. The development of a payment settlement system to support the money market is among one of the strategic concerns of this Task Force, as all payment systems – domestic and international – will have to address the *Sharī`ah* issues relating to credit extensions implicit or explicit in the payment, and those relating to lags in settlement. However, detailed recommendations on a domestic payment system can be a follow-up project, as this Technical Note is focused on strategy and not the details of each recommendation. Making recommendations on international payment systems that are more closely related to foreign exchange markets is beyond the immediate concerns of this Technical Note.

Box 3: Workshop on Payment Settlement Structure

The Workshop highlighted several important aspects of supporting a sound and efficient clearing and settlement system for IIFS.

1. An efficient legal system needs to be in place in order to minimise uncertainty in the financial contract.

2. The services provided shall be practically adequate in facilitating the needs of all market players, including IIFS, in terms of access to technology and instruments. This includes the lender of last resort, as well as the emergency liquidity facility, particularly in the case of a severe liquidity shortage in the financial system.

3. While half of the jurisdictions surveyed have adopted the RTGS system, most have not adapted it to allow for the collaterals permissible for IIFS. Therefore, alternative money market and LLR arrangements that are more transparent are needed to facilitate the operation of the payment system.

Current issues related to the Islamic financial system

As already noted, the inadequate availability of *Sharī`ah*-compliant financial instruments forces Islamic banks to hold a significant amount of excess reserves in order to manage liquidity, while also limiting the flexibility of central bank's monetary operations with IIFS.. Therefore, a key issue is to broaden the range of *Sharī`ah*-compliant instruments and build liquid markets. Both objectives require a well designed clearing and settlement system adapted to the needs of IIFS. The case study below illustrates some of the issues in adapting the payment system to Islamic finance.

Payment and settlement systems: Malaysia

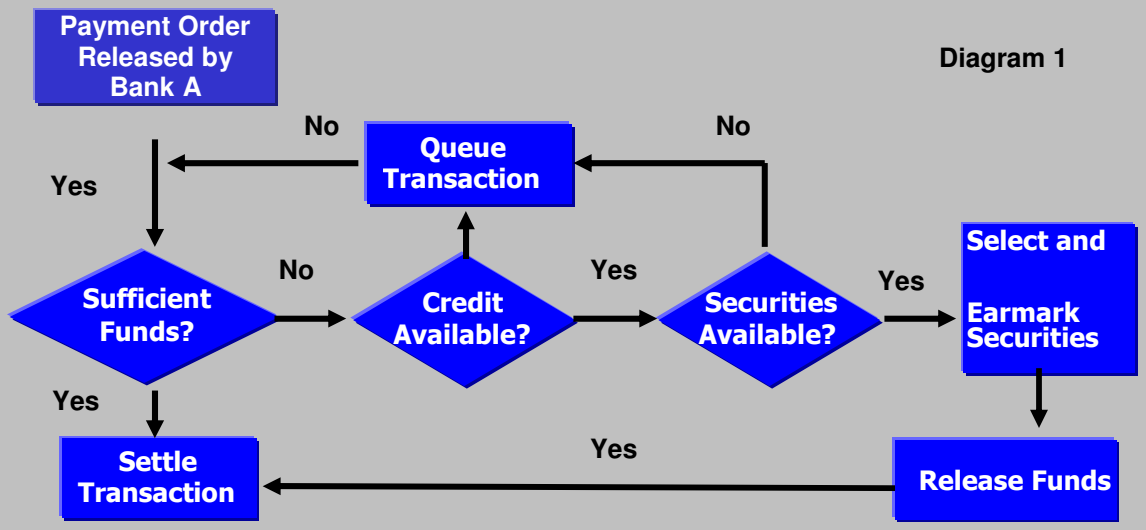
The payment and settlement system in Malaysia is designed to support both the conventional and Islamic banking operations. The features of the system include the following:

- Transactions include investment in securities.
- The system allows Islamic banks to hold only Islamic securities.
- Non-Islamic securities are automatically rejected.
- Intra-day credit borrowing is limited to Islamic securities.
- Overnight borrowing is based on Islamic principles.

Sources of liquidity

Islamic banks in Malaysia can obtain liquidity from the following sources:

- Balance in settlement account
- Withdrawals from SRR account maintained with BNM
  - Members may withdraw from the SRR provided that the SRR does not fall below the minimum limit (3.2% daily)
  - Allow for intra-day drawdown
- Securities and interbank money market transactions
- Intra-day credit facility from BNM
  - Fully collateralised with eligible securities
  - Limited by the size of members' eligible collaterals
  - Utilisation triggered by the system
  - Automatic redemption
  - Provided in tranches of RM5 million
  - No interest charge is imposed on credit facility, except for an administrative fee



Collateral management

Diagram 1 (above) shows the use of collateral accounts in **RENTAS.**

- Participants deposit eligible securities into collateral account
- Types of securities accepted as collateral
  - Government bonds
  - BNM papers
  - Private Debt Securities with credit rating of "A" and above
- Parameters for selection of collateral built into the system
  - Stock types
  - Credit rating
  - Earliest maturity
- BNM imposed margin on securities for valuation purposes (currently set at 1–5%, depending on the type of security)
- Participants manage their collateral accounts

Payment and settlement systems: Kingdom of Saudi Arabia

The Saudi Arabian Monetary Agency provides an RTGS system—where the central bank provides liquidity, subject to an intra-day overdraft limit. A transaction that breaches the limit is held in the RTGS – CS until that bank has sufficient "available funds" in its account with the central bank.

Considerations used to determine the limit:

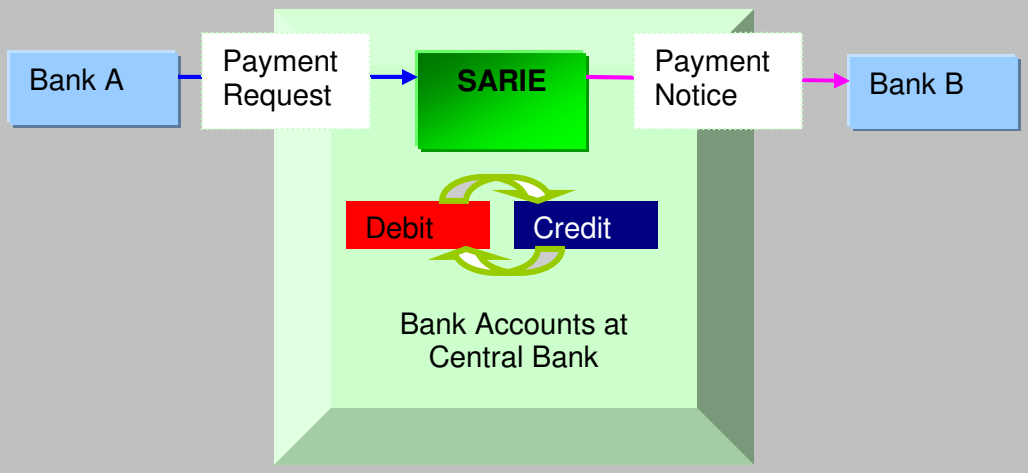
- Bank's need
- Central bank's policy
- Value (Volume is not a factor)
- Recent experience and future expectations
- Behaviour of all participants
- Participants' internal systems – ability to schedule payment flows

The intra-day limit should also be fully collateralised by instruments accepted by the central bank. In addition, the bank's account with the central bank must be in credit or zero position at the end of the day.

Collateral management

Only assets that can be easily liquidated and over which the central bank has jurisdiction are accepted as collateral. Government bonds, Treasury bills and *Murābaha* are the most commonly pledged collateral in the RTGS system. Diagram 2 shows the SARIE system.

Diagram 2



Role of foreign exchange markets in monetary operations of central banks and liquidity management of IIFS

78. The development of money market and foreign exchange markets are operationally interlinked and the two can reinforce each other. First, central banks may use operations in foreign exchange markets as a means to influence the level of bank reserves and the liquidity in domestic money markets.[12] Globally, however, most central banks do not rely on foreign exchange operations for monetary management because of the potential market risks, and the likely conflicts that it could create between interest rate and exchange rate policies. Moreover, well-developed money markets provide a means to price foreign exchange swaps and forward contracts, and this helps to deepen the foreign exchange markets. For example, well-developed interbank money markets in two different currencies could readily be used as a functional equivalent of a forward market in foreign exchange. In the same way, well-developed foreign exchange markets can contribute to the depth and liquidity of money markets. Because of these considerations, it is important to address any *Sharī`ah* compliance issues in IIFS transactions in the foreign exchange markets, as a means to complement Islamic money market development strategy.

79. As only 60% of the jurisdictions included in the survey accept spot transactions (with T+2 settlement delay) as *Sharī`ah*-compatible, a speedier system for settlement – e.g. PVP – should be more widely adopted. Many developing and emerging market countries already have faster settlements in their foreign exchange markets than do the advanced economies.[13] Only a few countries reported having PVP systems for foreign exchange

[12] See Hooyman (1997) for discussion of the use of foreign exchange markets for domestic monetary management.
[13] See Canales-Kriljenko (2004) on the microstructure of foreign exchange markets.

settlements; most of those surveyed rated such a system as being the most important factor for efficient functioning of foreign exchange markets.

80. Only 25% of the countries surveyed regarded forward transactions in foreign exchange as *Sharī`ah*-compatible *(see Table 5 in Appendix 2)*. Authorities and IIFS need to focus on ways to design *Sharī`ah*-compliant alternatives to foreign exchange hedging and risk management arrangements. Developing *Sukūk* markets in different currencies and then swapping them provides an avenue for IIFS and the central banks to manage their foreign currency liquidity requirement as a substitute for foreign exchange forwards and swaps.

SECTION 6: POLICY ISSUES AND STRATEGIES FOR ISLAMIC MONEY MARKET DEVELOPMENT

Broad strategy and policy issues

81. It is important that countries properly sequence – i.e. set priorities – and coordinate the numerous measures that are needed to develop the Islamic money market in their respective jurisdictions. Among others, the plan may include steps to design *Sharī`ah*-compliant money market instruments for the central bank's monetary operations and instruments for the Government's public debt and financing management. Apart from instruments design, and monetary operations with these instruments, the sequencing of measures should cover the development of the microstructure of markets, and of adaptations in the payments and settlement systems to support IIFS money market operations. In addition, well-designed prudential norms for liquidity risk management, and properly designed payment settlement rules, can provide incentives for active liquidity management by IIFS, setting the stage for active money markets.

82. Financial innovations to design long-term *Sukūk* have gathered momentum, and most issuances have obtained broad *Sharī`ah* approval. However, designing *Sharī`ah*-compliant short-term instruments as alternatives to REPOs based on long-term *Sukūk* has been more difficult, and this is an issue where a concerted effort involving central banks and IIFS can be particularly fruitful.

83. The different levels of Islamic money market development in the members of the IFSB imply that the policy issues identified by the Task Force would not have the same priority in all countries. Nevertheless, the Task Force has identified a set of policy issues related to the development of Islamic money markets that are relevant to a wide range of countries with Islamic banks.

Sharī`ah-compliant money market instruments

84. The current underdeveloped state of the Islamic money markets, and the relatively small number and share of IIFS in the overall financial system, indicates that developing *Sharī`ah*-compatible money market instruments that are broadly acceptable across institutions both Islamic and conventional is of paramount importance for the development of Islamic finance. This is because, as IIFS constitute only a small share of the overall financial system, instruments that have limited use only among IIFS will not have the scale and volume needed to generate a liquid market.

85. To facilitate their use in monetary and public financing[14] operations, the *Sharī`ah*-compliant instruments should have the following features:
    - a relatively low-risk instrument of simple design that can serve as a benchmark for pricing other more risky instruments of varying maturities and strongly influence the marginal cost of funds for banks;
    - sufficient and regular supply of the instrument, which is amenable for sale through a programme of regular issuance in adequate volumes in order to meet both monetary policy needs and the portfolio needs of investors;
    - widely held by both banks and non-banks to support a liquid market. This requirement implies that the instrument should be neutral in the sense that it can be readily held by

both Islamic and conventional banks, and incorporated into the ongoing monetary and public financing management programme; and

- supported by a robust and reliable payment settlement system and efficient trading arrangements.

86. Structuring instruments that meet the above characteristics requires a process of continued financial innovation in order to design *Sharī`ah*-compatible Government investment issues, and their incorporation into monetary operations and in IIFS liquidity management, as well as their integration into the overall public debt and financing management programme. While many innovations have been initiated in the private sector and by Governments (including central banks) to design instruments for short-term liquidity management, the instruments have not had the desired characteristics to enable an active interbank money market. Therefore, the central banks and Governments have to play a stronger role in creating the systemic liquidity infrastructure that can then serve as the foundation for accelerating the development of private sector innovations and making them more efficient.

Monetary policy operations and Government debt and financing framework

87. The central bank should conduct market-based monetary operations using the instruments that are suitable for both Islamic and conventional banks in a unified monetary operations framework. This will require the alignment of other monetary policy instruments, such as Cash Reserve Requirements (CRR), remuneration of excess reserves, and liquidity requirements between conventional and Islamic banks. These alignments can be made in phases to bring about a sound and efficient interbank payment settlement system that accommodates IIFS, supported by a central bank LLR facility that accommodates both IIFS and conventional banks with consistent and uniform signalling of the cost of central bank financing. The relevant short-term instruments – such as *Sharī`ah*-compliant alternatives to REPOs for these purposes – must be developed to increase liquidity and volume in the secondary market. Within the primary market, broadening the range of holders and strengthening trading arrangements through the use of primary dealers will help increase the volume and range of instruments issued into the system.

Development of Government debt and financing framework in coordination with monetary operations

88. *Sharī`ah*-compliant money market and Government investment instruments that meet the required characteristics need to be developed and be incorporated into the overall public financing management framework. This would require close coordination between monetary operations and public debt and financing operations, and also close coordination between Government financing and expenditure decisions.

89. A regular issuance programme for Government financing instruments in key maturities is necessary to help establish a wide investor base, benchmark Islamic securities, and domestic benchmark rates of return. These together constitute the foundation on which to develop the Islamic money market. Consideration should also be given to the promotion of *Sharī`ah*-compatible asset-backed money market instruments (denominated in US dollars or other convertible currency) for cross-border interbank transactions. A review of taxation and transaction costs should be undertaken alongside all of these promotional strategies to promote neutrality vis-à-vis the conventional banking system. Insofar as the domestic financial system is too small to support sufficient issue volume for cross-border trading, alternative approaches to designing such instruments based on regional and international cooperation could be explored.

90. Establishing a benchmark yield curve or benchmark return for Islamic money market instruments is possible only if a programme of regular issuance of these instruments in sufficient volume is present to reflect returns that are in line with the changing economic and market conditions, and is supported by well-designed secondary trading arrangements.

Creating incentives for Islamic money and foreign exchange markets

91. The supervisory authority also needs to foster effective liquidity risk and asset–liability management by commercial banks through adaptations in the banking regulation and supervision guidelines as needed to strengthen and facilitate IIFS involvement in the money market as well as the foreign exchange market.

92. A programme for strengthening foreign exchange markets should be developed in parallel with measures to develop money markets, as this could provide added incentives for active money markets. A well-developed interbank money market in two different currencies could readily be used as a functional equivalent of a forward market in foreign exchange. In the same way, well-developed foreign exchange markets can contribute to the depth and liquidity of money markets. Because of these considerations, it is important to address any *Sharī`ah* compliance issues in IIFS transactions in the foreign exchange markets, as a means to complement the Islamic money market development strategy.

93. After basic money markets are established, efforts to enhance market transparency and a disclosure-based regime, including dissemination of market information through newswires (such as Bloomberg, Reuters, Moneyline Telerate, etc.), and rating assessments by credit rating agencies and the financial analysis community would all become important in further developing market efficiency and depth.

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APPENDICES

Appendix 1: Mandate of the Money Market Task Force

In view of the underdevelopment or virtual non-existence of an organised Islamic money market in IFSB member countries, as well as the lack of adequate *Sharī`ah*-compliant money market instruments for liquidity management, the IFSB Technical Committee, at its 7th Meeting on 10 May 2005 in Amman, mandated the Secretariat to:

- conduct a study on the existing practices and infrastructures of Islamic money markets across countries; and
- propose recommendations to address impediments to future development of efficient Islamic money markets.

For this purpose, the Task Force on Markets and Instruments for *Sharī`ah* Compliant Liquidity Management and Monetary Operations (Money Market Task Force) was formed and held its first meeting on 22 February 2006 in Langkawi.

Focusing on two money market components – namely, the market for Government and/or central bank securities and the interbank market – the intention of the Task Force is to encourage and facilitate liquidity management of institutions offering Islamic financial services (IIFS) and monetary operations of central banks using *Sharī`ah*-compliant instruments. The full objectives of the Task Force are as follows:

- To review current practices in money market trading by IIFS and the use of Islamic money market instruments by monetary authorities, to propose strategies for strengthening the liquidity management framework, and to identify areas requiring additional guidelines and standards.
- To review the market microstructure, including the roles of other relevant agencies such as market makers, principal dealerships, etc., and the use of a payment settlement system for Islamic financial institutions.
- To review the central banks' practices on statutory reserve and liquidity requirements for Islamic financial institutions, and their use of market-based instruments that relate to Islamic financial institutions.
- To review the existing short-term and long-term liquidity support mechanism used by central banks for Islamic financial institutions in their capacity as lender of last resort.
- To review the current use of asset securitisation practices to design Islamic securities, and develop guidance on the aspects of the Islamic asset securitisation procedures that are suitable for monetary and Government borrowing operations.
- To suggest a liquidity risk management framework for Islamic financial institutions.
- To identify measures to develop benchmark Islamic securities that can help to determine a benchmark rate for system-wide application.
- To design measures to foster active markets (including cross-border markets) in these instruments supported by efficient monetary operations, and well-functioning trading and settlement arrangements.

In order to carry out a systematic fact-finding exercise and undertake a study of issues and gaps, the Task Force developed a survey and conducted study visits in selected IFSB member countries with the aim of:

- analysing variations in instruments, infrastructure and practices across countries;
- identifying gaps between what is in existence and the perception of what is needed for effective monetary operations, liquidity management and money market development; and
- formulating best practices, principles and benchmarks based on country practices.

Purpose

The purpose of the Technical Note, prepared under the guidance of this Task Force, is to provide guidelines on the design and development of appropriate money market instruments and the needed systemic liquidity infrastructure and thereby encourage adoption of programmes to develop Islamic money markets nationally, and promote their integration regionally and globally. Achievement of these objectives will help strengthen liquidity risk management and profitability of IIFS consistent with *Article 4(d) in the Articles of Agreement of the IFSB*, which states*: "to enhance and coordinate initiatives to develop instruments and procedures for efficient operations and risk management."*

The development of Islamic money and exchange markets will enhance the effectiveness of banking supervision by:

- promoting more active use of asset securitisation as a tool of asset–liability management;
- improving bank profitability and thereby the capital position of IIFS;
- strengthening liquidity risk management – diversity of instruments provides flexibility in liquidity management and provides investors with a wider choice of investible assets; and
- facilitating the formation of national and, eventually, international benchmark rates of return, thereby contributing to efficient pricing of risky assets and better risk management.

By promoting harmonised approaches to designing and developing money market instruments and liquidity infrastructure, the Technical Note can contribute to the establishment of the preconditions for developing liquid markets for Islamic financial products that are traded both domestically and internationally. This approach gives priority to first building a robust national liquidity infrastructure and well-functioning national Islamic money markets, based on an agreed general framework and guidelines, and then allowing cross-border transactions in the money market to develop and bring about a liquid international market.

Survey

The underlying intention of conducting the survey was to provide background information to the Task Force in drafting the Technical Note. The survey covered issues deemed important for the purpose of facilitating monetary operations of central banks and liquidity management of IIFS. The scope and key findings of the survey are summarised in Appendix 2.

Country visits

The IFSB Project Team visited selected IFSB member countries for an on-the-ground fact-finding mission in order to capture more in-depth information on practices and experiences of IIFS in liquidity management and central banks in monetary operations involving IIFS. In conducting the on-site interviews with money market players, the IFSB Project Team held discussions or dialogue sessions with a group of representatives from central banks and IIFS in these countries.

The survey and the country visit findings were discussed with the Task Force members in the 3rd and 4th meetings, and further inputs were derived from these deliberations resulting in this Technical Note.

Workshop

A workshop on a payment and settlement system was carried out in Hong Kong alongsidethe 4th meeting of the Task Force. The workshop was designed to address the payment settlement issues specific to Islamic finance, particularly in accommodating the specificities of the Islamic money market. The presentation of country practices regarding interbank payment settlement systems helped to improve mutual understanding of the operational characteristics within the member participants or countries that can facilitate IIFS participation in such systems.

The workshop focused on the role of large-value payment systems (particularly RTGS) as a key component of systemic liquidity infrastructure facilitating both monetary operations as well as the functioning of money and securities markets, and the role of the central bank in providing oversight of the system to minimise systemic risks. The areas requiring adaptations to accommodate the needs of IIFS were discussed, and this provided a useful background for drafting the Technical Note.

Appendix 2: Scope and Key Findings of the Survey

The findings of the survey have provided feedback on and insight into what money market players consider as useful or important, both in terms of instruments and infrastructure for an orderly development of money markets. Among others, the survey questionnaire addressed the following issues:

- the regulation and supervision of the domestic (and/or regional) money market, such as type of regulators (single or multiple regulatory authorities), laws governing the domestic Islamic banking industry and/or its money market, etc.;
- a variety of money market practices and financial instruments, both for monetary operations and liquidity management, recognised as compatible with *Sharī`ah* rules and principles across countries;
- requirements specified in the domestic statutory liquidity framework and practices of IIFS in meeting statutory liquidity requirements;
- aspects of systemic liquidity architecture and infrastructure for effective supervision and financial stability, including monetary and exchange operations, trading, clearing, depository, payment and securities settlement systems;
- *Sharī`ah* issues and the framework of approval for financial instruments according to *Sharī`ah* rules and principles; and
- any other issues/concerns/obstacles that could impede the development of Islamic money markets, such as lack of non-participation of IIFS themselves in any issuance programme of Islamic money market instruments, as well as possible measures to address them.

TABLE 1: GENERAL MONEY MARKET-RELATED ISSUES OR CHALLENGES

Ranking from 1 (not significant) to 5 (very significant)

	AVERAGE
No. of Supervisory Authority respondents: 13	
1. Under-development or virtual non-existence of a formal or organised Islamic money market in one form or another.	**3.9**
2. Limited options for central banks to consider for effective open-market type operations using *Sharī`ah*-compliant tools.	**3.8**
3. Low liquidity in the Islamic money market (in some jurisdictions) due to the limited number of market participants and the small size of their transactions.	**3.2**
4. General shortage of *Sharī`ah*-compliant money market instruments requires IIFS to hold a substantial portion of their assets in the form of cash, parked in their vaults or at central banks (with minimum or no return) or in other very low or non-revenue generating assets. Being too long on cash could affect the profitability and competitiveness of IIFS.	**3.5**
5. Given the shortage of and limited trading arrangements for *Sharī`ah*-compliant short-term financial instruments, there is a tendency among IIFS to hold Islamic money market papers until maturity instead of trading. This could have an impact on general market depth/liquidity, mark-to-market pricing practices and liquidity of IIFS assets.	**3.8**
6. Inadequacy of existing *Sharī`ah*-compliant money market instruments, currently dominated by *Muḍārabah*-type or with linkages to commodity markets which are not well-suited for active secondary market trading could hamper the development of overall Islamic money market.	**3.8**
7. Effective absence of transparent *lender of last resort* privileges with central banks such as discount window and Lombard facilities for day-to-day liquidity management of IIFS could be a constraint to Islamic money market development.	**3.5**
8. Reliance on conventional interest-based indices such as the *London Interbank Offered Rate* due to the limited availability of benchmark rates of return that reflect better the domestic monetary and financial conditions of the IFSI.	**3.2**

TABLE 2: INTERBANK PRACTICES & SHORT-TERM FINANCIAL INSTRUMENTS USED BY IIFS

	% of YES	Usefulness	Degree of tradability
No. of Supervisory Authority respondents: 12			
1. Commodity *Murābahah*	25.0	3	2
2. Islamic Government Investment Certificates/Issues or equivalent	50.0	4	3
3. Government or central bank *Mushārakah* Certificates or equivalent	8.3	3	2
4. Islamic Treasury Bills or equivalent	8.3	4	3
5. Central bank Negotiable Notes or equivalent	8.3	4	3
6. Central bank Participation Certificates or equivalent	16.7	3	3
7. Short-term *Sukūk Al-Ijārah*	33.3	4	3
8. Short-term *Sukūk Al-Istisna'*	0.0	3	2
9. Short-term *Sukūk Al-Salam*	16.7	3	2
10. Negotiable Islamic Deposit/Negotiable Notes of Deposit Certificates or equivalent	16.7	4	3
11. *Wadi'ah* acceptance certificates or equivalent	25.0	4	2
12. Repurchase agreement (Repo) and Reverse Repo instruments	25.0	4	2
13. Interbank *Muḍārabah* investment or equivalent	33.3	4	2
14. Short-term placement with other IIFS and interbank agreement for mutual financing facilities within the profit-sharing framework	25.0	4	2
15. Common pool of funds created at the central bank for mutual accommodation	0.0	3	2
16. Islamic mutual funds or unit trusts	50.0	3	2
No. of IIFS respondents: 71 (from 11 jurisdictions)			
1. Commodity *Murābahah*	49.2	3	2
2. Islamic Government Investment Certificates/Issues or equivalent	22.3	4	3
3. Government or central bank *Mushārakah* Certificates or equivalent	4.0	3	2
4. Islamic Treasury Bills or equivalent	8.3	4	3
5. Central bank Negotiable Notes or equivalent	11.3	4	3
6. Central bank Participation Certificates or equivalent	11.8	3	3
7. Short-term *Sukūk Al-Ijārah*	4.2	4	3
8. Short-term *Sukūk Al-Istisna'*	23.6	3	2
9. Short-term *Sukūk Al-Salam*	3.8	3	2
10. Negotiable Islamic Deposit/Negotiable Notes of Deposit Certificates or equivalent	7.7	4	3
11. *Wadī`ah* acceptance certificates or equivalent	9.5	4	2
12. Repurchase agreement (Repo) and reverse Repo instruments	10.6	4	2
13. Interbank *Muḍārabah* investment or equivalent	7.8	4	2
14. Short-term placement with other IIFS and interbank agreement for mutual financing facilities within the profit-sharing framework	34.4	4	2
15. Common pool of funds created at the central bank for mutual accommodation	13.4	3	2
16. Islamic mutual funds or unit trusts	31.3	3	2

**Ranking from 1 (not tradable at all) to 5 (highly tradable)*

TABLE 3: POLICY INSTRUMENTS EMPLOYED BY CENTRAL BANKS FOR MONETARY OPERATIONS

	Existence			Adaptation to *Sharī`ah*		
No. of Supervisory Authority respondents: 13	YES	NO	% of YES	YES	NO	% of YES
1. Open market operations (OMOs)						
(a) Buying and selling money market instruments outright on the secondary market	7	6	58.3	4	6	33.3
(b) Buying and selling assets under repurchase agreement (repo and reverse repo operations) in a secondary market to inject or absorb liquidity, into or from the banking system	7	6	58.3	2	6	16.7
(c) Buying and selling of foreign exchange swaps	5	8	41.7	0	8	0.0
2. OMO-type operations, conducted using specific central bank instruments						
(a) Lending and borrowing on auction basis against underlying assets as collateral	2	11	16.7	0	11	0.0
(b) Primary market issuance of central bank or Government securities for monetary policy purposes	9	4	75.0	6	4	50.0
(c) Auctions of term deposits	1	12	8.3	1	12	8.3
(d) Foreign exchange auctions (as a tool for both banking system's liquidity management and foreign exchange)	1	12	8.3	0	12	0.0
3. Standing facilities i.e. discretionary end-of-day lending or deposit facilities to provide or absorb overnight liquidity						
(a) Discount window or refinance facilities i.e. short-term borrowing of funds from central banks secured against Government bonds or central bank securities as collateral, providing a ceiling for market interest rates	5	8	41.7	1	8	8.3
(b) Deposit facilities i.e. short-term placement of banks' funds with central banks, providing a floor for market interest rates	5	8	41.7	1	8	8.3
(c) Fully collateralised Lombard facilities, secured against Government bonds and loans on deeds, providing a ceiling for market interest rates	3	10	25.0	0	10	0.0

TABLE 4: SEPARATION & COORDINATION BETWEEN MONETARY OPERATIONS & PUBLIC DEBT MANAGEMENT: Existence

	Overall YES	No. of resp.	% of YES
No. of Supervisory Authority respondents: 13			
1. The central bank/monetary authority act as a banker to the Government in managing its short-term cash flows and as an agent for public debt issuance and management.	12	13	92.31
2. The legal framework for public debt issuance and management (usually undertaken by the central bank on behalf of the Treasury or Ministry of Finance) allows for the design and issuance of short-term Islamic financial instruments.	7	13	53.85
3. Both the central bank and securities or capital market regulator regulates secondary market trading of Government and/or central bank securities.	8	13	61.54
4. Central bank securities co-exist with, and are markedly distinct from Government securities.	8	13	61.54
5. *Sharī`ah* screening and approval process for the issuance of Government securities is different from central bank securities.	3	13	23.08
6. Achieving the desired risk cost trade-off i.e. assessing risks vs. cost considerations is crucial for Government or central bank securities issued either for monetary operations or public debt management.	9	13	69.23
7. Others (please specify)	0	13	0.00

TABLE 5: LAWS, REGULATIONS & OTHER LEGAL ARRANGEMENTS

Modification to existing ones to accommodate specificities of Islamic finance and perception on the urgency of such modification *No. of Supervisory Authority respondents: 13*	Modified (% YES)	Perception of urgency (Average)*
1. Laws or acts on:		
(a) central banking	61.5	4.2
(b) banking	61.5	4.6
(c) insurance	46.2	4.1
(d) securities (including public and private debt securities)	46.2	4.5
(e) stamp duty	23.1	3.5
(f) trust	30.8	3.8
(g) anti-money laundering	61.5	3.7
(h) others (please specify)	7.7	5.0
2. Guidelines/guidance, circulars, etc issued by the central bank or Ministry of Finance on market practices	61.5	4.2
3. Market self regulations including market code of conduct or ethics	38.5	4.1

TABLE 6: ISSUES RELATED TO *SHARĪ`AH* *Urgency of the issue and permissibility/acceptance in respondent's jurisdiction*	URGENCY*	PERMISSIBILITY (% YES)
1. Differing interpretations of *Sharī`ah* rulings or *fatāwā* on financial matters across jurisdictions could lead to differing methods of structuring/packaging financial instruments and non-validity/non-recognition of some contracts or terms of practice in		
(a) revenue sharing (as opposed to profit sharing)	3.4	61.5
(b) put option exercise at face value (as opposed to market value)	2.8	23.1
(c) purchase undertaking to buy back units of investment in equity-based structures (as opposed to non-purchase undertaking)	2.6	7.7
(d) sale of debt to a third party and securitisation of receivables for debt trading (Bay` al-Dayn)	3.5	15.4
(e) conditional rebate/discount for early repayments	3.1	30.8
(f) floating Ijārah i.e. "lease back and releasing"	3.2	53.8
(g) trading of receivables against assets i.e. convertible debts based on the concept of embedded binding promise	3.4	30.8
(h) Mushārakah Mutanaqisah (Diminishing Mushārakah)	2.8	53.8
(i) usufruct swap or exchange of subject matter of Ijārah transactions	2.8	30.8
2. On-going debate on risk mitigating instruments (in particular derivatives) such as:		
(a) Islamic profit rate swap (Murābahah principle and cash settlement via set-off)	3.3	30.8
(b) forex swap	3.1	46.2
(c) forward (salam principle)	3.1	46.2
(d) forward forex (wa`d principle)	2.8	38.5
(e) options (`urbūn principle)	3.4	38.5
(f) futures contracts	3.3	30.8
(g) Bay` al-Istijrār	2.2	30.8

Appendix 3: Case Studies

CASE STUDY: MALAYSIA

1. Interbank money markets – structure, instruments, state of development

The Islamic Interbank Money Market (IIMM) has been developed to operate in parallel with the conventional money market. Since its inception in 1994, the market has evolved to become an important component of the overall Islamic financial system in terms of providing an avenue for Islamic banking institutions (IBIs) to source and invest in short-term financial instruments. The Government, BNM and IBIs have successfully developed an array of *Sharī`ah*-compliant financial instruments that are comparable with the conventional money market. Trading and investment activities in the IIMM have continued to be active, reaching an average monthly volume of RM30 billion in March 2007. The existence of an active and vibrant market has enabled IBIs to manage their liquidity position effectively.

	2005	2006	Mar-07
Islamic Interbank Money Market	**(RM million)**		
Total Money Market Transactions	**356,475**	**395,785**	**87,603**
Muḍārabah* Interbank Investment	254,717	256,089	53,301
Money Market Papers:	**101,757**	**139,696**	**34,302**
*Islamic Accepted Bills**	*9,391*	*24,025*	*1,577*
*Negotiable Islamic Debt Certificates**	*8,594*	*29,338*	*3,012*
Government Investment Issues	*43,177*	*39,003*	*22,802*
Islamic Treasury Bills	*4,461*	*4,843*	*1,186*
Bank Negara Negotiable Notes	*36,134*	*41,870*	*5,605*
Bank Negara Sukūk Al-Ijārah		*617*	*120*
Sanadat ABBA Cagamas	1,330	1,579	575
Khazanah bonds	17,520	2,330	31
Average Monthly Turnover	**29,706**	**32,982**	**29,201**

	2005	2006	Mar-07
Debt Securities (Outstanding Amount)		**(RM million)**	
Total Debt Securities	**418,484**	**449,472**	**472,116**
Islamic Securities	122,244	144,130	144,684
Conventional Securities	296,240	305,342	327,432
Total Private Debt Securities (PDS)	**232,351**	**199,006**	**221,688**
Islamic PDS	103,144	113,530	116,684
Conventional PDS	129,207	85,476	105,004
Total Islamic Securities	**122,244**	**144,130**	**144,684**
Government Investment Issues	10,100	19,600	23,100
Islamic Treasury Bills	2,000	2,000	2,000
Bank Negara Negotiable Notes	7,000	8,600	2,500
Bank Negara *Sukūk Ijārah*	-	400	400
Subtotal	**19,100**	**30,600**	**28,000**
Asset Backed Securities	3,254	3,216	3,216
Corporate Bonds	75,352	66,235	74,016
of which:			
Khazanah Bonds	*10,000*	*8,300*	*6,350*
Medium Term Notes	16,749	26,263	28,943
Commercial Papers	4,359	5,556	4,404
Sanadat *Muḍārabah* Cagamas Papers	930	6,130	730
Sanadat ABBA Cagamas Papers	2,500	6,130	5,375
Subtotal	**103,144**	**113,530**	**116,684**

The historical data on rate of return payable to depositors, financing rate (benchmarked against conventional banking institutions), Consumer Price Index (inflation rate), indicative rates for Treasury bills, and the market indicative yield for Government securities are provided in Tables 1 to 5.

2. Central bank standing facilities

BNM has developed several Islamic financial instruments to facilitate effective management of liquidity position in the Islamic financial system. Among others, it has developed mechanisms for the acceptance and placement of interbank deposits that are based on the *Sharī`ah* contract of *Wadī`ah* and *Muḍārabah*, respectively. In addition, BNM has developed a sale and buyback agreement (a *Sharī`ah*-compliant alternative to REPO) transaction that is based on the contract of outright sale of *Sukūk* and a promise to buy back the underlying *Sukūk* at an agreed price on a specified future date.

All banking institutions in Malaysia are required to maintain minimum balances in their SRR account, which is a non-interest-bearing deposit account maintained at BNM, equivalent to 4% of their eligible liabilities base. PSIA is also regarded as part of the eligible liabilities for the calculation of SRR.

Banking institutions in Malaysia are required to maintain sufficient liquidity surplus and reserves to sustain a sudden liquidity withdrawal shock arising from the profile of the assets and liabilities of a particular institution. Currently, the rate of heavy withdrawal as defined by BNM under its liquidity framework is as follows:

Maturity bucket	Amount of heavy withdrawal (as % of deposits base)	
	Banks	Finance companies
Within 1 week	5%	5%
Within 1 month	7%	15%
Within 2 months	10%	20%
Within 3 months	15%	25%

Islamic banking institutions are expected to sustain heavy withdrawals up to a period of one month. However, the actual quantum will vary from institution to institution, depending on their funding structure, and will be a matter to be agreed between BNM and the institution on a case-by-case basis. Nevertheless, the liquidity profile for Islamic and conventional banking institutions in Malaysia generally is quite similar given that they are operating in the same competitive and dual-banking system. Most of the deposits are offered in the same tenor and are targeted at similar types of customers (although the structure and design of deposits are different). The PSIA are subject to the computation of both SRR and liquid assets requirement.[15] *(See Tables 6 and 7 for data on SRR and liquid assets.)*

3. Market-based instruments of monetary and Government finance operations

The money market papers available in Malaysia are as follows:

Money market papers	*Sharī`ah* contracts
Government Investment Issues	*Bay` Bithaman Ajil*
Islamic Treasury Bills	*Bay` al-`Inah*
Islamic Bank Negara Monetary Notes	*Bay` Bithaman Ajil*
Bank Negara *Sukūk Al-Ijārah*	*Ijārah*
Interbank investment	*Muḍārabah*
Commodity *Murābahah* deposit/ investment	*Murābahah*

All instruments sold by the Government and BNM are offered through the tendering process to the appointed principal dealers in Malaysia. The GII, iTB and the Bank Negara *Sukūk Al-Ijārah* are issued to accommodate the need for funding by the Government. These instruments are issued based on a pre-determined date, and the amount of issuance is subject to the limit imposed by the Government Funding Act in Malaysia.

Pricing of these instruments is determined based on competitive bidding by these principal dealers during the tendering process. The indicative prices for Islamic instruments would be benchmarked against their conventional counterparts to ensure the competitiveness of these instruments in the market. The structures and design of these instruments are approved by the National *Sharī`ah* Advisory Council of Bank Negara Malaysia. *(See Table 8 for data on the*

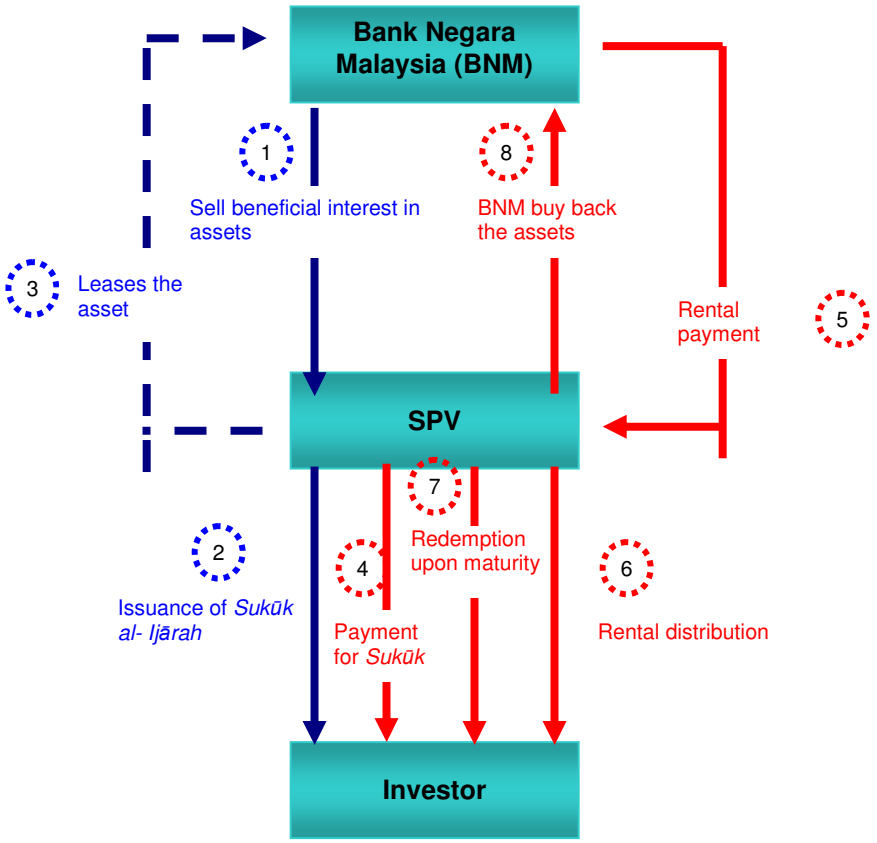
[15] BNM does not separate SRR data for Islamic banking and conventional banking institutions.

Islamic interbank money market, money market papers and outstanding amount of securities transactions in Malaysia.)

(a) Sukūk Al-Ijārah (Diagram 1)

- *Sukūk Al-Ijārah* is acceptable in many jurisdictions
- The rejection is due to the buyback option by the original owner in this arrangement.

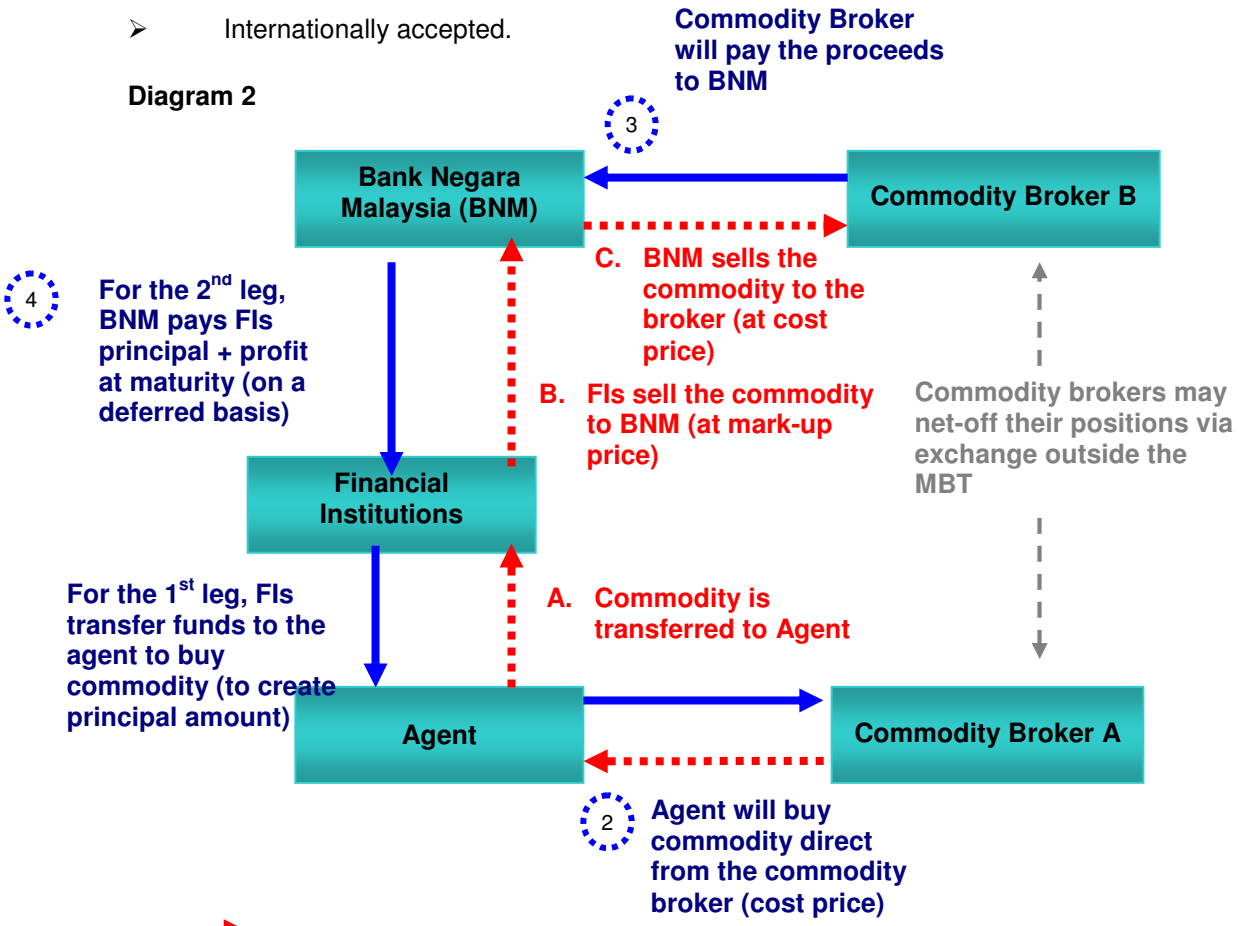
Diagram 1



(b) Deposit Placement with BNM via Commodity Murābahah Transaction (Diagram 2)

- Internationally accepted.

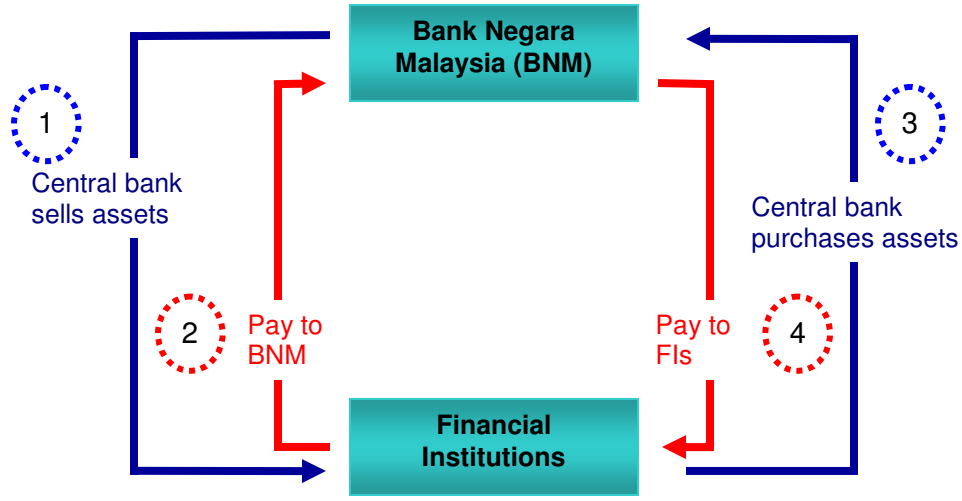
Diagram 2



(c) Issuance of Bank Negara Islamic Monetary Notes and Issuance of Profit-based GII (*Diagram 3*)

- *Bay` al-`Inah* is not acceptable by *Sharī`ah* scholars in the Middle East countries.
- Some of the scholars regarded *Bay` al-`Inah* as part of interest-based transactions.

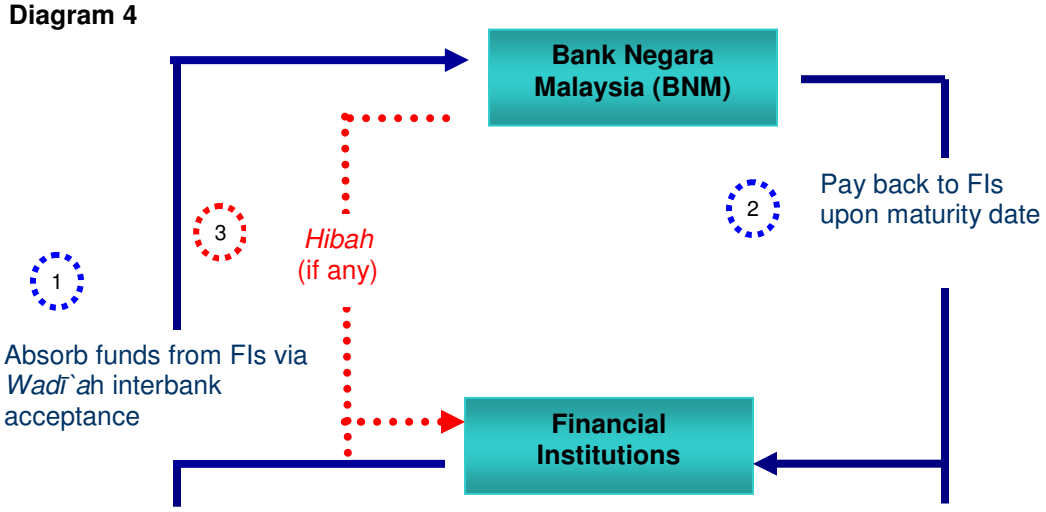
Diagram 3



(d) Wadī`ah Placement with BNM (Diagram 4)

- *Wadī`ah* concept is widely acceptable across many jurisdictions.

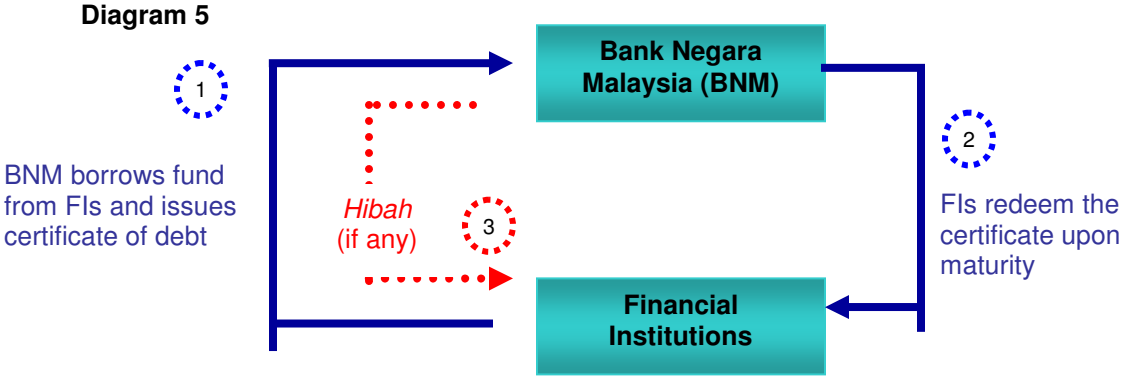
Diagram 4



(e) Government Investment Issues (prior to 1993) and Placement of Deposit (Diagram 5)

- *Qard (interest free loan)* concept is widely acceptable across many jurisdictions.

Diagram 5



(f) Muḍārabah Interbank Money Market (Diagram 6)

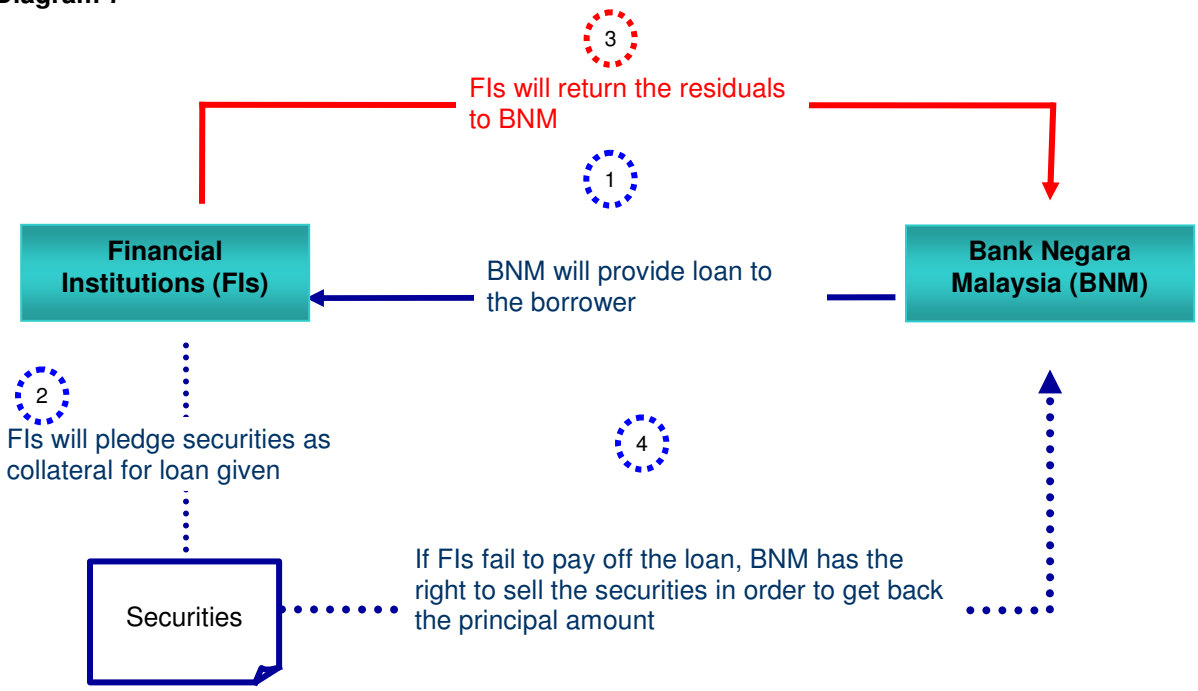
- The *Muḍārabah* concept is widely acceptable across many jurisdictions.

Diagram 6

(g) Rahn Lending Facility (Diagram 7)

- The *Rahn* concept is widely acceptable across many jurisdictions.

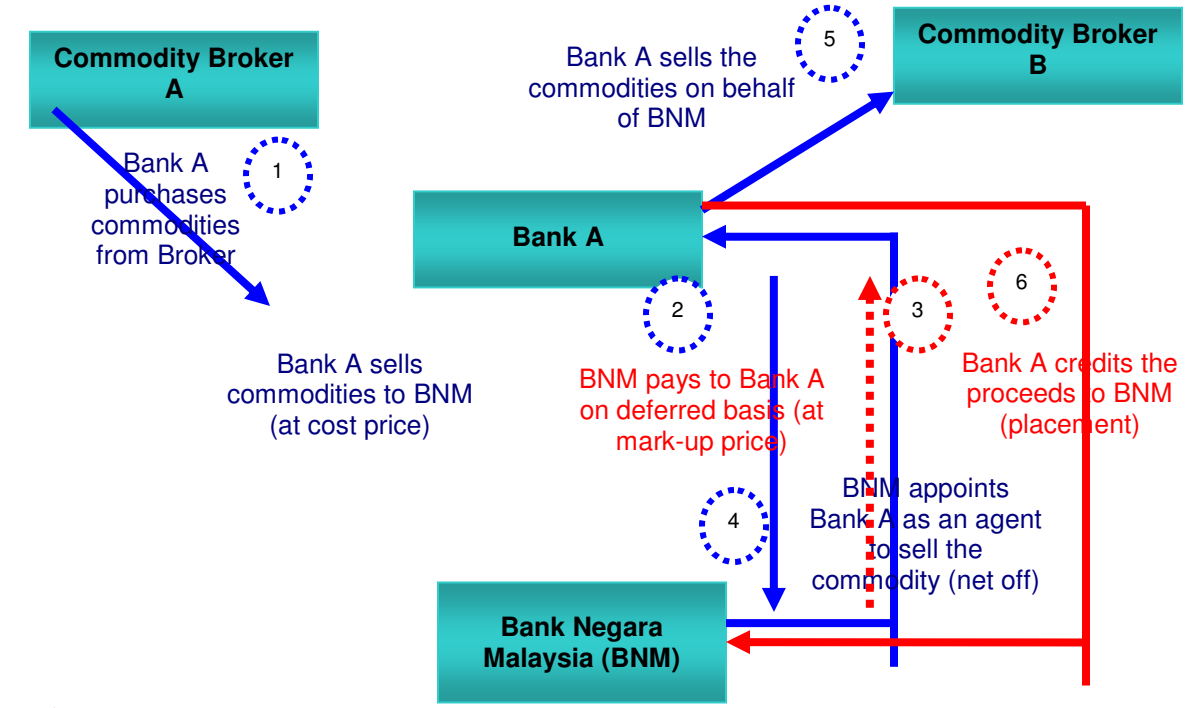
Diagram 7



(h) Deposit Placement with BNM via Murābahah-based Transaction (Diagram 8)

- Internationally accepted

Diagram 8



Note: All transactions shall take place on the same day except for the forward transaction (3), which shall take place on the maturity date.

4. Microstructure of secondary markets and payment system

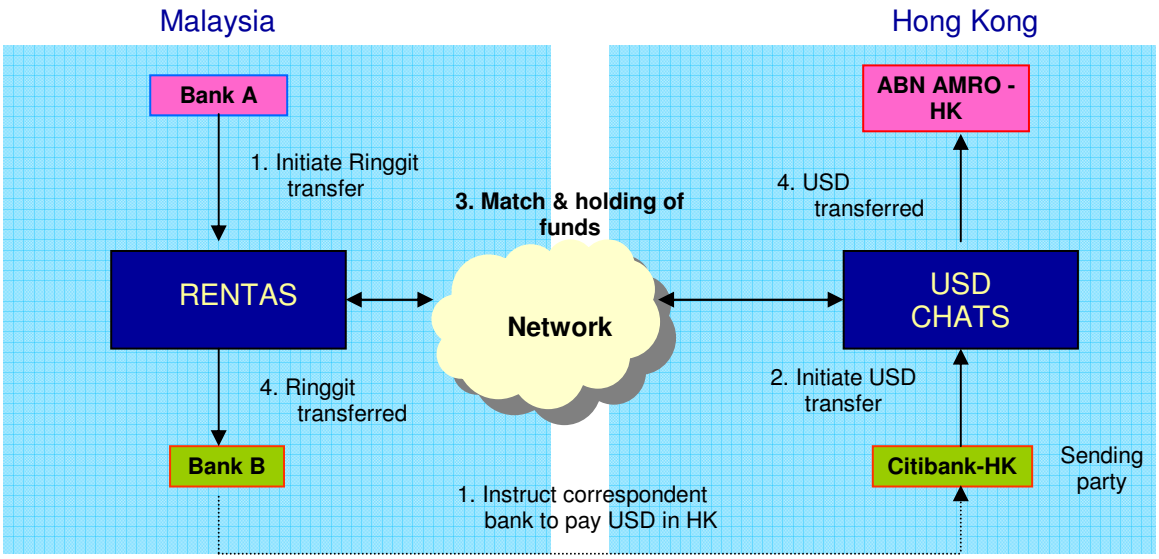
Instruments of the money market are not listed on the stock exchange. The trading of these instruments in the secondary market is conducted in the interbank market where prices are made available directly by Islamic banking institutions or by the money broker's institution. The settlement of high-value interbank transactions in terms of funds and securities is executed and recorded under *RENTAS*, which runs on an *RTGS* system. The availability of such a settlement system provides a safer and efficient payment flow and enhances monetary and financial stability by eliminating potential settlement risk. The operation of any payment system in Malaysia is governed by the Payment System Act 2003 and falls under the purview of BNM.

BNM does not have any restrictions on buying back the instruments it has issued to the market, but the structure of such a transaction is subject to the approval of the National *Sharī`ah* Advisory Council.

5. Foreign exchange markets

BNM may use the foreign exchange in the monetary management to mop up excess reserves. Currently, the *Sharī`ah* Advisory Council in Malaysia has approved the *Sharī`ah*-compliant alternatives to foreign exchange swaps based on *Bay` al-`Inah* and Commodity *Murābahah* structures. Examples of those structures are provided in Diagram 10 and 11.

Diagram 9: Ringgit–USD PVP transaction flow: How Malaysian banks use HK CHATS to settle foreign transactions



Assumptions:

- Bank A sells Ringgit for US dollars from Bank B.
- Bank A USD Nostro agent in Hong Kong is ABN Amro.
- Bank B USD Nostro agent in Hong Kong is Citibank.

Table 1*

Skim Perbankan Tanpa Faedah: Kadar Pulangan kepada Pendeposit

Interest-Free Banking Scheme: Rate of Return to Depositors

Peratus setahun *Percent per annum*

Akhir tempoh / *End of period*	Bank perdagangan *Commercial banks*						Syarikat kewangan *Finance companies*						Bank saudagar/Bank pelaburan *Merchant banks/Investment banks*				
	Akaun pelaburan *Investment account*					Akaun tabungan *Savings deposit*	Akaun pelaburan *Investment account*					Akaun tabungan *Savings deposit*	Akaun pelaburan *Investment account*				
	Tempoh (dalam bulan) *Period (in months)*						Tempoh (dalam bulan) *Period (in months)*						Tempoh (dalam bulan) *Period (in months)*				
	1	3	6	9	12		1	3	6	9	12		1	3	6	9	12
2002 Jan. / *Jan.*	2.98	3.06	3.27	3.35	3.65	2.05	3.29	3.46	3.66	3.87	4.11	2.76	3.18	3.28	3.88	4.10	4.31
Feb. / *Feb.*	2.94	3.05	3.21	3.33	3.59	2.03	3.32	3.50	3.71	3.92	4.16	2.87	3.13	3.27	3.89	4.11	4.33
Mac / *Mar.*	2.92	3.00	3.19	3.33	3.56	2.22	3.30	3.48	3.68	3.90	4.15	2.88	3.13	3.25	3.90	4.11	4.33
Apr. / *Apr.*	2.88	2.95	3.16	3.30	3.51	2.11	3.30	3.47	3.65	3.90	4.13	2.86	3.46	3.24	3.35	4.11	4.33
Mei / *May*	2.85	2.92	3.18	3.32	3.52	2.08	3.26	3.43	3.71	4.00	4.24	2.78	0.00	2.80	3.31	4.07	4.33
Jun / *June*	2.75	2.87	3.09	3.25	3.45	2.02	3.42	3.58	3.90	4.23	4.49	2.69	0.00	2.80	0.00	4.07	4.33
Jul / *July*	2.70	2.82	3.04	3.22	3.38	2.01	3.56	3.64	3.84	4.65	4.29	2.65	0.00	2.80	2.80	4.08	0.00
Aug / *Aug.*	2.76	2.83	3.06	3.22	3.38	2.01	3.60	3.74	3.88	4.10	4.31	2.71	0.00	2.80	2.80	4.08	0.00
Sep / *Sep.*	2.76	2.81	3.04	3.19	3.35	2.02	3.60	3.72	3.90	4.04	4.32	2.70	0.00	2.80	2.80	4.08	0.00
Okt. / *Oct.*	2.77	2.90	3.13	3.30	3.42	2.03	3.45	3.67	3.90	4.03	4.19	2.74	0.00	2.80	2.80	4.01	0.00
Nov / *Nov.*	2.88	3.04	3.26	3.42	3.59	2.20	3.61	3.73	4.06	4.15	4.29	2.70	0.00	2.80	2.80	0.00	0.00
Dis / *Dec.*	2.90	3.00	3.21	3.37	3.81	2.26	3.49	3.75	4.06	4.19	4.39	2.81	0.00	2.80	2.80	0.00	0.00
2003 Jan. / *Jan.*	2.74	2.82	3.03	3.18	3.48	2.10	3.42	3.61	3.98	4.37	4.67	2.80	2.80	2.80	0.00	0.00	0.00
Feb. / *Feb.*	2.71	2.88	3.20	3.22	3.52	2.13	3.43	3.56	3.96	4.30	4.48	2.70	2.83	2.82	0.00	0.00	0.00
Mac / *Mar.*	2.68	2.88	3.10	3.22	3.54	2.11	3.38	3.56	3.96	4.26	4.46	2.69	2.85	2.85	2.88	0.00	0.00
Apr. / *Apr.*	2.68	2.86	3.12	3.26	3.60	2.12	3.34	3.43	3.77	4.09	4.36	2.65	2.85	2.85	2.88	0.00	0.00
Mei / *May*	2.68	2.81	3.06	3.25	3.42	2.08	3.43	3.67	3.94	4.20	4.49	2.65	2.85	2.86	2.90	0.00	0.00
Jun / *June*	2.73	2.74	3.02	3.19	3.37	2.07	3.95	3.48	3.81	4.16	4.43	2.58	2.84	2.85	2.89	0.00	0.00
Jul / *July*	2.72	2.75	3.03	3.22	3.40	2.06	3.92	3.45	3.77	4.08	4.41	2.52	2.83	2.82	2.87	0.00	0.00
Aug / *Aug.*	2.71	2.71	3.00	3.28	3.49	2.03	3.27	3.39	3.68	4.00	4.26	2.49	2.80	2.80	2.80	0.00	0.00
Sep / *Sep.*	2.71	2.71	2.96	3.26	3.48	1.99	3.60	3.34	3.66	3.91	4.16	2.44	2.80	2.80	2.80	0.00	0.00
Okt. / *Oct.*	2.61	2.71	2.97	3.26	3.49	2.02	3.16	3.26	3.57	3.84	4.09	2.41	2.81	2.80	2.81	0.00	0.00
Nov / *Nov.*	2.64	2.69	2.96	3.21	3.48	1.93	3.53	3.27	3.56	3.82	4.12	2.42	2.81	0.00	2.85	0.00	0.00
Dis / *Dec.*	2.66	2.70	2.97	3.14	3.43	1.92	3.11	3.24	3.50	3.71	4.06	2.39	2.80	0.00	0.00	0.00	0.00
2004 Jan. / *Jan.*	2.68	2.68	2.99	3.21	3.37	1.85	3.45	3.34	3.62	3.89	4.13	2.46	2.81	2.81	2.84	0.00	0.00
Feb. / *Feb.*	2.67	2.69	2.99	3.18	3.39	1.84	3.41	3.24	3.50	3.73	4.04	2.39	2.82	2.82	2.82	0.00	0.00
Mac / *Mar.*	2.66	2.69	2.97	3.16	3.35	1.82	3.35	3.23	3.50	3.75	4.03	2.36	2.80	2.80	2.80	0.00	0.00
Apr. / *Apr.*	2.62	2.67	2.93	3.11	3.27	1.78	3.14	3.24	3.53	3.75	4.06	2.37	3.02	2.80	2.81	0.00	0.00
Mei / *May*	2.59	2.65	2.89	3.09	3.25	1.78	3.34	3.20	3.48	3.70	4.03	2.33	3.08	2.80	0.00	3.00	3.00
Jun / *June*	2.62	2.69	2.89	3.11	3.26	1.94	3.33	3.20	3.47	3.72	3.95	2.33	3.04	2.80	2.80	0.00	3.00
Jul / *July*	2.61	2.69	2.90	3.11	3.25	1.76	2.77	2.88	3.11	3.36	3.57	2.19	3.05	2.80	2.80	0.00	3.00
Aug / *Aug.*	2.71	2.71	2.99	3.28	3.49	2.03	3.82	3.39	3.68	4.00	4.26	2.49	2.80	2.80	2.80	0.00	0.00
Sep / *Sep.*	2.67	2.69	2.87	3.04	3.23	1.74	2.82	2.85	3.10	3.32	3.53	2.36	3.00	2.79	2.80	0.00	3.53
Okt. / *Oct.*	2.68	2.74	2.92	3.10	3.30	1.71	2.78	2.85	3.09	3.31	3.52	2.54	2.90	2.79	2.79	0.00	3.00
Nov / *Nov.*	2.69	2.74	2.91	3.11	2.30	1.67	2.66	2.73	2.94	3.11	3.38	2.27	2.77	2.79	2.80	0.00	3.00
Dis / *Dec.*	2.64	2.75	2.94	3.13	3.34	1.68	2.76	2.78	3.00	3.17	3.45	2.31	2.61	2.94	3.01	0.00	3.00

Skim Perbankan Tanpa Faedah: Kadar Pulangan kepada Pendeposit

Interest-Free Banking Scheme: Rate of Return to Depositors

Peratus setahun *Percent per annum*

Akhir tempoh *End of*	Bank perdagangan *Commercial banks*						Syarikat kewangan *Finance companies*						Bank saudagar/Bank pelaburan *Merchant banks/Investment banks*				
	Akaun pelaburan *Investment account*					Akaun tabungan *Savings*	Akaun pelaburan *Investment account*					Akaun tabungan *Savings*	Akaun pelaburan *Investment account*				
	Tempoh (dalam bulan) *Period (in months)*						Tempoh (dalam bulan) *Period (in months)*						Tempoh (dalam bulan) *Period (in months)*				
2005 Jan. / *Jan.*	2.63	2.72	2.90	3.14	3.32	1.67	2.85	2.92	3.14	3.33	3.62	2.41	2.90	2.93	2.76	3.30	3.00
Feb. / *Feb.*	2.64	2.72	2.89	3.14	3.35	1.68	2.92	3.03	3.27	3.46	3.76	2.51	2.84	2.93	2.91	3.30	3.15
Mac / *Mar.*	2.60	2.71	2.88	3.08	3.30	1.71	2.95	3.04	3.28	3.47	3.78	2.51	2.75	2.93	2.87	3.15	3.11
Apr. / *Apr.*	2.62	2.72	2.91	3.07	3.36	1.67	2.98	3.06	3.30	3.49	3.79	2.52	2.75	2.86	2.87	3.15	3.11
Mei / *May*	2.55	2.69	2.88	3.08	3.33	1.61	3.01	3.03	3.27	3.46	3.76	2.51	2.70	0.00	2.86	3.17	3.19
Jun / *June*	2.54	2.62	2.85	3.06	3.31	1.57	2.75	2.77	3.05	3.20	3.47	2.56	2.73	0.00	2.84	2.99	3.19
Jul / *July*	2.50	2.59	2.82	3.01	3.21	1.51	2.75	2.78	3.06	3.21	3.47	2.57	2.76	2.77	2.83	2.89	3.11
Aug / *Aug.*	2.51	2.59	2.80	3.00	3.24	1.51	2.75	2.78	3.06	3.21	3.48	2.57	2.76	2.77	2.81	2.89	3.11
Sep / *Sep.*	2.49	2.58	2.78	2.97	3.22	1.49	2.75	2.77	3.05	3.20	3.46	2.56	2.76	2.77	2.81	2.83	3.19
Okt. / *Oct.*	2.45	2.58	2.77	2.95	3.23	1.49	2.63	2.77	3.05	3.20	3.47	2.56	2.75	2.77	2.82	2.83	3.19
Nov / *Nov.*	2.45	2.58	2.76	2.94	3.22	1.46	2.63	2.77	3.05	3.20	3.47	2.56	2.76	2.77	2.77	2.83	3.19
Dis / *Dec.*	2.50	2.64	2.81	2.95	3.24	1.42	2.64	2.78	3.06	3.20	3.47	2.57	2.94	2.95	2.91	2.95	3.19
2006 Jan. / Jan.	2.61	2.69	2.83	2.97	3.25	1.43							3.02	2.98	2.91	2.97	3.19
Feb. / *Feb.*	2.67	2.74	2.86	2.99	3.26	1.45							3.05	2.97	3.05	2.97	3.19
Mac / *Mar.*	2.73	2.82	2.94	3.03	3.30	1.45							3.27	3.30	3.24	3.00	3.44
Apr. / *Apr.*	2.68	2.81	2.99	3.11	3.31	1.42							3.25	3.30	3.24	3.04	3.44
Mei / *May*	2.88	2.93	3.15	3.33	3.54	1.37							3.44	0.00	3.32	3.04	3.44
Jun / June	3.01	3.06	3.30	3.45	3.58	1.37							3.46	3.52	3.48	3.08	3.44
Jul / *July*	3.03	3.07	3.31	3.48	3.60	1.29							3.54	3.52	3.56	3.67	3.44
Aug / *Aug.*	3.02	3.10	3.33	3.44	3.69	1.26							3.60	3.52	3.56	3.71	3.44
Sep / *Sep.*	2.99	3.08	3.27	3.45	3.70	1.24							3.62	3.65	3.63	3.71	3.64
Okt. / *Oct.*	2.98	3.05	3.24	3.43	3.69	1.23							3.57	3.63	3.66	3.71	3.68
Nov / *Nov.*	2.97	3.04	3.20	3.38	3.66	1.23							3.34	3.63	3.66	3.71	3.68
Dis / *Dec.*	2.97	3.03	3.15	3.33	3.64	1.22							3.55	3.61	3.66	3.71	3.68
2007 Jan. / Jan.	3.02	3.07	3.17	3.35	3.64	1.24							3.41	3.45	3.61	3.71	3.68
Feb. / *Feb.*	3.06	3.09	3.21	3.37	3.66	1.22							3.40	3.47	3.62	3.75	3.77
Mac / *Mar.*	2.79	2.88	3.10	3.23	3.54	2.11							2.82	2.85	2.88	0.00	0.00
Apr. / *Apr.*	3.03	3.14	3.28	3.48	3.75	1.16							3.41	3.43	3.59	0.00	3.93
Mei / *May*	3.01	3.11	3.29	3.47	3.74	1.16							3.37	3.40	3.50	0.00	3.93
Jun / June	3.01	3.10	3.30	3.47	3.74	1.16							3.39	3.50	3.45	0.00	3.93
Jul / *July*	2.78	3.09	3.28	3.46	3.74	1.17							3.39	3.50	3.64	0.00	3.97

Table 2*

Kadar Faedah: Institusi Perbankan

Interest Rates: Banking Institutions

Peratus Setahun

Percent per annum

Kadar purata pada akhir tempoh *Average rates at end-period*	Bank Perdagangan / *Commercial Banks*								Syarikat Kewangan / *Finance Companies*								Bank Saudagar / *Merchant Banks*					
	Deposit tetap *Fixed deposits*					Deposit tabungan	Kadar Berian Pinjaman Asas	Kadar Berian Pinjaman Purata	Deposit tetap *Fixed deposits*					Deposit tabungan	Kadar Berian Pinjaman Asas	Kadar Berian Pinjaman Purata	Deposit tetap *Fixed deposits*					Kadar Berian Pinjaman Purata
	Tempoh (dalam bulan) *Period (in months)*					*Savings deposit*	*Base Lending Rate*	*Average Lending Rate*	Tempoh (dalam bulan) *Period (in months)*					*Savings deposit*	*Base Lending Rate*	*Average Lending Rate*	Tempoh (dalam bulan) *Period (in months)*					*Average Lending Rate*
	1	3	6	9	12				1	3	6	9	12				1	3	6	9	12	
2003	3.00	3.00	3.01	3.03	3.70	1.86	6.00	6.11	3.00	3.00	3.02	3.05	3.68	2.18	6.90	9.11	2.81	2.87	2.91	2.95	2.90	6.71
2004	3.00	3.00	3.00	3.00	3.70	1.58	5.98	5.98	3.00	3.00	3.00	3.02	3.70	1.98	6.90	8.78	2.73	2.76	2.81	2.81	2.70	6.39
2005	3.01	3.02	3.04	3.08	3.70	1.41	6.20	6.12	3.00	3.00	3.00	3.09	3.70	1.53	7.03	8.66	2.93	2.98	2.87	2.88	3.41	6.46
2006	3.11	3.19	3.34	3.46	3.73	1.48	6.72	6.57									3.47	3.55	3.51	3.65	3.69	6.87
2004 Jan./ *Jan.*	3.00	3.00	3.01	3.03	3.70	1.83	6.00	6.12	3.00	3.00	3.01	3.03	3.66	2.20	6.90	9.06	2.81	2.86	2.87	3.00	3.08	6.70
Feb./ *Feb.*	3.00	3.00	3.01	3.03	3.70	1.83	6.00	6.13	3.00	3.00	3.01	3.04	3.70	2.19	6.90	9.01	2.73	2.83	2.86	2.85	3.70	6.69
Mac/ *Mar.*	3.00	3.00	3.00	3.02	3.70	1.77	6.00	6.10	3.00	3.00	3.01	3.03	3.70	2.14	6.90	8.95	2.80	2.82	2.85	2.85	3.08	6.61
Apr./ *Apr.*	3.00	3.00	3.00	3.02	3.70	1.77	6.00	6.08	3.00	3.00	3.01	3.03	3.70	2.14	6.90	8.87	2.76	2.81	2.85	2.80	3.00	6.57
Mei/ *May*	3.00	3.00	3.00	3.01	3.70	1.74	5.98	6.07	3.00	3.00	3.01	3.03	3.70	2.11	6.90	8.82	2.77	2.81	2.65	2.80	2.95	6.56
Jun/ *June*	3.00	3.00	3.00	3.01	3.70	1.73	5.98	5.99	3.00	3.00	3.01	3.03	3.70	1.99	6.90	8.76	2.77	2.81	2.80	2.90	2.95	6.50
Jul./ *Jul.*	3.00	3.00	3.00	3.01	3.70	1.72	5.98	6.00	3.00	3.00	3.01	3.03	3.70	1.93	6.82	8.69	2.74	2.78	2.82	2.90	3.05	6.61
Aug./ *Aug.*	3.00	3.00	3.00	3.00	3.70	1.69	5.98	6.09	3.00	3.00	3.01	3.04	3.70	1.79	6.90	8.64	2.75	2.76	2.70	2.90	2.91	6.61
Sep./ *Sep.*	3.00	3.00	3.00	3.00	3.70	1.65	5.98	6.01	3.00	3.00	3.01	3.04	3.70	1.93	6.90	8.76	2.75	2.77	2.80	2.85	2.83	6.60
Okt./ *Oct.*	3.00	3.00	3.00	3.00	3.70	1.64	5.98	6.01	3.00	3.00	3.01	3.04	3.70	1.99	6.90	8.65	2.75	2.73	2.79	2.85	2.95	6.50
Nov./ *Nov.*	3.00	3.00	3.00	3.00	3.70	1.59	5.98	5.97	3.00	3.00	3.02	3.05	3.70	2.04	6.90	8.81	2.73	2.78	2.81	2.82	3.00	6.42
Dis./ *Dec.*	3.00	3.00	3.00	3.00	3.70	1.58	5.98	5.98	3.00	3.00	3.00	3.02	3.70	1.98	6.90	8.78	2.73	2.76	2.81	2.81	2.70	6.39
2005 Jan./ *Jan.*	3.00	3.00	3.00	3.00	3.70	1.60	5.98	5.98	3.00	3.00	3.00	3.02	3.70	1.94	6.90	8.78	2.74	2.75	2.79	2.83	2.90	6.37
Feb./ *Feb.*	3.00	3.00	3.00	3.00	3.70	1.55	5.98	5.95	3.00	3.00	3.00	3.02	3.70	1.71	6.90	8.74	2.72	2.75	2.79	2.81	2.90	6.42
Mac/ *Mar.*	3.00	3.00	3.00	3.00	3.70	1.51	5.98	5.90	3.00	3.00	3.00	3.02	3.70	1.60	6.90	8.63	2.73	2.74	2.78	2.80	2.90	6.39
Apr./ *Apr.*	3.00	3.00	3.00	3.00	3.70	1.50	5.98	5.97	3.00	3.00	3.00	3.02	3.70	1.61	6.90	8.64	2.70	2.74	2.80	2.78	2.93	6.38
Mei/ *May*	3.00	3.00	3.00	3.00	3.70	1.50	5.98	5.94	3.00	3.00	3.00	3.02	3.70	1.60	6.90	8.57	2.71	2.73	2.76	2.78	2.88	6.41
Jun/ *June*	3.00	3.00	3.00	3.00	3.70	1.45	5.98	5.90	3.00	3.00	3.00	3.03	3.70	1.61	6.90	8.78	2.72	2.73	2.79	2.76	2.88	6.44
Jul./ *Jul.*	3.00	3.00	3.00	3.00	3.70	1.44	5.98	5.90	3.00	3.00	3.00	3.03	3.70	1.61	6.90	8.75	2.71	2.74	2.78	2.75	2.90	6.44
Aug./ *Aug.*	3.00	3.00	3.00	3.00	3.70	1.46	5.98	5.91	3.00	3.00	3.00	3.03	3.70	1.61	6.90	8.72	2.71	2.73	2.79	2.75	2.90	6.33
Sep./ *Sep.*	3.00	3.00	3.00	3.00	3.70	1.42	5.98	5.90	3.00	3.00	3.00	3.03	3.70	1.60	6.90	8.70	2.72	2.74	2.74	2.75	2.89	6.31
Okt./ *Oct.*	3.00	3.00	3.00	3.00	3.70	1.40	5.98	5.95	3.00	3.00	3.00	3.03	3.70	1.52	6.90	8.68	2.72	2.74	2.75	2.75	3.00	6.31
Nov./ *Nov.*	3.00	3.00	3.00	3.00	3.70	1.41	5.98	5.98	3.00	3.00	3.00	3.03	3.70	1.52	6.90	8.66	2.75	2.78	2.81	2.75	2.90	6.33
Dis./ *Dec.*	3.01	3.02	3.04	3.08	3.70	1.41	6.20	6.12	3.00	3.00	3.00	3.09	3.70	1.53	7.03	8.66	2.93	2.98	2.87	2.88	3.41	6.46
2006 Jan./ *Jan.*	3.00	3.03	3.05	3.09	3.70	1.42	6.21	6.15									2.89	3.04	3.02	2.75	3.05	6.60
Feb./ *Feb.*	3.02	3.04	3.07	3.11	3.70	1.43	6.34	6.29									3.12	3.02	3.00	2.75	3.42	6.67
Mac/ *Mar.*	3.03	3.06	3.11	3.16	3.70	1.44	6.47	6.29									3.11	3.17	3.13	0.00	3.64	6.74
Apr./ *Apr.*	3.06	3.12	3.21	3.31	3.73	1.46	6.58	6.42									3.24	3.31	3.01	0.00	3.72	6.83
Mei/ *May*	3.11	3.17	3.31	3.44	3.76	1.47	6.72	6.51									3.43	3.51	3.17	0.00	3.85	6.99
Jun/ *June*	3.11	3.18	3.32	3.45	3.77	1.47	6.72	6.55									3.37	3.44	3.17	0.00	3.95	7.34
Jul./ *Jul.*	3.12	3.19	3.34	3.48	3.78	1.46	6.72	6.63									3.55	3.62	3.36	0.00	4.00	7.40
Aug./ *Aug.*	3.12	3.19	3.34	3.48	3.77	1.46	6.72	6.64									3.51	3.60	3.59	0.00	3.99	7.35
Sep./ *Sep.*	3.13	3.21	3.36	3.49	3.77	1.46	6.72	6.63									3.52	3.64	3.17	0.00	3.94	7.32
Okt./ *Oct.*	3.13	3.21	3.36	3.49	3.76	1.46	6.72	6.56									3.54	3.64	3.54	3.70	3.85	7.08
Nov./ *Nov.*	3.11	3.20	3.35	3.47	3.75	1.48	6.72	6.59									3.45	3.56	3.55	3.70	3.89	7.08
Dis./ *Dec.*	3.11	3.19	3.34	3.46	3.73	1.48	6.72	6.57									3.47	3.55	3.51	3.65	3.69	6.87
2007 Jan./ *Jan.*	3.11	3.19	3.34	3.45	3.72	1.49	6.72	6.57									3.47	3.54	3.34	3.70	3.62	6.94
Feb./ *Feb.*	3.11	3.19	3.34	3.45	3.71	1.44	6.72	6.54									3.51	3.54	3.51	3.70	3.65	6.96
Mac/ *Mar.*	3.10	3.18	3.34	3.45	3.71	1.43	6.72	6.54									3.70	3.54	3.47	3.67	3.69	6.83
Apr./ *Apr.*	3.10	3.18	3.33	3.43	3.71	1.44	6.72	6.48									3.62	3.51	3.52	3.63	3.66	6.70
Mei/ *May*	3.10	3.18	3.32	3.42	3.71	1.44	6.72	6.44									3.47	3.49	3.49	3.58	3.62	6.79
Jun/ *June*	3.09	3.17	3.32	3.42	3.71	1.44	6.72	6.49									3.44	3.48	3.47	3.56	3.60	6.81
Jul./ *Jul.*	3.08	3.15	3.29	3.38	3.70	1.44	6.72	6.34									3.42	3.49	3.46	3.56	3.60	5.85

1/ From August 2000 onwards, the Fixed Deposit Rate series for Commercial Banks, Finance Companies and Merchant Banks have been revised. Data for x-month fixed deposit rate refers to the quoted rate for that particular maturity alone. (Data prior to this

1/ Mulai Ogos 2000, kadar deposit tetap bagi Bank Perdagangan, Syarikat Kewangan dan Bank Saudagar telah disemak semula. Data bagi kadar deposit tetap x-bulan merujuk kepada kadar disebut bagi tempoh matang tersebut sahaja. (Data sebelum Ogos 2000 masih m

Table 3*

Penunjuk Harga Pengguna[1]

Consumer Price Indicators[1]

	Semua kumpulan *All groups*	IHP terlaras[2] *Adjusted CPI[2]*	Kumpulan kecil *Sub-groups*: Makanan *Food*	Sewa kasar, bahan api dan kuasa *Gross rent, fuel and power*	Pengangkutan dan perhubungan *Transport and communication*		Ketahanan *Durability*: Barang-barang tahan lama *Durable goods*	Barang-barang separuh tahan lama *Semi-durable goods*	Barang-barang tidak tahan lama *Non-durable goods*	Perkhidmatan *Services*	
Wajaran (2000 =100)	100.0	66.2	33.8	22.4	18.8		9.4	5.4	40.2	45.0	*Weight (2000 =100)*
	Perubahan tahunan (%) *Annual change (%)*										
2005	3.1	2.8	3.6	1.2	4.4		0.4	-0.1	5.0	2.1	*2005*
2005 Jan.	2.4	2.0	3.2	1.0	2.0		0.6	0.0	4.0	1.3	*2005 Jan.*
Feb.	2.4	2.0	3.2	1.2	1.9		0.6	-0.4	3.9	1.4	*Feb.*
Mac	2.6	2.0	3.7	1.3	2.0		0.6	0.1	4.5	1.5	*Mar.*
Apr.	2.7	2.0	3.9	1.3	2.0		0.2	-0.3	4.6	1.5	*Apr.*
Mei	3.1	2.8	3.7	1.1	4.5		0.4	0.1	5.3	2.0	*May*
Jun	3.2	2.9	3.9	1.2	4.6		0.4	-0.1	5.5	2.2	*Jun.*
Jul.	3.0	2.9	3.3	1.2	4.8		0.3	0.1	5.1	2.1	*Jul.*
Ogos	3.7	3.7	3.6	1.2	6.9		0.4	-0.1	6.5	2.2	*Aug.*
Sep.	3.4	3.1	3.9	1.2	7.0		0.4	0.0	5.5	2.3	*Sep.*
Okt.	3.3	3.1	3.7	1.2	6.0		0.4	-0.3	5.2	2.4	*Oct.*
Nov.	3.5	3.4	3.7	1.3	6.0		0.3	0.7	5.4	2.5	*Nov.*
Dis.	3.5	3.4	3.8	1.3	6.1		0.6	0.1	5.4	2.6	*Dec.*

	Semua kumpulan *All groups*	IHP terlaras[3] *Adjusted CPI[3]*	Kumpulan kecil *Sub-groups*: Makanan dan bukan minuman keras *Food and non-alcoholic beverages*	Perumahan, air, elektrik, gas dan lain-lain bahan api *Housing, water, electricity, gas and other fules*	Pengangkutan *Transport*	Perhubungan *Communication*	Ketahanan *Durability*: Barang-barang tahan lama *Durable goods*	Barang-barang separuh tahan lama *Semi-durable goods*	Barang-barang tidak tahan lama *Non-durable goods*	Perkhidmatan *Services*	
Wajaran (2005 =100)	100.0	68.6	31.4	21.4	15.9	5.1	9.4	5.4	40.2	45.0	*Weight (2005 =100)*
2006	3.6	3.8	3.4	1.5	11.0	-1.4	-1.2	-0.8	7.0	2.2	*2006*
2006 Jan.	3.2	2.8	4.3	1.1	8.3	-1.0	0.0	-1.5	5.6	2.2	*2006 Jan.*
Feb.	3.2	2.9	4.1	1.1	8.1	-1.1	0.1	-0.6	5.5	2.2	*Feb.*
Mac	4.8	5.2	3.5	1.5	18.0	-1.2	-0.2	-1.1	9.2	2.3	*Mar*
Apr.	4.6	5.2	3.1	1.5	16.9	-1.3	-1.8	-0.6	8.7	2.4	*Apr.*
Mei	3.9	4.2	3.3	1.5	12.4	-1.4	-1.1	-0.7	7.4	2.1	*May*
Jun	3.9	4.2	3.2	1.8	12.5	-1.4	-1.5	-0.8	7.5	2.1	*Jun.*
Jul.	4.1	4.2	3.8	1.8	12.3	-1.5	-1.9	-0.3	7.8	2.2	*Jul.*
Ogos	3.3	3.3	3.2	1.7	8.8	-1.5	-1.7	-0.5	6.0	2.0	*Aug.*
Sep.	3.3	3.4	3.1	1.6	8.9	-1.6	-2.1	-0.9	6.1	2.0	*Sep*
Okt.	3.1	3.1	3.0	1.6	8.8	-1.6	-1.3	-0.8	6.9	2.1	*Oct*
Nov.	3.0	2.9	3.0	1.6	8.7	-1.6	-1.4	-0.9	6.8	2.1	*Nov*
Dec.	3.1	3.1	2.9	1.7	8.7	-1.6	-1.5	-0.9	6.8	2.1	*Dec*
2007 Jan.	3.2	3.3	3.1	1.7	9.3	-1.7	-3.4	-0.1	6.0	2.0	*2007 Jan.*
Feb.	3.1	3.1	3.2	1.8	9.3	-1.7	-3.6	-1.9	6.0	2.0	*Feb.*
Mac	1.5	0.8	3.0	1.3	0.2	-1.6	-2.8	-0.6	2.0	1.9	*Mar*
Apr.	1.5	0.9	3.0	1.3	1.1	-1.4	-1.2	-1.3	2.1	1.9	*Apr.*
Mei	1.4	1.0	2.4	1.4	1.1	-1.3	-1.8	-1.1	1.7	1.9	*May*
Jun	1.4	1.1	2.3	1.1	1.2	-1.2	-1.4	-0.6	1.4	2.2	*Jun.*
Jul.	1.6	1.4	2.3	1.1	1.2	-1.1	-1.2	-1.8	1.9	2.2	*Jul.*

1. Seperti yang diukur oleh perubahan tahunan dalam IHP (rujuk Jadual VI.12)
2. Tidak termasuk makanan.
3. Tidak termasuk makanan dan bukan minuman keras.

Nota: Kalendar siaran awal bagi kategori data ini boleh didapati di laman web DSBB-IMF (http://dsbb.imf.org).

Sumber: Jabatan Perangkaan Malaysia

1. As measured by the annual change in the CPI (refer table VI.12) .
2. Exclude food items.
3. Excluding food and non-alcoholic beverages.

Note: An advance release calendar for this data category is published on the IMF's Dissemination Standards Bulletin Board (http://dsbb.imf.org).

Source: Department of Statistics, Malaysia

Table 4*

Kadar Faedah: Bil Perbendaharaan dan Bil Bank Negara

Indicative Rates: Treasury Bills and Bank Negara Bills

Peratus setahun *Percent per annum*

Tempoh / *Period*	Kadar diskaun purata Bil Perbendaharaan / *Average discount rate on Treasury bills*			Kadar diskaun purata Bil Bank Negara / *Average discount rate on Bank Negara bills*					
	Tempoh (dalam bulan) / *Period (in months)*			Tempoh (dalam bulan) / *Period (in months)*					
	3	6	12	1	2	3	6	9	12
2002 Jan. / *Jan.*	2.748	2.747	2.767	-	-	2.740	-	-	-
Feb. / *Feb.*	2.731	2.753	2.769	-	-	2.727	-	-	-
Mac / *Mar.*	2.710	2.738	2.760	-	-	2.712	2.742	-	-
Apr / *Apr.*	2.725	2.753	2.782	-	-	2.730	2.756	-	-
Mei / *May*	2.724	2.753	2.801	-	-	2.724	2.754	-	-
Jun / June	2.725	2.754	2.807	-	-	2.726	2.756	-	-
Jul. / *Jul.*	2.727	2.756	2.803	-	-	2.728	2.758	-	-
Ogos. / *Aug.*	2.725	2.755	2.798	-	-	2.727	2.756	-	-
Sep. / *Sep.*	2.723	2.752	2.787	-	-	2.724	2.753	-	-
Okt. / *Oct.*	2.717	2.742	2.767	-	-	2.714	2.750	-	-
Nov. / *Nov.*	2.710	2.739	2.760	-	-	2.710	2.739	-	-
Dis. / Dec.	2.820	2.838	2.899	-	-	2.804	-	-	-
2003 Jan. / *Jan.*	2.800	2.832	2.813	-	-	2.807	-	-	-
Feb. / *Feb.*	2.796	2.818	2.803	-	-	2.799	2.819	-	-
Mac / *Mar.*	2.793	2.795	2.789	-	-	2.795	2.796	-	-
Apr / *Apr.*	2.790	2.793	2.788	-	-	2.791	2.796	-	-
Mei / *May*	2.782	2.790	2.779	-	-	2.779	2.788	-	-
Jun / June	2.772	2.776	2.776	-	-	2.770	2.775	-	-
Jul. / *Jul.*	2.773	2.794	2.772	-	-	2.802	2.781	-	-
Ogos. / *Aug.*	2.816	2.829	2.821	-	-	2.824	2.829	-	-
Sep. / *Sep.*	2.821	2.825	2.831	-	-	2.821	2.821	-	-
Okt. / *Oct.*	2.768	2.776	2.775	-	-	2.737	2.784	-	-
Nov. / *Nov.*	2.776	2.796	2.839	-	-	2.785	2.788	-	-
Dis. / Dec.	2.773	2.804	2.817	-	-	2.777	2.797	-	-
2004 Jan. / *Jan.*	2.676	2.655	2.686	-	-	2.581	2.794	-	-
Feb. / *Feb.*	2.376	2.329	2.309	-	-	-	2.338	-	-
Mac / *Mar.*	2.538	2.299	2.477	-	-	-	2.337	-	-
Apr / *Apr.*	2.494	2.299	2.263	-	-	2.543	2.284	-	-
Mei / *May*	2.580	2.543	2.636	-	-	-	2.510	-	-
Jun / June	2.566	2.609	2.613	-	-	-	2.652	-	-
Jul. / *Jul.*	2.341	2.371	2.491	-	-	2.293	2.450	-	-
Ogos. / *Aug.*	2.508	2.657	2.676	-	-	-	2.642	-	-
Sep. / *Sep.*	2.522	2.602	2.668	-	-	-	2.611	-	-
Okt. / *Oct.*	2.348	2.358	-	-	-	2.269	2.411	-	-
Nov. / *Nov.*	1.837	2.021	-	-	-	-	1.802	-	-
Dis. / Dec.	1.964	2.160	2.071	-	-	-	1.639	-	-
2005 Jan. / *Jan.*	2.255	2.232	2.534	-	-	2.328	-	-	-
Feb. / *Feb.*	2.223	2.327	1.980	-	-	-	2.311	-	-
Mac / *Mar.*	2.565	2.589	2.330	-	-	-	2.437	-	-
Apr / *Apr.*	2.556	2.559	2.758	-	-	2.430	2.600	-	-
Mei / *May*	2.066	1.744	2.449	-	-	-	2.089	-	-
Jun / June	2.480	2.660	2.317	-	-	-	2.424	-	-
Jul. / *Jul.*	2.300	2.287	-	-	-	2.194	-	-	-
Ogos. / *Aug.*	2.271	2.500	2.557	-	-	-	2.283	-	-
Sep. / *Sep.*	2.691	2.781	-	-	-	-	2.819	-	-
Okt. / *Oct.*	2.797	2.927	-	-	-	2.794	2.922	-	-
Nov. / *Nov.*	2.789	2.896	-	-	-	-	2.896	-	-
Dis. / Dec.	2.961	3.198	3.210	-	-	-	3.189	-	-
2006 Jan. / *Jan.*	2.883	3.045	3.341	-	-	2.851	-	-	-
Feb. / *Feb.*	2.857	3.157	3.328	-	-	-	2.995	-	-
Mac / *Mar.*	3.100	3.190	3.305	-	-	-	3.129	-	-
Apr / *Apr.*	2.869	3.258	-	-	-	2.694	3.129	-	-
Mei / *May*	2.946	3.089	3.675	-	-	-	3.123	-	-
Jun / June	3.491	3.762	3.776	-	-	-	3.688	-	-
Jul. / *Jul.*	3.457	3.728	3.913	-	-	3.461	3.754	-	-
Ogos. / *Aug.*	3.384	3.550	3.812	-	-	-	3.568	3.591	-
Sep. / *Sep.*	3.386	3.565	-	-	-	-	3.557	-	-
Okt. / *Oct.*	3.498	3.584	-	-	-	3.506	3.586	-	-
Nov. / *Nov.*	3.489	3.499	-	-	-	-	3.494	-	-
Dis. / Dec.	3.367	3.464	3.471	-	-	-	3.419	3.461	-
2007 Jan. / *Jan.*	3.384	3.472	3.468	-	-	-	3.473	-	-
Feb. / *Feb.*	3.407	3.427	3.525	-	-	-	3.406	-	-
Mac. / *Mar.*	3.461	3.437	3.408	-	-	-	3.357	-	3.456
Apr / *Apr.*	3.372	3.412	0.000	-	-	3.351	3.415	-	-
Mei / *May*	3.298	3.408	3.304	-	-	3.185	3.407	-	3.178
Jun / June	3.499	3.488	3.390	-	-	3.480	3.470	-	-
Jul. / *Jul.*	3.471	3.470	3.477	-	-	3.431	3.445	-	3.562

Table 5*

Hasil Indikatif Pasaran[1]: Sekuriti Kerajaan Malaysia

Market Indicative Yield [1] : Malaysian Government Securities

Tahun sebelum kematangan *Remaining years to maturity*	1	2	3	4	5	10	15	20
1992	7.4100	7.3540	7.2990	7.2890	7.2910	7.5000	8.1000	8.5000
1993	5.7000	5.5000	5.3500	5.3000	5.2500	5.7500	6.7000	7.4500
1994	5.7700	6.0000	6.2000	6.2800	6.3000	6.2500	6.7000	7.2500
1995	6.7000	6.3500	6.3000	6.4000	6.5000	6.9000	7.1500	7.4300
1996	6.6995	6.6200	6.5700	6.5500	6.5500	6.7800	7.1625	7.4500
1997	7.0090	7.2170	7.4380	7.6160	7.7450	7.8370	7.7000	7.7000
1998	5.7920	6.2000	6.4450	6.5950	6.6550	6.7000	8.0000	8.0000
1999	3.3680	3.9090	4.2430	4.8320	5.2090	6.3270	7.3000	7.3000
2000	3.3560	3.6810	4.0210	4.4630	4.8000	5.6940	6.2000	6.8000
2001	2.9290	2.9910	3.0650	3.1140	3.1790	3.8100	4.2880	6.0000
2002	2.9350	2.9830	3.0480	3.1000	3.1530	4.0580	4.6160	5.8000
2003	2.9250	3.3670	3.7550	4.0650	4.2780	4.8500	5.4330	5.7500
2004	2.2420	2.5670	3.0230	3.4120	3.6430	4.7400	5.4380	5.8000
2005	3.3020	3.4330	3.5180	3.6180	3.7250	4.2380	4.5350	4.7220
2006	3.5470	3.5850	3.6300	3.6700	3.7030	3.7780	3.8920	3.9920
2005 Jan./ *Jan.*	2.4580	2.8250	3.1070	3.4420	3.6170	4.6250	5.3750	5.8000
Feb./ *Feb.*	2.5000	2.8670	3.1430	3.4650	3.6350	4.5080	5.3330	5.8000
Mac/ *Mar.*	2.7550	3.0080	3.3330	3.6170	3.7720	4.7000	5.3170	5.8080
Apr./ *Apr.*	2.5830	2.9580	3.2450	3.4370	3.6000	4.6250	5.2250	5.7580
Mei/ *May*	2.6420	2.9330	3.2430	3.4030	3.5680	4.3880	5.1000	5.6670
Jun/ *Jun.*	2.7120	2.9800	3.1680	3.2970	3.4030	4.2500	4.9080	5.4830
Jul./ *Jul.*	2.6300	2.9500	3.1570	3.2730	3.3820	4.1920	4.5420	4.8200
Ogos/ *Aug.*	2.7500	3.0320	3.1730	3.2720	3.3350	4.0450	4.4130	4.6600
Sep./ *Sep.*	2.9920	3.1620	3.2530	3.3000	3.3480	3.9530	4.3420	4.6220
Okt./ *Oct.*	3.1000	3.2500	3.3430	3.4820	3.6420	4.1730	4.4680	4.7240
Nov./ *Nov.*	3.2420	3.4370	3.5590	3.6870	3.7930	4.2840	4.5920	4.8100
Dis./Dec.	3.3020	3.4330	3.5180	3.6180	3.7250	4.2380	4.5350	4.7220
2006 Jan./ *Jan.*	3.3060	3.4470	3.5570	3.6180	3.7070	4.0980	4.4180	4.5770
Feb./ *Feb.*	3.4010	3.5360	3.6050	3.6880	3.7430	4.1430	4.4160	4.5710
Mac/ *Mar.*	3.4340	3.5290	3.6020	3.6850	3.7610	4.1230	4.3670	4.5480
Apr./ *Apr.*	3.7330	3.9090	4.0250	4.1350	4.1980	4.4820	4.6540	4.8360
Mei/ *May*	4.0080	4.1760	4.3320	4.4070	4.4920	4.8920	5.0700	5.2170
Jun/ *Jun.*	4.0630	4.3090	4.4800	4.5240	4.5700	5.0470	5.1470	5.2480
Jul./ *Jul.*	4.0220	4.1030	4.1570	4.2430	4.3270	4.7150	4.9330	5.0300
Ogos/ *Aug.*	3.7800	3.8530	3.9320	4.0170	4.0930	4.3500	4.5420	4.7170
Sep./ *Sep.*	3.7320	3.8180	3.9140	3.9320	3.9570	4.1580	4.3320	4.4970
Okt./ *Oct.*	3.6570	3.6970	3.7300	3.7700	3.8070	3.9790	4.1450	4.2770
Nov./ *Nov.*	3.5620	3.6100	3.6510	3.6950	3.7200	3.7980	3.9450	4.0660
Dis./Dec.	3.5470	3.5850	3.6300	3.6700	3.7030	3.7780	3.8920	3.9920
2007 Jan./ *Jan.*	3.5480	3.6150	3.6560	3.6930	3.7300	3.8120	3.9570	4.0500
Feb./ *Feb.*	3.5530	3.5800	3.5980	3.6150	3.6280	3.7680	3.9170	4.0230
Mac/ *Mar.*	3.4230	3.4350	3.4410	3.4540	3.4630	3.5070	3.6370	3.7410
Apr./ *Apr.*	3.4160	3.4220	3.4310	3.4420	3.4510	3.4970	3.5700	3.6450
Mei/ *May*	3.3470	3.3670	3.4020	3.4160	3.4370	3.5100	3.5850	3.6730
Jun/ *Jun.*	3.3030	3.3120	3.3020	3.3510	3.3900	3.5380	3.6940	3.8530
Jul./ *Jul.*	3.4260	3.4380	3.4540	3.4660	3.4770	3.6670	3.8530	4.0370

[1] Siri hanya bermula pada tahun 1992.

[1] *Series started in 1992.*

Table 6*

Nisbah Keperluan Berkanun dan Nisbah Mudah Tunai

Statutory Reserve Requirement and Liquidity Ratio

Tahun / *Year*	Tarikh perubahan / *Date of change*	Bank perdagangan *Commercial banks*		Syarikat kewangan *Finance companies*		Merchant banks *Bank saudagar*	
		SRR *SRR*	Nisbah mudah tunai [4] *Liquidity ratio* [4]	SRR *SRR*	Nisbah mudah tunai [4] *Liquidity ratio* [4]	SRR *SRR*	Nisbah mudah tunai [4] *Liquidity ratio* [4]
			(12.5)		(5.0)		
1975	17 Feb. / *17 Feb.*	8.5	25.0	5.5	10.0	1.5 [3]	-
			(12.5)		(5.0)		
1976	16 Feb. / *16 Feb.*	6.0	25.0	4.0	10.0	1.5	-
			(12.5)		(5.0)		
1978	16 Dis. / *16 Dec.*	5.0	25.0	2.5	10.0	1.5	-
			(12.5)		(5.0)		
1979	1 Mac / *1 March*	5.0	20.0	2.5	10.0	1.5	10.0
			(10.0)		(5.0)		
1985	15 Apr. / *15 Apr.*	4.0	18.5	2.5	10.0	2.5	10.0
			(10.0)		(5.0)		
1986	15 Feb. / *15 Feb.*	4.0	17.0	3.0	10.0	3.0	10.0
			(10.0)		(5.0)		
1986	15 Okt. / *15 Oct.*	3.5	17.0	3.0	10.0	3.0	10.0
			(10.0)		(5.0)		
1989	1 Jan. [6] / *1 Jan.* [6]	3.5	17.0	3.0	10.0 [7]	3.0	10.0 dan 12.5 [5]
			(5.0)				
1989	2 Mei / *2 May*	4.5	17.0	4.5	10.0	4.5	10.0 dan 12.5
			(5.0)				
1989	16 Okt. / *16 Oct.*	5.5	17.0	5.5	10.0	5.5	10.0 dan 12.5
			(5.0)				
1990	16 Jan. / *16 Jan.*	6.5	17.0 [7]	6.5	10.0 dan 12.5 [8]	6.5	10.0 dan 12.5
1991	16 Ogos / *16 Aug.*	7.5	17.0	7.5	10.0 dan 12.5 [8]	7.5	10.0 dan 12.5
1992	2 Mei / *2 May*	8.5	17.0	8.5	10.0 dan 12.5	8.5	10.0 dan 12.5
1994	3 Jan. / *3 Jan.*	9.5	17.0	9.5	10.0 dan 12.5	9.5	10.0 dan 12.5
1994	16 Mei / *16 May*	10.5	17.0	10.5	10.0 dan 12.5	10.5	10.0 dan 12.5
1994	1 Jul. / *1 July*	11.5	17.0	11.5	10.0 dan 12.5	11.5	10.0 dan 12.5
1996	1 Feb. / *1 Feb.*	12.5	17.0	12.5	10.0 dan 12.5	12.5	10.0 dan 12.5
1996	1 Jun / *1 Jun.*	13.5	17.0	13.5	10.0 dan 12.5	13.5	10.0 dan 12.5
1998	16 Feb. / *16 Feb.*	10.0	17.0	10.0	10.0 dan 12.5	10.0	10.0 dan 12.5
1998	1 Jul. / *1 July*	8.0	17.0	8.0	10.0 dan 12.5	8.0	10.0 dan 12.5
1998	1 Sept. / *1 Sep.*	6.0	17.0	6.0	10.0 dan 12.5	6.0	10.0 dan 12.5
1998	16 Sept. / *16 Sep.*	4.0	15.0	4.0	10.0 dan 12.5	4.0	10.0 dan 12.5

1 First introduced for commercial banks.
2 First introduced for finance companies.
3 First introduced for merchant banks.
4 With effect from February 1, 1987, averaging of the minimum liquidity requirement was allowed. Daily liquidity ratio was allowed to decline by as much as 2% point below the required minimum.
5 With effect from February 1, 1987, for merchant banks which issued NIDs, the minimum liquidity ratio was higher at 12.5%.
6 With effect from January 1, 1989, averaging of the statutory reserve requirement was allowed. Daily SRR ratio was allowed to decline by as much as 0.5% point below the required minimum.
7 With effect from January 1, 1989, the two-tier liquidity ratios were removed for both the finance companies and commercial banks (with effect from June 1, 1990). In brackets are the primary ratios.
8 With effect from March 1, 1990, for finance companies which issued NIDs, minimum liquidity ratio was higher at 12.5%.

Table 7*

Keperluan Rizab Berkanun dan Harta Mudah Tunai

Statutory Reserve and Liquid Asset Requirement

	Akhir tempoh / *End-period*	Bank Perdagangan / *Commercial Banks*				Syarikat Kewangan / *Finance Companies*				Bank Saudagar/Bank Pelaburan / *Merchant Banks/Investment Banks*			
		Keperluan rizab berkanun *Statutory reserve requirement*	Keperluan harta mudah tunai *Liquid asset requirement*			Keperluan rizab berkanun *Statutory reserve requirement*	Keperluan harta mudah tunai *Liquid asset requirement*			Keperluan rizab berkanun *Statutory reserve requirement*	Keperluan harta mudah tunai *Liquid asset requirement*		
		Rizab berkanun *Statutory reserve*	Harta mudah tunai *Liquid assets*	Tanggungan yang layak *Eligible liabilities*	Nisbah mudah tunai *Liquidity ratio*	Rizab berkanun *Statutory reserve*	Harta mudah tunai *Liquid assets*	Tanggungan yang layak *Eligible liabilities*	Nisbah mudah tunai *Liquidity ratio*	Rizab berkanun *Statutory reserve*	Harta mudah tunai *Liquid assets*	Tanggungan yang layak *Eligible liabilities*	Nisbah mudah tunai *Liquidity ratio*
		RM juta/*RM million*			Peratus/*Percent*	RM juta/*RM million*			Peratus/*Percent*	RM juta/*RM million*			Peratus/*Percent*
Tempoh sebelum pengenalan Rangka Kerja Mudah Tunai *Period prior to the introduction of the New Liquidity Framework*	1990	4,860.0	13,282.4	72,322.2	18.4	1,575.8	2,957.4	24,943.7	12.1	465.8	1,174.8	7,160.1	16.5
	1991	6,540.6	15,382.1	86,259.2	18.0	2,382.4	3,791.2	32,074.6	12.0	600.4	1,333.6	8,221.4	16.8
	1992	7,379.8	15,416.1	87,557.8	18.0	3,165.4	4,455.9	37,870.8	12.1	763.3	1,565.0	9,219.1	17.9
	1993	7,932.3	16,599.0	93,792.0	18.0	3,718.8	5,246.0	44,543.1	12.0	886.4	1,836.5	10,525.9	18.3
	1994	14,074.5	21,650.0	127,561.4	17.9	5,945.7	6,378.7	52,659.9	12.4	1,408.0	1,923.2	12,647.6	15.8
	1995	18,518.8	27,878.1	164,538.3	17.5	7,640.2	8,270.8	67,650.1	12.5	1,546.2	2,048.0	13,920.9	15.3
	1996	27,973.2	36,570.0	180,283.6	20.3	12,050.4	11,150.5	85,375.3	13.1	2,643.3	2,992.0	15,853.5	18.9
	1997	37,131.0	46,098.4	258,562.2	17.8	16,043.1	11,841.7	116,838.2	10.1	3,466.4	2,540.3	25,390.3	10.0
	1998	10,624.4	44,071.1	245,790.1	17.9	3,475.2	12,046.1	85,991.1	14.0	852.8	4,317.3	21,309.8	20.3
	1999	10,476.2	21,184.9	107,867.2	19.6	3,174.2	10,017.6	53,446.8	18.7	833.7	3,636.3	17,970.8	20.2
	2000	10,087.8	12,861.1	69,540.9	18.5	3,029.3	4,164.9	28,770.8	14.5	866.6	1,504.1	6,176.9	24.4
	2001	10,623.3	-	135,419.4	-	3,110.1	-	51,804.5	-	830.7	-	9,078.3	-
	2002 Jan.	11,486.8	-	136,672.3	-	3,171.7	-	52,706.2	-	842.9	-	8,847.5	-
	Feb.	11,023.2	-	138,905.5	-	3,182.2	-	53,086.4	-	853.4	-	8,359.0	-
	Mar.	11,237.8	-	148,139.1	-	3,190.1	-	54,041.9	-	812.7	-	8,156.4	-
	Apr.	11,232.2	-	136,887.0	-	3,229.4	-	53,380.9	-	806.1	-	7,910.4	-
	May	11,031.0	-	138,904.5	-	3,173.4	-	52,338.0	-	782.5	-	7,885.4	-
	June	11,358.1	-	136,908.3	-	3,170.2	-	38,423.5	-	792.1	-	7,769.5	-
	July	11,367.8	-	139,968.7	-	3,191.0	-	58,602.9	-	814.0	-	7,963.5	-
	Aug.	11,115.3	-	137,236.7	-	3,198.6	-	57,372.0	-	808.3	-	7,666.8	-
	Sep.	10,645.0	-	137,441.4	-	3,193.6	-	58,272.3	-	823.5	-	7,598.4	-
	Oct.	11,606.3	-	141,753.2	-	3,224.1	-	59,037.0	-	819.5	-	7,473.6	-
	Nov.	11,587.1	-	139,899.3	-	3,233.3	-	59,303.5	-	848.5	-	7,558.3	-
	Dec.	10,735.1	-	142,720.2	-	3,322.7	-	46,580.8	-	819.9	-	7,658.1	-
	2003 Jan.	11,690.7	-	142,447.2	-	3,388.7	-	54,159.9	-	853.8	-	7,635.3	-
	Feb.	11,568.8	-	143,238.3	-	3,383.3	-	61,123.7	-	836.1	-	7,572.7	-
	Mar.	11,461.1	-	155,221.7	-	3,410.0	-	62,563.0	-	834.6	-	8,103.6	-
	Apr.	11,500.4	-	144,303.8	-	3,328.1	-	64,106.1	-	826.1	-	7,786.9	-
	May	10,912.0	-	118,737.3	-	3,394.3	-	65,326.9	-	815.2	-	7,831.6	-
	June	11,109.4	-	118,835.2	-	3,354.2	-	67,313.3	-	801.2	-	7,692.0	-
	July	12,368.5	-	123,908.0	-	3,443.1	-	67,963.5	-	812.3	-	8,049.5	-
	Aug.	12,113.8	-	148,681.2	-	3,457.7	-	65,962.8	-	810.6	-	8,042.2	-
	Sep.	12,056.0	-	123,157.9	-	3,497.7	-	64,273.8	-	831.4	-	7,892.4	-
	Oct.	12,126.0	-	123,391.4	-	3,504.6	-	64,847.6	-	878.5	-	8,321.8	-
	Nov.	12,304.0	-	144,342.0	-	3,441.0	-	64,410.2	-	889.0	-	8,384.8	-
	Dec.	11,590.4	-	120,629.0	-	3,499.7	-	64,924.3	-	918.8	-	8,537.2	-

Keperluan Rizab Berkanun dan Harta Mudah Tunai

Statutory Reserve and Liquid Asset Requirement

Akhir tempoh / *End-period*	Bank Perdagangan / *Commercial Banks*				Syarikat Kewangan / *Finance Companies*				Bank Saudagar/Bank Pelaburan / *Merchant Banks/Investment Banks*			
	Keperluan rizab berkanun / *Statutory reserve requirement*	Keperluan harta mudah tunai / *Liquid asset requirement*			Keperluan rizab berkanun / *Statutory reserve requirement*	Keperluan harta mudah tunai / *Liquid asset requirement*			Keperluan rizab berkanun / *Statutory reserve requirement*	Keperluan harta mudah tunai / *Liquid asset requirement*		
	Rizab berkanun / *Statutory reserve*	Harta mudah tunai / *Liquid assets*	Tanggungan yang layak / *Eligible liabilities*	Nisbah mudah tunai / *Liquidity ratio*	Rizab berkanun / *Statutory reserve*	Harta mudah tunai / *Liquid assets*	Tanggungan yang layak / *Eligible liabilities*	Nisbah mudah tunai / *Liquidity ratio*	Rizab berkanun / *Statutory reserve*	Harta mudah tunai / *Liquid assets*	Tanggungan yang layak / *Eligible liabilities*	Nisbah mudah tunai / *Liquidity ratio*
	RM juta/*RM million*	RM juta/*RM million*		Peratus/*Percent*	RM juta/*RM million*	RM juta/*RM million*		Peratus/*Percent*	RM juta/*RM million*	RM juta/*RM million*		Peratus/*Percent*
2004 Jan.	12,021.7	-	144,662.6	-	3,589.5	-	65,469.8	-	887.6	-	8,075.1	-
Feb.	12,155.1	-	118,935.2	-	3,614.3	-	66,349.0	-	867.8	-	8,073.3	-
Mar	12,031.7	-	121,351.4	-	3,579.3	-	66,474.5	-	823.3	-	7,999.4	-
Apr	12,095.8	-	117,653.0	-	3,568.1	-	65,437.9	-	790.9	-	7,434.9	-
May	11,611.0	-	118,151.5	-	3,569.4	-	65,849.5	-	733.3	-	7,297.8	-
Jun	12,038.4	-	143,936.3	-	3,648.9	-	65,471.1	-	742.4	-	7,232.1	-
Jul	12,520.5	-	120,399.8	-	3,654.1	-	66,491.6	-	772.4	-	8,191.4	-
Aug	12,651.9	-	117,603.3	-	3,374.1	-	64,164.8	-	773.4	-	8,160.8	-
Sep	13,315.3	-	133,418.3	-	2,729.9	-	47,642.5	-	720.0	-	7,696.7	-
Oct	14,676.4	-	133,695.4	-	2,121.1	-	33,919.4	-	747.0	-	7,952.5	-
Nov	14,809.2	-	138,416.8	-	1,754.1	-	28,043.2	-	778.4	-	8,094.0	-
Dec	15,092.5	-	147,471.5	-	1,768.4	-	17,706.2	-	789.9	-	8,070.4	-
2005 Jan.	15,422.2	-	150,367.0	-	1,789.0	-	17,136.3	-	789.5	-	7,725.3	-
Feb.	15,183.3	-	160,683.4	-	1,800.7	-	28,655.0	-	791.5	-	7,630.9	-
Mar	15,517.6	-	161,564.0	-	1,807.1	-	29,279.5	-	729.9	-	8,198.1	-
Apr	15,871.1	-	152,619.9	-	1,826.6	-	29,260.9	-	725.5	-	7,595.7	-
May	16,108.6	-	154,786.0	-	1,864.0	-	30,107.4	-	741.6	-	8,065.9	-
Jun	17,375.5	-	172,639.4	-	668.0	-	1,785.6	-	768.6	-	7,624.4	-
Jul	16,944.4	-	179,722.5	-	675.4	-	1,895.3	-	732.0	-	7,054.3	-
Aug	16,340.2	-	170,080.3	-	684.0	-	1,779.4	-	715.6	-	6,644.3	-
Sep	18,046.8	-	170,647.1	-	698.1	-	1,824.0	-	683.9	-	6,414.2	-
Oct	16,506.4	-	176,448.3	-	709.6	-	1,988.7	-	674.8	-	6,943.9	-
Nov	17,980.5	-	177,598.6	-	721.3	-	1,890.9	-	550.2	-	7,631.7	-
Dec	16,690.6	-	180,399.4	-	719.0	-	2,029.6	-	515.4	-	8,140.5	-
2006 Jan.	18,793.6	-	178,467.5	-	-	-	-	-	525.6	-	7,454.5	-
Feb.	18,704.7	-	170,878.4	-	-	-	-	-	537.9	-	8,153.2	-
Mar	18,717.1	-	177,137.1	-	-	-	-	-	539.4	-	8,583.8	-
Apr	18,685.5	-	169,399.0	-	-	-	-	-	549.0	-	7,979.2	-
May	18,077.0	-	158,711.8	-	-	-	-	-	539.2	-	8,816.0	-
Jun	17,993.7	-	170,962.7	-	-	-	-	-	473.8	-	8,718.1	-
Jul	18,082.6	-	179,699.4	-	-	-	-	-	525.1	-	8,033.4	-
Aug	18,325.5	-	180,705.5	-	-	-	-	-	533.2	-	7,945.3	-
Sep	18,873.0	-	172,907.5	-	-	-	-	-	506.6	-	7,747.9	-
Oct	18,095.5	-	174,571.8	-	-	-	-	-	493.0	-	7,835.5	-
Nov	17,960.8	-	169,727.7	-	-	-	-	-	486.8	-	7,040.1	-
Dec	19,637.3	-	179,373.4	-	-	-	-	-	481.0	-	7,672.2	-
2007 Jan.	18,967.1	-	174,998.7	-	-	-	-	-	603.3	-	7,958.8	-
Feb.	18,777.0	-	178,415.0	-	-	-	-	-	630.5	-	9,863.7	-
Mar	19,749.0	-	179,960.8	-	-	-	-	-	662.2	-	10,308.7	-
Apr	19,716.6	-	184,124.1	-	-	-	-	-	657.8	-	9,860.0	-
May	19,681.9	-	199,683.5	-	-	-	-	-	707.8	-	9,406.4	-
Jun	20,213.7	-	193,400.8	-	-	-	-	-	657.0	-	8,236.9	-

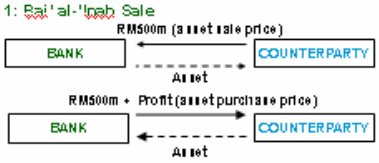
1 Beginning January 1999, some banking institutions migrated to the New Liquidity Framework. These institutions were excluded from the data on liquid asset requirement (liquid assets, eligible liabilities, liquidity

**** Source: Monthly Statistical bulletin, Bank Negara Malaysia statistics (www.bnm.gov.my)***

Diagram 10

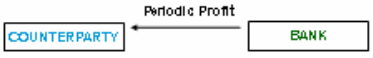
Bai' al-'Inah Fixed Counterparty Structure

Day 1: Bai' al-'Inah Sale



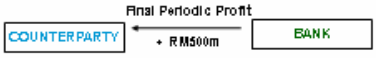
Day 1: Bai' al-'Inah Sale
1. Bank identified an asset ("the asset") worth RM500m (asset sale price).
2. Bank sells the asset to the Counterparty at RM500m (asset sale price)
3. The Counterparty sells back the asset to Bank at cost plus profit (murabahah) RM500m + Profit (asset purchase price.
   - Profit (RM X% p.a.) will be paid every 6 month.
   - RM500m will be paid to the Counterparty upon maturity.

Every 6 month: Periodic Profit Payment



Periodic Profit Payment
1. Periodic profit payment will be paid deferred every 6 month until maturity.

At Maturity



Maturity
1. Final periodic profit payment + RM500m will be paid at maturity.

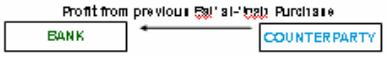
Note: The fixed counterparty may also use the same floating counterparty structure to match the floating counterparty's Periodic Bai' al-'Inah transaction and profit payment

Bai' al-'Inah Floating Counterparty Structure

Day 1: Bai' al-'Inah Purchase

Day 1: Bai' al-'Inah Purchase ("BIP")
1. The Counterparty identified an asset ("the asset") worth USD135m.
2. The Counterparty sells the asset to Bank at USD135m (asset purchase price)
3. Bank sells back the asset to the Counterparty at cost plus profit (murabahah) USD135m + Profit (asset sale price).
   - Profit (USD Y% p.a. + Libor) will be paid after 6 month.
   - USD135m will be paid to Bank for next Periodic Bai' al-'Inah Purchase.

Every 6 month: Periodic Profit Payment Bai' al-'Inah Purchase

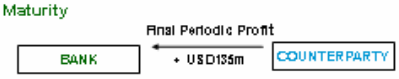


Periodic Bai' al-'Inah Purchase and Final Periodic Bai' al-'Inah Purchase follow the same structure as Bai' al-'Inah Purchase

Periodic Bai' al-'Inah Purchase ("PBIP")
1. PBIP will be executed every 6 month. After each purchase, the profit will be paid after 6 month. USD135m will be paid to Bank for next PBIP.

Final Periodic Bai' al-'Inah Purchase ("FPBIP")
1. FPBIP will be executed 6 month before maturity. USD135m + profit will be paid to Bank upon maturity.

At Maturity



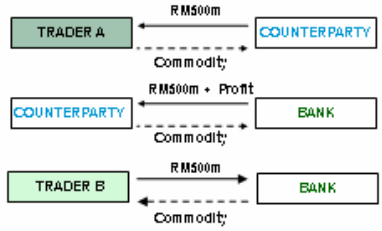
Maturity
1. Upon maturity, the Counterparty will pay the principal amount of USD135m + profit due to Bank from the FPBIP.

Note: The Counterparty's obligation to pay USD135m part of asset sale price after each Murabahah transaction from each PBIP can be set off against Bank's obligation to pay asset purchase price of USD135m to the Counterparty from each Periodic Bai' al-'Inah Purchase.

Diagram 11

Commodity Murabahah Fixed Counterparty Structure

Day 1: Commodity Murabahah Purchase

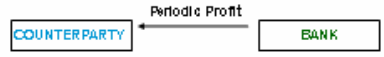


Commodity Murabahah Purchase ("CMP")
1. The Counterparty buys the commodity or Bank buys on behalf of the counterparty from Trader A at RM500m.

2. Bank then purchases the Commodity from the Counterparty at cost plus profit (Murabahah) RM500m + Profit
   - Periodic profit payment (RM X% p.a.) will be paid every 6 month.

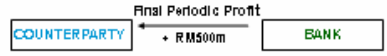
3. Bank will sell the Commodity to Trader B at RM500m.
   - RM500m will be paid to the Counterparty at maturity.

Every6 month: Periodic Profit Payment



Periodic Profit Payment ("PPP")
1. Bank will pay the PPP from the CMP to the Counterparty every 6 month until maturity.

At Maturity

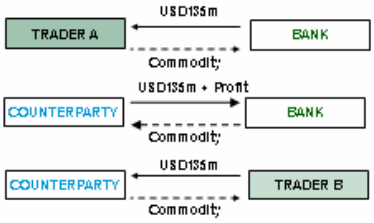


Maturity
1. Upon maturity Bank will pay the final Periodic Profit Payment and the principal amount due of RM500m from the CMP.

Note: The fixed counterparty may also use the same floating counterparty structure to match the floating counterparty's periodic Commodity Murabahah transaction and profit payment

Commodity Murabahah Floating Counterparty Structure

Day 1: Commodity Murabahah Sale



Commodity Murabahah Sale ("CMS")
1. Bank buys Commodity from Trader A at USD135m.

2. Bank then sells the Commodity to the Counterparty at cost plus profit (Murabahah) USD135m + Profit
   - Profit (USD Y% p.a. + Libor) will be paid after 6 month.

3. The Counterparty will sell the Commodity to Trader B at USD135m to pay the principle amount to Bank.
   - USD135m will be used for Bank to buy commodity for next Commodity Murabahah Sale after 6 month.

Every6 month: Periodic Profit Payment & Commodity Murabahah Sale

Periodic CM Sale and Final Periodic CM Sale follow the same structure as Initial CM Sale

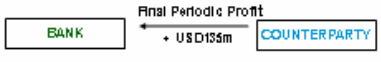
Periodic Commodity Murabahah Sale ("PCMS")
1. PCMS will be executed every 6 month. After each sale, the profit will be paid after6 month.

2. The Counterparty will sell the commodity to Trader B to get USD135m.
   - USD135m will be used for Bank to buy commodity for next PCMS after 6 month.

Final Periodic Commodity Murabahah Sale ("FPCMS")
1. FPCMS will be 6 month before maturity. Profit from FPCMS will be paid upon maturity.

2. The Counterparty will sell the commodity to Trader B to get USD135m
   - USD135m will be paid to Bank upon maturity.

At Maturity



Maturity
1. Upon maturity, the Counterparty will pay the principal amount of USD135m + profit due to Bank from the FPCMS.

CASE STUDY: SUDAN

1. Interbank money markets – structure, instruments, state of development

Interbank transactions in domestic currency instruments among IIFS, and between IIFS and the newly established conventional banks, have been uncommon, for several reasons:

- the highly accommodative policy of the Central Bank of Sudan in providing liquidity *(see Section 2)*;
- the reluctance of banks to reveal their liquidity needs to their competitors; and
- the available tradable instruments issued by CBOS, and by the Government for monetary policy and Government financing, have high yields, with limited supplies, causing investors to hold until maturity.

The lack of widely held instruments suitable for transactions with conventional as well as Islamic banks would create complications in the conduct of monetary policy, and for the development of an integrated interbank market; however, currently, this is not a key issue, because conventional banks are new, relatively small, and may not yet have systems for interbank transactions to manage liquidity.

2. Central bank standing facilities

- *Central bank credit facilities*

Until recently, IIFS had access to zero-cost liquidity for up to a week, and the balances remaining beyond one week were then converted into a *Muḍārabah* facility. In addition, CBOS provides investment financing to banks, on a *Murābahah* or *Mushārakah* basis. This is done through an auction system, where banks compete with offers of a percentage of profits (under *Mushārakah*) or a percentage of profit margins (under *Murābahah*) for defined amounts of credit. With the subsequent introduction of Central Bank *Mushārakah* Certificates, Government *Mushārakah* Certificates and Government Investment Certificates *(see Section 3 for a discussion of these instruments)*, and increases in foreign exchange balances with IIFS, the zero-cost facility has been phased out. Banks that are short of liquidity can now sell the certificates or foreign exchange to CBOS. In addition, the newly introduced Central Bank *Ijārah* Certificates are available to obtain liquidity from CBOS. In practice, CBOS buys back these certificates, on demand from IIFS, at close to their nominal value plus accrued return. The absence of any discounts in the buyback price by CBOS (in relation to a market price) acts as a disincentive for interbank trading in these certificates.

CBOS circular No. 1/2000 provides the rules for accessing a liquidity shortage window, which include: limits on the amount that can be received; the limit of two financing requests per month; and exemption from paying accrued profits, if repaid within seven days, etc. Beyond one week, accrued profits of banks for each two-week period will be distributed between CBOS and the bank (as *Muḍārib*) in the ratios of 90% and 10%.

- *Reserve requirements, excess reserves and other deposit facilities*

CBOS imposes 11% CRR on demand deposits. The CRR does not apply to PSIAs, as they are not considered liabilities of banks, even though they are included as a component of Broad Money. The 10% liquid asset requirement also does not apply to PSIA. Banks hold large excess reserves normally, but the amounts have come down with the availability of CMCs, GMCs, CICs and CBICs.

3. Market-based instruments of monetary and Government finance operations

CBOS was a pioneer in introducing a *Sharī`ah*-compliant market-based instrument of monetary operations (the so-called Central Bank *Mushārakah* Certificate) in 1998, as part of its monetary and exchange market reform aimed at achieving exchange rate unification with monetary stability. The CMCs were claims on a portion of the central bank and the Government's equity stakes in commercial banks, which were segregated and held by a special purpose vehicle, the Sudanese Financial Services Company, which is 90% owned by CBOS. SFSC then securitised these assets by issuing CMCs based on *Mushārakah* contracts. Total value of the CMCs issued was decided as the book value plus reserves as of 30 April 1998. The proceeds of CMC issue (sold only to commercial banks) served to sterilise excess liquidity and helped monetary control.

The return on CMC was based on the expected return on the underlying equity securities, distributed in proportion to the share in ownership. The certificates, however, had high yields, reflecting the equity risks and the limited supply of equity for securitisation.

This was followed by the Government issuing GMCs (since 1999), similar in design to CMCs. The GMCs are issued based on the Government's equity claims on a broader range of profitable state-owned and joint venture enterprises, not just banks. The Government limited the maturity of the GMCs to one year from the date of issue, at which time the GMC can be redeemed at market value. It could also be redeemed prior to maturity at the central bank through a buyback facility.

Since 2003, Government Investment Certificates have been issued, representing securities that provide funding for Government financing of its expenditures using *Ijārah*, *Istisnā'*, *Murābahah*, *Salam* and other contracts with the majority (51%) being *Ijārah* contracts. SFSC acts as the *Muḍārib*, investing the funds from security issuance (under *Muḍārabah* contracts) in the various Government finance contracts. The return on these contracts generates profits that are shared between the investors and the *Muḍārib* in the ratio of 95% and 5%, respectively. It is the intention of the Government to phase out GMCs and replace them with GICs of differing maturities. CMCs are already being phased out.

The large inflow of foreign exchange and the associated monetary expansion in recent years has required additional security issuance to absorb the excess liquidity. While, in principle, CBOS could use GICs (if issued in adequate volumes) for monetary management purposes, the practice since 2005 has been for CBOS to issue its own Central Bank *Ijārah* Certificates purely for monetary management purposes. These certificates represent claims on leased assets, which consist of CBOS's buildings. These buildings were sold to SFSC, which then leased them back to CBOS at 1% rental per month. These rentals provide the income to service the *Ijārah* certificates issued and managed by the SFSC. SFSC sold the certificates to banks, investment funds and public sector institutions. The proceeds were given to CBOS to acquire the buildings. CBICs can be sold back to CBOS on demand. Currently, CBOS buys back the security at the purchase price plus accrued return, effectively ruling out any incentive for secondary trading at a discounted price from face value. CBOS also guarantees and stands ready to buy back CMCs, GMCs and GICs. The detailed design, including the underlying cash flows and contracts, of GICs is shown in Diagram 1–3.

GMCs and GICs were initially sold on a subscription basis, with new issues being announced from time to time during the year (but not on a regular calendar), to meet Government financing needs. Since 2005, GICs and GMCs have been sold on a competitive auction basis. CMCs have also been sold on an auction basis since their inception. CBOS also sells its *Ijārah* certificates on an auction basis through a regular schedule of auctions. However, the issuance of GICs has not been based on a well-defined strategy for Government financing. This was reflected in the buildup of accumulated payment arrears to suppliers, with some of these arrears being converted into ad-hoc securities representing the overdue obligations of the Government.

There is a separate *Sharī`ah* supervision, through a *Sukūk* Regulation Committee, for Government *Sukūk* issues. This is in addition to the High *Sharī`ah* Supervisory Council at the CBOS, which oversees and coordinates *Sharī`ah* compliance in the financial services industry. There is also a High Advisory Committee for *Sukūk*, consisting of the MOF, CBOS, SFSC and academics, the purpose of which is to develop new products.

4. Microstructure of secondary markets and payment system

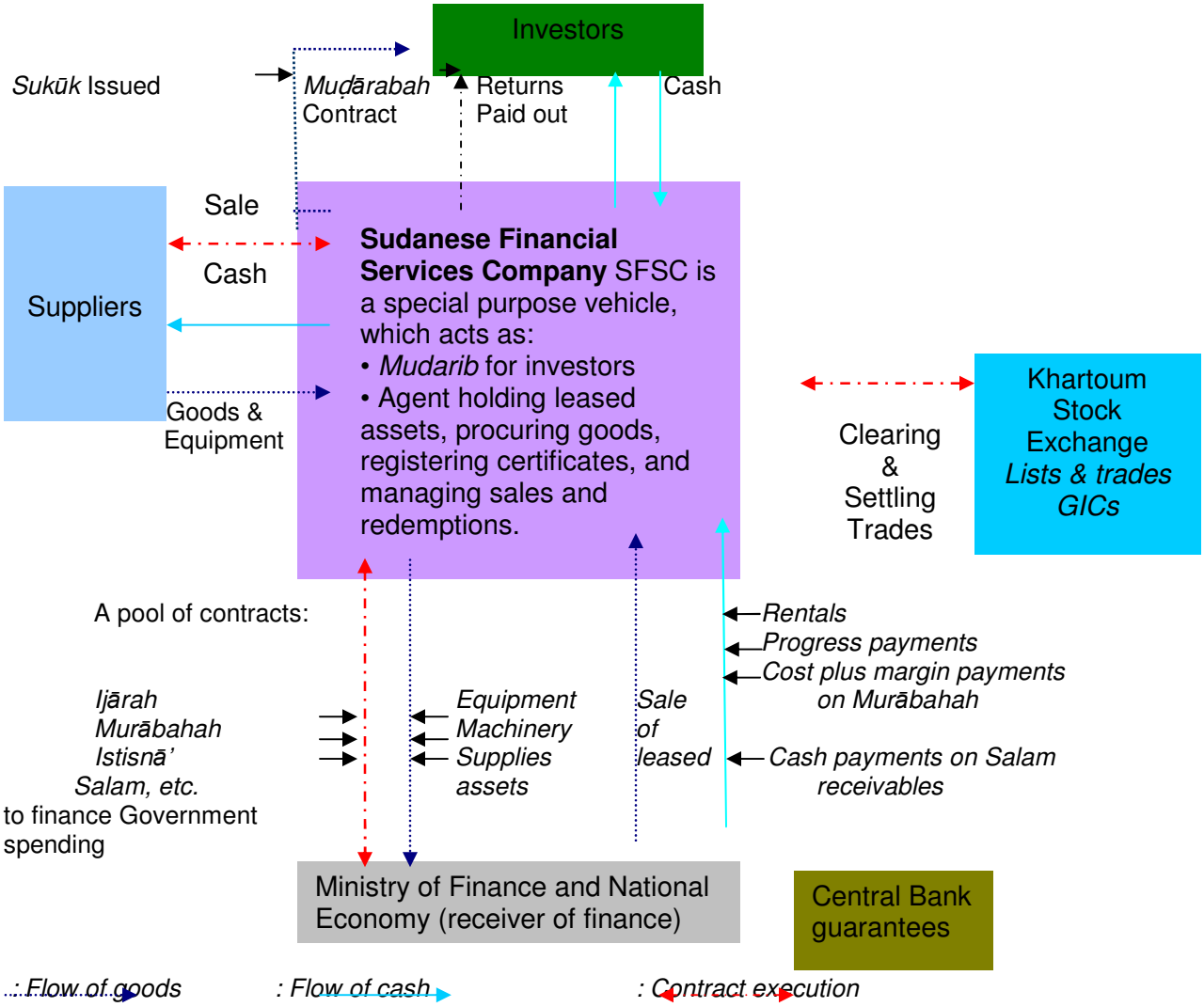
CMC, GMC, GIC and CBIC are listed on the Khartoum Stock Exchange. SFSC maintains an electronic registry of all Government and central bank securities. However, there is no central registry for equities, as each issuing company maintains its own registry and issues and manages the physical issue of certificates. The buyback facility offered by CBOS is very attractive, and leaves no incentives for banks to use the Khartoum Stock Exchange, or to engage in interbank trading in these certificates. The authority's efforts to design a repurchase facility (sale and buyback, or the reverse) based on the CBIC, GIC, etc., have not met with *Sharī`ah* approval so far. CBOS (and the markets) still rely on outright purchases and repurchases of the certificates, rather than on sale and buyback.

CBOS is currently engaged in a modernisation of its payment system (which has so far been primarily paper-based), including the establishment of RTGS, and the associated legal framework, and risk management arrangements. Historically, however, the functioning of the payment system impeded the operation of the financial markets, and gave rise to large systemic risks, typically borne by the CBOS.

5. Foreign exchange markets

With the increase in foreign capital inflows, the CBOS has built up reserves that have contributed to injecting liquidity into the economy. In response, CBOS has begun to use three-month *Sharī`ah*-compliant alternatives to foreign exchange swaps (sales of foreign exchange to commercial banks, with a promise to buy them back in three months) as a significant tool of monetary management to mop up the excess reserves. This is in addition to the use of CBICs to sterilise the monetary impact of foreign exchange purchases by CBOS. CBOS has also strengthened the operation of the interbank foreign exchange spot market, through various operational improvements.

Diagram 1: Sudan: Government Investment Certificates

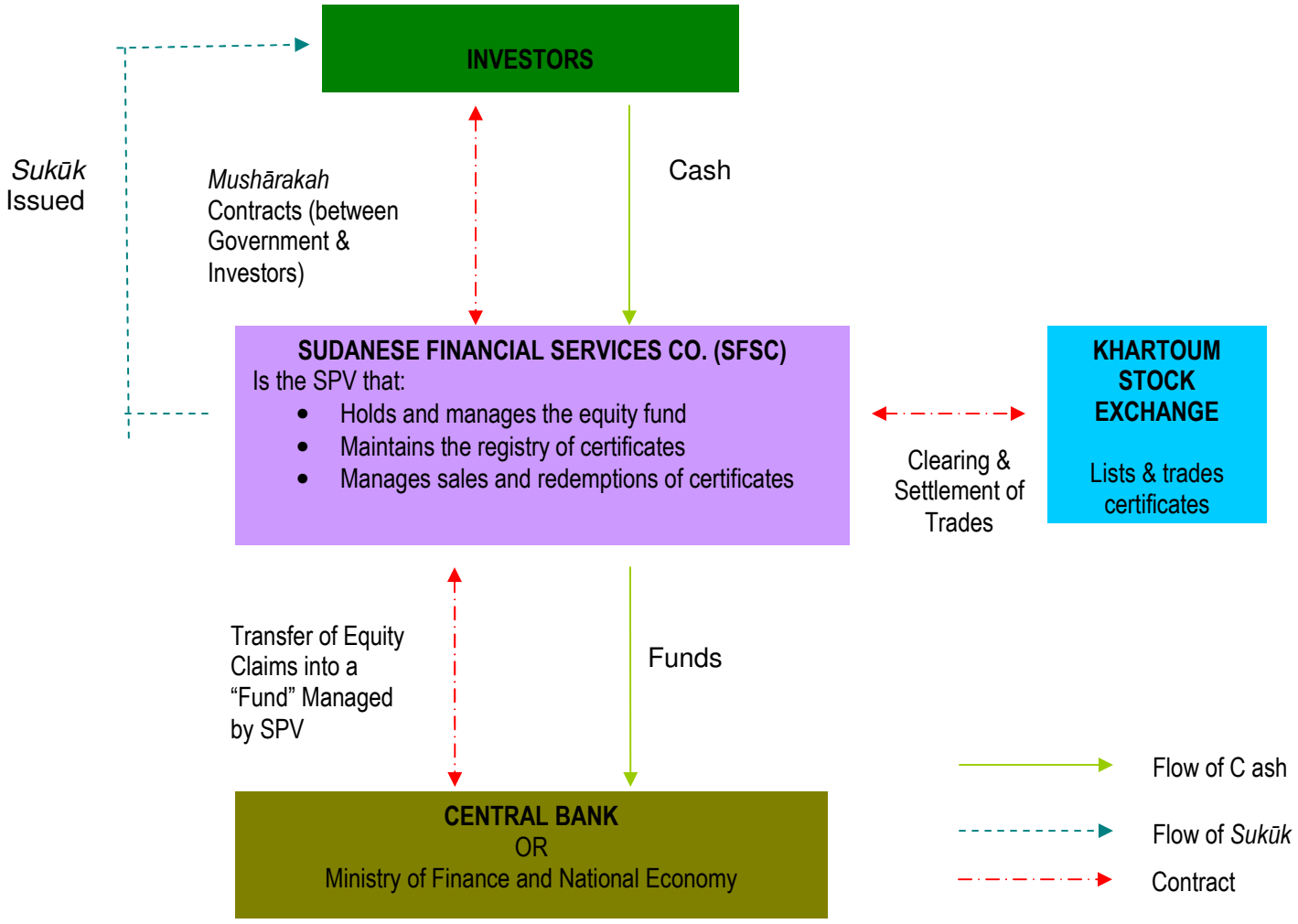


1. Share of *Ijārah* in the pool of contracts should exceed 51% in order to ensure tradability of the certificates.
2. Maturities range from two to six years, and volumes vary depending upon the time of issue.

Return on the financing provided to the Government forms the basis for servicing *Sukūk*. The central bank guarantees all payments due to *Sukūk* holders.

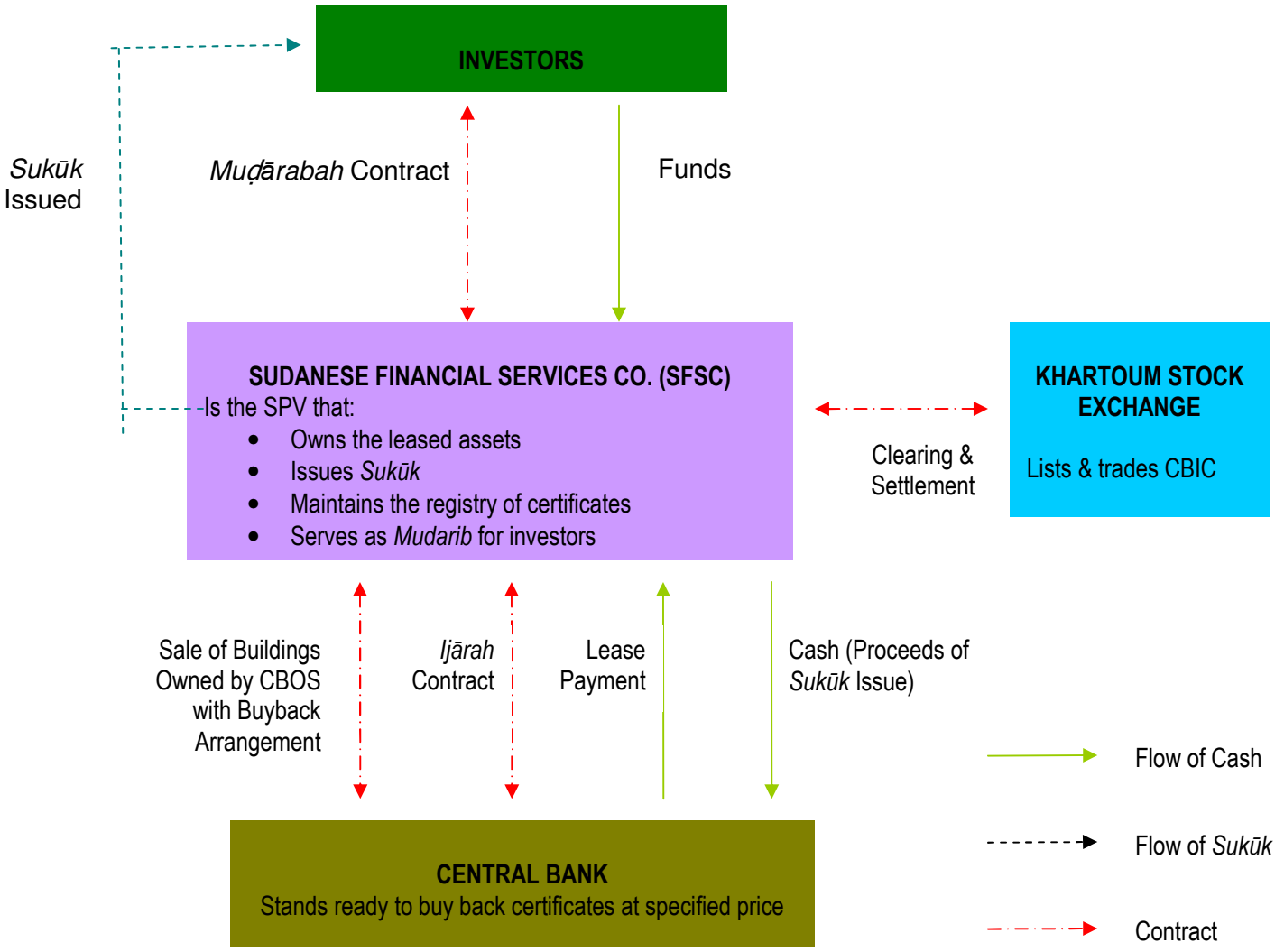
Diagram 2: Sudan: Central Bank *Mushārakah* Certificates

Government *Mushārakah* Certificates



- As equity instruments, central bank *Mushārakah* certificates have no definite maturity, but are redeemable at fair market value in the secondary market, or at the central bank.
- Both central bank *Mushārakah* certificates and Government *Mushārakah* Certificates were sold in uniform price auctions.
- Government *Mushārakah* Certificates were issued for a fixed term of one year.
- Return on the certificates is based on return on the underlying equity securities distributed pro-rata.

Diagram 3: Sudan: Central Bank *Ijārah* Certificates



- Sold mainly to banks and public sectors on an auction basis since 2005.

CASE STUDY: BAHRAIN

1. Interbank money markets – structure, instruments, state of development

Two instruments make up the majority of transactions of IIFS in Bahrain's money market:

- √ *Murābahah* Deposits and Reverse *Murābahah* are the most commonly used instruments (these contracts are backed by transactions in metal, and major users of Reverse *Murābahah* are the IIFS)
- √ *Sukūk* (mostly issued by the central bank).
  There is, however, no active market for *Sukūk*, as most IIFS hold them until maturity. The Central Bank of Bahrain has been issuing short-term *Sukūk* but is unable to meet the huge demand for these securities.

Counterparties in the Islamic money market in Bahrain can be both conventional banks and IIFS. Citibank, Standard Chartered Bank, HSBC and other major conventional banks are big players in the *Murābahah* Deposit market. However, Reverse *Murābahah* transactions are done mostly by IIFS. IIFS have not issued many short-term securities, as the cost of issuance is high. IIFS tend to use *Sukūk* mainly as an instrument of investment, rather than as a tool of liquidity management.

The tenure for the Commodity *Murābahah* contract can vary from one week to a year, with returns linked to LIBOR. However, the most commonly issued tenures are of three months or less, depending on the liquidity profile of the IIFS. There can be many parties in a Commodity *Murābahah* transaction, but so far the most is four – i.e. an Islamic bank, a conventional bank, a selling broker and a buying broker (of the commodity). While IIFS are free to design the structure of Commodity *Murābahah* contracts, CBB has developed a standard Commodity *Murābahah* contract that is presently being finalised.

IIFS are switching from instruments based on the Commodity *Murābahah* to other more cost-effective interbank instruments. Instruments based on Commodity *Murābahah* contracts are not interchangeable and have greater documentation requirements; hence, they are more expensive to issue. The trend is moving towards the *Wakālah* type of interbank transaction. Under the *Wakālah* concept, IIFS can assign liquidity management to another bank for a specific period. However, the assigned bank must also be an IIFS.

2. Central bank standing facilities

All banks, including Islamic banks, hold required reserves at 5% of non-bank liabilities. In the case of Islamic banks in Bahrain, the PSIA are also subject to cash reserve requirements.

The short-term deposit facilities for overnight or one week that are available for conventional banks are not available for Islamic banks. The interest rate on a one-week deposit facility serves as the "base rate", a policy rate adjusted by the CBB from time to time. The current base rate was set recently at 4.75%. (For overnight, it is 4.25 %) Conventional banks have access to a short-term lending facility (typically overnight or one week, available only once a week each Tuesday). Currently, the overnight REPOs are priced at 5.25%. Islamic banks cannot access these lending facilities owing to *Sharī`ah* restrictions, and hence the CBB is in the process of developing a *Sharī`ah*-compliant alternative to REPO (which is still awaiting CBB Sharī`ah Board approval) to enable Islamic banks to access central bank credit. Islamic banks, however, can have negative balances in their current account with the CBB, and offset it with positive balances subsequently, in a "dynamic netting" process. In practice, however, the CBB views that IIFS always have excess liquidity and do not seek credit from the CBB. (Most IIFS have more than 30% of their cash invested in liquid assets.) However, there is a special lender of last resort arrangement provided to IIFS.

3. Market-based instruments issued and used by central bank and Government

The CBB, as an agent of Government, manages the Government of Bahrain's *Sukūk* programmes, consisting of issuance of *Sukūk Al-Ijārah* and *Sukūk Al-Salam*, and the Treasury bill issuance programme. All the Islamic securities are backed by the government properties as underling assets. The

Government of Bahrain directly guarantees the Islamic leasing securities via its binding promise to buy the asset at its original (par) value at maturity. It also guarantees to continue renting the asset according to the rental contract until the end of the rental period. The securities shall be issued at 100% of their full nominal value and the rate of the return is set by the monetary Policy Committee. All the auctions are competitive based on quantity.

The criteria in deciding the volume of issuance of *Sukūk Al-Ijārah* depend on the debt profile and the cash needs of the Government. Apart from being the guarantor, the CBB is also acting as the issuing agent. These are Government issues, but the CBB issues them on behalf of the Government and does not charge the Government for the issuance cost.

Sukūk Al-Salam is used to affect the level of Bahrain Dinar current account balances of banks with the CBB, and thereby to influence monetary conditions, while also serving as a tool of public debt management. Thus, short-term *Sukūk Al-Ijārah* and *Sukūk Al-Salam* serve both monetary and public debt management purposes. The Government may also consider issuing conventional bonds in addition to T-bills. The monetary impact of security issuance is affected by the fact that the Bahrain Government has bank accounts with both commercial banks and the CBB.

Sukūk Al-Salam

Sukūk Al-Salam is a short-term Islamic security, denominated in BHD, with a maturity of 91 days and is issued once a month. At any time, there are three *Sukūk Al-Salam* outstanding issues. The return is pre-set by the Monetary Policy Committee and is paid upon maturity. The issue amount is decided by the Ministry of Finance each year in advance. Commercial banks (Islamic and conventional), the General Organisation for Social Insurance, the Pension Fund Commission (military and civilian), financial institutions and national insurance companies are permitted to subscribe to the *Sukūk Al-Salam*. The allotment amount is determined on a pro-rata basis in relation to the total amount subscribed to by participants. Hence, all participants receive a part of the issue.

Sukūk Al-Ijārah

There are two types of *Sukūk Al-Ijārah*: (a) short-term (182 days) denominated in BHD only; and (b) long-term (between three and ten years) denominated in USD or BHD.

The short-term *Sukūk Al-Ijārah* are issued once a month and with the same issue amount for all issues during the same calendar year. There is no secondary market for the short term Islamic securities. The long-term *Sukūk Al-Ijārah* are issued on an ad-hoc basis and their issue amount varies from issue to issue. They are listed on the Bahrain Stock Exchange for secondary market and the Central Bank of Bahrain provides a buy back facilities at the maturity date. The return for these securities could be fixed or floating and is paid semi-annually. The return is pre-set by the Monetary Policy Committee and is paid semi-annually. The issue amount is decided by the Ministry of Finance each year in advance and the Banking Services Directorate is responsible for publishing an issuance calendar for each year, which is available on the CBB website.

All commercial banks, the General Organisation for Social Insurance, the Pension Fund Commission (military and civilian), financial institutions and national insurance companies are eligible to participate in the USD-based *Sukūk Al-Ijārah*.

The subscription for short-term *Sukūk Al-Ijārah* normally takes place on Tuesday, with the issue date on Thursday. The allotment amount is determined on a pro-rata basis in relation to the total amount subscribed to by participants. Hence, all participants receive a part of the issue.

4. Microstructure of secondary markets and payment system

There is no active secondary trading in the Bahrain *Sukūk* market due to the low volume of issuance in relation to demand. Long-term *Sukūk* have been listed on the Bahrain stock exchange. The Government is the main issuer in the *Sukūk* market. Most of the existing *Sukūk* have real estate or property as underlying assets, and transactions are made based on an outright sale or purchase arrangement. However, the mechanism to transfer the title to investors is very lengthy and cumbersome.

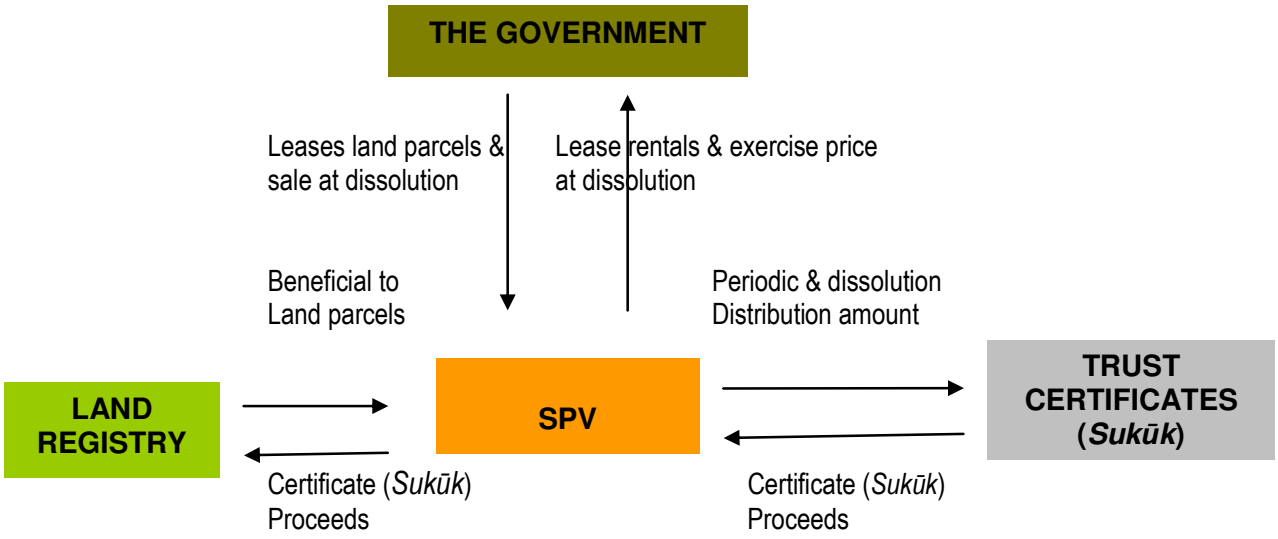
With regard to the payment and settlement system, the CBB has now adopted the RTGS system. Prior to RTGS, settlement was made in Bahrain Dinar the next day after identifying their position at the end of the day. The CBB had no loss-sharing arrangement, but it had a collateral arrangement to prevent a failed settlement. Under the RTGS, intra-day credit is made available against collateral free of charge, and the amount has to be repaid by the end of the day. This facility is available to both conventional and Islamic banks.

There is no *Sharī`ah* committee at the national level whose ruling would be binding on all participants in the *Sukūk* market.

5. Foreign exchange markets

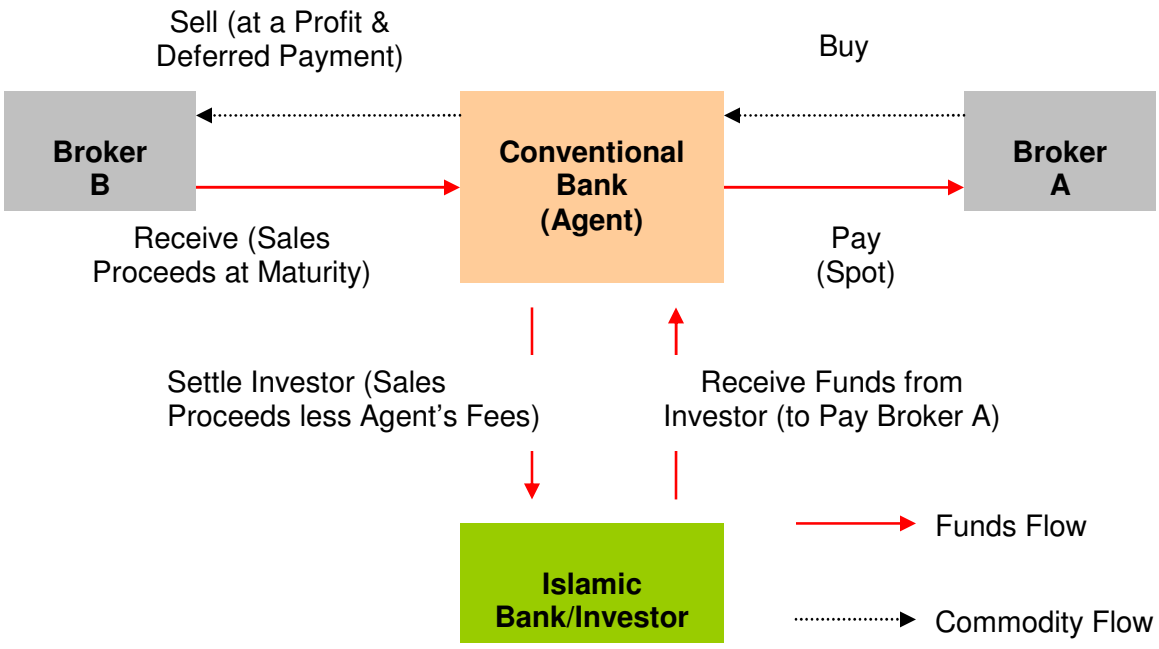
The CBB offers a foreign exchange facility, implying that it stands ready to sell US dollars, at a rate very close to the official exchange rate. The CBB provides this facility to commercial banks located in the Kingdom of Bahrain. Since the CBB is prepared to sell US dollars on request, very close to the official rate, there is no incentive for the private sector to generate any speculative pressures for or against the Bahraini Dinar.

Diagram 1: Bahrain- *Sukūk Al-Ijārah* structure



Source: Abdul Rais Abdul Majid, "Development of Liquidity Management Investment: Challenges and Opportunities", Paper presented at the International Conference on Islamic Banking, Jakarta, 30 September – 2 October 2003.

Diagram 2: Bahrain- Commodity *Murābahah* structure



CASE STUDY: PAKISTAN

1. Interbank money markets – structure, instruments, state of development

A *Sharī`ah*-compliant instrument has been issued by the Government of Pakistan in the international market, but no sovereign instrument has been issued in the domestic market as yet. There is only one *Sharī`ah* Board working in SBP, which is also working on behalf of the GOP. It is obligatory to get approval from the central bank's *Sharī`ah* Board in case the GOP plans to issue any *Sharī`ah*-compliant instrument. IIFS have their own *Sharī`ah* Boards, but to get approval of their own instrument they have to send it to SBP for its consent.

The Islamic banking system in Pakistan forms only 3% of the total assets of the banking system.[16]

Description	Jun-07	Mar-07	Dec-06	Dec-05	Dec-04	Dec-03
Total assets (PKR in billions)	159	136	118	72	44	13
Percentage of banking industry	3.4	3.2	2.9	2.1	1.4	0.5
Deposits (PKR in billions)	108	93	83	50	30	8
Percentage of banking industry	3.1	3.0	2.8	1.9	1.2	0.4
Financing & investment (PKR in billions)	90	78	72	48	30	10
Percentage of banking industry	2.6	2.5	2.4	1.8	1.3	0.5
Full-fledged Islamic banks	6	5	4	2	2	1
Conventional banks with Islamic banking branches	12	13	12	9	7	3
No. of branches	162	170	150	70	48	17

Various instruments for interbank market transactions are available to conventional banks, including REPOs/Reverse REPOs and outright sales/purchases of MTBs/PIBs. However, these instruments are not available for IIFS.

For its debt management programme and for monetary policy purposes, the GOP is planning to issue short-term *Sharī`ah*-compliant instruments mimicking the conventional T-bill profile and risk features. The proposed structure for the instrument is as follows:

Type of *Sukūk*	**Hybrid structure (*Ijārah* + *Murābahah* or *Mushārakah*) or simple *Ijārah***
Frequency of issuance	Fortnightly/Monthly
Part of public debt management programme	Yes
Instrument	3-month, 6-month and 12 months
Selling technique	Through auction using Islamic banks (IBs)/Islamic bank branches (IBBs) of conventional banks as primary dealers. However, in the secondary market everyone is eligible to buy.
Pricing of instrument	Available at a discount, but the discount value would be treated as face value in contrast to a conventional T-bill where par value – i.e. RS100/0 – is treated as face value.

[16] Quarterly Performance Review of the Banking System, March 2007

Features of Islamic Instruments Market

Currently Islamic instrument market is highly short of liquidity management instruments and is limited to a few quasi-soverign (i.e. instruments issued by public sector enterprises) and corporate *Sukūk*. As a result IFIs are presently mainly relying on clean placements of funds in the following manners:-.

Specific F.I. Pool: To meet the short-term liquidity requirements of Islamic banks, hybrid investment pools, comprising of financing assets like *Murābahah*, *Ijārah* etc. (ideally tangible assets) are created and named as F.I.Pool. At maturity, normally, these F.I. Pools are dissolved and assets are transferred back to "other investment pool".

In the creation of specific FI pools, the following parameters are taken care of based on the nature of mode and tenure of the fund acceptance:

- The FI Pool will comprise financing asset(s) transferred from the "Other asset pool" of the bank, or new assets will be booked for the pool.
- The pool must comprise a significant portion (minimum 10%) of fixed/tangible assets (such as *Ijārah* or fixed-asset *Mushārakah*, etc.) to make redemption possible.
- The tenure of this FI pool must be less than or equal to the tenure of the financing assets in the pool.

Mushārakah*-based FI pools:* In *Mushārakah*-based FI pools, the FI participates in a special FI pool as a "sleeping partner" with the IFI as a "working partner". The risk and reward of the pool are shared as per the rules of *Mushārakah*.

***Muḍārabah*-based FI pools:** In *Muḍārabah* based FI pools, the FI participate as *Rabb-ul-Maal* or investor, with the IFI as *Muḍārib*. The risk and reward of the pool are shared as per the rules of *Muḍārabah*.

Parameters set for the Pools

At any point, the sources and allocation of funds in the FI pools are known, balanced and verifiable. The assets for an FI pool are properly assigned to the pools, preferably at the general ledger or sub-general ledger level. This can also be done with the help of an internal non-financial entry. The proper allocation of financing assets implies that related risk and reward (profit or return) of the asset are clearly linked to a specific FI pool.

At the time of pool creation, the proper transfer of assets is recorded. When an asset is transferred to the FI pool, it is recorded through an entry and a transfer voucher is generated. An asset transfer implies that the risk and reward for the asset is being transferred to the FI pool. After the maturity of the FI pool, the pool asset(s) are transferred back to the Deposit or Investment Pool with all its risk and reward. The asset's return/transfer is also recorded through voucher and entry. Income generated by the assets is assigned accordingly to its related FI pool with respect to the number of days an asset is linked to that pool.

The profit-sharing ratio of the partners (bank and FI) is decided before the finalisation of the agreement. An Islamic bank can set any profit-sharing ratio, keeping in mind the desired rate of return of the investor (FI). However, in the case of *Mushārakah*, the profit-sharing ratio of the sleeping partner (the FI) cannot be greater than the ratio of its investment share in the pool. The profit ratio is explicitly mentioned in the Deal Confirmation agreement and is communicated to the FI. Losses, if any, are shared on a pro-rata basis (in the same ratio as the investment shares of both parties). Profit is distributed at the time of maturity of the FI pool as per the agreed-upon profit-sharing ratio.

Acceptance of funds from any FI is recorded by a Deal Confirmation agreement (a *Muḍārabah* or *Mushārakah* agreement). The Deal Confirmation explicitly mentions the mode in which the funds are being accepted in the FI pool. The Deal Confirmation also contains the unique PIN of the FI pool that defines the underlying assets for that arrangement.

Islamic placement funds: Islamic banks can offer placement accounts to other IFIs in the market, tailored exclusively to meet their need to manage excess liquidity in an immediate and profitable manner. These accounts can be used for acceptance of funds in the "General deposit pools" from SBP as an alternative to the conventional discount window.

Examples of the Key Features of Islamic Placement Funds

- A checking account only available for IFIs
- Deposits invested under a *Muḍārabah* arrangement
- Minimum investment amount: PKR 10 million or multiples thereof
- Maximum investment amount: PKR 1 billion
- Withdrawals of funds :
  - 24 hours' notice for PKR50–200 million deposit
  - 48 hours' notice for 200+ million deposit
- Profit disbursed on a monthly basis
- Profit calculated on a daily product basis

Commodity *Murābahah*: Available in overnight to one-year maturity. The Islamic bank purchases a commodity on a spot basis from a commodity broker against a cash consideration. After taking delivery, the Islamic bank through its agent sells the commodity on a deferred payment basis. Local Commodity *Murābahah* have taken place in Pakistan where commodities such as fertiliser, sugar and pulses are physically identified before a sale takes place.

***Wakālah* Arrangements:** To generate liquidity in order to meet shortage of funds bank 'A' receives funds from Bank 'B' to meet new financing requirements. Bank 'A' (acting as Agent) creates matching asset by disbursing the funds received from Bank 'B'. The amount, tenor, maturity date of newly created assets is kept similar to that of the funds received from Bank 'B'. Bank 'B' bears the risks and rewards of the new assets till the maturity and is entitled to the profit earned on such assets. Bank 'A' will only act as an Agent and is entitled to a fixed fee for its services. The fee is l not linked to the profit or loss of the investment. At maturity date, the funds are paid back to Bank 'B' along with the profit.

***Tawarruq* arrangement:** The Bank purchases a commodity/stock that is liquid in the market (such as metals sold in a commodity exchange or equities). The subject matter is purchased from any financial institution on credit (*Murābahah* basis) and after taking delivery the bank sells the commodity in the market at the prevailing market price. The required liquidity is obtained through realisation of the cash price. The bank pays back the purchase price after the expiry of the credit period. The process is also known as Commodity *Murābahah* or Reverse *Murābahah*.

Features of Conventional Securities Market

Money Market (MM): Money Market is comprised of MTB issuances that are of 3, 6 and 12-month tenors and are carried out on fortnightly basis through auctions. Activities like OMO, Repo, Outright, Call and Clean (see detail definitions below); Discounting and foreign exchange transactions (with one leg in Pakistan Rupee) are also part of money market. The market is also used for carrying out monetary policy operations through impacting Reserve Money Stock of interbank market. The money market in Pakistan operates through Primary and Secondary Market framework.

Primary Market

MTB Auctions: MTB auctions are carried out to raise short term debt for the Government. The SBP conducts MTB auctions through selective Primary Dealers. MTBs (with their risk profile) serve the purpose of meeting banks' SLR requirements and as collateral in the Repo market.

PIB Auctions: PIB auctions are conducted to finance long-term debt requirements of GOP for 3, 5, 10, 15, 20 and 30 years tenors. PIB auctions are conducted in accordance with the targets set in GOP annual debt plan.PIBs provide long-term fixed income strams to investors and are SLR eleigible securities.

Secondary Market

Repo Market: Repo market serves the purpose of doing short term liquidity management by Financial Institutions (FIs). Repo transactions involve sale of MTBs/PIBs with an agreement to buy back on agreed date. More than 80% of secondary market trading of MTBs/PIBs is carried out in this segment alone.

Call Money Market: With a view to maintain daily liquidity, scheduled banks are allowed to lend and borrow in the interbank call money market. All transactions are settled through cheques, which are ultimately recorded in respective banks' current account with SBP on the date of transaction. All deals in Call money market take place among banks and are non-collateralised.

Outright Market: it is that segment of the secondary market where MTBs/PIBs are outrightly sold/ purchased. This market constitutes 10% of secondary market transactions.

Clean: Clean market constitutes of placements of funds with Non Bank Financial Companies (NBFCs) by the banks**.**

Open Market Operations: OMOs are conducted by SBP as main monetary policy tool. They are conducting through Repo/Reverse Repo or Outright transactions that are intended to absorb/inject liquidity from/into the banking system by using MTBs. Only Commercial Banks are allowed to participate in the OMOs and they are conducted on as and when required basis.

Discount Window Facility: Under the arrangement, banks with liquidity crunch come to State Bank (lender of the last resort) and undergo a 3-day repo transaction and borrow from State Bank against collateral. Discount rate also serves the purpose of giving interest rate signals to the Money Market and particularly from the perspective of medium term signal for SBP monetary policy stance.

Capital Market: Capital Market consists of Corporate TFCs and Equity Market.

Term Finance Certificates (TFCs): Corporate bond in Pakistan is in form of term finance certificates (TFCs). TFCs are based on legislation enacted in 1984, which authorises issuance of redeemable capital securities. As a debt instrument TFC is slightly different from the corporate

bond because it was specifically designed to comply with Shar'iah law. The key difference is that the TFC substitutes the words "expected profit rates" for "interest rate". TFC issuers include banks, NBFIs as well as public and private firms. Coupon rates on the TFCs display a wide range with different fixed coupons as well as floating coupons linked to various interest rates including the discount rate, PIB rates and the Karachi Inter Bank Offered Rate (KIBOR).

Commercial Papers: An unsecured, short-term debt instrument issued by a corporation, typically for the financing of accounts receivable, inventories and meeting short-term liabilities. The debt is usually issued at a discount, reflecting prevailing market interst rates. SBP and Securities and Exchange Commission of Pakistan (SECP) issued guidelines for their issuance two years back. The tenor of commercial papers is 3, 6 and 9 months, however mostly issued commercial papers are in shorter tenor due to rising interest rate scenario prevailing since mid 2003.

2. Central bank standing facilities

Central bank credit facilities

The central bank's discount window facility is available only to conventional banks facing liquidity crunch. IFIs do not have any such facility as yet but SBP is working to design such a facility for IFIs as well. However for disbursements under Export Refinance scheme IFIs receive such funds from SBP on Musharakah (profit and loss sharing) basis.

Reserve requirements, excess reserves, and other deposit facilities

Position in respect to CRR and SLR:

Reserve requirements	Conventional banks	Islamic banks
Cash reserve requirements (CRR)	7% of total demand liabilities 3% of total time liabilities	7% of total demand liabilities 3% of total time liabilities
Statutory liquidity requirement (SLR)	8% (excl. CRR) of their TDL	8% (excl. CRR) of their total TDL*
** Currently WAPDA Sukūk (i.e.a quasi-soverign Sukūk) is only eligible for SLR and that too for 5% of TDL of IFIs. Going above 5%; IFIs have to provide 3% in cash against their TDL for SLR in addition to 7% of TDL as CRR. On availability of Sovereign/Quasi Sovereign Sukūk in future, obviously the SLR for IFIs would be the same as for Conventional Banks.*		

3. Microstructure of secondary markets and payment system

Cash settlement is presently processed through Multi Netting System (MNS) against current account of all banks accounts maintained with SBP. Soon, the RTGS system would replace MNS.

4. Foreign exchange markets

Forward cover plays a very important role in facilitating imports and exports. Islamic banks cannot enter into a forward sale/purchase agreement; however, it can enter into a promise to sell/purchase agreement in order to sell/purchase foreign currencies in future. Guidelines issued by a *Sharī`ah* advisors are followed at the time of execution of these transactions. No *Sharī`ah*-compliant derivative instrument is available as yet.

Definitions as per Sharī`ah

Spot (ready) transaction: If the deal (transaction) date and maturity date are the same, then the transaction will be considered as spot (hand-to-hand) as per the rules of currency trading in *Sharī`ah*. In this case, the bank is allowed to do a normal sale/purchase transaction of currency.

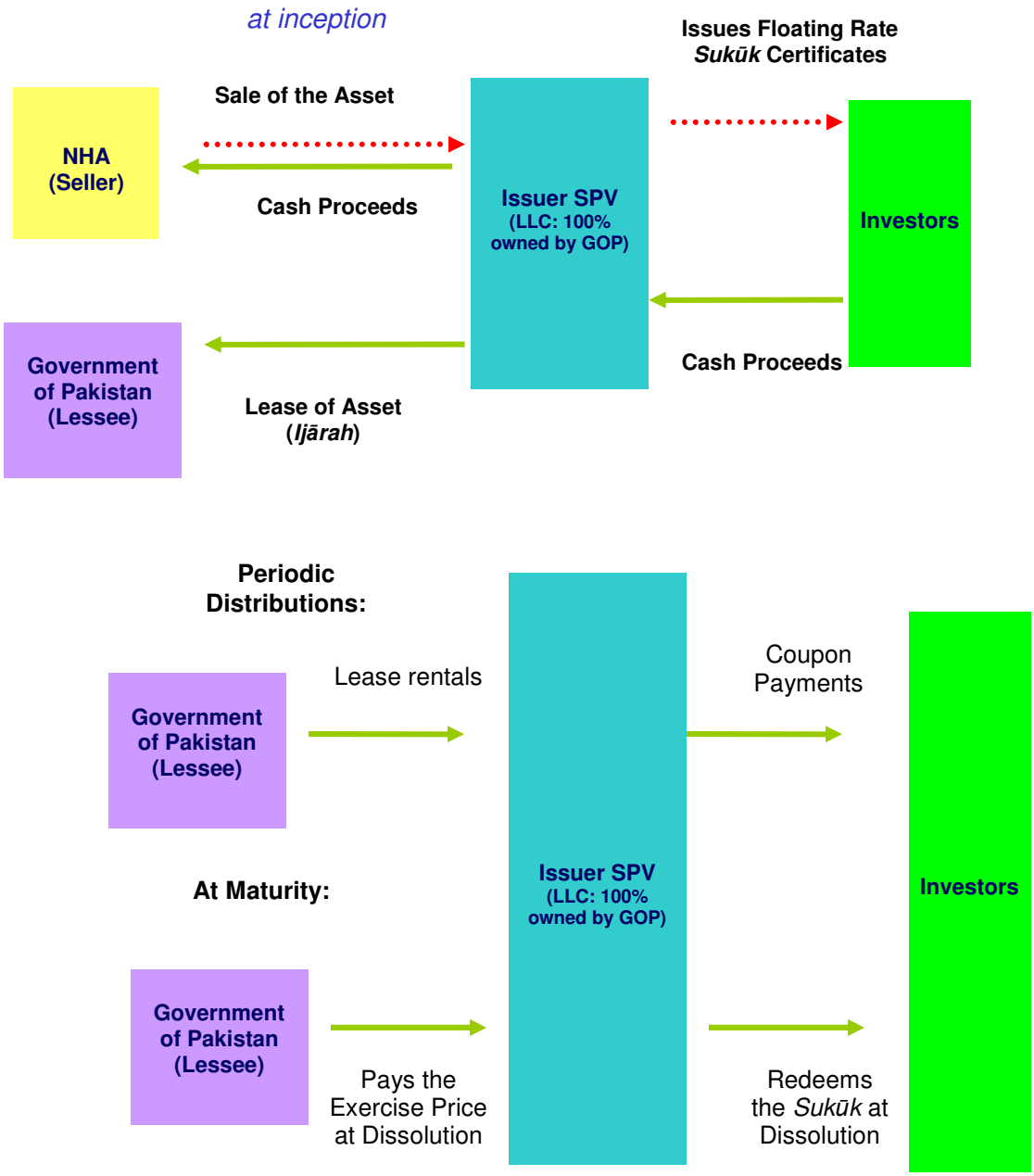
Forward transaction: If the deal date and maturity dates are different, then the transaction will be considered as forward as per the rules of *Sharī`ah* (even though the market convention defines a spot transaction as being in range of one to three days under the T+2 system). In this case, the Islamic bank can enter into a promise to sell or buy with the counterparty.

Hence, all foreign exchange transactions that are not "ready" can only be carried out on the basis of a "Unilateral Promise to Sell/Buy". This means that those spot transactions that are not settled on the same day will also be carried out through a promise to buy/sell. In this regard, an option is a promise to sell or purchase on a specific price within a specified period. Such a promise in itself is permissible and is normally binding on the promissory. However, this promise cannot be the subject matter of a sale or purchase. Therefore, the promissory cannot charge the promisee a fee for making such a promise.

Pakistan International *Sukūk*
Fully backed by state-owned assets, including the 400-kilometre Islamabad–Lahore Motorway *(see Diagram 1)*.

Underlying contract	*Ijārah*
Role of SPV	The assets held by the SPV, called Pakistan International *Sukūk* Pvt. Ltd Co.
Frequency of issue	None
Selling technique	Auction
Tenor	5 years
Price	6-M LIBOR plus 220bps
Guarantor	Government of Pakistan

Diagram 1: Pakistan–International *Sukūk Al-Ijārah*



WAPDA *Sukūk*

The Water and Power Development Authority (WAPDA) of Pakistan required funding to finance (partially) the Mangla Dam Raising Project.

Underlying contract	:	*Ijārah*
Role of SPV	:	The assets held by the SPV, called WAPDA First *Sukūk* Company Ltd
Frequency of issue	:	None
Selling technique	:	Auction
Tradability	:	Allowed
Eligibility for SLR	:	Yes

WAPDA decided to raise finance worth PKR 8.0 billion from the local market through issuance of *Sukūk* based on *Ijārah*. This involved the sale and leaseback of 10 hydel power-generation units (turbines) installed at Mangla Hydel Power Station. Under the envisaged structure, WAPDA SPV would sell *Sukūk* to investors and utilise the proceeds to purchase identified hydel power generation turbines from WAPDA.

The assets thus acquired would be held in trust by the WAPDA SPV, for the benefit of the *Sukūk* holders, until such time that the trust is dissolved. Subsequent to this purchase, SPV and WAPDA would enter into an *Ijārah* agreement, whereby WAPDA would lease the turbines from SPV for a period of seven years against rentals equal to a six-month KIBOR plus 35 basis points.

Additionally, WAPDA would also enter into a purchase undertaking with SPV to purchase the turbines at the exercise price on the maturity date. The *Sukūk* investors would earn periodic distribution based on their certificate holdings, being equal to the lease rentals received by the WAPDA SPV.

Diagram 2: Transaction structure

At inception:

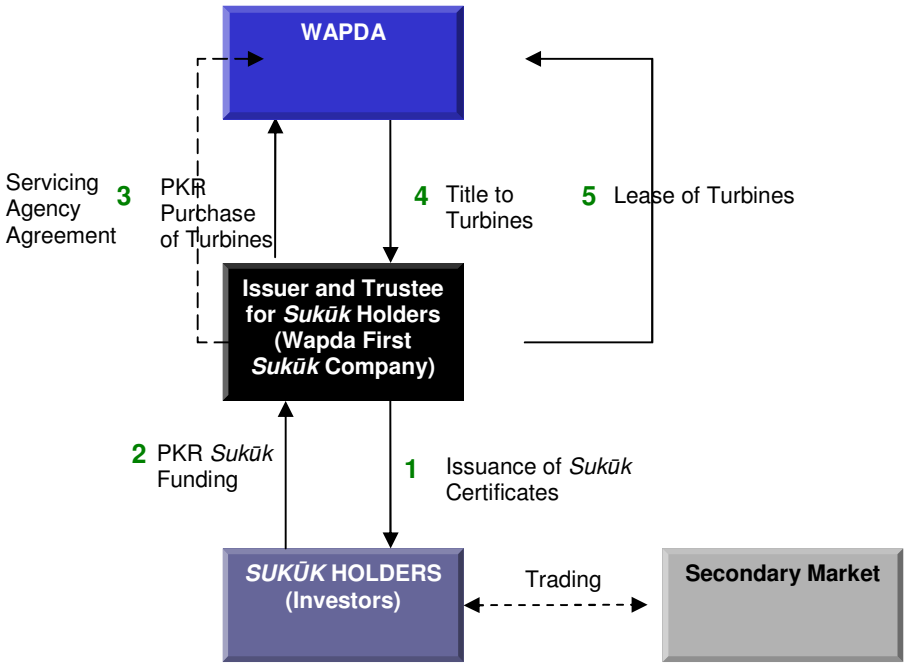
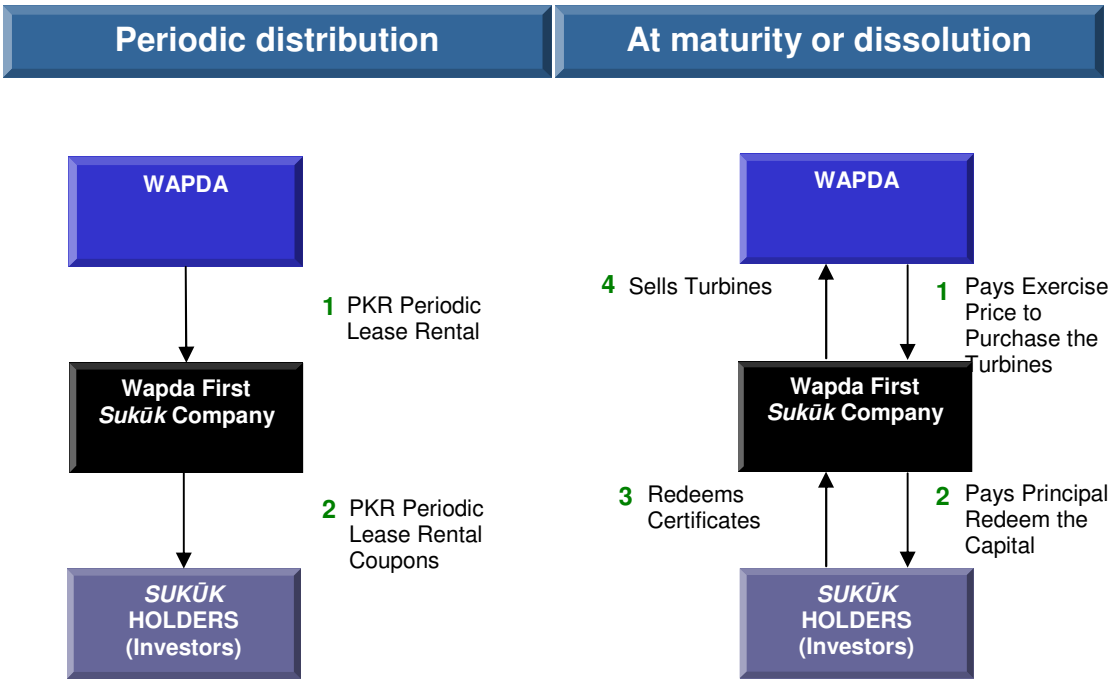


Diagram 3: Transaction structure



DEFINITIONS

Bay` al-Dayn	The sale of payable right either back to the debtor, or to other third-party. The base asset can be either money or commodity.
Bay` al-`Inah	A contract involving the sale and buy-back transaction of assets by a seller. A seller sells an asset to a buyer on a cash basis and later buys it back on a deferred payment basis where the price is higher than the cash price. It can also be applied when a seller sells an asset to a buyer on a deferred basis and later buys it back on a cash basis, at a price which is lower than the deferred price.
Bay` al-Istijrār	A sale or contract in which a customer agrees to pay in lump sum in advance and receives the commodities gradually instalment.
Diminishing *Mushārakah*	Diminishing *Mushārakah* is a form of partnership in which one of the partner promises to buy the equity share of the other partner gradually until the title to the equity is completely transferred to the buying partner. The transaction starts with the formation of a partnership, after which buying and selling of the other partner's equity take place at market value or the price agreed upon at the time of entering into the contract. The "buying and selling" is independent of the partnership contract and should not be stipulated in the partnership contract since the buying partner is only allowed to give only a promise to buy. It is also not permitted that one contract be entered into as a condition for concluding the other.
Fatāwā	*Fatāwā* (singular: *fatwa*) is a juristic opinion given by the *Sharī`ah* board, a *mufti*, or a *faqīh* on any matter pertinent to *Sharī`ah* issues in Islamic finance.
Ijārah	An *Ijārah* contract refers to an agreement made by IIFS to lease to a customer an asset specified by the customer for an agreed period against specified instalments of lease rental. An *Ijārah* contract commences with a promise to lease that is binding on the part of the potential lessee prior to entering the *Ijārah* contract.
Ijārah Muntahiyah Bittamlīk	An *Ijārah Muntahiyah Bittamlīk* (or *Ijārah wa Iqtina'*) is a form of lease contract that offers the lessee an option to own the asset at the end of the lease period either by purchase of the asset through a token consideration or payment of the market value, or by means of a gift contract.
Investment Risk Reserve	Investment risk reserve is the amount appropriated by the IIFS out of the income of IAH, after allocating the *Muḍārib*'s share, in order to cushion against future investment losses for IAH.
Istisnā'	An *Istisnā'* contract refers to an agreement to sell to a customer a non-existent asset, which is to be manufactured or built according to the buyer's specifications and is to be delivered on a specified future date at a predetermined selling price.

Muḍārabah	A *Muḍārabah* is a contract between the capital provider and a skilled entrepreneur whereby the capital provider would contribute capital to an enterprise or activity, which is to be managed, by the entrepreneur as the *Muḍārib* (or labour provider). Profits generated by that enterprise or activity are shared in accordance with the terms of the *Muḍārabah* agreement whilst losses are to borne solely by the capital provider unless the losses are due to the *Muḍārib*'s misconduct, negligence or breach of contracted terms.
Murābahah	A *Murābahah* contract refers to a sale contract whereby the IIFS sell to a customer at an agreed profit margin plus cost (selling price), a specified kind of asset that is already in their possession.
Mushārakah	A *Mushārakah* is a contract between the IIFS and a customer to contribute capital to an enterprise, whether existing or new, or to ownership of a real estate or moveable asset, either on a temporary or permanent basis. Profits generated by that enterprise or real estate/asset are shared in accordance with the terms of *Mushārakah* agreement whilst losses are shared in proportion to each partner's share of capital.
Profit Equalisation Reserve	Profit equalisation reserve (PER) is the amount appropriated by the IIFS out of the *Muḍārabah* income, before allocating the *Muḍārib*'s share, in order to maintain a certain level of return on investment for IAH and to increase owners' equity.
Qarḍ	A non-interest bearing loan intended to allow the borrower to use the loaned funds for a period with the understanding that the same amount of the loaned funds would be repaid at the end of the period.
Restricted Investment Accounts	The account holders authorise the IIFS to invest their funds based on *Muḍārabah* or agency contracts with certain restrictions as to where, how and for what purpose these funds are to be invested.
Salam	A *Salam* contract refers to an agreement to purchase, at a predetermined price, a specified kind of commodity not available with the seller, which is to be delivered on a specified future date in a specified quantity and quality. The IIFS as the buyers make full payment of the purchase price upon execution of a *Salam* contract. The commodity may or may not be traded over the counter or on an exchange.
Sukūk	*Sukūk* are certificates that represent the holder's proportionate ownership in an undivided part of an underlying asset where the holder assumes all rights and obligations to such asset.
Takāful	*Takāful* is derived from an Arabic word which means solidarity, whereby a group of participants agree among themselves to support one another jointly against a specified loss. In a *Takāful* arrangement, the participants contribute a sum of money as *Tabarru'* (donation) into a common fund, which will be used for mutual assistance of the members against specified loss or damage.

Unrestricted Investment Accounts	The account holders authorise the IIFS to invest their funds based on *Muḍārabah* or *Wakālah* (agency) contracts without laying any restriction. The IIFS can commingle these funds with their own funds and invest them in a pooled portfolio.
`Urbūn	*`Urbūn* is earnest money held as collateral (taken from a purchaser or lessee) to guarantee contract performance after a contract is established.
Rahn	A pledge to secure payment to the lender. The lender has the right to take possession of the property under detention in the event of default.
Wa`d	An agreement to establish a good deed in the future.
Wakālah	An agency contract where the customer (principal) appoints the IIFS as agent (*wakīl*) to carry out the business on their behalf where a fee (or no fee) is charged to the principal based on the contract agreement.

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