CHAPTER 2

INTRODUCTION TO ISLAMIC MONETARY SYSTEM

Charging interest on loans has had a bad name in all 5 religions: Islam, Christianity, Judaism, Hinduism and Buddhism. Nonetheless, economists continued to ignore the moral aspect of charging interest. As time passed, charging interest on loans has become a household practice as it is now taken for granted with no moral qualibles. In the second half of the last century, Milton Friedman and Paul Samuelson came forward with the observation that the cost of producing fiat money is zero at the margin. In order to reach optimality, the price of money, i.e., the rate of interest must be zero. To reach that goal, the economy must be deflated at a rate equal to the real rate of interest. Curiously, Samuelson notice that the goal of optimality cannot be reached within laissez faire. This could be interpreted as the need to change the structure of the financial system. However, Friedman introduced his rule (which is the same as Samuelson’s, but the name of Friedman persisted), which has been taken as applicable to the current system.

The rationale behind Friedman rule is two sided. On the one hand, optimality requires that equality between marginal cost and price. On the other hand, putting a positive price on money would lead trading agents to economize on the use of money as a means of exchange through the substitution of real resources for money in transactions. Such substitution runs contrary to optimality, as total output can be increased with less substitution. The proposal to reach a zero nominal rate of interest created a lot of discussion in the economics academia, but failed to stir concern in the banking community. Central banks took no notice of Friedman rule, indicating perhaps that they thought it impractical. Discussion ensued later about the zero-bound rate of interest and whether it implied a liquidity trap. Further discussion examined the Friedman rule in overlapping generations models in contrast with the infinitely lived representative agents models in models with and without non-distortionary taxes.

Instead of calling on people to lend each other at a zero interest rate, the interest rate is forced to take a zero value or to move asymptotically towards zero, convincing people to hold sufficient real balances in order to benefit from the deflation reward on money. The former case is a case of charity and cannot be used to finance business investment. The latter deflationary policy depends on persuading central bankers. Between the two, we can expect no institutional reform of the monetary system.

Islamic economics presents to us a bold idea of monetary reform. This is based on few rules. First, no sale of present for future cash is allowed. Second, financing is provided through twelve contracts that can be divided into three categories: equity-based finance, sale- and lease-based finance and agency finance. The structure of the monetary system and the way money is created has to change radically. What the monetary and financial system should look like, and how monetary policy is exercised is what we plan to show below, where we can contrast an Islamic economy with a conventional economy.

The Islamic monetary system can best work when all requirements are present, including necessary market regulations, redistributive systems and an enabling sociopolitical environment. However, its partial application is possible and can be useful in creating an Islamic finance industry that competes in open markets with conventional finance. The market test would be critical, as it would show whether Islamic finance can expand its market share through competition and without explicit or implicit subsidies.

THE ALLOCATION OF FINANCIAL RESOURCES: LENDING- VS. PRODUCTIVITY- BASED PROCESSES

In a conventional economy, money is produced in two foundries: the central bank and commercial banks. The central bank issues currency against government liabilities. It means, it borrows from itself, but can lend it mostly to the government and occasionally to banks. Once it is used to finance its operations, money filters down from the government to those who supply it with goods and services. In the other workshop, currency filtered down to the banking system as demand deposits is used to create credit money by lending it to borrowers, which gives rise to derivative deposits. In both workshops, newly created money is loaned to users for a charge. The process of creating and then allocating financial resources in such an economy can then be described as lending-centered or lending-based money creation.

Only in the second round of allocation of financial resources, when currency filters down from the government to its suppliers and when money filters down from banks to household borrowers, only then can some holders of financial resources invest directly into an enterprise. They would be purchasing real assets (stocks) in enterprises based on their profitability.

Many others would prefer to place their financial resources with lending institutions in the form of deposits, bonds, certificates, etc. Lending institutions in turn provide (some of the) financial resources they receive to investors. However, because of their asset- and liabilities-based maturity mismatch, lending institutions maintain the claims they hold against investors in the form of monetary asset, rather than titles to real assets.

The key issue here is that the process of money creation is lending-based. In order to increase the money supply broadly defined, lending by the central bank to government and/or by banks to households must increase. The process of money destruction runs in the opposite direction. This raises an important question: can we base the process of money creation (and destruction) on productivity related factors? In other words, can the tie domestic output and domestic liquidity together? We understand that borrowed money is used to carry out transactions in the real sector, including stock exchanges. But some of it is also used to carry out transactions in debt and risk trading. In the money market, people (as well as banks) borrow money and then sell it against future cash if the interest-rate differential is favorable.

They make bets on prices and interest rates in the financial market through derivatives. If we can tie money creation with the transactions requirements of national output, and remove its tie with lending, and if we can make the money market redundant, the rate of interest becomes irrelevant to resource allocation. Financial resources would be allocated according to criteria related to output, meaning that uses with higher productivity or profitability would take a higher priority in obtaining finance.

We can therefore distinguish between two kinds of decision-making processes related to allocating financial resources. The first kind is the lending-based process, and the second kind is the productivity-based process. The lending-based process encompasses the rational behavior of lenders, while the productivity-based process includes the rational behavior of investors.

A lender is a holder of monetary assets, which are claims to fixed sums of money. He is therefore interested in the solvency of the borrower, in the sense that the present value of the borrower’s net worth is at least sufficient to cover the value of his debt. To ascertain the solvency of borrowers requires information collection and follow-up in which financial institutions specialize.

The lending-based process is an allocation process in which the solvency of borrower holds the utmost importance, and the “productivity” of the borrowing sector is of secondary importance. Therefore, individuals would place their funds with financial institutions of highest interest rates, given their ability to meet repayments and other conditions. In the same way, banks offer funds to consumers as well as producers, as long as they are expected to meet repayment obligations. All lending-based allocative processes in the economy provide for the interaction between demand and supply forces in such a way that sets an equilibrium interest rate. This rate serves as the opportunity cost of liquidity which would in turn play an indirect role to influence the productivity-based process.

Finance through lending is intrinsically inefficient. It suffers from information asymmetry that leads to risks of adverse selection and moral hazard. It is therefore important to insure that whatever productivity-based financing process is used, it must not suffer from information asymmetry that usually exists between borrowers and lenders. It is those two processes: a lending-based creation of money and allocation of financial resources that distinguish the conventional system from an interest-free economy. It will be argued later on that the interest-free monetary economy draws its relative strength from that distinction.
**CHAPTER 2**

**THE CONVENTIONAL BANKING SYSTEM VS ISLAMIC BANKING SYSTEM**

**THE CONVENTIONAL BANKING SYSTEM**

Under the system of commodity money, the supply of metal (gold and silver) controlled the money supply. Monetary authorities played no role in determining the rate of monetary expansion. Policies were developed later to promote the importation of gold through the realization of trade surpluses. In addition, governments practiced currency debasement as well as issuing coins made of non-precious metals. Despite that, bimetallism imposed an external limitation on monetary expansion by monetary authorities.

When fiat money became prevalent, it was thought of being more efficient that commodity money, because of its lower cost of ascertaining quality, transporting and storing. However, the external limitation on the power of the monetary authority to expand the money supply was lost with the retirement of the gold standard and convertibility to gold. In theory at least, monetary authorities can (and sometimes did) issue fiat money at will. Literature on monetary policy concerns itself with the rules to which the monetary authority must adhere in changing the supply of money. Most of these rules are based on the relationship between monetary aggregates, growth on the one hand and prices on the other hand. Money affects growth as it facilitates transactions because it reduces transactions costs. It influences prices because the change in monetary balances is directly reflected into excess demands for commodities.

Ordinarily, in a conventional economy, the central bank stands ready to issue money against interest-bearing claims on the government. Changes in the central bank holdings of foreign assets, unless sterilized, would also lead to changes in money supply. The central bank creates money in two cases, hence. Firstly, when the government (or banks) borrows directly from it and, secondly, when the central bank decides to carry out an “expansionary open market operation”. In the first case, governments borrow to finance a deficit in the budget, which is politically determined. In the second case, the central bank attempts to stabilize the economy through open-market operations. As for the first case, the decision to borrow from the central bank is politically easier than raising taxes and less costly to borrowing from the public. This would make it relatively more attractive for governments to extend their hands to the central bank, which has saved money against foreign assets as well as the effects private borrow on the money supply will be dealt with later on always to oblige.

Financing politically unpopular undertakings as well as an important fraction of the activities of politically weak governments, or governments with inefficient tax structure is always done through this method. Even democratic governments with strong tax systems find it easier to overspend simply because the legislative is usually more flexible when it comes to government internal borrowing. While in both cases the government obtains the resources it desires, borrowing from the public and borrowing from the central bank are not similar in economic effects. Borrowing from the central bank thus, does not necessarily affect the current (nominal) money supply at the same level. However, to the extent it raises future tax liabilities it redistributes wealth from future to present generations.

Borrowing from the central bank, however, changes the nominal supply of money. This has ramifications on prices and, consequently, on the distribution of wealth. If price increases continue, an inflationary process ensues, with its negative implications on macroeconomic efficiency as well as its well-known redistributive effects. Borrowing from the central bank could therefore influence both efficiency and equity. Further effects of changes in the money supply on the real sector cannot be ruled out prima facie, and under certain conditions, can be significant. To make the central bank a lender of last resort to the government is not critical to the stability of the economy. Besides, there is an alternative which is economically, if not politically, superior, i.e., to borrow from the public. However, if the central bank does not issue fiat money against interest-bearing assets, it may be thought of as not exercising its authority over the control of the money supply and, consequently, on the price level. We will show below that there are alternative means to do so.

The currently dominant financial structure can therefore be described as a lending-centered system. Its financial resources are wholly created and then handed down from their owners to users through lending processes. Another important characteristic of the conventional financial system is that the process of money creation is lending-based. Money is created by the central bank to be lent to the government. It is also created by commercial banks, is, in a sense, derived from, and as a consequence of, the currency in circulation. Indeed, the central bank is the sole issuer of legal tender in the system, a concept derived from the idea of a “free economy,” in which the central bank is the lender of last resort to the government, business enterprises and almost everybody else cannot borrow. Only the needy can borrow and only if they find people who are willing to lend them interest free.

The Islamic monetary and financial system must be structured to reflect this basic fact. The principle of financial intermediation analogous to the process of lending cannot be based on borrowing, as this would make it religiously unlawful. The author has previously presented a design for a monetary and financial system that is not based on borrowing (Al-Jarh, 1981). Fortunately, that design has gained credence over time. It will therefore be used as a basis for our analysis.

**CHAPTER 3**

**CENTRAL BANK OF ISLAMIC MONETARY SYSTEM**

**THE CENTRAL BANK**

The central bank is the institution entrusted with the management of the supply of money, which involves the issue of fiat money as well as the control of commercial banks.

**FIAT MONEY CREATION:**

The central bank can open investment accounts in its member banks, in which it deposits whatever money it creates and from which with-drains whatever money it retires. Member banks, as will be seen below, will invest those deposits in the real sector in accordance with the investment policy of each. Profits earned on such deposits could be used in part to cover the cost of central bank operations. Such deposits will be termed central deposits, or CD’s. CD’s can be used as a tool of monetary policy (to create and retire money). They can also be used as a means of financial intermediation, which would add to additional monetary services. The central bank would create an instrument, which could be termed “central deposit certificate”. CDC’s would be sold to the public and their proceeds be invested in CD’s throughout the banking system. Obviously, the CDC’s provide the lowest degree of financial risk in an interest-free economy, since each carries with it a title to a more diversified investment portfolio than any member bank by itself can provide. The rate of return on the CDC’s will approach the average rate of profit on investment for the whole economy.

It is also considered immoral, unjust and a sign of greed. The logic of Islamic religious scholars can be explained further. Being unjust is based on the assumption that money is a barren asset, which cannot produce anything, by itself. To charge for lending money would therefore be unjustified. Greed is symptomatic of the behavior of people who have money and live on interest (in contrast to wages or profits). They tend to get the highest possible rate of interest on the money they lend. Once unjustness of charging interest and its association with greed is established, immorality becomes a conclusion.

As a substitute for the conventional process of money creation, which is based on issuing money in return for government debt instruments, we have just outlined a non-lending based process of monetary expansion. Such process has several advantages. It is an investment-based process. Since central deposits are invested in the real sector by banks, any rate of return would gauge monetary policy performance. It is totally independent of government budget, meaning that the process monetary policy would be depoliticized. The monetary authority will depend solely on monitoring the relationship between both prices and output in deciding upon the (optimal) rate of monetary expansion.

**MONEY, GROWTH AND PRICES**

The function of the management of the money supply is, in a nutshell, to provide for the transactions requirements of the community, especially in a growing economy. While the central bank must set the money supply at the level, which provides the “maximum” amount of transactions services at a certain level of income, it must keep the level of prices stable. It is important to note that it is the real and not the nominal unit of money that produces transactions services. This implies that an increase in the supply of (Nominal) money through greater transactions services for the community only to the extent that the price level stays stable, or increased less proportionately than the nominal money supply.
An increase in the rate of growth of money creates excess demand for goods (excess supply of money) at faster rates. Assuming markets to be sable, equilibrium will be regained. However, the new rates of growth of prices will differ from the old ones depending on price speeds of adjustment (\(a\)), compared to quantity speed of adjustments in all markets. Speeds of adjustment can be related to three factors: the rate of adjustment, the rate of growth of the economy, and the degree of substitutability and complementarity between goods, and the rate of growth of the economy. To illustrate the first point, the rate of growth of prices can be written as

\[
P = P_t - 1, \ldots, n
\]

Where \((P_t)\) is the rate of growth of the price of the ith good, which is equal:

\[
p_i = \frac{dp_i}{dt} = \left(\frac{dp_i}{dr_t}/dr_t\right)/p_t
\]

Where \((si)\) is the excess demand for the ith good.

Equation (2) shows that the rate of growth of the ith price can be decomposed into two factors. The first is the responsiveness of the price of the good in question to changes in its excess demand. The second is the extent to which that excess demand is increasing or decreasing over time. While the first term refers to the price speed of adjustment, the second refers to the quantity speed of adjustment. Speeds of adjustment can be hindered by non-competitive elements on the institutional side of the market, e.g., government regulations, monopolies, etc. They also depend on the degrees of substitutability and complementarity between goods. Given the institutional arrangement as well as the degree of substitutability between goods, speeds of adjustment depend on the rate of growth. This is so because the quantity speed of adjustment is faster with higher rates of growth, as it becomes easier to satisfy excess demands in this case.

**FIGURE (1): THE RELATIONSHIP BETWEEN INFLATION RATE AND THE RATE OF MONETARY EXPANSION**

We can consider the proposition that economic growth attenuates the effects of monetary expansion on prices. Figure (2) shows the monetary expansion lines \(L_1\) through \(L_4\), which are associated with the rates of growth \(g_1\) through \(g_4\), respectively. The proportion of the expansion curve within which prices respond less proportionately to monetary expansion is larger with higher rates of economic growth. Along \(L_4\) \((g_4)\) the rate of growth is so low that any monetary expansion produces equi-proportional change in prices. The portions of the expansion lines, which coincide with the horizontal axis, show that monetary expansion is being fully reflected in growing real balances. As indicated by Figure 2, such non-inflationary monetary expansion would be equal to \(oe_1\), when the economy grows at \(g_1\), and \(oe_2\) when it grows at \(g_2\). Higher, rates of monetary expansion would lead to positive rates of inflation. An economy in which strict price stability, viz., \(P = 0\), is preferred, the monetary authority should choose \(M = oe_1\) or \(oe_2\) when real growth is equal to \(g_1\) or \(g_2\), respectively. Otherwise, the rate of monetary expansion should equal zero. Rates of monetary expansion higher than \(oa_1\), \(oa_2\) or \(oa_3\), when corresponding rates of growth are \(g_1\), \(g_2\), or \(g_3\), respectively would cause correspondingly equal rates of inflation.

**THE OPTIMAL PATH OF MONETARY EXPANSION**

Let us now assume that the monetary authority is bound by absolute price stability (zero inflation rate), and has been carefully monitoring the relationship between the rate of monetary expansion, inflation and the rate of growth. The monetary authority will face a frontier of rates of growth, each associated with a maximum rate of monetary expansion that can be implemented without increasing prices. We can term that rate the optimal rate of monetary expansion or the optimal supply of money. This frontier is represented by the curve in Figure (3) and can be termed the optimal path of monetary expansion or the optimal path of monetary policy. As the rate of growth increases, the maximum rate of monetary expansion rises up to a limit after which any further increase in the rate of monetary expansion would lead to increasing rates of inflation. This is where the quantity theory of money strictly applies.

**FIGURE (3): THE OPTIMAL PATH OF MONETARY EXPANSION**

When the rate of growth is \(g_1\), the optimal rate of monetary expansion is \(e_1\). When growth rises to \(g_2\), the optimal rate of monetary expansion rises to \(e_2\). when the rate of growth is \(g_3\), the optimal rate of monetary expansion is \(e_3\), which is the highest possible rate of optimal monetary expansion. Any further rise in growth will not be associated with higher rates of monetary expansion above \(e_3\).

**EXTERNAL INFLUENCES AND THE MONEY SUPPLY**

In an open economy with no foreign exchange controls, we expect traders across the borders as well as the banking institutions themselves to hold foreign assets. Variations in foreign asset holdings, accompanied by the absence of offsetting monetary policy will have effects on the supply of money. When residents receive foreign exchange, they will either use it to cover purchases abroad (of goods, services, real assets and shares), sell it to other residents who use it for the same purpose, or exchange it from the banking system for domestic currency to finance domestic spending. We must exclude the fourth alternative, which is to hold foreign-currency-
denominated debt instruments. Such instruments would be interest bearing and therefore unacceptably tradable in the domestic market. Naturally, the change in net foreign assets held by the banking system will have a direct effect on money supply. This would distort the optimal supply of money rule, which we have proposed above, namely to tie the path of monetary expansion to the path of real growth, given the relationship between money and prices. The monetarist framework, however, provides few options to avoid such distortion. The first is to neutralize completely all changes in net foreign assets, so that they would have no effect. The second option is to suppose that they be treated as if they were caused by a change in real balances or to add to it. Both processes change the money supply resulting from an increase in net foreign assets. It will also inject an amount approximately equivalent to the decrease in demand deposits perfectly offsetting the increase in real balances. Both absorption and injection would be carried out through the sale and purchase of CDC’s, respectively.

Another option is to neutralize only the changes in the money supply that would cause the path of monetary expansion to deviate from its optimal path. As a third option, the monetary authorities can stand ready to sell or purchase foreign exchange at daily declared prices, which would be set at levels that would enable the monetary authority to keep net foreign assets at levels consistent with the optimal path of monetary expansion. Net purchases of foreign exchange by the central bank can be invested in foreign or domestic projects through member banks. The central bank can therefore keep CD’s in foreign currencies with member banks for this purpose. Meanwhile, it can issue CDC’s denominated in foreign currencies or domestic currency equivalents. The proceeds of selling those CDC’s can be used to finance foreign currency purchases.

CHAPTER 4

MEMBER BANKS OPERATIONS IN INTEREST-FREE SYSTEM

Member banks in an interest-free system cannot follow the traditional modes of operations developed by commercial banks. Since they cannot charge interest, they cannot operate on the basis of taking loans from fund owners and lending them back to fund users. They must undertake direct investment, take equity in the firms they finance and provide the rest of customer’s banking services as well. Such banks have come to be known in the past as business banks or Banques d’Affaires. They are commonly known today as relationship or universal banks.

RESOURCE MOBILIZATION

1. Demand Deposits

These are similar to the checking accounts usually held in commercial banks. They carry no rate of return, but give their holders the right to write checks against them. They could be insured against bank insolvency in a manner similar to that of the FDIC. Such deposits are considered as interest-free loans whose principal is guaranteed by the bank. The existence of demand deposits raises the question of whether the central bank would increase a 100 percent or a fractional reserve ratio. Relationship or universal banks are “large-scale banks that operate extensive networks of branches, provide many different services, hold several claims on firms’ equity accounts,” and participate directly in the corporate governance of the firms that earn the banks as sources of funding or as securities underwriters, (“Al-Jarhi, 2003). It is obvious that with fractional reserves, when traders switch from “high powered money” to “deposit money” and vice versa, the total supply of money will change. However, with one hundred percent reserves, such a switch will change the composition of money, leaving its total supply constant.

Milton Friedman uses the above reason to suggest the abolition of fractional reserves (Friedman, 1959). He argues that fractional reserves caused the monetary system to suffer from an “inherent stability”. While Friedman’s argument is correct, it should not be the only basis for abolishing fractional reserves. Many writers believe that the “production” of money is costless (Mints, 1950), Tolly, 1957, Friedman, 1959 and 1969, Samuelson, 1968, and 1969, Tobin, 1968) at the margin, but not at the average. Our approach here suggests that adding real balances to the existing stock is more costly just as increasing a print machine.

The central bank has to watch for the changes in prices while keeping an eye on economic growth. Traders would require assurances of the relative price of money and its future developments, so that their expectations would not misread the direction of monetary policy. Such a process of “asset characterization” is costly (Al-Jarhi, P. 373 ff).

In a fractional reserve system, the process of creating derivative deposits is accompanied by changes in the money supply resulting from substituting deposits and cash for each other. Both processes change the cost of producing real balances. Specifically, such changes in the money supply resulting from banking as well as depositors’ behavior under fractional reserves make it more costly to maintain the existing stock of real balances or to increase it in addition. Banks have the right to create money through derivative deposits and earn interest on it. This represents unjustifiable redistribution from the public to banks shareholders. Contrary to what such shareholders would lie in the higher income groups, a fractional reserve system is equivalent to a regressive tax. Such tax is non-neutral, as it affects allocation in favor of the banking sector. We consider all the reasons above, the inherent instability and the cost of producing real balances, the allocative and redistributive effects sufficient to warrant the adoption of 100 percent reserves against demand deposits.

2. Investment and saving deposits, Mudaraba based.

Mudaraba bank can establish new firms providing their full capital initially or acting as catalyst to attract other equity holders. They can also hold shares in existing enterprises and participate in their management. The bank can use its expertise to give technical assistance to those companies, in order to enable them to be more profitable. Geographic proximity to the projects involved, possession of first hand information about their activities, and relative familiarity with people operating them all afford banks excellent opportunities for profit. Considering their ex- pertise, banks can increase the degree of business success in their communities. Musharaka or equity investment can be made for an indefinite period, or for a specific period. The latter is called diminishing equity investment or Musharaka Mutanaqissa. Each year the other partner uses part of his or her profit to purchase part of the bank’s equity. At the end of the period, all the bank’s equity share would have reverted to its partner.

Some visualize Musharaka as something that businesswomen want to avoid as a means of finance for two reasons. First, the company has to divulge its profits and second it has to share them with the bank. This can be more expensive than conventional or interest-based finance. Islamic banks have developed ways to make Musharaka more attractive. First, with Musharaka, the bank shares risk with its partner and provides technical assistance while participating in management. Second, the bank can participate in an extra interest on its partners through setting a hurdle profit rate as a maximum rate of profit taken by the bank. The rest would automatically be assigned to partners.

2. Profit-And-Loss Sharing (PLS) Finance, or Mudaraba

Mudaraba banks can use their vantage point in the firms in which they hold equity to monitor their operations cheaply and assess their performance, which can be provided on a profit-and-loss-sharing (PLS) basis. This category of finance provides short-term funds to finance business needs for working capital for the duration of the production cycle. It is also a good outlet for funds that are being employed in small scale businesses. This type of finance is typically offered to those firms which cannot be financed by banks would be netted out of costs, and the remainder is shared with banks according to an agreed upon formula. Musharaka as a mode of finance can be unrestricted, so that the fund user can use them in all aspects of his business. It can also be restricted to specific activities.

The time length of such operations could vary from six to twelve months for industrial and agricultural projects. Yet it could be as short as 60 to 90 days for commercial ventures. Because of the presence of information asymmetry in Mudaraba as a mode of finance, it is best provided side-by-
side with Musharaka, in order to eliminate the cost of monitoring. Such behavior would be similar to that of universal banks.

3. Financing through agency arrangement

Banks can provide funds to fund seekers through agency or Wakala agreements. Fund users would present a feasibility study regarding the prospective performance of their investment activities. On the basis of this study, banks provide funds on Wakala basis, where the fund user acts as agent to the bank in return for a fixed commission. Banks in return get the full profit of their commitment. The Wakala mode of finance is a good way for interbank funds as well as syndicated finance. It could be one of the ways of establishing an interbank market.

4. Leasing (Ijarah) Activities

Leasing or Ijarah can be two kinds, operating lease or financial lease (Ijarah Muntahia Bettamelek). Under the first type, the bank sells the usufruct of assets it acquires their titles or their services. Under the second type, the bank leases an asset while commuting itself to transfer its title to the lessee at the end of the lease. Installments paid would include part of the principal as well as the value of the usufruct of the asset under this lease. Banks can purchase means of transport (ships, planes, etc.), industrial equipment, buildings, and others to lease them to users in return for periodical installments. The lease agreement terminates with a title transfer to the user.

While leasing contracts can provide a means to serve customers in a way that is flexible enough to cater for varying need, they provide the bank a way to invest in an equity, which transfers itself into liquid cash gradually over a certain period. Customers may seek Ijarah finance for existing or (currently) non-existent assets, like a ship or airplane to be built or a house to be constructed. Banks would require in this case customers to commit themselves to leasing the assets through forward Ijarah. This is a lease contract that takes effect, once the assets in question are delivered to the lessee.

5. Commodity Finance

Banks can finance purchasing commodities and services on credit. This would entail acquiring commodities from suppliers for cash (benefiting from suppliers credit and quantity discount) and selling them to customers on credit. Such activity appears to be rather unique, as it would require banks to trade. This can be done in several ways.

One way of doing it is that banks acquire commodities first and then offer them for sale on a deferred-payment basis. This is called Bai‘ Bethanah Ajil. Alternatively, banks can come forward to banks to specify in application the commodities they would like to buy, while perhaps attaching offers from suppliers and committing themselves to purchase the commodities at an agreed cost plus price. This is called Murabaha. When a customer wants to acquire commodities or assets which are not currently on hand, banks can purchase them from their manufacturers through a command to manufacture or Istisna’ contract. Banks can then sell the same to customers through parallel manufacturing contract, financial Ijarah, or a deferred-payment sale contract.

When goods would be available in the future, regardless the necessity to manufacture them, they can be purchased by banks by cash payment against future delivery. This called Salam. Such method is particularly effective in providing finance of working capital in agriculture and industry. Naturally, banks need to find someone to purchase the same commodities at the time of their delivery.

6. Use of Holding Companies to carry out investments

We have seen above that banks take equity in firms, and provide them and households with customers with finance through a variety of modes. Such activities may be considered to be far outside traditional banking activities. In order to keep a reasonable amount of division of labor in the banking industry, for the sake of economic efficiency, banks can establish specialized subsidiaries to handle their equity, PLS, leasing and commodity finance finance. Banks need only to hold part of the equity of their own subsidiaries and attract the rest from other shareholders. They also would have an opportunity to provide interim financing to subsidiaries.

We have so far specified 12 contracts that can be used singly or in combinations to provide finance to fund users. They include:

1. Musharaka,
2. Dividending Musharaka,
3. Unrestricted Mudaraba,
4. Restricted Mudaraba
5. Unrestricted Wakala,
6. Restricted Wakala,
7. Operational Ijarah,
8. Forward Ijarah,
9. Deferred-payment sale,
10. Murabaha sale,
11. Istisna’,
12. Salam

The twelve contracts replace the classical loan contract (present for future cash), which is the only ingredient used in conventional finance. The twelve contracts does not exhaust the list of modes, as they can be used also in combinations, e.g., in one finance transaction we can mix Musharaka and Ijarah. Mixing and matching of the twelve contracts increases the number of financial products far beyond what is available in conventional finance. This implies a much larger room for financial innovation.

INFORMATION SYMMETRY

With the exception of Mudaraba, information is perfectly symmetrical with all twelve modes of finance. This means that both the bank and the finance user are equally informed about the use of finance, thereby excluding possibilities of moral hazard and adverse selection. In addition, information can be made symmetrical with Mudaraba, when it is mixed with Musharaka finance. This would be a welcome conclusion for banks as finance providers, as their risks would be more limited than in conventional finance.

BORROWING REQUIREMENTS

Since banks do provide long and short-term capital to enterprises on equity or profit-sharing basis, borrowing by business enterprises would become unnecessary. In addition, the provision of commodity finance and leasing finance would cover most of the needs of households. Yet some borrowing may still be needed to balance one’s income stream with his consumption stream. This is the case when individuals face emergency situations or special needs that would require short-term bridge financing. Such individuals would be expected to fall in low-income brackets. A modest amount of interest-free lending must be provided as a philanthropic activity.

The central bank can inject into the system a regulation that each bank would devote a small percentage of its resources for interest-free lending. The central bank can supplement such resources from its CD earnings. Naturally, since loans would be interest-free, funds have to be rationed according to some social criteria. Some members of the community would be interested in making a part of their financial resources available for interest-free lending purposes. While this would mean that it could be encouraged by stable prices. Some individuals may hesitate to lend for being unable to assess the borrowers’ future earnings. In addition, since they are non-specialists, it would be relatively more costly for individuals to do so.

The central bank can overcome this problem by issuing central lending certificates, CCL’s, which carry no return, but are guaranteed to be paid on maturity. Proceeds of CCL’s can be made available to member banks, which would lend to borrowers after proper assessment of future income, and application of social criteria, as rationing would certainly be required.

CHAPTER 5

TREASURY SYSTEM OF ISLAMIC PUBLIC SECTOR

ECONOMY

The picture of the monetary and financial sector of any economy would be incomplete without the details of the operations of the public sector. Islam sets specific rules to guide the public sector in a way that would not contradict with interest-free banking. The functions of the public sector have been traditionally divided into what is known to be the allocative and the distributive branches (Nisargi, 1959). While this would bear similarity to the Islamic structure, there are some differences still.

In an Islamic economic system, the allocative branch takes responsibility of the mineral resources, which are generally considered public property. This adds another feature to the allocative branch, which is traditionally known to be in charge of the finance and production of public goods. Handling monopolies, ensuring orderly markets, correcting for externalities, and the like can be placed in another division of this branch, which would be termed the market-order division. The distributive branch in the Islamic system is based on the collection as well as the distribution of AL Zakah.

THE ALLOCATIVE BRANCH

1. Division of Mineral resources:

These ownership rights in these resources does not necessarily imply state production. The state can involve itself in the production of minerals through state-owned enterprises although it would be more efficient to enfranchise private producers for this purpose. The mineral Resource Division assumes the responsibility of mineral production, directly or indirectly, the proceeds of which are added to the Treasury to be used in financing government operations.

2. Division of Public Goods

Public goods are generally known to be those goods whose consumption is collective, e.g., defence, education, certain categories of health services, and so forth. While the details of their provision are determined through the political process, the state stands responsible for providing public goods to its citizens. Public goods may be produced directly by government owned public enterprises or, more efficiently, by private enterprises. They are financed by the net proceeds from the mineral resource division and from other taxes and revenues. Some taxes can be of special practical importance when the exclusion principle can be applied to the distribution of semi public goods, as in the cases of toll

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roads, higher education, security and other services provided by municipalities authorized to levy (property) taxes, and the like. Other taxes would include income, sales, and international trade taxes. Revenues would include the net profits earned by the central bank on issuing money and then transferred to the government. Some of the public goods, like defense, can be financed from Al Zakah proceeds given enough funds from that source after satisfying the poor.

3. Division of Market Order

The fragility of private assets can always be disturbed by the rise of monopolies, the existence of externalities, and other market failures. Dealing with such problems could involve a certain tax-subsidy network or direct regulations by the government. Most of the time, what is required is a tax-subsidy scheme. In extreme cases, direct control may be called for. The finance of such operations could be accomplished through balancing tax-paid surpluses with subsidies payments. It may also call for special taxes to finance the maintenance of “orderly markets.”

THE REDISTRIBUTIVE BRANCH

A distributive tax, called Al-Zakah is levied on the following:
1. Monetary assets, including cash, demand deposits and debt, when held for a year.
2. Titles to real assets, e.g., shares, profit sharing funds, etc., when held for a year.
3. Gold, precious metals, and diamonds, based on their current market value, when held for a year.
4. End of year Net earnings of assets not included in the above categories, like housing not occupied by proprietor, factories, enterprises operating in production, trade and the like.
5. Agricultural crops (including bee-hive production).

Mineral resources are considered wealth and not income. The government should not spend earnings from selling such resources, but should invest such earnings and only apply the net income of their investments. The tax rates, which differ from one category of assets to another, are applied on total holdings over and above a certain level, called Nisab that reflects the cost of living of the taxpayer. The proceeds are earmarked for certain purposes on the top of which poverty reduction lies supreme. This is done through two kinds of redistributive policies: wealth maintenance and income maintenance policies.

The poor, i.e., those whose income (and wealth) is below a certain minimum level, are classified into two categories, those capable and those incapable of work. Those capable of work are given extra assets to use in order to earn income that would place them above the poverty line. Those incapable must be guaranteed a minimum level of income to cover their basic needs. It is commonly understood that the process of redistribution continues every year and poverty is reduced gradually and eventually eliminated in the long run for all capable of working. Banks would play a role, as wealth maintenance policies can be implemented through the finance of micro enterprises, which the poor own and manage.

Questions have been raised regarding the ability of Zakah to eradicate poverty and over what period of time. Answering this question should depend on empirical data drawn from experiences of countries that apply the system of Zakah conscientiously and effectively. Unfortunately, we know of no country that does exactly this. It is true, even in countries, which claim to apply Islam, like Saudi Arabia, Iran, and Sudan. Lack of continuous application of Zakah can be related to several factors. Islamic economics have not practiced on a countrywide scale for a long time. Developing countries, where most Muslims live are riddled with corrupt governments which people do not trust with their Zakah funds and prefer to give them directly to the poor they know.

This deprives Zakah from effective management at the macroeconomic level. Third, political decisions in such countries are not in the hands of the poor. Fourth, poverty eradication has not been an explicit priority. Instead, political stability takes precedence. This is usually realized through huge spending on internal security. Therefore, we have to do with a simple arithmetic example. However, it is not easy to simulate Zakah application using simple arithmetic. The rates of Zakah are applied sometimes to assets (as in cash, inventories, precious metal, equity shares) and sometimes to income (like crops, dividends, etc.) Zakah rates may also differ according to tax base. This may require a separate research by itself.

FISCAL STRATEGY AND POLICIES

The fact that the government does not have access to borrowing from the central bank is balanced by the fact that the central bank has a with exclusive right to issue money in the form of central (investment) deposits and consequently earns all the seignorage on such process. The surplus of the central bank is automatically made available to Treasury to draw from for use in covering part of its expenditures. In order to provide some perception of the amount of seignorage available to the government, we can safely assume that the supply of money would amount to 25 percent of GDP. If this amount were to net 6 percent of its value as income when invested in the real sector through the banking system, available seignorage could amount to 1.5 percent of GDP. As a matter of fact, deficits exceeding 1.5 percent of GDP are considered excessive by many. That could easily cover a large size deficit in the government budget. In as Islamic economic system, the government has two concerns. First, it must find a fiscal strategy, to mobilize resources to cover its expenditures and keep its budget balanced. Second, it must consider the role of its fiscal policies when circumstances require.

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CHAPTER 6

SHARIAH-BASED FINANCIAL INSTRUMENTS

A review of the balance sheets of the central bank as well as member banks will show the different financial instruments, which compose the "demand side" in the financial market. The "supply side" is considered later in order to complete a picture of the financial market.

BANK BALANCE SHEETS

<table>
<thead>
<tr>
<th>THE CENTRAL BANK</th>
<th>BALANCE SHEET (100% REQUIRED RESERVE RATIO)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASSETS</strong></td>
<td><strong>LIABILITIES</strong></td>
</tr>
<tr>
<td>Cash in Vault</td>
<td>Central Deposit Certificates</td>
</tr>
<tr>
<td>Central deposits with banks, restricted and unrestricted</td>
<td>Central Deposits, Restricted And Unrestricted</td>
</tr>
<tr>
<td>Lending Accounts with Member Banks</td>
<td>Restricted investment deposits</td>
</tr>
<tr>
<td>Other investments made from bank reserves and retained earnings</td>
<td>Investment Accounts for Government and Public corporations</td>
</tr>
<tr>
<td>Net Foreign Assets</td>
<td>Monetary Base – demand deposits</td>
</tr>
</tbody>
</table>

The central bank holds central deposits and loan accounts with member banks, which, in addition to net foreign assets and cash in vault, constitute the central bank assets. On the liability side, the public holds central deposit and central lending certificates. Unlike the traditional process of money creation, issuing money by the central bank is not a liability that is offset by holding debt instruments (government securities). In our case, money creation increases central bank deposits with member banks.

MEMBER BANKS

Member banks place their resources in equity (direct investment), in profit-sharing accounts, leasing and commodity finance accounts. In addition to cash in vault and reserves with central bank, that makes the asset side.

<table>
<thead>
<tr>
<th><strong>ASSETS</strong></th>
<th><strong>LIABILITIES</strong></th>
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<tbody>
<tr>
<td>Cash in Vault</td>
<td>Demand Deposits</td>
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<tr>
<td>Reserves with Central Bank</td>
<td>Central Deposits, Restricted And Unrestricted</td>
</tr>
<tr>
<td>Equity in Subsidiaries, And Other Enterprises</td>
<td>Unrestricted investment deposits</td>
</tr>
<tr>
<td>Accounts With Fund Users:</td>
<td>Restricted investment deposits</td>
</tr>
<tr>
<td>PLS Accounts</td>
<td>Mode-restricted deposits</td>
</tr>
<tr>
<td>Leasing Accounts</td>
<td>Project(s)-specific deposits</td>
</tr>
<tr>
<td>Commodity Accounts</td>
<td>Sector-specific deposits</td>
</tr>
<tr>
<td>Assets owned by special funds and portfolios</td>
<td>Unrestricted Investment Deposit Certificates</td>
</tr>
<tr>
<td>Net Foreign Assets</td>
<td>Restricted Investment Deposit Certificates:</td>
</tr>
<tr>
<td>Lending Accounts</td>
<td>Project(s) Specific Certificates</td>
</tr>
<tr>
<td>Central Lending Funds</td>
<td>Sector Specific Certificates</td>
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<tr>
<td></td>
<td>Mode Specific Certificates</td>
</tr>
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<td></td>
<td>Fund Shares</td>
</tr>
</tbody>
</table>

The central bank income statement would include income earned on its central deposits and loan accounts with member banks. On the liability side, the buying (purchase) of central deposits and central lending certificates will be reflected.

FINANCIAL INSTRUMENTS

Savers in the model presented have three investment alternatives each of which is discussed in what follows:

I. SHARES

A. CORPORATE STOCKS

A saver can buy stocks directly and becomes a stockholder. This affords him the direct participation, to the extent of his capital, in the management of the company. If his savings are substantial, he can guide them on holdings in different companies. A proper diversification scheme can be applied in this respect. In an economy where private enterprise has a significant degree of freedom, stocks would be easy to trade and change hands between different shareholders. To the extent this is true stock prices should reflect a "market consensus" on the expectations of the future earnings of each respective enterprise. However, this does not necessarily take place when speculative (rather than investment) transactions dominate the market. Speculation tools range from trading on the margin, short sale, and trading in derivatives. Interestingly enough, such transactions are not allowed in Islam, as they are considered gambling (zero sum games). We can therefore rest assured that stock prices would be much closer to fundamentals in an Islamic economy that would be in a conventional one.

B. FUND SHARES

Banks and other financial institutions can form special funds with special objectives, regarding risk, return and liquidity. Such funds would hold a variety of stocks as well as investment deposits and certificates. Instead of holding few shares in enterprises, fund shares give individuals an opportunity to choose the combination of financial asset holdings that suit his preferences by just holding those shares.

II. SUKUK

A. MEMBER BANK Sukuk

After more than a quarter of a century of practicing Islamic finance, Islamic financial instruments came to be known as Sukuk18. We have instead used the term "certificate." We will therefore keep the old name, followed by the use of the new terminology. Member banks offer two categories of certificates or Sukuk.

Unrestricted investment certificate, UIC’s (Mudaraba Sukuk). Sukuk in Arabic is the plural of Suk, which literally means a title document. Notably, the word check is a corrupt version of the word Suk. Nowadays it denotes a title to a common share in one or more assets, which are usually income earning. Sukuk bears are entitled to a proportional share of the income resulting from the underlying assets. The proceeds of unrestricted investment certificates would enter the general pool of member bank investment. Its holder would be entitled to an average rate of profit on all operations done by the member bank. It is the closest thing to holding a stock in the bank itself, although it does not carry a voting power. In addition to benefiting from the expertise, the UIC’s provides a greater degree of diversification. This could mean lower risk for savers.
UIC’s can be issued for terms to maturity. They could be as short as one week and as long as several years, depending on the range of bank operations. Restricted investment certificates, SIC.

2.Restricted Investment Certificates (Restricted Mudaraba Sukuk)
Investment certificates can be issued by object of investment or financial modes. As and object of investment, they can be restricted to investment in one or more projects, or a specific sector/20. When restricted to certain finance modes, they can be PLS, leasing or a mixture of any two or more finance modes in proportions that suit the preferences of savers.

3.Central Deposit Certificates, CDC (Central Bank Sukuk)
As Mentioned above, a CDC gives its holder a share in the central bank deposits, which are being invested with all member banks. This makes it the most diversified investment in the economy. In addition, since it involves two layers of financial intermediation, namely banks and the central bank combined, it should be the safest instrument available in the whole economy. The central bank allocates its CI's among banks according to profitability, liquidity, and risk. By using those traditional investment criteria, the central bank would encourage both investment and banking efficiency in the economy, as relatively more efficiently operating member banks will obtain relatively greater shares of the CDC proceeds. This ultimately leads to high rates of economic activity for the whole economy, especially if the aggregate amount of CD's is significant.

Being relatively more familiar with banks than individual households, the central bank can make judgments that are more reliable on the performance of each. This further reduces the financial risk to the CDC holder. Obviously, CDC’s would have a wide secondary market, for they are readily tradable. Moreover, since they are titles to CD's, they can be redeemed for their face value plus dividend through the central bank.

4.Central Lending Certificates, CLC’s (Central Lending Sukuk)
As mentioned before, CLC’s are titles to a fixed sum of money. Their proceeds from their sale are used by the central bank to lend borrowers whose future income expectations warrant their solvency. Besides, the CLC’s do not give any rate of return to their holder. It may be doubted that people would want to hold “barren” assets, when a wide spectrum of financial assets are available. All these reasons would explain that.

In addition, the central bank could guarantee the instant encashment of CLC’s. Islamic teachings would not allow the same for other certificates. This makes them both safe and liquid. Considering that a holder would have to pay AL-Zakah on CLC’s (2.5%) it would appear that people would hold them for very short periods as good cash substitutes; that is considering the cost of demand deposits and of safe deposit boxes. Only philanthropic motives could make the amount of CLC’s significant.

B_NON BANK SUKUK
1. ASSET OWNERSHIP Sukuk
Asset ownership Sukuk represent common shares in a portfolio of assets. Sukuk holders are entitled to proportional shares in the proceeds of their sale or the sale of their usufruct.

2. Usufruct Sukuk
Usufruct Sukuk represent common shares in the usufruct of a portfolio of assets. Sukuk holders are entitled to proportional shares in the proceeds of selling such usufruct (subleasing the underlying assets)

3. Services Sukuk
Services Sukuk represent common shares in the services to be given by services providers that undertake to make them available to others in return for agreed fees, either directly or through firms, means equipment, e.g., medical, educational and transport services; financial and legal consultancies and engineering designs. Services Sukuk holders are entitled to a share in the price of reselling the services provided.

4. Mudaraba Sukuk
Mudaraba Sukuk represent common shares in Mudaraba capital (capital provided to some investors to be invested on the basis of profit sharing. Sukuk holders are entitled to proportional shares in both the principal and the profit.

5. Musharaka Sukuk
A partner in a joint venture issues Sukuk, representing common shares in his interest in the joint venture (JIV). Sukuk holders are entitled to shares in the dividends due to the JIV, as determined by the agreements among the shareholders of the joint venture. They bear proportionately their shares in losses.

6. Ijarah Sukuk
Ijarah Sukuk represent common shares in the usufruct of assets acquired for resale (sublease). Ijarah Sukuk holders share proportionally the proceeds of selling the usufruct (the sublease).

7. Salam Sukuk
Starting with some merchandise purchased through Salam (price is paid upfront and merchandise delivery is deferred to a later date), the merchandise owner securitizes his/her merchandise through Salam Sukuk. Sukuk holders own proportional shares in the merchandise and are entitled to proportional shares in its price when sold.

8. Istisna’ Sukuk
Starting with someone contracting with another party to manufacture one or more assets through an Istisna’ contract (price would be paid, upfront, according to stages of production, during or after production), the purchaser securitizes the assets into Istisna’ Sukuk. Sukuk holders own proportional shares in the asset to be manufactured. They are share proportionately the proceeds of selling such assets.

9. Murabaha and deferred-payment-sale Sukuk
Sometimes would contract to purchase some assets or merchandise on Murabaha from a second party. It means that sale would be made at cost plus markup, and merchandise/assets are delivered upfront and price is paid upon in lump sum payments. Alternatively, merchandise/assets are purchased at an agreed price without reference to cost with instant delivery and deferred payment. The merchandise/asset owner securitized their asset into Sukuk. Sukuk holders would own a common share in the merchandise/assets and are entitled to a proportional share in their sale proceeds.

III. DISTINGUISHING FEATURES OF ISLAMIC FINANCIAL INSTRUMENTS
1. All Islamic financial instruments represent titles to common shares in companies, assets or merchandise, but not to future cash. In other words they are equity-based financial instruments.
2. The only exception to the above rule is the central bank lending Sukuk. They represent a title to a specific sum of future money. However, they carry not rate of interest. We can therefore call them zero-interest rate bonds.

3. Since Sukuk are based on ownership of real goods, they would attract future cash (price) expectations. The central bank can therefore allocate such assets to Sukuk market according to productivity or investment criteria.

4. In Islamic financial market, there are no instruments that reflect risk trading, like options and other derivatives. As previously mentioned risk trading is considered as zero-sum games or gambling and is prohibited by Islam.

CHAPTER 7
FINANCIAL MARKET EQUILIBRIUM IN ISLAMIC MONETARY SYSTEM

ALTERNATIVE USES OF MONEY IN AN ECONOMY WITH A MONETARY INTEREST RATE
In the conventional economic system within which we live, the alternative uses of money are centered not on the function of investment but on the function of lending. When money is directed to any alternative use, its opportunity cost is considered to be the rate of “return” on the safest and most liquid financial asset, viz., government securities. Since those securities are interest bearing assets, their rate of interest is the opportunity cost of placing money in other uses. It may be pointed out, however, that circulation of money is necessary to place money in government securities. Hence, there is as such an opportunity cost the rate of return on the asset with the highest yield. It may be noted that “lending” as a process is distinct from “investing”. The former is based on solvency assessment, while the latter is based on production activity assessment. In the former case there is no concern for future price expectations. Yet, a saving process, which is lending centered creates a mechanism of price expectations, which would be different from the corresponding process created by an investment-centered saving process. This is because the mechanics of money creation differ between the two cases.

In a lending-centered economy, economic agents tend to associate changes in the price level with monetary growth. This is so because the prevalent method of monetary expansion or contraction is influenced, in the first instance, by the desired level of government expenditures. This has consequences on the prices expectations. The central bank tries to manage such consequences through the use of available tools. However, its ability to do so is by no means free from constraints. When the government expands the money supply by using its prerogative to sell securities to the central bank, the latter can attempt to offset such a move by selling back some of those securities to the public. Yet, even with a fairly wide market, such an action will raise the monetary rate of interest.

The cost of money would rise, and economic activities would be restrained in the private sector while expanded in the public sector.

The rate of interest, as the cost of borrowing would therefore become a major determinant of factor prices, the cost of capital would be determined by the rate of interest as the opportunity cost the rate of inflation. However, this magnitude can be reached only when the central bank is capable of completely offsetting the initial government monetary expansion. Although total offsetting is hardly conceivable, it could lead to the contraction of the private sector and an expansion of the government sector. This leads to a government monetary expansion and a contraction of the private sector, which will compare the rate of monetary expansion with the rise in the rate of inflation. An excess of the former over the latter would justify expectations of further inflation, until they are equalized. We can postulate then that in lending centered economies price expec- tations compare the rate of monetary expansion with changes in the rate of inflation.
When there is no "monetary" rate of interest, the government carries its monetary expansion in a way similar to that outlined in Ch. II.

In this case, the central bank would not allow any monetary expansion, which would not lead to a justifiable expansion of real balances. Moreover, all monetary expansion is invested in CD's, which has ramifications for savings as well as on market fundamentals. One method of monetary creation in investment-centered economies forces economic agents to look into investment activities in general, and factors markets in particular, for a clue to price expectations. Therefore, we can safely claim that in investment-centered economies, price expectations are productivity-oriented. We can also add that the familiar equalization of opportunity cost of money and the rate of return on the margin, is only illusory. Savings are channeled through the banking system on the basis of interest rate expectations. Meanwhile, the proposition sector considers those savings expectations. When the saving process is lending-centered, interest rate expectations dominate productivity expectations, a case of a tail wagging its dog.

ALTERNATIVE USES OF MONEY IN AN INTEREST-FREE ECONOMY

In contrast to the previously outlined system, an interest-free economy gives a minute role to the process of lending. Money is issued and allocated to different uses on bases that are related to growth and productivity and far removed from the political connections with public sector requirements. Lending plays an insignificant role in the interest-free economy. Considering safety, central lending certificates, CLC's are quite safe. They are also liquid, due to their encasability, but so is money. Yet, to hold a certain amount of money for a full period of a year implies getting no yield while having to pay Al-Zakah rate of 2.5% that is usually levied on monetary balances. This means that the net rate of return on those assets is negative. Such applies to money holdings as well. In general, it applies to all monetary assets, i.e., claims to a sum of money.

Therefore, lending or holding monetary assets in general is not the "next best" alternative to investment. In an interest-free economy, the investor considers placing his money into central deposit certificates, CD's as his next best alternative use of money. The latter is somehow peculiar to an interest-free economy, since it gives the highest degree of safety and the lowest degree of risk for income-earning financial assets. In addition, CD's with short-term maturities should be encasable with a notice that is shorter than other income-earning assets. This places them in liquidity next to CLC's. Since central deposits are allocated to banks according to efficiency criteria, the net rate of return represents the average rate of return on opportunities lying on the production frontier of the whole economy. It is therefore possible to say that this rate of return becomes in itself the opportunity cost of money and the benchmark for all uses of money. Noting that the proceeds of central deposit certificates are invested in productive uses, this makes the interest-free economy an investment-centered economy.

Investors consider the safest possible investment opportunity, rather than the safest possible lending opportunity, as their next best alternative. They do not consider the safest possible lending opportunity at all. In this way, money and investment markets are effectively interconnected, for money holdings are considered in comparison with investment opportunities directly and not through a scheme of financial intermediation based on lending.

THE DEMAND FOR MONEY IN A CONVENTIONAL ECONOMY

The study of the demand for money in a conventional economy starts with distinguishing between transactions, precautionary and speculative demand for money. Ultimately, all three demands for money are added together in one aggregate called the demand for money (Keynes, 1936). Whether treating this demand was done through the inventory approach (Baumol, 1952) or the portfolio approach (Tobin, 1958), all analysts agree that the quantity demanded for money is inversely related to the rate of interest.

One of the pillars of monetary analysis under the conventional monetary structure is what is called "inelastic expectations". This means that agents believe in the existence of a natural rate of interest that reflects economic fundamentals. When the rate of interest rises above or declines below the natural rate, agents believe that it will return back to its original level. When the rate of interest rises, bond prices decline. Since agents expect the rate of interest to decline in the future and consequently bond prices to rise, they find an opportunity to make profit. Speculators switch from cash balances to bonds. When the rate of interest rises, they switch from bond to cash balances. Thereafter, we find that the quantity demanded increases when the rate of interest declines and vice versa. This analysis represents the theoretical basis for the downward sloping liquidity preference curve.

We can therefore conclude that people in the conventional system hold money for speculative purposes either when they expect prices to decline or when they expect the rate of return on investment to rise, both situations would be interrelated. Expectations of lower future prices or higher interest rates will both lead to a shift from real and financial assets into money, thereby causing a decrease in asset and bond prices, which is equivalent to an increase in the rate of interest.

The DEMAND FOR MONEY IN AN INTEREST-FREE ECONOMY

A. THE ROLE OF THE RATE OF RETURN ON CENTRAL DEPOSITS

We can now ask how the demand for money would likely be in the interest-free economy that we have so far proposed for an interest-free economy. Such question could be answered through understanding the nature of the rate of return on short-term central deposit certificates, CD's. We have previously stressed that holding those certificates represents the next best alternative to holding cash. We can therefore infer from this that the CDCC's interest rate could perform the following functions:

1. A benchmark for investment. In this regard, we can consider the whole spectrum of investment opportunities, including the CDCC's of comparable maturity to the investment in question.
2. A rate of discount for future income streams expected to accrue on financial and real assets through the process of speculative expectations. When the saving process is lending-centered, interest rate expectations dominate productivity expectations, a case of a tail wagging its dog.

A tool and an indicator for feasibility studies and business planning.

4. A market price for the allocation of resources.

We can therefore conclude that the demand for money must be directly related to the CDCC. When that rate rises, agents will find that they must economize on the use of monetary resources in transactions and switch some cash balances to investment. When it declines, agents will find that holding money has become less costly, thereby encouraging them to increase their money holdings. In other words, the demand for money would be such that the quantity demanded is inversely related to the CDCC.

SPECULATIVE DEMAND FOR MONEY

It is true that in an interest-free economy, the central bank would replace the rate of interest. Yet, speculative demand for money should not increase with expectations of higher future returns on CD's. The CDCC's interest would automatically be translated into the market into higher prices of investment instruments. The rate of CDCC's is used to discount the stream of future expected returns on other instruments into their present values. When it is expected to be higher, the expected returns of such instruments would be higher, since the latter is some kind of an average of the former. Moreover, and for the same reason, the rise in the expected returns of investment instruments would always be higher than the rate in the CDCC. The final conclusion is that expectations of higher CDCC will not lead to a decline but a rise in the prices of investment instruments.

An expected decline in the CDCC rate must be associated, because of reasons similar to above, with an expected decline in the prices of investment instruments. Expectations of such decline in the rates of return on financial instruments will not lead to a rise in speculative demand for money unless the rates of return are expected to take a negative value that is less than the rate of zakah on monetary assets with a negative sign. In an interest-free economy, prices should be stable, since monetary growth is tied to the rate of change in prices. Nevertheless, if prices were expected to decline, because e.g., some policy error, people would revert to money, if the decline exceeds 2.5 percent. They sell some of the investment instruments they hold and for cash.

While the economy can adjust itself back to equilibrium through changes in the prices of investment instruments, the effects of a rise in speculative demand for money can be easily reversed through monetary policy. This is more assured since all monetary growth is automatically translated in CD's, which flow through member banks to investors.

MARKET EQUILIBRIUM

From the above discussion, we can define the following functions:

\[ S = S(p, Y) \] (3)
\[ I = I(p') \] (4)
\[ 0 = \int S(p', Y) - I(p')dp' \] (2)

Where \( S \) is savings, \( I \) is the rate on CDCC of shortest maturity, \( Y \) is real national income, and \( p \) is money. Superscripts \((h)\) and \((g)\) refer to household and government, respectively. Equation (3) expresses savings as a function of the average rate of return on investment as well as on the level of real national income. Equation (4) expresses private investment as a function of the average rate of return on investment. A part of public investment, namely investment in the exploration of minerals is also included in private investment, as it is decided upon in light of its profitability.

The other type of public investment is done by the monetary authority through the issue of CDCC and adding it to central deposits with banks, i.e., through monetary expansion. Now we must ask about the basis upon which the decision of monetary expansion or contraction is made. Reversing from the creation of new money by creating a totally interest-free economy is totally free from political pressures regarding the finance of the budget. It is bound by fulfilling the needs of the economy to money holdings for transactions purposes, while retaining price stability. We can follow the accepted doctrine in this regard and assume that transactions demand will depend on the level of real income \( Y \). In order to present a more general case, we can assume that the monetary authority targets a rate of inflation, whereby the rate of monopoly expansion or contraction depends on the difference between the target \( \pi \) and the expected rate of inflation,
\[ \pi^*_q = \text{const} \phi (\pi - \pi^*_g). \]

Notice that we used the subscript \((g)\) to refer to price expectations by the saving-investment market agent. Such expectations would be based on systematic and conscious calculations. It would be different from price expectations by households, which would be made in a less formalized fashion. This formula includes that case of absolute price stability when the target inflation rate is equal to zero. In this case, rate of monetary expansion will not increase unless keeping it at the current level would lead the economy to deflation. We can therefore state that public investment (through the issue of money) would be subject to the following conditions:

\[ I^e = 0 \text{ if } (\pi - \pi^*_t) > 0 \]  
\[ I^e < 0 \text{ if } (\pi - \pi^*_t) \leq 0 \]  
\[ I^e > 0 \text{ if } (\pi - \pi^*_t) < 0 \]

Equilibrium in the investment market would require:

\[ S(\omega Y) - M(\omega Y) = I^e(\pi - \pi^*_t) \]  

A rise in \( p \) would increase savings on the one hand. It would increase investment on the other hand, as investment opportunities become more attractive. We can therefore conclude that the equilibrium frontier of the saving-investment market can be represented by a positively-sloped curve that rises between income and the rate of return on CD's. This is similar to the IS relationship that is commonly known in Keynesian economics. Moving to the money market, we can notice that the supply function of money is the same as the function of public investment. In other words:

\[ M^d = I^e(\omega Y, \pi - \pi^*_t) \]

Where \( M^d \) and \( MS \) refer to the demand and supply of money. We can now write the equilibrium condition for the money market as follows:

\[ M^d(\omega Y, \pi - \pi^*_t) = I^e(\omega Y, \pi - \pi^*_t) \]

When \( p \) increases, the monetary authority gets a signal that the real sector is performing better than before and aggregate supply is rising. The expected rate of inflation goes down and the gap between target and expected inflation widens.

**FIGURE (4): FULL EMPLOYMENT EQUILIBRIUM**

\[ \rho \]

\[ \text{FE} \]

\[ \text{LM} \]

\[ \text{IS} \]

The monetary authority finds it safe to increase the supply of money without violating its inflation target. The increase in base money translates itself into an increase in central deposits and ultimately in investment. Therefore, the equilibrium frontier of the money sector can be represented by a positive relationship between real income and RCDC. Such relationship would be parallel to the LM curve in Keynesian economics, but with a different slope, because all money issued is automatically plowed into the real sector from the start. Figure (4) represents the full employment equilibrium for the whole economy, using the equilibrium frontier of the investment and saving market, IS and that of the money market, LM, in addition to the full employment level of aggregate supply FE.

While both frontiers are positively sloped, the IS frontier is more elastic than the LM frontier. Along the former frontier, increases in RCDC leads to higher savings and investment then to higher income. As would be expected, income is more responsive to increases in income below the level of full employment aggregate supply. Meanwhile, it becomes relatively inelastic beyond the level of full employment. The same applies to the LM curve but to a lesser extent. As higher RCDC’s motivate the monetary authority to issue more money and increase central deposits, the expected inflation rate gets closer to the target inflation rate, inhibiting further increases in monetary expansion. The result is a higher level of income along the LM curve is therefore constrained by both the rate of inflation and the full employment level of aggregate supply. That is why the LM should be less elastic everywhere than the IS curve. Interestingly, the elasticity of the IS relative to the LM frontier appears from Figure (3) to be an equilibrium condition.

**CHAPTER 8**

**ISLAMIC MONETARY POLICY FRAMEWORK**

Despite a fast growing Islamic banking industry, the implementation of monetary policy and the transmission mechanism of monetary policy tools in the presence of Islamic banks remain a challenge for the central banks (CBs). The challenges arise not only from the Islamic finance core principles but also from the macrofinance background and the nonexistence of conventional policy frameworks of countries where Islamic banks operate. Since the early 1990s, the related literature has broadly followed two streams: the first one, theoretical, was derived from Khan and Mirakhor (1990) and was based on the premise that Islamic finance is strongly anchored on the profit-and-risk sharing principle and mainly equity-based. The second one, empirical, focused on the conventional segment to the Islamic segment of the financial system (Cevik and Charap, 2011).

Financial systems where Islamic banking is systemic are typically dual and not fully developed. Islamic banks tend to develop side-by-side conventional banks and are influenced by "standard" monetary policy instruments and conditions. As Islamic finance grows in importance,
development in that segment may start to influence, under competitive pressure, the conventional financial system and overall market conditions. Islamic banks are not isolated from the macrofinancial background in which they operate: exogenous shocks, macroeconomic management, and systemic liquidity conditions have implications for monetary policy implementation and its transmission through the Islamic banking system.

Assessing monetary policy effectiveness in the presence of Islamic banking is complex, as it requires examining it through multiple and sometimes conflicting dimensions. These include the fundamental issue of ex-ante interest payment prohibition and profit-and-risk sharing; the spillovers from the conventional segment to the Islamic segment of the financial system; and the monetary policy framework and institutional setup in place. As in conventional systems, monetary policy in the presence of Islamic banking needs to adequately address structural excess liquidity, financial system shallowness, and fiscal distortions. Dominant public sectors, direct monetary financing of fiscal deficits, or distorted credit environments also limit the scope of monetary policy transmission through Islamic banks.

Monetary policy mainly works through prices or quantities. However, the CB’s capacity to influence market conditions varies significantly. The effectiveness of the CB’s actions through price setting necessitates sufficiently developed financial systems to transmit the signaling effect of monetary policy. Shallow banking systems and underdeveloped financial markets hinder the effectiveness of the monetary policy signal, while rigid exchange rate regimes leave little room for the exchange rate channel to play a role in the monetary transmission mechanism. On the other hand, intervention through the credit channel is often the only way to influence the supply of credit, but excess liquidity and constrained credit environments can weaken monetary policy transmission through the credit channel.

When conducting monetary policy in the presence of Islamic banks, caution is required in assessing the monetary transmission mechanism. Islamic financial systems are heterogeneous: they can be full-fledged Islamic or they can be developing by side by side a more-or-less mature conventional banking system. Introducing Islamic banks in macrofinancial environments where the interest rate channel is well established can result in conventional monetary policy transmission through the Islamic financial system, even if this transmission has not been anticipated by the CB. In full-fledged Islamic financial systems, monetary policy transmission could be activated through the credit channel as long as the CB’s actions affect the supply of Islamic credit. However, the bank lending channel—or in some cases for Islamic banks—may still be weakly linked with financial liberalization and financial markets development. Another important consideration is the extent to which the CB can influence the funding costs of Islamic banks by targeting the profit-sharing ratio of interbank Mudarabah markets.

Monetary policy objectives in the presence of Islamic banks have to be adapted to the level of development of the Islamic financial system and its interaction with the conventional one. At an early stage, special attention should be given to the development of Islamic credit, money, and government Sukuk markets, as well as to the design of effective sterilization policies and liquidity management frameworks. As both segments of the financial system become more balanced, a unified monetary policy stance becomes feasible. This is subject to the constraints of the conventional and Islamic segments of the financial system. However, arbitrage between conventional and Islamic banks as well as the resulting monetary transmission from the conventional to the Islamic segment of the financial system incurs the risk of not being accepted by all Islamic finance standard setters. Going forward, there is a need to explore when and how a unified monetary policy stance can be achieved by using conventional and Islamic monetary policy instruments simultaneously.

The rest of this paper is structured as follows: Section II gives an overview of the macro-financial background and monetary policy frameworks where Islamic banks operate; Section III explores the monetary transmission mechanism in economies where Islamic finance is reaching a critical size; Section IV provides some guidance on how to adapt the monetary policy framework in the presence of Islamic banks; Section V discusses the monetary policy operational framework for Islamic banks; and Section VI concludes. In conventional interbank markets, funding costs are interests paid for the funds borrowed; in interbank Mudarabah markets, funding costs represent the share of profits that is given to the financier or provider of funds (Rab-al-al).

MACROFINANCIAL BACKGROUND AND MONETARY POLICY FRAMEWORKS

There are few economies where monetary policy operates with an independent Islamic financial segment as a backdrop. These are mainly countries in the Gulf Cooperation Council (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (U.A.E)) as well as Bangladesh, Brunei, Iran, Jordan, Malaysia, Pakistan, Sudan, and Yemen. Except Iran and Jordan, the majority of these countries have dual financial systems. The experience of some of these countries shows that it is possible to have low and stable inflation and a functioning transmission mechanism for monetary policy in the presence of Islamic banks.

However, monetary transmission through the Islamic segment of the financial system may be accepted by all Shari’ah scholars when it comes to the role of interest rates. At the same time, the experience of these countries suggests that when supported by sound macroeconomic
Figure 2. Islamic Banking, Current Account Balances, and Exchange Rate Regimes

Islamic Assets and Current Account Surpluses

Islamic Assets and GDP per Capita

Islamic Assets and Oil Rents (*)
Oil rents are the difference between the value of crude oil production at world prices and total costs of production. Estimates based on sources and methods are described in "The Changing Wealth of Nations: Measuring Sustainable Development in the New Millennium" (World Bank, 2011).

Exchange Rate Regimes:
1a. No separate legal tender;
2a. Currency board;
3a. Conventional peg;
4a. Uninhibited arrangement;
5a. Crawling peg;
6a. Crawl-like arrangement;
7a. Pegged exchange rate within horizontal bands;
8a. Other managed arrangement;
9a. Floating;
10a. Free floating.

Overview of the Monetary Transmission Mechanism

The monetary transmission mechanism (MTM) differs from one economy to another and changes over time. The intensity of nominal rigidities, market imperfections, other distortions arising from government interferences, the degree of financial development and openness, as well as potential constraints on the supply and demand side of credit are important determinants of a country’s MTM. Understanding monetary policy transmission is a prerequisite to monetary policy implementation in general, but especially in dual financial systems. As a starting point, this section focuses on the bank lending or financing channel as well as the interest rate channel in the presence of Islamic banking (Figure 3).

The interest rate channel

In standard macroeconomic models, the interest rate channel is the main channel of monetary transmission. Traditional models emphasize the effects of monetary policy on the real interest rate, under the assumption of wage and price stickiness, on the cost of capital and aggregate demand: an expansionary monetary policy decreases the interest rate and produces an output expansion. However, CBs do not always have an effective control over money creation or interest rates. Further, while high-powered money is supplied by the CB, conventional commercial banks also contribute to money creation. In addition, the CB typically controls the short end of the yield curve, while economic agents respond to the level and changes in a broader spectrum of interest rates.

Several factors may weaken the effectiveness of the interest rate channel. For example, in the absence of an active interbank market, the CB would be unable to steer a short-term interbank reference rate using its policy rate. As a result, the signaling effect of changes in the policy rate as well as its transmission through the interest rate channel is weakened. The absence of a money market or a sovereign yield curve that generally serve as reference for lending rates also weakens the interest rate channel. The policy rate being a short-term interest rate, effective monetary policy transmission involves the link between short-term and long-term interest rates, and the existence of a term structure of interest rates: expectations operating on the term structure tie long-term to short-term interest rates. Monetary policy actions on prices are transmitted through money market rates and sovereign yield curves, as well as bank lending rates.

Large and variable gaps between short-term and long-term interest rates can impair the interest rate channel. For example, unsterilized liquidity surpluses would tend to put downward pressures on short-term interest rates which may widen the gap with long-term interest rates. CBs may not always be able or willing to fully sterilize liquidity surpluses at a certain level of interest rate. Long-term interest rates will however remain influenced by inflation expectations, and the supply and demand for government securities, as well as the depth of financial markets. A large supply of government securities to finance large fiscal imbalances for example, will place upward pressures on long-term interest rates. Therefore, the combination of weak liquidity management frameworks, unsterilized liquidity surpluses, and fiscal dominance is likely to widen the gap between short-term and longer term interest rates, which is what is explained by the term structure, impairing monetary transmission. Deep money and government securities markets allow monetary policy impulses to be transmitted along the yield curves and to bank lending rates.

The credit channel

The credit channel recognizes that monetary policy impacts the economic activity not only through the interest rate’s influence on aggregate demand but also through shifts in the supply of credit. The credit channel operates through two mechanisms: the bank lending channel (i.e. the narrow credit channel) and the balance sheet channel (i.e. the broad credit channel). Under imperfect substitutability of the retail and wholesale funding of banks, monetary policy transmission through the bank lending channel operates through the money multiplier: a change in reserve balances affects banks’ deposits and the supply of credit. However, the bank lending channel tends to weaken with financial liberalization, especially when banks have relatively easy access to external sources of funding. In advanced economies, the effectiveness of the credit channel is subject of debate with several researches arguing that banks balance sheets, and not just bank credit, is the main channel of monetary policy transmission.

The country’s financial structure is a key determinant of monetary transmission through the bank-lending channel. This channel tends to be more “potent” and effective for banks with less liquid balance sheets, when small banks dominate the financial sector and firms have limited access to nonbank funding sources. Highly liquid banks weaken the bank lending channel.

Other factors affect the supply and demand for credit and the effectiveness of the bank lending channel. On the supply side, the presence of weak banks, their inability to properly assess risks, weak property rights and poor judiciary systems generally constrain the flow of credit to the private sector. On the demand side, the economic structure (more-or-less bank-based market-based), and the relative importance of credit-dependent SMEs and large firms that can borrow directly from financial markets, are key drivers of the demand for credit. Sizable informal finance may also limit the demand of credit channeled through the formal financial sector. In general, the relationship between credit demand and supply is complex, and distinguishing demand-side from supply-side drivers is not straightforward either conceptually or empirically (Figure 4).

Government policies can interfere with the free functioning of credit markets and thus with the credit channel. Government interventions can introduce distortions in credit markets in many ways including through interest rate controls, bank lending ceilings, and selective credit policies.
Fiscal dominant regimes can crowd-out the supply of credit to the private sector, especially in the presence of high financing needs, but they also impair the interest rate channel.

The exchange rate channel

In modern macroeconomic models, the effectiveness of the exchange rate channel in economies with flexible exchange rates is measured by the extent to which changes in interest rates pass through the exchange rate. However, CBs interventions through quantities—both in FX and domestic currency—also affect the exchange rate. In practice, the effect of monetary policy on the exchange rate depends on several factors: the exchange rate regime, capital controls, and the development and integration of the foreign and foreign-exchange markets. When the exchange rate is allowed to move, increases in domestic liquidity tend to depreciate the exchange rate. When the exchange rate is fixed, a significant increase in CB liquidity injection can deteriorate the external balance, induce losses of FX and weaken the sustainability of the fixed exchange rate. While the empirical evidence supports inflation performances of fixed exchange rates, especially for developing countries, rigid exchange rate arrangements not supported by strong macroeconomic policies may give rise to sizeable current account deficits which are difficult to contain without output costs or a change in the exchange rate. Those fixed exchange rate regimes also can become prone to speculative attacks and currency crises. In contrast, countries with large FX reserves and persistent current account surpluses are able to sustain fixed exchange rates when supported by sound macroeconomic and liquidity management.

When the exchange rate channel is operative, an expansionary monetary policy generally leads to a currency depreciation. Nevertheless, the ability of the exchange rate depreciation to generate an improvement in the trade balance depends on foreign trade responsiveness to exchange rate fluctuations as well as the level of domestic absorption. Capital flows' responsiveness to a monetary policy shock affects how this is transmitted through the exchange rate channel; that is, whether the expansive monetary policy is more likely to generate an improvement of the current account (under flexible exchange rates) and a deterioration of the capital account, the overall effect on output and inflation will depend on the structure of the economy.

A sketch of the transmission mechanism

There are two main mechanisms through which monetary policy is, on impact, transmitted to the financial system: (i) quantities involving the CB balance sheet; and (ii) prices, i.e., changes in interest rate signaling changes in the policy stance. The conduct of monetary policy through the reliance on quantities is based on the assumption of CB control over money creation.14 However, as noted, CBs do not always have full control over monetary creation. The transmission through quantities setting pressures on the developed money and government securities markets allowing price formation.

Monetary transmission starts to operate through the effect of the CB's actions on banks reserves and interbank markets. Arbitrages between several segments of financial markets represent the second stage of monetary transmission. These include arbitrages between the money and government securities markets, between the money and FX markets, and between the government securities and credit markets. Arbitrage between commercial banks, between the interbank and government securities markets links government securities returns to interbank rates. The transmission to money and government securities markets enables pricing over different maturities, depending on the existence and efficiency of those markets.

Figure 4. Credit Demand and Supply Following an Adverse Macroeconomic Shock—Conventional System

Relevance of the Bank Lending Channel for Islamic Banks

In dual financial systems where both the conventional and Islamic segments are at early stage of development, reserve balances may play a central role in the conduct of monetary policy. The effectiveness of the bank lending—or financing—channel for Islamic banks will depend on (i) the CB's capacity to be one of the main suppliers of liquidity for Islamic banks; (ii) the Islamic banking system's ability to supply of credit/funding in response to changes in their reserve balances at the CB. According to the IMF Islamic banking survey results of 2012, 81 percent of the CBs have reserve requirements (RR) to Islamic banks. In cases where banks (Islamic and conventional) are in surplus liquidity or have fluid access to wholesale funding, or when there are binding constraints on the supply of credit, the bank lending channel and the Islamic financing channel may tend to be ineffective. The extent to which CBs can affect the supply of Islamic credit/financing in conventional transactions through reserve ratios is an important area that requires further empirical investigation.

At present, most countries with Islamic banks operate regimes with fixed exchange rates that are subject to important liquidity shocks. When CBs do not have the appropriate tools, capacities, and processes to offset these shocks, they can be transmitted to the economic activity and therefore influence the economic and financial cycles. Governments' cash management can interfere with the conduct of monetary policy whenever public treasuries transactions and deposits with the banking system induce important fluctuations of systemic liquidity. In particular, the combination of oil shocks, oversized public sectors, poor government cash management, lack of sterilization policies, and weak liquidity management can result in ineffective monetary policy.

The Interest Rate Channel in the Presence of Islamic Banking

In dual financial systems, economic performance is fairly dependent on conventional money markets, Islamic banks evolve in an interest rate dominant environment. Due to arbitrage between conventional and Islamic financial systems, the CBs tend to be split into channels: (i) interest rates to Islamic banks funding costs, to returns of profit-sharing investment accounts (PSIs) as well as to costs of Islamic credit (see Box 1).15

In dual systems where Islamic finance is still embryonic, there is often no Islamic finance equivalent to money market or government securities yield curves that can serve as references to price Islamic banks credit. As a result, some Islamic banks tend to rely on conventional rates to price their Murabahah and Ijarah contracts.16 Nonetheless, even when resorting to conventional interest rates to price Islamic credit, Islamic banks can be more sensitive to changes in interest rates than CBs.17 If Islamic banks' reactions to changes of conventional interest rates are sluggish, monetary policy transmission through the interest rate channel will be less effective in the presence of sizable Islamic banking.

Box 1. Monetary Transmission from Conventional to Islamic Financial Systems

Islamic finance contracts can be classified in three broad categories: (i) profit-and-loss sharing contracts such as Murabahah and Musharakah; (ii) debt-like contracts such as Ijarah and Murabahah; and (iii) services such as Wakalah.18

In Malaysia, Islamic banks funding costs are strongly influenced by the Bank Negara Malaysia Overnight Policy Rate (OPR), and several papers support the existence of the conventional interest rate bias in the Islamic financial system.20 The Malaysian Islamic Interbank Money Market (IIMM) was established on January 3, 1994 and allows Islamic banks to make liquidity shortfalls. Surplus surplus by using Murahah Investments (MII) are part of the IIMM. MII is a transaction where a deficit Islamic banking institution can obtain investment from a surplus Islamic banking institution, based on profit-sharing ratio, on maturities ranging from the overnight to twelve months.

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The Signaling Mechanism and the Profit-sharing Principle

The development of Islamic interbank Mudarabah markets introduces other channels through which monetary policy can be transmitted. In addition to the interest rate, the exchange rate or the RR instruments used in conventional systems, in dual systems CBs can also try to influence Islamic banks’ funding costs by targeting the profit-sharing ratio of Interbank Mudarabah transactions. The effectiveness of this monetary policy instrument depends on the level of development of Islamic financial markets.

The extent to which monetary policy affects the profit-sharing ratios through the signaling mechanism is another area that deserves further empirical investigation. In theory, CBs can affect interbank Mudarabah markets profit-sharing ratios by setting the profit-sharing ratios of their Mudarabah transactions with Islamic banks; Islamic banks can, in turn, set the profit-sharing ratios of Islamic contracts with their clients. However, there is no empirical evidence supporting the notion that the profit-sharing mechanism is an effective monetary policy channel and that economic agents make their investment and consumption decisions according to the profit-sharing ratio set by the CB. The results so far suggest that when the profit-and-loss sharing contracts such as Mudarabah are not widely used by banks, consumers and firms, this monetary transmission channel breaks down or is too weak. Figure 5 shows a simplified sketch of the monetary policy transmission in dual financial systems with sufficiently developed Islamic banking system and interbank markets.

Signaling the monetary policy stance helps the formation of market expectations and eases monetary transmission through the expectation channel.22 CBs communication typically goes beyond the policy rate and encompasses features related to macroeconomic forecasts, monetary policy strategies as well as monetary operations. To develop this channel, CBs in economies with Islamic banks should try to communicate information related to Islamic banks’ liquidity conditions, interbank markets, and their Shari’ah-compliant operational framework. In fact, in its Guiding Principles of Liquidity Risk Management for IIFS, the Islamic Financial Services Board (IFSB) suggested that “supervisory authorities should provide greater clarity of their roles in both normal and stressed times” and “should be more explicit regarding their handling of a liquidity crisis situation, such as defining the type of Shari’ah-compliant collateral that can be pledged, the limits applicable to various types of eligible Shari’ah-compliant collateral, and possible durations of the financing”. The expectation channel is the effect of changes in the monetary policy stance on economic agents’ expectations of future assets prices, growth, and inflation.

Figure 5. Monetary Transmission Mechanism in Dual Financial Systems

The Dual Monetary Policy Regime

In countries with relatively underdeveloped financial markets (e.g. countries with low ratios of credit to GDP), the conduct of monetary policy is fundamentally different from that in countries with developed financial systems (Figure 6). In the former, monetary policy tends to be more focused on the supply of credit. At an early stage of financial systems development, CBs actions generally aim to affect the supply of conventional credit through refinancing policies—when there is a liquidity deficit—or the use of credit as collateral, and gradually introduce government securities as eligible collateral as markets for these securities develop. In presence of structural excess liquidity, it is important to distinguish situations where the excess liquidity fuels a credit boom from those where other factors affecting the supply and demand for credit constrain lending.

In dual financial systems, it is often the case that the conventional segment is more developed than the Islamic one. Addressing the shallowness of the Islamic segment when the conventional system is developed is challenging. Clearly, monetary policy cannot operate in the same way when the dual financial markets have different levels of development. Further, as some economic activities are prohibited under Islamic rules, Islamic credit might not flow through the economic sectors as conventional credit.24 Whether monetary policy will have broadly similar effects on the conventional and Islamic segments of the market will depend on several factors including: the size of the Islamic segment relative to the conventional one; the jurisdiction; the structure of Islamic contracts; the behavior of consumers and Islamic banks; and the extent to which consumers are responsive to changes in interest rates. In some cases, Islamic banks clients can be indifferent to the level or changes in returns of the PSIAs or cost of Islamic credit mainly due to their deep religious beliefs. However, in other countries consumers’ arbitrage may lead to a convergence of returns of PSIAs and costs of Islamic credit to conventional banks’ deposits and lending rates.

Designing a monetary policy framework for countries where Islamic finance reaches an important share of the financial system entails different levels of complexity. The first one is related to the Islamic finance core principles and the cautious interpretation of the Shari’ah rules; the second one, is the heterogeneity of the financial systems and monetary policy frameworks; and the third one, is the relationship between monetary policy, financial development and financial stability policies for Islamic banks.

Figure 6. Domestic Credit to the Private Sector (1960-2013)
Fixed Exchange Rate Regimes Considerations

As noted earlier, pegged exchange rate regimes limit the CBs’ ability to significantly influence monetary conditions through changes in quantities. Even in cases where there is some degree of flexibility, vulnerabilities and high exchange rate pass-through may constrain the ability of CBs to stimulate credit through large liquid injections.25 Hence, monetary policies aimed at significantly expanding bank reserves can be challenging in many countries where Islamic banks operate. For these countries, the level of FX reserves and the control over systemic liquidity are key features of the viability of the exchange rate anchor. Direct instruments with fixed exchange rate regimes are limited in their capacity to freely manipulate a policy rate—especially under high capital mobility—but can still influence their liquidity management. This requires having in place adequate sterilization policies and monetary policy instruments aimed at offsetting liquidity shocks, thereby supporting market development.

Making Monetary Transmission Operational

Relying on market-based instruments to conduct monetary policy in an economy with Islamic banks is preferable than relying on direct instruments of monetary control for both conventional and Islamic banks. Direct instruments are often associated to non-transparent discretionary interventions that may result in a liquidity misallocation. They can create distortions in favor of some sectors of the economy or segments of the banking system, impairing banks competition and interbank markets development. When implemented in a surplus liquidity situation without an appropriate liquidity forecasting framework, direct instruments of monetary control can aggravate the liquidity overhang.26

To incorporate Islamic banks in the monetary policy framework, two important dimensions need to be considered. The first one is the challenge of developing the basic infrastructure necessary for a market-based Islamic monetary policy. The second is addressing more broadly the continuous evolution of the monetary policy framework. Developing Islamic money and Sukuk markets, as well as addressing the factors that give rise to market segmentation belong to the first dimension. Addressing potential spillovers from one segment of the financial system to another has implication for the monetary policy and financial stability. Competition among Islamic banks is a precondition for the development of Islamic interbank markets. A large number of Islamic banks in a country or a dominant role of government-owned banks limits the scope of interbank market development and monetary transmission more generally.

Market segmentation between conventional and Islamic banking systems can be a challenge for the conduct of monetary policy. In some countries with limited participation of Islamic banks in conventional monetary systems, such as in CBs traditional monetary operations and interbank markets, creating segmentation between Islamic and conventional money markets. While conventional banks offer real money market instruments for maintaining efficiently their liquidity, Islamic banks face greater difficulties as they cannot access markets that do not comply with the Islamic finance rules. Inefficient liquidity management reduces Islamic banks profitability, as they need to maintain more liquidity than strictly necessary.27 The IFSB Technical Note on Islamic Money Markets argues that there is an evidence of market segmentation between Islamic and conventional banking systems, as IFS rely primarily on interbank arrangements with other IIFS, with limited usage of transactions between IIFS and conventional banks. This segmentation can hamper the well-functioning and development of liquid money markets, especially when the size of the Islamic banking system is small. IIFS usually represent a small share of the overall financial system in dual financial systems and interbank market instruments that are dedicated to Islamic institutions. Consequently, Islamic banks need to have the scale and volume needed to generate a liquid interbank market.

Active Islamic interbank markets are crucial for monetary policy transmission through the Islamic financial system. Interbank markets allow liquidity to circulate through the banking system and reach its most needed segments. Developed interbank Mudarabah markets allow the transmission of monetary policy changes through profit-sharing ratios. Active FX interbank markets are also important for monetary policy transmission through the exchange rate channel.

The basic infrastructure for a market-based Islamic monetary policy should comprise: (i) Islamic collateralized money-market instruments for liquidity management; (ii) high-quality marketable collateral (in sufficient amounts); (iii) active interbank Mudarabah and collateralized interbank markets; (iv) efficient operational framework; and (v) adequate payment and settlement systems (Figure 7). The operational framework should notably encompass structural operations, such as the issuance of sovereign securities and outright purchases/sales of securities, and short-term money market policy instruments needed to provide short-term liquidity. Other options might be considered as alternatives to the interbank Mudarabah. However, favoring the development of the interbank market at an early stage may require the standardization of the interbank arrangements as the first stage and introducing other types of contracts gradually. To this purpose, analyzing the comparative advantage of the interbank Mudarabah relative to other structures of interbank transactions might be useful when considering strategies of Islamic interbank markets development. This includes carefully assessing the Shari’ah-compliance risk of each structure.

An adequate financial market infrastructure—including the adaptation and upgrading of payment and settlement systems—is necessary to facilitate the transmission of money market policy actions through the Islamic financial system. In particular, the “dematerialization”28 of government securities, and effective delivery-versus-payment and collateral mobilization procedures are important prerequisites for smooth monetary operations. Dematerialization refers to the issuance and recording of securities in electronic format.

Figure 7. Islamic Monetary Operations Infrastructure: Building Blocks

MONETARY OPERATIONS UNDER ISLAMIC BANKING

Sterilization Policies

As in conventional financial systems, excess liquidity has to be managed properly to enhance monetary policy transmission through the Islamic banking system. One of the characteristics of Islamic banks around the world is that they often are in surplus liquidity. Key reasons for this include: prohibition on interest rates; insufficient sterilization; lack of Shari’ah-compliant High Quality Liquid Assets (HQLA) and more generally insufficiently developed Islamic financial markets. Islamic banks have not been able neither to create viable Shari’ah-compliant money markets nor to effectively participate in the prevailing conventional money markets. This outcome was largely the result of difficulties in developing Shari’ah-compliant interbank markets when the size of the industry could not, in many jurisdictions, justify or support the creation of such markets. Finally, the constraints have been compounded by insufficient issuing of sovereign Sukuk, even if recently on a growing trend. In extreme cases, surplus liquidity can be aggravated by monetary financing of government deficits and weak government cash management.

Addressing the surplus liquidity issue requires first identifying its main causes, and deploying the adequate combination of fiscal, monetary, foreign exchange, and market development policies to eliminate them. Sterilization of Islamic banks structural liquidity surpluses should be considered in a broader approach that does not rely exclusively on a CB Shari’ah-compliant short-term liquidity absorption instrument, but also on the development of structural and/or long-term sterilization tools. Surplus liquidity can originate not only from CBs unsterilized FX interventions but also from other factors such as the persistence of direct monetary financing of government activities or CBs quantitative measures. When the source of surplus liquidity is monetary policy, then it should be prohibited preferably than having the CB offsetting the effect of government expenditures with its short-term monetary operations. Sterilization is also a policy or a strategy because CBs have usually to choose among different types of structural and/or long-term instruments such as the issuance of CBs securities, government securities or RR, and consider the best option or combination of these instruments.

Relying exclusively on RR to sterilize large liquidity surpluses can constrain the growth of Islamic credit if RR are not remunerated. Setting RR at a close rate level is generally appropriate, especially when combined with an averaging mechanism, as it helps create a structural refinancing need while reducing the volatility of banks’ funding costs. Nonetheless, because Islamic banks reserves are typically not remunerated, imposing high RR ratios creates distortions and tends to increase the cost of Islamic credit. If Islamic banks’ reserves could be remunerated through Shari’ah-compliant mechanisms, RR would be more easily used as an effective sterilization mean. In practice, when applying RR, CBs operating in the context of Islamic banks tend to harmonise their features through conventional and Islamic banks except for the return: there is a national government’s RR which can be used for conventional banks. Not all CBs in these economies, however apply RR to PSAs.

The development of HQLA that Islamic banks can use as collateral plays an important role in successful sterilization policies. However, monetary policy cannot rely entirely on government Sukuk issuances as they cannot substitute for standing facilities (SFs) and standard open market operations (OMOs), but they can provide the necessary collateral to CBs to...
offer SFs and OMOs to Islamic banks through a Shari’ah-compliant manner. In full-fledged Islamic banking systems, public investment on infrastructure were often used to issue government securities for monetary policy purposes.

Examples of government instruments issued to absorb liquidity surpluses are the Government Investment Certificates (GICs) in Sudan. GICs were mainly designed as long term Ijarah contracts involving payment of rentals by the government for durable assets sold. The leased assets were owned by a Special Purpose Vehicle (SPV), which enters into a lease agreement with the government, and issues securities to the public in order to finance the purchase of assets. Recently, Godlewski, Turk, and Weil (2014) have found that the structure of Sukuk matters in terms of its acceptance and potential of development. In particular, the Ijarah-based Sukuk appear to have the lower Shari’ah-compliance risk compared to other types of Sukuk. A slow introduction of development due to better investor’s reaction to them compared to other structures.

Islamic CBs securities also have been issued to mop up structural excess liquidity. In Bahrain and Malaysia, Sukuk or other Shari’ah-compliant papers were issued over different maturities.29 When the markets for CBs securities are undeveloped, it is possible to resort to government securities. The use of government securities can help introduce discipline and transparency to government debt and cash management, curtail direct monetary financing of government activities and fosters financial markets development. Issuing CBs securities on the other hand can create competition with government securities markets especially at early stage of their development and when coordination between the CB and the Ministry of Finance (MoF) is weak, and may result in market fragmentation. In addition, these securities can generate losses for the CB.30 Continuous issuance of CBs’ securities requires persistent levels of surplus liquidity. When monetary financing is not allowed and CBs have not heavily monetized the economy, excess liquidity often originates from FX reserves accumulation that depends on global macrofinancial conditions. In the post-GFC crisis, many developing and emerging economies switched from a situation of liquidity surplus to deficit limiting the scope for issuance of CBs securities. Stopping CBs issuances can create a gap in the short end of the yield curve impairing monetary transmission.

There might be some cases where the issuance of CBs’ securities is unavoidable especially when there is no possible agreement between the CB and the MoF to issue government securities for sterilization purposes and when large and persistent liquidity surpluses impair the conduct of monetary policy. However, whenever such agreement can be reached and government securities markets are not yet developed, it is preferable to focus on developing those instruments first (Table 2).31

### Table 2. Sterilization under Islamic Banking: Key Considerations

<table>
<thead>
<tr>
<th>STERILIZATION INSTRUMENT</th>
<th>PROs</th>
<th>CONs</th>
</tr>
</thead>
</table>
| Reserve Requirements      | Under CB’s control | • Not reconvered for Islamic banks  
                             |         | • Increase cost of Islamic credit  |
|                           | powerful effect on credit  | • Non-market-based instrument |
| Central banks securities  | Under CB’s control | • Require persistent levels of surplus liquidity to maintain regular liquidity |
|                           |         | • Can compete with government securities at early stage of development  
                             |         | • Can generate losses to the CB  |
| Government securities     | Sterilization costs borne by the government | • Large fiscal surpluses  
                             |         | • Covered cost of private credit at early stage of development  |
|                           | Ijarah preferred collateral  | • Impose discipline and transparency to debt management  |
|                           | Development of a benchmark yield curve | • Permanently insulate the economy from FX inflows  
                             |         | • Mainly a solution when excess liquidity source is FX |

CHAPTER 10

ISLAMIC MONETARY POLICY OPERATIONAL FRAMEWORK

While the majority of countries where Islamic banking is reaching a critical size and is more heavily dependent on financial instruments, some of them still use them. 32 Interest rate controls are used in Bangladesh, Iran, and Yemen. Credit ceilings are used in Jordan, Oman and United Arab Emirates (U.A.E.). Directed credits and specific lending requirements are applied in Iran. Jordan also applies specific lending requirements. Bangladesh Bank is extending Islamic refinancing facilities to the Islamic banks and financial institutions for priority sector lending.

In terms of the development of Shari’ah-compliant instruments to mop up structural excess liquidity there has been progress in some countries; the use of short-term monetary policy instruments however, is lagging. The evidence shows an important reliance on government and CBs securities issuance in dual banking systems mainly due to liquidity surpluses and prohibition on interest rates. Outright purchases and sales of tradable Sukuk are also used in Iran, Malaysia, and Sudan. 32 Based on the ISBMP database, and answers to the 2010 survey by the following countries: Bahrain, Bangladesh, Iran, Jordan, Kuwait, Malaysia, Oman, Pakistan, Qatar, Saudi Arabia, United Arab Emirates and Yemen. According to the IFSB Stability Report of 2013, 72 percent of the regulatory and supervisory authorities surveyed rely on CB or government securities for monetary policy purposes, and 29 percent have adapted them to meet Islamic finance requirements. The report also notes that only 23 percent of the regulatory and supervisory authorities have adapted their repo and outright operations to accommodate transactions with Islamic financial institutions; only 10 percent have adapted their credit facility and 25 percent their deposit facilities to Islamic banks (Figure 8).

Figure 8. Central Banks Monetary Operations Compliance with the Shari’ah Requirements

In times of systemic crisis, CBs may use unconventional measures in the context of impaired MTM, or deflation and recession risks. Under their financial stability mandate, monetary authorities have also the discretion to respond to idiosyncratic needs for liquidity, when no other sources are available to individual banks. The dividing line between conventional and unconventional monetary policy is becoming blur, but the distinction between a systemic and idiosyncratic liquidity support is more straightforward. In this paper, we define Lender of Last Resort (LOLR) as
CBs’ intervention in response to an idiosyncratic need. Results are based on the IFSB survey that included regulatory and supervisory authorities of the following 32 countries: Afghanistan, Bangladesh, Brunei, China, Egypt, Indonesia, Iran, Japan, Jordan, Kazakhstan, Korea, Kuwait, Lebanon, Luxembourg, Malaysia, Maldives, Mauritius, Morocco, Nigeria, Oman, Pakistan, Palestine, Philippines, Qatar, Saudi Arabia, Senegal, Singapore, Sudan, Tajikistan, Turkey, UAE, Zambia. For further details see IFSB (2013) and Chattha and Abdul Halim (2014).

In terms of best practices, LOLR support is usually provided at a penalty rate, to solvent and viable entities, assessed on an ongoing basis, and whose shutdown would create financial stability risks. Banks resort to LOLR when they have exhausted all other funding options available to them, including money markets funding, CB conventional funding and the stock of monetary policy eligible collateral. LOLR is temporary and indispensable. Given LOLR support is usually provided at a penalty rate, LOLR should be clearly regulated and should not become an additional tool for increasing Islamic banks liquidity. LOLR can be extended to Islamic banks as long as it is Shari’ah-compliant. The main complications for this reside on the interest-bearing loan, and especially the reference to the penalty rate, as well as the need for a broader collateral. To be compliant with the Shari’ah, the LOLR structure should be interest-rate free and the collateral used needs to comply with the Shari’ah rules. According to the IFSB, only 25 percent of the regulatory and supervisory authorities surveyed have developed a Shari’ah-compliant LOLR framework for IIFS using different types of structures (Mudarabah, Musharakah, Murabahah). 35

Interbank Markets

Creating Islamic interbank markets when all the markets participants are in excess liquidity and have no liquidity needs is difficult if not impossible. Although some countries with Islamic banks have developed interbank collateralized and uncollateralized money market instruments for those banks, their compliance with Islamic finance rules has raised some questions. Uncollateralized instruments can take the form of Mudarabah contracts (Appendix I), where interbank funds are invested over different maturities with returns based on an agreed profit-sharing ratio. Islamic banks have also designed collateralized money market instruments such as the commodity Murabahah contract where interbank funds are used to execute a Murabahah transaction in a commodity (Appendix II). However, the Shari’ah-compliance of the commodity Murabahah has been put in question in certain jurisdictions. In addition, some operational constraints may also limit the use of the commodity Murabahah as a very short-term liquidity management instrument.

Well-designed strategies of Islamic domestic money and government Sukuk markets are crucial for monetary policy implementation and its transmission through the Islamic banking system. One such strategy may come in first the development of tradable Sukuk issued by governments on a regular basis over different maturities, and in sufficient volumes. Different categories of market operators would increase the volumes traded on those markets. A key challenge would be to avoid the proliferation of different types and structures of Islamic government securities and money markets instruments; such proliferation would impair the formation of a stock of fungible HQLA that can be more easily priced, traded and used as collateral for liquidity management purposes. Standardized structuring of Islamic government securities and money market instruments will ease their use for liquidity management by CBs and Islamic financial institutions. Going forward, Islamic financial systems development strategies should rationalize the number of different instruments created with similar functions. Once key Islamic money and government Sukuk markets have been developed, other instruments may be introduced gradually.

To foster Islamic interbank markets development, Islamic financial institutions and CBs should aim at standardizing the type of Islamic interbank market instruments. Taking into account the challenge of designing collateralized money-market instruments for Islamic banks, a strong commitment of CBs to develop these markets is needed. Two options can also be considered as collateralized transactions for Islamic banks’ liquidity management: (i) Sell and buybacks; or (ii) interest-free collateralized loans (Qard with Rahn-Appendix III). Ideally, the collateral would be a government Sukuk rather than a less liquid asset (e.g., a commodity), non-suited from a monetary policy and financial deepening perspective. At the same time, interbank Mudarabah investments may remain an effective instrument for uncollateralized interbank transactions. The sell and buybacks and interest-free collateralized loans (Qard with Rahn-Appendix III). Ideally, the collateral would be a government Sukuk rather than a less liquid asset (e.g., a commodity), non-suited from a monetary policy and financial deepening perspective. At the same time, interbank Mudarabah investments may remain an effective instrument for uncollateralized interbank transactions. The sell and buybacks and

Sell commodity

Buy commodity

Sell commodity

Buy commodity

Payback credit at maturity

Provide credit

Islamic bank B

Securities

Pledge security as collateral

Central Bank

or

Islamic bank A

in the event of default, the creditor (central bank or Islamic bank A) can sell the securities.

Sukuk issued by governments might be the most suitable collateral for Shari’ah-compliant monetary operations. From an operational point of view, the existence of a liquid, transparent government Sukuk market may

The Interbank Mudarabah

The Commodity Murabahah

The Interbank Mudarabah
reduce the impact of individual transactions, such as government issuances, on price discovery mitigating the risk of fiscal dominance and reducing their market risks. They may facilitate the use of Sukuk as collateral not only for CB operations but also between market operators. Increased collateralized transactions with underlying government Sukuk can sustain their market liquidity.

While collateral needs for liquidity management should ideally be met with government Sukuk, the IFSB suggested that the lack of sufficient supply of such Sukuk in the domestic market will require CBs to expand the range of eligible collateral. This collateral extension may include accepting Shari’ah-compliant instruments or Sukuk issued by public sector enterprises and major national corporate bodies, multilateral institutions as well as other sovereigns and CBs. Recently issued IFSB Guidance Note on Quantitative Measures in Liquidity Risk Management of IIFS36 has proposed that CBs consider Sukuk issued by the international organizations such as the Islamic Development Bank (IDB) and the International Islamic Liquidity Management corporation (IILM) as collateral for providing liquidity support to IIFS. However, expanding the range of acceptable collateral does not come at the expense of the development of domestic government Sukuk markets.

Creating active and deep government Sukuk markets is a difficult task. Many factors can constrain their development including large fiscal surpluses, non-standardized issuances, reliance on non-tradable Sukuk, Shari’ah-compliance risk, continued reliance on CB direct financing, weak government debt management strategies, narrow investors base and limited financial sector diversification, inappropriate payment and settlement systems as well as underdeveloped collateralized instruments with government Sukuk as underlying assets.37 The development of government Sukuk markets may require a variety of investors, effective inter-sectoral linkages, and a rapid expansion of the operational networks, delays and transaction costs. Beyond technical and operational considerations, other factors may hinder the development of these markets, including the degree of commitment of the MoF to develop them and the lack of mutual funds and asset management activities.

The majority of countries where Islamic banks are becoming important have developed their own monetary policy frameworks. This has important implications for the conduct of monetary policy: in those countries, the exchange rate is the main nominal anchor and liquidity management and the control over the systemic liquidity is a key determinant of the effectiveness of monetary policy and the sustainability of the exchange rate. Yet, Islamic banks in many of these countries are typically in surplus liquidity. Excess liquidity need to be managed properly to enhance monetary policy transmission through the Islamic banking system. When the interest rate channel is effective, monetary transmission can operate from the conventional to the Islamic sector. The following characteristics of the Islamic financial system, which stems from its nature as a barter system, are of course: real money, 100 per cent reserves and real money; 100 per cent reserves and real money. Real money, i.e. the intrinsic value of money, is the basis of the circulation of goods and services and the value of the money itself. The value of money is determined by the supply and demand of money, and the purchasing power of money is determined by the supply of goods and services.

CASE STUDY


Production and trade, no doubt had improved the economic wellbeing of mankind. With trade one is able to enjoy more goods and services, through specialization, which otherwise would not be possible to produce oneself. However, if barter economy poses a number of problems; double coincidence of wants is one of them. Introducing money into the system, nevertheless, not only solves the problems inherent in barter trade, but also promotes specialization, encourages trade and improves the overall well-being of people. Money is, on the other hand, generally anything that is accepted as payment for goods and services or debt. Normally, people only refer to currency (paper notes and coins) as money but, technically, it is anything that is accepted as a medium for payment. In ancient times, people had even used rocks, leather, salt, shells, etc. as money, these were later replaced by precious metals like gold and silver which played the role of money better for a considerable span of time in human history. Ather Bretton Woods ended in 1971, paper money and electronic money have become the dominant forms of money globally.

The primary function of money in the economy is, of course, as a medium of exchange, i.e. used for paying for goods and services. Fits simple function is, nevertheless, responsible for promoting specialization and accelerating trade among people; and thereby, elevating the standards of living for the people. The function of money as a medium of exchange, therefore, brings about a high degree of economic efficiency. A barter economy efficiency is much suppressed and, therefore, the standards of living would be necessarily low.

With the introduction of money, the problem of ‘double coincidence of wants’ is eliminated. One sells goods or services for money and then uses it to buy whatever other goods and services one desires. Divisibility of money makes the exchange of different quantities of items possible and very easy. Money thus allows one to specialize in whatever one does best. Fits increases the productivity, quantity and quality of goods and services produced and exchanged in the economy. For an item to function effectively as money, the following five characteristics are normally mentioned as should be present:

1. Standardizable such that its value can be ascertained easily.
2. Accepted widely. Fits function requires money to be something that has its own worth or intrinsic value. The rarer the item the better (so that a small quantity can fetch high value). Since fiat money has no intrinsic value of its own, it is made ‘acceptable’ by means of law, and hence the term ‘legal tender’.
3. Divide, so that it can be used for the exchange of a range of values.
4. Portability, i.e. easy to carry around.
5. Stable/Durable, so that it does not deteriorate, perish, deplete or erode easily due to its own chemical structure, weather, pest, fire or other reasons.

A good monetary system should encourage the circulation of money rather than hoarding it. A high degree of exchange, a high velocity of money circulation would encourage increased economic activity and productivity. Hoarding, on the contrary would slacken economic activity which show up in the form of poor demand, low business activities and profits, business failures, unemployment, etc. The second function of money is as a unit of account. Fits refers to its use as a measure of value in the economy, e.g. $50 being the price of a shirt or $2 being the price of a kilogram of sugar and so on. This function eliminates the need to quote the barter exchange prices between every pair of goods and services that exist in the economy. The third function of money is as a store of value. Fits refers to the purchasing power of money over time. If money is a good store of value, then its purchasing power should be preserved from the time money is received until it is spent. If $1,000 today can buy a basket of goods, and a year later it can buy the same basket of goods, then money has been a good store of value in that year. In contemporary financial systems, money is not a good store of value since its value generally depreciates over time, i.e. its purchasing power erodes due to inflation.

Part 1 postulated that the following characteristics of the present monetary system, i.e. fiat money, fractional reserve banking and interest charges as being at the root of the instability and unjustness of the system. We argued that these characteristics, indeed, negate the integrity of the money and thereby the MAQASID. The real characteristics of the money are of course: real money, 100 per cent reserves and negative interest rates (e.g. zakat or demurrage charge). A negative interest rate encourages people to spend and invest instead of being hoarded. If the earlier characteristics were shown to prevent the attainment of the maqāsid al-Shari’ah, could the opposites of those be then compatible with Shari’ah money?
Muhammad Firman  
*University of Indonesia - Accounting*

We argue in the next section why real money and negative interest rates are indeed characteristics of Islamic monetary system.

### Table 1. Characteristics of Fiat Money and Problems Caused

<table>
<thead>
<tr>
<th>Creation of Fiat Money Out of Thin Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Causes inflation and asset price bubbles.</td>
</tr>
<tr>
<td>2. Debt bubbles and financial collapses of firms and governments.</td>
</tr>
<tr>
<td>3. Amplifies business cycles.</td>
</tr>
<tr>
<td>4. Trade-off between inflation and unemployment.</td>
</tr>
<tr>
<td>5. Agriculture sector disadvantaged due to price controls in this sector.</td>
</tr>
<tr>
<td>6. Along with interest rates, it places the burden of a continuous growth requirement on the economy and accumulates wealth in the hands of a minority by taxing the majority.</td>
</tr>
<tr>
<td>7. Widening gap in the distribution of income - creates poverty and social problems like housing, long working hours, multiple jobs, female and child labour, corruption, crime, etc.</td>
</tr>
</tbody>
</table>

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**Real Commodity Monies: The Viability of Gold as Money**

Opposite of fiat money is, of course, real money, i.e. money that has intrinsic value. Fits necessarily has to be commodity based, i.e. money which itself is a commodity valued by people or money that is backed by such commodities. Islam, historically and traditionally, has used a number of commodities as money – cowry shells, salt, leather, gold and silver to name a few. But in later periods, gold and silver dominated money. The gold dinar and silver dirhams were the dominant money during the early days of Islam and for the most part of the Muslim history. Commodity money, unlike its fiat counterpart, cannot be created out of nothing. We argued in Part I that fiat money is essentially created by the banking sector and that the growth in money supply is necessary simply for the sustainability of the system. It also highlighted the many problems inherent in the interest-based fiat monetary system. The problems may be matched with the characteristics of fiat money as summarized in Table 1.

A commodity money is not likely to cause the above problems simply because it cannot be created the way fiat money is easily created. A commodity is, in contrast, physical and real. It can neither be created at will nor be counterfeited. Its characteristic alone can obviate most of the problems associated with money—hyperinflation, asset price bubbles, debt bubbles, amplification of business cycles, etc. If a commodity like gold were used as a common currency instead of the different national currencies, then there would be no exchange rates in the first place. Therefore, speculation, manipulation and arbitrage would no longer be possible. The possibility of the kind of currency attacks that the East Asian countries experienced in 1997–98 would be very much diminished. Also if gold were to become a common currency, no individual country could enjoy substantial seigniorage, like the seigniorage of international currencies. Accordingly, gold protects the sovereignty of nations and thereby, in turn, also protects their culture, religion, education, legal structure, etc.

A number of ‘real money’ solutions are currently being discussed, examples of which include: (1) gold and silver money, (2) a basket of commodities as money, (3) complementary currencies and (4) Real Money Unit (RMU). In our opinion, any real money would in one way or another provide some solutions to the above problems. Indeed, the historical Islamic economic system was fundamentally a barter economy, i.e. one that exchanged real goods and services. Nevertheless, some commodities in the economy, with the right characteristics, played the role of ‘money’; and thereby prevented the problems generally associated with barter.

Abu Said al-Khudri reported Allah’s Messenger SAW as saying: Gold is to be paid for by gold, silver by silver, wheat by wheat, barley by barley, dates by dates and salt by salt, like for like, payment being made on the spot. If anyone gives more or asks more he has dealt in riba. The receiver and giver are equally guilty. (Sahih Muslim)

Also consider the following hadith:

Yahya related to me from Malik that Yahya ibn Sa’id said, “The Messenger of Allah SAW, ordered the two Sa’ds to sell a vessel made of gold to a man for silver from the booty. They either sold each three units of weight for four units weight of coins or each four units of weight for three units weight of coins. The Messenger of Allah SAW. said to them, ‘You have taken usury, so they returned it’.

The commodities mentioned in the above ahadith have the characteristics of money as discussed earlier, to be exchanged weight for weight.

Table 2 below summarizes the characteristics of these ‘money-commodities’ mentioned in the sayings of the Prophet SAW, as per our judgment. As for the Homogenous and Standardizable characteristic, we give a grade of good for the food items, i.e. dates, wheat and barley because these items can easily be recognized and graded. But we grade excellent for salt, gold and silver due to their fineness (in texture). For Acceptability, we grade excellent for gold due to its international acceptability. For silver we grade very good since it had historically played the role of money for a long period. Many gold proponents still talk about its possible comeback.

For the food items, i.e. dates, wheat, barley and salt we provide a grade of good since they don’t enjoy international acceptability. For example, dates may not be desired in some cultures. As for Mobility, we give all the items a grade of good since all can be moved location easily. As for Stability and Durability, gold and silver enjoy an excellent grade since both can last for very long periods unlike the food items that can perish due to bacterial activity, fungus, pest, fire etc.; and indeed these items are also destroyed in the process of consumption. As for Rarity, of course, gold enjoys an excellent grade while we give a good grade to silver which is available in a slightly higher quantity. For the food items we give a fair grade since they are available in much larger quantities and can also be cultivated. Nevertheless, unlike fiat money, all the above commodities cannot be created out of nothing.

---

**Table 2 Commodities with Money Characteristics**

<table>
<thead>
<tr>
<th>Homogenous/Standardizable</th>
<th>Acceptability</th>
<th>Divisibility</th>
<th>Mobile</th>
<th>Stable/ Durable</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Fair</td>
</tr>
<tr>
<td>Wheat</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Fair</td>
</tr>
<tr>
<td>Barley</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Fair</td>
</tr>
<tr>
<td>Salt</td>
<td>Excellent</td>
<td>Good</td>
<td>Excellent</td>
<td>Good</td>
<td>Excellent</td>
</tr>
<tr>
<td>Gold</td>
<td>Good</td>
<td>Excellent</td>
<td>Good</td>
<td>Good</td>
<td>Fair</td>
</tr>
<tr>
<td>Silver</td>
<td>Very Good</td>
<td>Excellent</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Real Commodity Money</td>
<td>Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These items are perishable through bacterial activity, fungal, pest, water, fire etc. and are also destroyed in the process of consumption.

From the above comparison of the characteristics, gold and silver dominate the other items in terms of durability, homogeneity, divisibility, rarity and global acceptance. Hence these two metals are also capable of playing the role of international money. Indeed, the most well-known commodity monies in the history of mankind are gold and silver. Gold as Shar‘ah money is not something being asserted only in present times. A commodity money is not likely to cause the above problems simply because it cannot be created the way fiat money is easily created. A commodity is, in contrast, physical and real. It can neither be created at will nor be counterfeited. Its characteristic alone can obviate most of the problems associated with money—hyperinflation, asset price bubbles, debt bubbles, amplification of business cycles, etc.

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<td>Gold</td>
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And there are those who hoard gold and silver and spend it not in the Way of Allah, announce unto them a most grievous chastisement. (Qur‘ân, At-Taubah, 9:34)
The Holy Prophet (peace be upon him) said: The system of weights and measures is the system of the people of Medina. (Sahih Bukhari)

Yahyā related to me from Malik from Humayd ibn Qays al-Makkī that Mujaḥid said, “I was with ‘Abdullāh ibn ‘Umar when an artisan came to him and said, ‘Abu ‘Abd ar-Rahmān, I fashion gold and then sell what I have made for more than its weight. I take an amount equivalent to the work of my hand.’ ‘Abdullāh forbade him to do that, so the artisan repeated the question to him and ‘Abdullāh forbade him to forbid him until he came to the door of the mosque or to an animal that he intended to mount. Then ‘Abdullāh ibn ‘Umar said, ‘A dinar for dinar, and a dirham for dirham. There is no difference between them. This is the command of our Prophet to us and our advice to you.’”

It is interesting to note from the above hadith that even gold ornaments are to be exchanged weight for weight, which means that an artisan or jeweller is not allowed to add workmanship charges. The above tradition strengthens our contention that gold is to play the role of money and, therefore, discourages the fashioning of it into ornaments that would technically end up being ‘hoarded’ and not circulated in the economy. Also, the gold dinar and the silver dirham were, in fact, the units of measurement of the Medina System. Also, in Sharī’ah, gold and silver are covered under al-Sarf, i.e. rulings that govern the exchange of money. Therefore, the Holy Qur’ān, the traditions of the Prophet (s.a.w.), the history of Islam and the writings of Muslim scholars of the past, all do indeed point towards gold and silver as money in Islam. But somehow in the passage of time, Muslims seem to have lost the wisdom behind this, adopted fiat money and have subjected themselves to subjugation, poverty and humiliation as observed by al-Maqrīzī in Egypt with fulūs as money.

Superiority of Gold over Other Forms of Money

Gold has intrinsic value just like any other commodity, but it distinguishes itself in that people of every race, creed and nationality desire it for its own sake as proven by the obsession humanity had for this metal in itself in that people of every race, creed and nationality desire it for its own sake as proven by the obsession humanity had for this metal throughout history. The following verse of Qur’an attests this:

Fair in the eyes of men is the love of things they covet: women and so...

We summarize in Table 3 below, the characteristics that make gold as an ideal money:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rate and Compact</td>
<td>Gold is rare, found and extracted only in minute quantities from earth. Being compact, a small amount of gold has big value. Therefore, one needs only small amounts for big purchases.</td>
</tr>
<tr>
<td>2 Stable and durable for very long periods</td>
<td>The chemical property of gold is that it is an element that rarely reacts with other elements or compounds. It is so inactive that it is even extracted from the earth as gold itself (unlike iron, for example, that is obtained as iron oxide, which is then processed to extract the iron). Gold does not oxidize easily and, therefore, does not get rusty. Even gold treasures buried in the salty seawater for many centuries remain in their pure form. Gold is also not destroyed by extreme heat and pressure.</td>
</tr>
<tr>
<td>3 Homogenous and divisible into minute quantity</td>
<td>This characteristic is important since it allows the pricing of a whole range of values. It is homogenous in the sense that if a gold bar is cut into two halves, one needs not choose between the two for they are simply equal. This splitting can go on until each unit is very small in weight. Gold is also homogenous in the sense that gold extracted from different parts of the world are practically substitutable for each other.</td>
</tr>
<tr>
<td>4 Steable</td>
<td>Gold is an ideal store of value, i.e. something that can be saved for future use, even very far into the future. It is not uncommon for fiat money to become obsolete with the passage of time, but gold coins, on the contrary, had always maintained their intrinsic value.</td>
</tr>
</tbody>
</table>

Table 3 Characteristics of Gold as Ideal Money

A major advantage of gold over fiat money is that it has intrinsic value and that it can neither be created nor destroyed. Its issuance or production is also not a monopoly of any single party, i.e. no unfair seigniorage. Gold is scattered throughout the earth and can be mined by anybody, unlike fiat money, the issuance of which is under the prerogative of some issuing bodies like the central banks and the commercial banks.

During a recession, fiat money gets destroyed through the reverse process of money creation. Money that is initially created in the form of accounting entries later gets destroyed in the same way. This destruction of money brings about a shrink in the money supply and a lower circulation of money in the economy which, in turn, causes lower demand and business transactions, lower business profits, bankruptcies, retrenchments, unemployment, etc. With commodity money, money brings about a shrink in the money supply and a lower circulation of money. Unlike fiat money, gold needs not be introduced into the economy in the form of debt. It can, therefore, neither create capital structure problems nor require constant growth in money and economy for the mere sustainability of the system.

It is not surprising, therefore, that with the above characteristics (Table 3) gold naturally dominated as the global currency in history. No one had to force others to accept gold as money, unlike fiat money that had to be made a ‘legal tender’. By the time of the advent of Prophet Muhammad (peace be upon him), gold coins of the Roman Byzantine empire were already in circulation and were fully accepted by the Arabian community. The gold coins of the Muslim world were called ‘dinar’, deriving from the Latin denarius. While the Prophet (peace be upon him) brought many changes to the social institutions of the time, the Roman denarius was, however, fully accepted as money in the new Islamic community. In that, is profound Nikmah. Indeed, the first Islamic dinar was not minted until about fifty years after the demise of the Prophet (peace be upon him), by the caliph Abd al-Malik ibn Marwān in 75 Hijrah (696 CE), the caliphs were very concerned over the quality of the gold dinar and imposed severe punishments for crimes like clipping, etc. As the Islamic world expanded, these precautions along with the high moral standards of the Muslims of the past made the dinar the dominant and desired international currency, even replacing the Roman gold coin throughout Europe. The dinar remained the currency of the Muslim world for centuries until the fall of the Ottoman caliphate in the early 20th century. A commodity money like gold, therefore, is superior and desirable money compared to fiat money as it is a just, stable, and durable money system while protecting the wealth (al-mal), sovereignty, culture and religion of the people. It also does not impose a ‘hidden tax’ on the people, which particularly affects the poor and the wage earners, as discussed in the Part I paper. All in all, commodity monies are, therefore, compatible with the maqāsid al-Sharī’ah.

Negative Interest Rates

We mentioned elsewhere earlier that negative interest rates discourages hoarding and instead encourages the circulation of money that has benefits for the economy. Many Muslim scholars have written on the issue of interest and riba. El-Diwany (1997), for example, argues excellently the inherent problems brought about by interest charges. He argues that creation of money out of thin air by the banking system and the subsequent lending of it at interest to be an important cause of economic injustice. Of course, the money creation process is made possible by the fractional reserve banks system. Liebert (2001) argues that positive interest rates as being counter to sustainable development and that negative interest rates (eg. demurrage charges) are instead compatible with the necessities of sustainable use of resources and hence development. To quote him:

“…interest rates create a built-in tendency to disregard the future, the higher the interest rate, the more that tendency prevails which create a direct conflict between financial criteria and ecological sustainability under our present money system...”

Liebert argues that there is indeed a connection between currencies with demurrage charges and the remarkable prosperity during the First European Renaissance and the Pharaonic period in Egypt. In the Islamic monetary system the negative interest rate function is, indeed, played by zakāt which ‘taxes’ the Muslim who has had his possession a minimum zākāt wealth for one full year, therefore, unlike in the present

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monetary system, unutilized savings are not only not rewarded in Islam but instead are ‘taxed’ and distributed away to the sections of the economy that need them most, i.e. the poor, orphans, those in debt etc. The interest of the economy indeed has a high propensity to consume and would keep the aggregate demand high and the economic engine working. Since gold is a physical item that can neither be created out of thin air nor destroyed, it is, therefore, compatible with a 100 percent reserve requirement. Hence, it’s obvious that the real money system of Islam with the institution of zakat is diametrically opposite to the present monetary system of fiat money, fractional reserve banking and positive interest rates.

Some Common Queries and Objections to the Gold Dinar
the talk about returning to gold, of course, is likely to rekindle our memory on past experiences with gold and raise some questions. For example, if gold standard failed, why return to it again? With gold standard, why did the Great Depression of the 1930’s take place? To answer questions like these, one needs to analyze why a system that lasted for centuries failed? Changes are that the failure is not due to the system itself but rather due to the distortion of the existing system. Indicators show, for example, that the cause of the Great Depression was, indeed, fiscal in nature, i.e. due to high tax rates of the Smoot-Hawley Tariff Act of 193038. Also governments printed more money than the gold reserves they had, the possible volatility of gold price is another common objection. Gold price may fluctuate for many reasons. It may not necessarily be due to changes in the demand and supply of gold alone, but also could be due to changes in fiat money itself. For example, if a government prints too much of its currency, then the gold price in that currency will rise simply indicating the falling value of that fiat currency. Nevertheless, historically, gold has proven to be more stable than most currencies including the dollar, in terms of keeping its value.

Since the gold payment system is fundamentally a ‘barter’ system for every transaction involves mutual exchange of values, gold producing countries need not be necessarily placed at an advantageous position relative to non-gold producing countries. Having gold deposits is, therefore, not necessarily better than a fertile land that produces lush vegetation and fruits for example. The produce of land could then be exchanged for gold. Similarly, knowledge, skills and technological know-how are just as valuable as gold. Some also argue that the global supply of gold is not sufficient to support the ever growing international trade. Also, in most cases gold would only play the role as a unit of account, the same gold can be used again and again in many transactions. This is basically the velocity of money circulation. The higher the velocity, the lesser the amount of money needed to support a given amount of exchange. Meera and Labani (2004) also showed that in international trade, a lot of transactions would cancel-out thereby requiring a much smaller amount of gold for settlement.

Some also query that new discoveries of gold may cause high inflation. Actually, it is fiat money that can be easily created or counterfeited and hence is more likely to cause inflation. Gold production, nonetheless entails technical know-how and heavy investment. Hence there are automatic checks on overproduction since miners know that overproduction would only invite inflation, i.e. why waste investment and effort that would only prove futile and translate into inflation? Using gold for settling international trade balances would truly be a great step forward44. For Muslims, it would be a significant step that would complement the establishment of a true Islamic economics and financial system itself. the gold dinar promises a just and stable global monetary system while providing a stable international unit of account, which is lacking in the current global monetary system. It promises to check excessive currency speculation, manipulation and arbitrage while reducing transaction costs.

Most importantly, it promises to protect countries from the threat of losing their national wealth and sovereignty to international financial powers through the interest-based fiat money system. In the current system, the Islamic bank is also caught up in the law-of-one-price that causes it to refer to the market interest rate in designing and pricing its financial products. A gold payment system needs to be implemented in a gradual manner. One cannot and should not attempt to overturn the present system overnight. Therefore, a practical way to introduce a gold payment system is to begin with a dual system, i.e. the gold dinar co-existing with the national currencies. This is desirable considering the fact that not every individual may be convinced by the gold argument. The best area to start is probably to implement the gold dinar for settling bilateral and multilateral trade arrangements48, since this has the least implications for the existing national currencies. Concurrently, a small but parallel gold dinar economy should be established. This refers to a set of businesses that accept gold for payments in the domestic economy. This gold economy would form the nucleus for the implementation of a gold payment system domestically.

Conclusion
In this Part II paper we argued in favor of commodity monies, like the gold dinar for the elimination of the negative socioeconomic effects of fiat money. We argued that the gold dinar is compatible with the maqāsid al-Sharī’ah for it protects wealth (or mali), a daruriyyah component of the maqāsid, while fiat money prevents the attainment of the maqāsid. Further some common objections to the gold dinar were addressed. Eventually the initial steps for the implementation of the gold dinar were discussed. The paper asserts that commodity monies like the gold dinar, which is compatible with a 100 percent reserve requirement and the replacement of interest by zakat (technically a negative of interest rate).