Role of Central Bank in Islamic Finance

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Role and Functions of Central Bank in Islamic Finance

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Abstract

The rapid growth in Islamic finance industry urges us to not only look for alternatives in the Islamic commercial banking, but also focus on the regulator and its role and functions to enable it to work in conformity with Islamic principles. This study reviews limited, but precious academic literature on central banking and monetary management in an environment where Islamic finance is in vogue. Refinance ratio and Qard-e-Hasan ratio and Mudarabah between central bank and Islamic commercial banks are in line with Islamic principles and helps meet liquidity requirements in the banking sector. Mudarabah can be done with profit sharing ratio benchmarked on economy's nominal income growth. We have presented the evidence on statistical equivalence of nominal Interest rates (being used in conventional banking) and Nominal GDP growth rate (we are recommending to use). The nominal GDP growth linked rate of remuneration can be used to benchmark for external loan arrangements including those from IMF, WB and IDA etc. We suggest central banks particularly in Muslim countries to use nominal income targeting as a rule for the conduct of monetary policy

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1. Introduction

1.1. Background of the Study

Islamic banking and the field of Islamic finance has grown appreciably and is continuing to do so. From deposit specific products initially, the industry now has alternatives for almost every financing need. This rapid growth and scope broadening urges us to not only look for alternatives in the Islamic commercial banking, but also focus on the regulator and its role and functions to enable it to work in conformity with Islamic principles and yet effectively carry out its functions of issuing currency, banker's bank, banker to the government, managing money supply by qualitative and quantitative measures and check price level to name a few.

Capitalism, unlike Islamic economic system and Socialism favors capital as an individual factor of production creditable of distinct factor payment i.e. interest. It supports the capitalists to benefit from wealth accumulation without having to put factor i.e. capital at similar risks that an entrepreneur faces e.g. price risk and market risk. It shifts the break even line further away from the entrepreneur and crowds out entrepreneurs who can not afford to keep feeding capitalists with interest. In this regard, interest has a huge influence on allocation of resources. It influences the basic economic decisions like what and for whom to produce.

Capital is needed for technological advancements. It is needed for production and consumption and for governments to spend on public goods. There would not have been many complexities if markets were efficient and income and wealth distribution fair. Equity financing as in the Islamic model of Mudarabah and Musharakah ensures justice and equity

Interest is prohibited in all monotheist religions (See Exodus 22:25, Leviticus 25:35-36, Deuteronomy 23:20, Psalms 15:5, Proverbs 28:8, Nehemiah 5:7 and Ezakhiel 18:8,13,17 & 22:12). However, interest is pervasive in capitalism Interest free commercial banking has been introduced in many countries since decades. However, limited attention has been paid on the role and functions of the regulator itself and the way in which it can perform its functions in leading the way for Islamic monetary system. On one hand, this study analyzes academic literature on interest free central banking in Islamic economics and existing practices in Muslim countries and on the other hand, this study suggests policy changes in the light of Islamic principles that can serve as an alternative need-fulfillment mechanism for central banking in an interest free monetary framework.

1.2. Problem Statement

This study reviews, analyzes and appraises the existing literature available on central banking in Islamic economics and the practices followed by central banks for liquidity management and monetary management in countries where Islamic banking is prevalent. We contribute in devising the role of a central bank in an Islamic economy and arming it with policy instrument compliant with Islamic principles to carry out its functions.

1.3. Objectives of the Study

The study sets forth following important objectives:

- To recommend alternate to the interest based benchmark in the current monetary system based on empirical evidence and proposal from renowned scholars in the area of Islamic finance
- To suggest a monetary policy mechanism for the central bank to perform its functions.

1.4. Importance of the Study

The study has significance in academics as well as in policy making. Contemporary Islamic finance is facing problems in benchmarking for profit sharing. Furthermore Islamic finance is mostly criticized on the lack of proper pricing strategy for international financial transaction particularly between governments and government and international financial institutions.

This study takes a broader approach to help in policy making and adds to the literature as it recommends a benchmark for profit sharing and liquidity management and proposes the central bank

to use that benchmark related monetary policy framework. This benchmark is also useful for pricing the international financial transaction particularly between governments and government and international financial institutions

1.5. Scope of the Study

The study sets forth a determined objective to contribute in policy making as well as add to the academic literature of Islamic Economics. The study briefly discusses monetary theory and from this academic discussion; the study goes on to discuss the role and functions of a central bank in an interest free monetary system. In suggesting alternative monetary framework, support for the policy changes is provided from empirical evidence. It does not however discuss all the functions of a central bank.

1.6. Limits of the Study

The study due to its limited and focused scope could not take into account exchange rate stability and the signeorage.

1.7. Research Methodology

This study is exploratory in nature. It discusses the role of a central bank in an interest free monetary system. Data on two variables 'Nominal Income Growth' as measured by Nominal GDP growth and 'Nominal interest rates' is taken from International Financial Statistics (IMF) for the last 20 years from 14 countries where Islamic banking has been prevalent. Equivalency of means test is carried out to determine whether there exists significant relationship between the two variables.

2. Literature Review

Interest free banking has been introduced in many Muslim countries since 1960. It has widened in scope, size, sophistication and reach ever since then. In academic literature relevant to the role and functions of central bank and monetary management based on Islamic ideals, we find concepts such as refinance ratio (Siddique, 1982), Qard-e-Hasan ratio (Khan, 1982), Mudarabah based lending between commercial and central banks and restricting high powered money by way of RRR than relying on OMO (Chapra, 1983), Time Multiple Counter Loan (Mehmood, 1991), composite stock (Zangeneh & Salam, 1993) and central bank having equity stake in commercial banks (Uzair, 1982) to name a few. Few studies have focused on the price of capital in an interest free context using shadow price in place of the regular accounting price (Mannan, 1982) and some studies have shown concern over the applicability of Islamic finance principles beyond the commercial banking into the pricing of loans between countries and IFIs (Reddy, 2001) and monetizing public debt (Darrat & Bashir, 2000). In this section, first, a brief overview of ideological discussion on pricing capital in the literature is provided followed by practicable alternatives as suggested by Islamic economists are discussed.

Kurrihara (1951) asserts that if a central bank is the government's bank; then, if government sells securities to the central bank, interest payment paid by the government will eventually come back to the government. In his viewpoint, there might not be an economic or payoff difference.

Mannan (1982) proposed the use of accounting price of capital which will neither add to the cost of production nor form part of the profits; but, instead will be used to appraise projects.

Reddy (2001) highlighted an important problem in an interest free economy as to how it will deal with external debt management which is primarily interest based. Similar concern was shown by Darrat & Bashir (2000) as to how deficit financing can be monetized in an interest free economy and how expectations about the rate of return can be formulated.

As can be seen from the above discussion that pricing capital in an interest free economy has been a problematic issue to deal with. Responding to Kurrihara's viewpoint, it must be emphasized that interest is prohibited in absolute sense and it can not be accommodated even if the same transaction is reversed over a period of time and thereby nullifying the economic impact. Responding to Mannan's viewpoint, it must be highlighted that if interest is criticized on the presumption that it is not a rightful mechanism to allocate resources; then, this accounting price (or rate of profit) will be no different.

However, capital rationing is still useful to avoid free-rider problem as long as an artificial and rigid scarcity of capital can be avoided. But, the vacuum still exists as to how to effectively price capital in a holistic way to encompass both private finance and public finance.

Now, we come to the various practicable alternatives that have been suggested to see whether the literature offers us a clue as to how capital may be priced holistically and look for various ways in which a central bank in an interest free economy can carry out its functions and roles. Chapra (1983) realizing that the two important instruments of monetary policy in the capitalist economy, discount rate and open market operations in interest-bearing government securities will not be available, he recommended following important measures for devising an alternative system of central banking in Islamic finance.

i) Managing Monetary Base, Deposit Mobilization & Fund Utilization

Central bank should make the total Mo created by it available partly to the government and partly to the commercial banks and the specialized financial institutions. The part of Mo made available to the government should be an interest-free loan to enable the government to finance its social welfare projects. The part of Mo made available to the commercial banks should be treated as Mudarabah advances and the profits realized from these should be made available to the government to finance projects designed to eliminate poverty and reduce income inequalities. The part of Mo made available to specialized credit institutions should also be a Mudarabah advance and be used mainly for financing productive activities -of self-employed persons, farmers, cottage industries and other small businesses which, though viable and socially necessary, are unable to obtain funds from commercial banks. The government would pay actual service charge to the commercial banks who acted as agents to mobilize funds from general public. This service charge would not be Riba as it will not involve time value of money and only actual cost of mobilizing funds would be reimbursed.

ii) Public Share of Demand Deposits

A certain proportion of commercial bank demand deposits up to a maximum of, say, 25 per cent, should be diverted to the government to enable it to finance socially beneficial projects in which profit-sharing is not feasible or desirable. This should be in addition to the amount diverted to the government by the central bank for expanding the monetary base (Mo). The rationale behind this proposal is that firstly, the commercial banks act as agents of the public for mobilizing the society's idle resources; secondly, the banks do not pay any return on demand deposits; and, thirdly, the public does not bear any risk on these deposits if these are fully insured. Hence it would be fair to expect that the society's idle resources thus mobilized should be used for social benefit except to the extent to which the society permits the commercial banks to use them for private benefit in the larger social interest. One of the important ways of using them for social benefit would be to divert a part of the demand deposits thus mobilized to the public treasury to finance socially beneficial projects without imposing any interest burden on the public exchequer.

iii) Statutory Reserve Requirement

Commercial banks should be required to hold a certain proportion, say, I0-20 per cent, of their deposit liabilities with the central bank as statutory reserves. The central bank-should pay the commercial banks the cost of mobilizing these deposits just as the government would pay the cost of mobilizing 25 per cent of demand deposits diverted to the government. This statutory reserve requirement could be varied by the central bank in accordance with the dictates of monetary policy. The rationale behind a statutory reserve requirement only against demand deposits is that the Mudarabah deposits would constitute a part of bank equity in an Islamic economy and since there is no statutory reserve requirement against other forms of equity, there is no reason why Mudarabah deposits should be subject to such a requirement.

He further highlighted the benefits of his proposal on public finance by explaining that the government‘s financial problems would also be solved partly because, firstly, additional interest-free resources would be made available to the government in the form of created money, and secondly, a certain proportion of all commercial bank demand deposits would also be made available to the government. This would carry a service charge which would be considerably smaller than the heavy

interest burden which makes the rich richer through interest receipts and the poor poorer through additional taxes levied to service the public debt.

Siddiqui (1982) supported the use of "refinance ratio" i.e. central bank refinancing a part of the interest-free loans provided by commercial banks to influence the volume of short term credit extended by the commercial banks. Khan (1982) advocated the use of "qard-hasnah" ratio i.e. the percentage of demand deposits that commercial banks are obliged to lend as an interest free loan to influence the availability of credit.

Uzair (1982) proposed that that a central bank can acquire equity stake in commercial banking by holding 25% of the capital stocks of the commercial banks. He opined that it would give a permanent source of income to the central bank and enable it to better play its role as a lender of last resort. However, his proposal is criticized on the basis of bringing conflict of interest between regulator and private banking institutions.

Mehmood (1991) introduced the TMCL model which is based on the basic idea that in a loan arrangement, both the amount of loan and time to maturity are equally important. Thus, if the amount of any loan is multiplied by the period for which it is provided, the result would be a unit i.e. loan value (LV). Thus an amount of Rs. 1000 for one year, has the same loan value as Rs.125 for eight years i.e. both sum upto the same loan value of Rs.1,000. Therefore, any combination of giving bilateral loans whereby the loan value remains same is in conformity with Islamic principles as it will fall in the realm of Qard-e-Hasan. Therefore, if a borrower needs a loan of Rs.1,000 for one year, he can give away a loan of Rs.125 for eight years and get a loan Rs.1,000 for one year. According to the author, the TMCL concept could be used in interbank lending and borrowing and between central banks and commercial banks.

Zaheer (1996) criticized TMCL concept arguing that TMCL is based on the premise that money ought to have time value, the Islamic prohibition of Riba requires that money should not be allowed to have any time value at all. Consequently, the TMCL proposal is contributing to resurrect exactly the same evil which Quran wants to see condemned to extinction.

Zangeneh & Salam (1993) presented two possible alternatives for money management i.e. alternative of discount rate and open market operations in Islamic finance. They recommended that the central bank could charge the borrowing bank a weighted average rate of return in different sectors of the economy plus or minus a discretionary premium to discourage borrowing if the economy is facing inflation. In recession, the central bank could charge the borrowing bank a weighted average rate of return in different sectors of the economy minus a discretionary discount (i.e., provide a subsidy) to encourage borrowing from the central bank. In this mechanism, the central bank would charge the borrowing bank a rate depending on the profit rate that prevails in the economy, plus or minus a policy premium or discount factor depending on the condition of the economy. At the time of providing funds, the central bank could use the last month's, last quarter's, or last year's data to calculate the relevant rate for short term borrowings of commercial banks. However, as soon as the central bank determines the actual profit rate for that particular time period, it could recalculate its share of the profit or losses, based on the agreed terms at the time resources were made available by the central bank, and charge the commercial bank for the loan or reimburse the bank for the overcharges.

Secondly, while recommending the alternative to traditional OMO in interest based banking, they recommended that the central bank could perform its open market operations in terms of a "composite stock" representing the central bank's ownership of all of the government and government agencies' owned enterprises. By trading a "composite stock" rather than individual private or public company's stocks, the potential problem of exerting undue influences on the price of a company's stocks is avoided.

Khan (2004) argued against elimination of interest by a legal decree and favored free market forces to bring the interest rates down to zero. He also emphasized on providing incentives for the use of equity over debt financing. He proposed following policy measures:

i) Reducing reserve requirements to increase supply of lent funds.
ii) Enforcing unlimited liability.

iii) Gradual decline in interest to make investments in debt based instruments less lucrative and shift loanable funds towards equity based instruments.
iv) Allowing dividend as a tax deductible expense.
v) Providing fiscal incentives to non-leverage firms and disincentives to leverage firms.

These recommendations worth serious consideration, but, limited liability is only available in partnerships which as are not as common and popular forms of business organization and in corporations. Limited liability in corporation serves the interest of shareholders which are mainly individuals from general public. Limited liability solves the agency problem by acting as a check on managers to be prudent in their strategic decisions especially related to capital structure and it also makes creditors lend prudently. It makes equity investments more secure by limiting risk and hence create a secondary market for equity instruments.

As can be observed from this literature review that efforts have been made in the past to delineate a mechanism for managing money supply (by limiting high powered money, using variable required reserve ratio, using full reserve ratio etc) instruments to be used in Islamic money market (Productive sector performance linked instruments for liquidity management), managing liquidity in financial sector (using two-way Mudarabah model, refinance ratio, Qard-e-Hasan ratio, composite stocks etc) and the role and functions of central bank. But much of that academic research has not translated into practice and least attention has been paid to the issue of establishing the benchmark for Islamic monetary system. This non-existence of a distinct and standardized benchmark has created obstacles in the creation and growth of more preferable Islamic alternatives like Mudarabah and Musharakah. This study tries to contribute in proposing a distinct, viable and stable alternative benchmark for Islamic finance industry which will be usable for pricing Islamic finance products in commercial banking (corporate and consumer both) and in pricing instruments for public finance, the trading in which will create a source of public debt financing and replacing conventional OMO by providing a base instrument in OMO in Islamic monetary framework.

3. Central Banking Practices in Muslim Countries

In UAE, the monetary instruments and liquidity management framework in the money market has following salient features: a) Minimum Reserve Requirement, b) Swap Arrangements, c) Advances and overdraft facility for banks and d) Certificates of Deposits. Source: Qualified Monetary Policy Instruments (Central Bank of UAE website, no date).

In Sudan, the monetary instruments and liquidity management framework in the money market has following salient features: a) Minimum Reserve Requirement, b) Central Bank of Sudan provides financial support to the Islamic banks facing temporary liquidity problems through purchasing financial papers “Sukuks” from them in accordance with what the Central bank may decide. Source: Central Bank of Sudan Policies for 2009 (Central Bank of Sudan website, 2009).

Chandavarkar (1996) citing the case of Saudi Arabia and Iran favored the use of reserve ratio and profit sharing ratio as the instruments of monetary policy management. He argued that adjustments in profit sharing ratios can be used as a substitute for bank rate variations. Credit can be tightened by reducing the share accruing to businessmen and eased by increasing it.

The monetary policy of Saudi Monetary Agency (SAMA) relies primarily on variations in the reserve ratio requirements, since it is debarred from using the re-discount facility under Islamic law and cannot use open market operations as the Kingdom does not have any public debt in the form of government securities which can be used for such operations. A significant secondary tool is selective credit controls which include regulation of credit ceilings, cash margins, terms and conditions of customer transactions, limits, prohibitions on specific categories of loans, and fixing the assets to be held within the Kingdom by each bank. SAMA also deploys its own accounts and government deposits with commercial banks to regulate the money supply. SAMA uses ORR (Official Repo Rate) for short term liquidity management. Saudi Monetary system also has Government Development Bonds and Treasury Bills for fiscal deficit financing and liquidity management.

In Iran, the set of instruments used particularly since the abolition of banks specific credit ceilings at the beginning of 1991-92 comprises variations of reserve ratio requirements and the rates charged on

lending of encashment facilities provided to banks. The reserve ratios are specified for each class of deposit, diminishing as their term increases (10 per cent on five years deposits to 30 per cent on demand deposits). Specialized banks are subject to a uniform (and lower) reserve ratio of 10 per cent. In Iran, RRR (Reserve Requirement Ratio), Participation Papers and ODA (Open Deposit Accounts) are used for short term liquidity management. Expected profit rates are determined by MCC (Money and Credit Council) in Iran.

In Qatar, the monetary instruments and liquidity management framework in the money market has following salient features: a) Required Reserve, b) Certificates of Deposit, c) QCB Rate, d) Repo Operation-Repo and e) Open Market Operations and f) Discount Window. Source: Monetary Policy Tools (Qatar Central Bank website, no date).

In Oman, the monetary instruments and liquidity management framework in the money market has following salient features: a) Treasury Bills, b) Certificates of Deposits, c) Open Market Operations and d) Repurchase/Reverse Repurchase. Source: Treasury Bill & Certificate of Deposit (Central Bank of Oman website, no date).

Kazmi (2009) explained the Islamic money market framework in Pakistan. Two interbank trading agreements – the Interbank Musharakah and Interbank Wakalah – are being used as standard contracts for the Islamic banking industry. The Islamic interbank market is hoped to replace the conventional Karachi Interbank Offered Rate (KIBOR), with the Islamic Interbank Offer Rate (IIBOR), and offer an avenue for Islamic banks to lend excess funds to each other.

Interbank Musharakah is a short term restricted partnership where the banks are invited to invest the amount in a special pool of assets on a pre-agreed profit sharing ratio agreed upon at the outset. Interbank Wakalah is an investment management contract where the investor (entity with surplus funds) agrees to provide the Islamic bank (entity with shortage of funds) with funds to invest in different assets. The Islamic bank acts as the investor's agent and is paid a fee for its services, while the investor receives the returns obtained on investments.

In Malaysia, the Islamic Inter bank Money Market (IIMM) was introduced on January 3, 1994 as a short-term intermediary to provide a ready source of short-term investment outlets based on Shariah principle. Through the IIMM, the Islamic banks and banks participating in the Islamic Banking Scheme (IBS) would be able to match the funding requirements effectively and efficiently. Bank Negara Malaysia (BNM) issued the Guidelines on the IIMM on December 18, 1993 to facilitate proper implementation of the IIMM. Source: Islamic Interbank Money Market Malaysia Information (Islamic Interbank Money Market website, 2009).

Types of Instruments in Islamic Interbank Money Market

1. Mudarabah Interbank Investment (MII)
2. Wadiah Acceptance
3. Government Investment Issue (GII)
4. Bank Negara Monetary Notes-i (BNMN-i)
5. Sell and Buy Back Agreement (SBBA)
6. Cagamas Mudarabah Bonds (SMC)
7. When Issue (WI)
8. Islamic Accepted Bills (IAB)
9. Islamic Negotiable Instruments (INI)
10. Islamic Private Debt Securities
11. Ar Rahnu Agreement-I (RA-i)
12. Sukuk BNM Ijarah (SBNMI)
13. Green Banker's Acceptances
14. Repurchase Agreements
15. Islamic Private Debt Securities

1. <u>Mudarabah Interbank Investment (MII)</u>

MII refers to a mechanism whereby a deficit Islamic banking institution (investee bank) can obtain investment from a surplus Islamic banking institution (investor bank) based on Mudarabah (profit sharing). The period of investment is from overnight to 12 months, while the rate of return is based on

the rate of gross profit before distribution for investment of 1-year of the investee bank. The profit sharing ratio is negotiable among both parties. The investor bank at the time of negotiation would not know what the return would be, as the actual return will be crystallized towards the end of the investment period.

2. Wadiah Acceptance

Wadiah Acceptance is a transaction between BNM and the Islamic banking institutions. It refers to a mechanism whereby the Islamic banking institutions place their surplus funds with BNM based on the concept of Al- Wadiah. Under this concept, the acceptor of funds is viewed as the custodian for the funds and there is no obligation on the part of the custodian to pay any return on the account. However, if there is any dividend paid by the custodian, it is perceived as 'hibah' (gift). The Wadiah Acceptance facilitates BNM's liquidity management operation as it gives flexibility for BNM to declare dividend without having to invest the funds received.

3. Government Investment Issue (GII)

The GII was introduced in July 1983 under the concept of Qard al- Hasan. The concept of Qard al-Hasan does not satisfy the GII as tradable instruments in the secondary market. To address this shortfall, BNM opens a window to facilitate the players to sell and purchase the papers with the central bank. The price in trade between the players is determined by BNM, which maintains a system to record any movement in the GII.

4. Bank Negara Monetary Notes-i (BNMN-i)

BNMN-i is an Islamic security issued by Bank Negara Malaysia replacing the existing Bank Negara Negotiable Notes (BNNN) for purposes of managing liquidity in the Islamic financial market. The maturity of these issuances has also been lengthened from one year to three years. New issuances of BNMN-i may be issued either on a discounted or a coupon-bearing basis depending on investors' demand. Discount-based BNMN-i is traded using the same market convention as the existing BNNN and Malaysian Islamic Treasury Bills (MITB) while the profit-based BNMN-i has adopted the market convention of Government Investment Issues (GII).

5. Sell and Buy Back Agreement (SBBA)

Sell and Buy Back Agreement (SBBA) is an Islamic money market transaction entered by two parties in which an SBBA seller sells assets to an SBBA buyer at an agreed price, and subsequently, both parties enter into a separate agreement in which the buyer promises to sell back the said asset to the seller at an agreed price.

6. Cagamas Mudarabah Bonds (SMC)

Cagamas Mudarabah Bond was introduced on 1 March 1994 by Cagamas Berhad to finance the purchase of Islamic housing debts from financial institutions that provides Islamic house financing to the public. The SMC Mudarabah Bond is structured using the concept of Mudarabah where the bondholders and Cagamas share the profits according to the agreed profit-sharing ratios.

7. When Issue (WI)

When Issue is a transaction of sale and purchase of debt securities before the securities is being issued. The National Shariah Advisory Council viewed that the WI transaction is allowed based on the permissibility to promise for sale and purchase transactions.

8. Islamic Accepted Bills (IAB)

Islamic Accepted Bill also known as Interest-Free Accepted Bill (IAB) was introduced in 1991. The IAB is formulated on the Islamic principles of Al-Murabaha (deferred lump-sum sale or cost-plus) and Bai ad-Dayn (debt-trading).There are two types of financing under the IAB facility, namely:-

i) Imports and local purchases

The financing would be financed under al-Murabaha working capital financing mechanism. Under this concept, the commercial bank appoints the customer as the purchasing agent for the bank. The customer then purchases the required goods from the seller on behalf of the bank, which would then pay the seller and resell the goods to the customer at a price, inclusive of a profit margin. The customer is allowed a deferred payment term of up to 200 days. Upon maturity of al-Murabaha financing, the customer shall pay the bank the cost of goods plus profit margin.

The sale of goods by the bank to the customer on deferred payment term constitutes the creation of debt. This is securitized in the form of a bill of exchange drawn by the bank on and accepted by the customer for the full amount of the bank's selling price payable at maturity. If the bank decides to sell the IAB to a third party, then the concept of Bai al-dayn will apply whereby the bank will sell the IAB at the agreed price.

ii) Exports and local sales

The bills created shall be traded under the concept of Bai al-Dayn. An exporter who had been approved for IAB facility will prepare the export documentation as required under the sale contract or letter of credit. The export documents shall be sent to the importer's bank. The exporter shall draw on the commercial bank a new bill of exchange as a substitution bill and this will be the IAB. The bank shall purchase the IAB at a mutually agreed price using the concept of Bai al-Dayn and the proceeds will be credited to the exporter's account. Domestic sales will be treated in a similar manner.

9. Islamic Negotiable Instruments (INI)

The INI covers two instruments such as:-

i) Islamic Negotiable Instruments of Deposit (INID)

The applicable concept is Al-Mudarabah. It refers to a sum of money deposited with the Islamic banking institutions and repayable to the bearer on a specified future date at the nominal value of INID plus declared dividend.

ii) Negotiable Islamic Debt Certificate (NIDC)

The transaction involves the sale of banking institution's assets to the customer at an agreed price on cash basis. Subsequently the assets are purchased back from the customer at principal value plus profit and to be settled at an agreed future date.

10. Islamic Private Debt Securities

Islamic Private Debt Securities (IPDS) has been introduced in Malaysia since 1990. At the moment, the IPDS which are outstanding in the market were issued based on the Shariah compliant concept of Bai Bithaman Ajil, Murabaha and al Mudarabah.

11. Ar Rahnu Agreement-I (RA-i)

Under RA-I, the lender provides a loan to the borrower based on the concept of Qard al- Hasan. The borrower pledges its securities as collateral for the loan granted. However, in the event where the borrower fails to repay the loan on maturity date, the lender has the right to sell the pledged securities and use the proceeds from the sale of the securities to settle the loan. If there is surplus money, the lender will return the balance to the borrower.

BNM uses RA-I as a liquidity management tool for its money market operations. Return from the RA-I is in the form of gift (hibah) and is determined based on the average inter bank money market rates.

12. Sukuk Bank Negara Malaysia Ijarah (SBNMI)

This Sukuk based on the Al-Ijarah or 'sale and lease back' concept, a structure that is widely used in the Middle East. A special purpose vehicle, BNM Sukuk Berhad has been established to issue the Sukuk Ijarah. The proceeds from the issuance are used to purchase Bank Negara Malaysia's assets. The assets are then eased to Bank Negara Malaysia for rental payment consideration, which is distributed to investors as a return on a semi-annual basis. Upon maturity of the Sukuk Ijarah, which will coincide with the end of the lease tenure, BNM Sukuk Berhad then sells the assets back to Bank Negara Malaysia at a predetermined price.

13. Green" Bankers Acceptance

Banks may purchase BA issued by other banks (inclusive of conventional banks) provided that it is a "halal" BA. To be considered as "halal", the BA must be:-

a. An export or sales BA
b. Drawn to finance "halal" goods or commodity.

14. Repurchase Agreements

Although the application of Repo in Islamic banking is not exactly the same as the conventional Repo, the conceptual framework is still the same. Thus Repo in conventional banking is an agreement under which a seller of securities undertakes to repurchase the securities from a buyer at an agreed price on a specified future date. However, in Islamic banking, the agreement to repurchase back the securities is just an agreement and not a condition for the contract to be settled. Thus this means that there are two contracts involved in Islamic Repo. The first one is to sell the securities and the second one is to purchase back the securities.

15. Islamic Private Debt Securities

IDS have been introduced using different types of Shariah concept namely through Bai Bithaman Ajil, al-Musharakah, al-Mudarabah, Qard ul Hassan, Murabaha etc. Under the concept of Bai' Bithaman Ajil, the financiers purchase an asset from the borrower and later resell the assets at a higher price which contain the cost and profit element. The loan which arises from the finance will be securitized through the issuance of two notes that is the primary notes which is equivalent to the asset price that is purchased by the financiers from the borrower and secondary notes which is equivalent to the profit value of the resale price. Both of these notes are traded in the secondary market under the concept of Bai' al Dayn.

Through Qard ul Hassan, the issuer of the notes is able to arrange the repayment of the loan which was given by the parent company. The IDS note is the evidence of debt for the amount which is yet to be repaid. Through the IDS, the loan is repaid by liquidating the IDS after certain period of time. The IDS is issued together with the Transferable Subscription Right (TSR). The TSR is the form of a "gift" (hibah) to the holder of the papers. The IDS is an alternative to the issuance of the conventional zero coupon bond.

Malaysia has the most sophisticated array of Islamic finance products. However, the prevalent use of Bai-al-Dayn (Sale of Debt) and Bai-Inaah (Buy Back) does not have the same support from Islamic scholars worldwide and hence it warrants us to look for better alternatives which are compliant with Islamic principles.

4. Filling the Void for Interest Based Benchmark in the Proposed Framework

Islamic commercial banks do have Shariah compliant alternatives for consumer and corporate financing. Some of the alternatives relevant to money market and liquidity needs established and used are listed below:

a. Bai Salam in Bill Discounting
b. Murabaha in Usance Bill Discounting

c. Running Musharakah
d. Tijara for Short Term Liquidity Management
e. Treasury Financing by way of Short Term Investment through Pool Management.
f. Treasury Investments by way of Short Term Investment through Commodity Murabaha.
g. Shariah Compliant Asset Backed Securitization like Sukuks.

Usmani (2003) proposed issuance of GDP growth linked instruments to finance public debt. His proposal can be further polished by making a secondary market for it by directing banks to meet their statutory requirements, This instrument will be a major investment alternative for money market players. The rate at which this instrument will be traded can be taken as the benchmark for pricing and structuring other products.

It is proposed that Nominal GDP linked benchmark be introduced. Nominal GDP is used as real GDP can get negative in periodic recessions. Nominal GDP is usually positive even if real GDP is low. It is linked with productive performance of the economy i.e. growth in GDP. In other words we propose nominal income targeting to the central bank.

5. Data Analysis

In what follows, data from 14 Muslim countries is taken for approximately 20 years from 1986 to 2006 on two variables i.e. Nominal GDP growth rate and Interest rates (discount rate, T-bill, Call money or lending rate are taken on the basis of availability).

5.1. Descriptive and Inferential Statistical Analysis

5.1.1 Bahrain

Period of Study	1986-2006	Equivalency of Means Test	
		H_o: $u_1 = u_2$	
Mean (NGDP)	7.59	H_A: $u_1 \neq u_2$	
Standard Deviation	8.60	t-statistic	1.14441
Mean (MM Rate)	5.37	t-table value (α=0.01)	2.704
Standard Deviation	2.17		

Conclusion: Calculated value does not fall in critical region. We do not reject null hypothesis.

5.1.2 Bangladesh

Period of Study	1987-2008	Equivalency of Means Test	
		H_o: $u_1 = u_2$	
Mean (NGDP)	10.32	H_A: $u_1 \neq u_2$	
Standard Deviation	2.63	t-statistic	4.519
Mean (Discount Rate)	7.102	t-table value (α=0.01)	2.70
Standard Deviation	2.06		

Conclusion: Calculated value does fall in critical region. We reject null hypothesis.

5.1.3 Iran

Period of Study	1961-1979	Equivalency of Means Test	
		H_o: $u_1 = u_2$	
Mean (NGDP)	17.75	H_A: $u_1 \neq u_2$	
Standard Deviation	17.86	t-statistic	2.6165
Mean (Discount Rate)	6.974	t-table value (α=0.01)	2.726
Standard Deviation	1.874		

Conclusion: Calculated value does not fall in critical region. We do not reject null hypothesis.

5.1.4 Indonesia

Period of Study	1990-2008	Equivalency of Means Test	
		H_o: $u_1 = u_2$	
Mean (NGDP)	19.36	H_A: $u_1 \neq u_2$	
Standard Deviation	8.9625	t-statistic	1.9419
		t-table value (α=0.01)	2.724
Mean (Call Money Rate)	14.313		
Standard Deviation	6.9269		

Conclusion: Calculated value does not fall in critical region. We do not reject null hypothesis.

5.1.5. Egypt

Period of Study	1977-2008	Equivalency of Means Test	
		H_o: $u_1 = u_2$	
Mean (NGDP)	16.25	H_A: $u_1 \neq u_2$	
Standard Deviation	7.32	t-statistic	1.1532
Mean (Lending Rate)	14.67	t-table value (α=0.01)	2.659
Standard Deviation	2.619		

Conclusion: Calculated value does not fall in critical region. We do not reject null hypothesis.

5.1.6 Jordon

Period of Study	1986-2007	Equivalency of Means Test	
		H_o: $u_1 = u_2$	
Mean (NGDP)	8.32	H_A: $u_1 \neq u_2$	
Standard Deviation	5.1717	t-statistic	1.1828
Mean (Discount Rate)	6.9783	t-table value (α=0.01)	2.70
Standard Deviation	1.7368		

Conclusion: Calculated value does not fall in critical region. We do not reject null hypothesis.

5.1.7 Kuwait

Period of Study	1987-2008	Equivalency of Means Test	
		H_o: $u_1 = u_2$	
Mean (NGDP)	12.39	H_A: $u_1 \neq u_2$	
Standard Deviation	24.96	t-statistic	1.1669
Mean (Discount Rate)	6.167	t-table value (α=0.01)	2.70
Standard Deviation	1.465		

Conclusion: Calculated value does not fall in critical region. We do not reject null hypothesis.

5.1.8 Libya

Period of Study	1987-2005	Equivalency of Means Test	
		H_o: $u_1 = u_2$	
Mean (NGDP)	12.30	H_A: $u_1 \neq u_2$	
Standard Deviation	14.23	t-statistic	2.299
Mean (Discount Rate)	4.789	t-table value (α=0.01)	2.726
Standard Deviation	0.535		

Conclusion: Calculated value does not fall in critical region. We do not reject null hypothesis.

5.1.9 Malaysia

Period of Study	1986-2008	Equivalency of Means Test	
		H_o: $u_1 = u_2$	
Mean (NGDP)	10.48	H_A: $u_1 \neq u_2$	
Standard Deviation	5.943	t-statistic	4.333
Mean (Overnight MM Rate)	4.76	t-table value (α=0.01)	2.70
Standard Deviation	2.166		

Conclusion: Calculated value does fall in critical region. We reject null hypothesis.

5.1.10 Oman

Period of Study	1986-2007	Equivalency of Means Test	
		H_o: $u_1 = u_2$	
Mean (NGDP)	7.51	H_A: $u_1 \neq u_2$	
Standard Deviation	10.38	t-statistic	0.4085
Mean (Discount Rate)	6.59	t-table value (α=0.01)	2.70
Standard Deviation	2.143		

Conclusion: Calculated value does not fall in critical region. We do not reject null hypothesis.

5.1.11 Pakistan

Period of Study	1986-2008	Equivalency of Means Test	
		H_o: $u_1 = u_2$	
Mean (NGDP)	14.54	H_A: $u_1 \neq u_2$	
Standard Deviation	5.226	t-statistic	2.1250
Mean (Discount Rate)	11.67	t-table value (α=0.01)	2.70
Standard Deviation	3.56		

Conclusion: Calculated value does not fall in critical region. We do not reject null hypothesis.

5.1.12 Saudi Arabia

Period of Study	1987-2008	Equivalency of Means Test	
		H_o: $u_1 = u_2$	
Mean (NGDP)	9.27	H_A: $u_1 \neq u_2$	
Standard Deviation	9.47	t-statistic	2.0141
Mean (Deposit Rate)	5.10	t-table value (α=0.01)	2.704
Standard Deviation	2.0296		

Conclusion: Calculated value does not fall in critical region. We do not reject null hypothesis.

5.1.13 Sudan

Period of Study	1989-2006	Equivalency of Means Test	
		H_o: $u_1 = u_2$	
Mean (NGDP)	57.21	H_A: $u_1 \neq u_2$	
Standard Deviation	49.81	t-statistic	0.36
Mean (CPI Rate)	51.33	t-table value (α=0.01)	2.726
Standard Deviation	48.16		

Conclusion: Calculated value does not fall in critical region. We do not reject null hypothesis.

5.1.14 Yemen

Period of Study	1996-2008	Equivalency of Means Test	
		H_o: $u_1 = u_2$	
Mean (NGDP)	21.02	H_A: $u_1 \neq u_2$	
Standard Deviation	13.25	t-statistic	1.4438
Mean (T-Bill Rate)	15.5	t-table value (α=0.01)	2.797
Standard Deviation	3.66		

Conclusion: Calculated value does not fall in critical region. We do not reject null hypothesis.

5.2. Key Findings

In 12 out of 14 countries, equivalency of mean test shows that null hypothesis (H_o: $u_1 = u_2$) i.e. both are not significantly different from each other could not be rejected. Therefore, it is plausible to use growth in Nominal GDP as the benchmark for making and refining instruments for money market. It will not be the same as bonds indexed for inflation. Bonds indexed for inflation are not recommendable as inflation does not always imply growth in production especially in stagflation. Moreover, inflation is more subjective and relative a measure to index an instrument with. Indexing the instrument based on Nominal GDP growth rate will be appropriate as the benchmark used will be related to production.

In the figure below, data for the period 1970-2008 for a group of big economies i.e. America, Britain, Canada, China, the euro area, India and Japan is shown on the variables Nominal Interest Rates (t) and Nominal GDP Growth Rate (t-1) since Nominal GDP responds to interest rate changes as it decreases aggregate demand for the subsequent period, a lag variable for GDP i.e. GDP (t-1) is taken.

It can be seen that both variables virtually moved together throughout the period and especially since 1990. Therefore, it is plausible to use Nominal GDP growth rate as the benchmark for Islamic money market. Since this figure confirms the movement of both variables in the same directions, it can be

used for indexing loans from the rest of the world and initially by Islamic Development Bank for its financing assets.

IMF provides lending to member countries for dealing with balance of payments crisis and maintain stability in the economy in the form of Stand-By Arrangements (SBA), Flexible Credit Line (FCL), Emergency Assistance (EA), Exogenous Shocks Facility (ESF) and Poverty Reduction and Growth Facility (PRGF) etc. If these loans are pegged with IMF's reserve currency i.e. SDR which is composed of a basket of currencies namely USD, JPY, GBP and Euro or pegged with USD or with any other hard currency, the financing facility so provided can be benchmarked using nominal GDP growth rate of the lender's country of origin or benchmarked with weighted Nominal GDP growth rate in major donor countries.

Financing in development projects from World Bank and International Development Association (IDA) can also be benchmarked with weighted Nominal GDP growth rate in major donor countries or countries whose currency is included in the basket of currencies which make up SDR. This will be an alternative for market based financing. For soft loans, aid and grants, the Nominal GDP growth rate in the recipient country can be used. It will not only compensate the financier for parting with liquidity and capital, but also provide a stable mechanism for recipient countries to get out of debt trap with debt servicing linked with output performance benchmark. Having this relief in the balance of payment and foreign debt, countries will be well set to introduce the proposed benchmark for pricing financial instruments in money market and this will automatically get its way in the pricing of commercial banking products as well. Financing from domestic commercial banks can be benchmarked with the national nominal GDP growth rate.

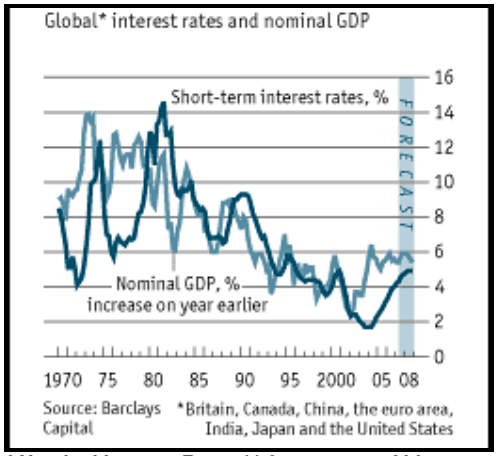

Figure 1: Nominal GDP (t-1) and Nominal Interest Rates (t) for a group of big economies (Source: The Economist)

6. Recommendations

Having Nominal GDP growth rate as the benchmark, following instruments and mechanism can be used with necessary refinement.

Concept of Refinance ratio and Qard-e-Hasan ratio (an alternative for SLR) and Mudarabah between central bank and Islamic commercial banks is in line with Islamic principles. Mudarabah can be done with profit sharing ratio benchmarked on individual sectors or the whole economy i.e. Nominal GDP growth rate. However, a fixed premium over the benchmark growth rate in the sector or economy ensuring minimum return in this case must not be used. In place of using a fixed spread over a benchmark, a multiple of benchmark can be used i.e. 110% of the growth rate in a benchmark.

The use of multiple of benchmark rate is also appropriate to take effect of bases because countries with a lower base have higher growth rates than with countries with higher bases. For instance, average growth rate in USA has been around 3% whereas in some developing countries, it is at around 10% as well. Therefore, using the multiple of benchmark rate would take care of base effect and avoid unnecessary flight of capital. The investment in composite stocks of non-banking enterprises is worth serious consideration. However, this would be more appropriate when 100% fractional reserve system is used and banks are not permitted to create money. If banks can create

money, they remain at an advantage as against the non-banking producing enterprises that cannot create money.

Conclusion

This study reviewed limited, but precious academic literature on central banking and monetary management in Islamic finance and the practices followed by central banks in some of the Muslim countries where Islamic banking has been established and introduced. The study proposed establishing and setting an alternative benchmark rate in the Islamic finance industry. The issuance of GDP linked instrument can provide a benchmark rate for pricing products in Islamic commercial banking and provide an avenue for investment in the Islamic money market. The Nominal GDP linked benchmark can be used to benchmark domestic debt as well as foreign debt. Loans from IMF can be benchmarked using nominal GDP growth rate of the lender's country of origin or benchmarked with weighted Nominal GDP growth rate in major donor countries (or in courtiers in the basket of SDR).

Financing in development projects from World Bank and International Development Association (IDA) can also be benchmarked with weighted Nominal GDP growth rate in major donor countries or country in whose currency he financing is denominated. Central Bank in an interest free economic framework will continue to have statutory reserve ratio to contain money supply and credit creation. Introducing Nominal GDP linked instruments would provide a base instrument for OMO and create a secondary market for the instrument. The instrument will enable central bank to manage foreign debt as well. Using Refinance ratio and Qard-e-Hassan Ratio, the central bank will be able to manage liquidity in the banking sector.

Appendices

Appendix 1: List of Abbreviations

BIMB:	Bank Islam Malaysia Berhad
BNM:	Bank Negara Malaysia
BNMN-i:	Bank Negara Monetary Notes-i
CDs:	Certificate of Deposits.
EA:	Emergency Assistance
ESF:	Exogenous Shocks Facility
FCL:	Flexible Credit Line
GDP:	Gross Domestic Product
GII:	Government Investment Issue
IAB:	Islamic Accepted Bills
IBBs:	Islamic banking branches
IBS:	Islamic Banking Scheme
IDA:	International Development Association
IIBOR:	Islamic Interbank Offered Rate
IMF:	International Monetary Fund
IIMM:	Inter bank Money Market
INI:	Islamic Negotiable Instruments
IPDS:	Islamic Private Debt Securities
KIBOR:	Karachi Interbank Offered Rate
LV:	Loan Value
Mo:	Monetary Base
MCC:	Money and Credit Council of Iran
MII:	Mudarabah Interbank Investment
ODA:	Open Deposit Accounts
OMO:	Open Market Operations
ORR:	Official Repo Rate
PRGF:	Poverty Reduction and Growth Facility
QCBr:	Qatar Central Bank Rate
RA-i:	Ar Rahnu Agreement-I
RRR:	Reserve Requirement Ratio
Repo:	Repurchase Agreements
SBP:	State Bank of Pakistan
SBA:	Stand-By Arrangements
SBBA:	Sell and Buy Back Agreement
SAMA:	Saudi Monetary Agency
SBNMI:	Sukuk BNM Ijarah
SDR:	Special Drawing Rights
SLR:	Statutory Liquidity Ratio
T-Bills:	Treasury Bills
TMCL:	Time Multiple Counter Loan
TSR:	Transferable Subscription Right
UAE:	United Arab Emirates
USA:	United States of America
WA:	Wadiah Acceptance
WB:	World Bank
WI:	When Issue

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