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## Reemergence of Islamic Monetary Economics: A Review of Theory and Practice

Md Akther Uddin<sup>1</sup>

### Abstract

This paper reviews important theoretical and empirical literatures on Islamic monetary economics. The reemergence of Islamic economics and finance in the twenty first century has motivated the issue. The prohibition of *Riba* has imposed challenges on Islamic economists to come up with the viable alternatives to achieve Islamic monetary policy goals. Equity based profit and loss sharing instruments have been proposed for conducting open market operations in an interest-free economy. Moreover, a number of conventional monetary instruments are still available: changes in reserve requirements, overall and selective controls on credit flows, changes in the monetary base through management of currency issue, and moral suasion. Theoretically, the Central Bank can achieve desired goals by manipulating money supply and profit-sharing ratios, also, the evidence from empirical literature suggests money demand tend to be more stable in an interest-free economy. Whether monetary transmission works through Islamic banking channel is yet controversial but the literature is growing. These findings are not surprising as majority Muslim countries lack sustainable and equitable economic growth; suffer from higher inflation and unemployment, little or no monetary freedom due to fixed exchange rate regime, shallow financial markets and strict capital control. A number of policy implications have been proposed.

**Key words:** *Islamic monetary policy, interest-free economy, Islamic economics, monetary policy instruments*

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## ***1. Introduction***

Monetary economics is the economics of the money supply, prices and interest rates, and their impacts on the economy. It focuses on the monetary and other financial markets, the determination of interest rate, the extent to which these affect the behavior of the economic units and the implications of that influence in the macroeconomic context (Handa, 2009). The literature of monetary economics is perhaps the oldest part of literature of economics as a whole, with contribution stretching back to the Greeks (O'Brien, 2007). Monetary system has been evolving since the beginning of human civilization. However, managed money is a new phenomenon which has gained prominence after the collapse of the Bretton Woods system in August 1971. There is no possibility of finding precedence for managed money in the days of the Prophet (pbuh) or in early Islamic history. A number of questions are, therefore, continually raised about the monetary system that a Muslim country may adopt (Chapra, 1996).

The reemergence of Islamic economics and finance, especially Islamic banking in the middle of the last century, has motivated economists to develop a comprehensive theoretical framework of modern Islamic monetary economics. As *Riba*<sup>2</sup>, literally interest rate, is prohibited in Islam, a viable alternative is required. The early writings of Moududi on *Sud*<sup>3</sup> (interest) have motivated many economists to rethink about interest-free economic system and many renowned Muslim economists have come up with different *shari'ah* compliant instruments to solve this problem. Following that Kurshid Ahmed, M.N. Siddiqi, M. Uzair, Umer Chapra, Al-Jahri, Mohsin Khan, Muhammad Anwar, Fahim Khan, Abbas Mirakhor and others have contributed tremendously to give a foundational framework of Islamic economic system. Two international seminars on monetary and fiscal economics of Islam were held at Jeddah and Islamabad in 1978 and 1980,

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<sup>2</sup> The Holy Quran (Al-Rum, 30:39; Al-Nisa, 4:161; Ali-Imran, 3:130 and Al-Bakarah, 2:275-9)

<sup>3</sup> Maududi, A. A. A. (1961). *Sud* (interest).

respectively. Since then the discourse on these themes coincides with the development of Islamic economics in general (Tahir, 2013). In the eighties and nineties a great number of theoretical papers have been written on Islamic monetary policy. On the one hand, researchers theoretically argue for equity based profit and loss sharing instruments to conduct monetary policy, on the other hand, many argue this system is inherently unstable and therefore not appropriate in real economic sense.

Early literatures on Islamic monetary economics argue that money demand function in Islamic economics system would be stable as there is no interest rate and no room for speculative demand for money (Chapra, 1985; 1996). However, some researchers argue that speculative demand would exist as return on equity based instrument is unstable, so demand for money would be also unstable (Khan, 1996).

Although interest rate is not acceptable as a monetary instrument in Islamic economic system, a number of conventional monetary instruments are still available: changes in reserve requirements, overall and selective controls on credit flows, changes in the monetary base through management of currency issue, and moral suasion. Anwar (1987), Khan and Mirakhor (1989), Khan (1996) attempted to develop interest-free economic model with the help of conventional ISLM framework. For example, Khan and Mirakhor (1989) argue that equity based profit and loss sharing instruments would work in interest-free economy and monetary policy would be effective. In addition to that, profit sharing ratio, refinance ratio, public share of demand deposits, value oriented allocation of credit, and *qard hasan* ratio have been recommended as distinctive Islamic monetary policy instruments in the literature. The area has lost its motivation since mid nineties and no significant contributions have been made on theoretical development of monetary economics from Islamic perspectives since then.

Islamic banking has emerged as a viable counterpart of conventional banking system; especially in a crisis period, Islamic banks have performed better than conventional banks as the former enjoys higher capitalization and higher liquidity reserves (Beck et al., 2013; Hussain et al. 2015). Consequently, monetary transmission mechanism through Islamic banks has gained significant attention. While some economists theoretically argue that monetary policy will be less potent under Islamic banking system, others argue that if Islamic banks truly operate under profit and loss sharing arrangement, monetary policy through bank credit channel would be effective.

The number of empirical studies on monetary policy from Islamic economics perspective is still very few but recent attention from IMF has motivated few insightful publications (Cevik and Charap, 2011; Kammer et al., 2015; Khatat, 2016). Earlier empirical works confirm the stability of money demand function in interest-free economy (Darrat, 1988) but the results are still not convincing and need further research in this area. On the one hand, some empirical findings suggest that monetary policy works through Islamic bank channel (Sukmana and Kassim, 2010; Basu et al., 2015), on the other hand, others argue monetary transmission channel does not pass through Islamic banks (Zaheer, 2012). The mix results are not surprising as in most Muslim countries Islamic banks operate under dual banking system and financial developments are heterogeneous. In addition to that most of these countries suffer from higher inflation, little or no monetary freedom due to fixed exchange rate regime, shallow financial markets and strict capital control.

The remainder of the paper is structured as follows. Section 2 identifies limitations of the study. Section 3 discusses monetary evolution and early Islamic monetary policy and presents

briefly some of the theoretical models of Islamic monetary policy. Section 4 analyzes empirical studies. Section 5 provides implications of the findings and section 6 concludes.

## ***2. Limitations of the study***

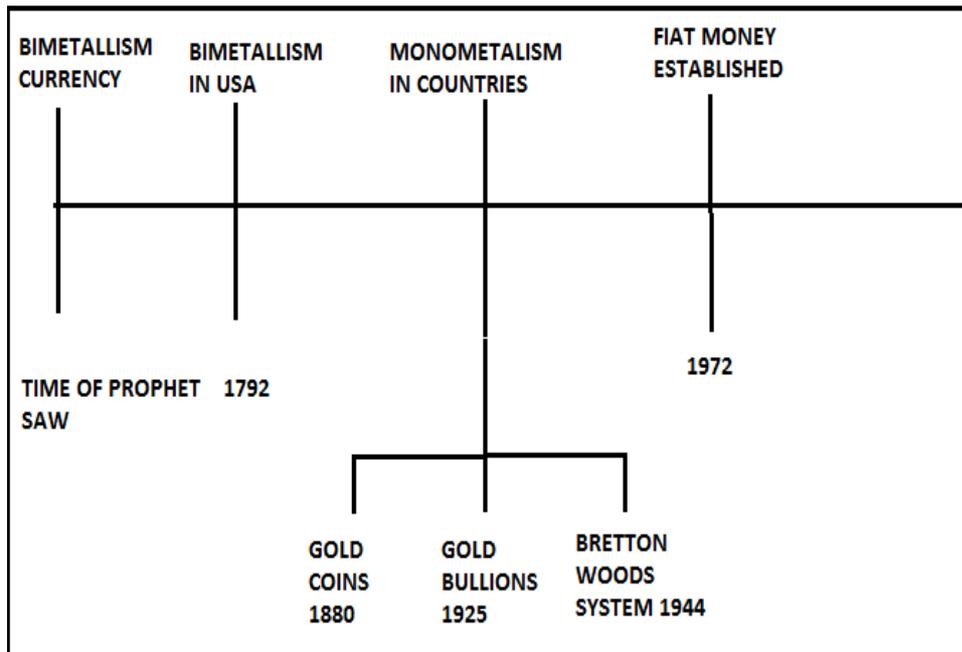
The study due to its focused scope reviews only the selected literatures on Islamic monetary economics. The theoretical models are explained without any mathematical equations which could have been more useful for understanding the relationship of key variables. The general inferences made from theory are difficult to test empirically, so very little empirical evidence, due to the absence of comprehensive Islamic economic system in Muslim countries. It would have been more meaningful to study monetary policy of countries which are considered as interest-free, Iran and Sudan, but availability of data still remains major constraint. Implications and conclusions drawn are broad in nature could have been narrow down which of course limit the extent of the study.

## ***3. Literature review***

### ***3.1 A brief history of monetary evolution and early Islamic monetary policy***

The monetary system that prevails in the world now has come into existence after passing through several stages of evolution. The monetary system that prevailed during the Prophet's (pbuh) days was essentially a bimetallic standard with gold and silver coins (dinar and dirham) circulating simultaneously. The ratio that prevailed between the two coins at that time was 1:10. This ratio seems to have remained generally stable throughout the period of the first four caliphs. Such stability did not, however, persist continually. The two metals faced different supply and

demand conditions which tended to destabilize their relative prices. Half of the Umayyad period



**Figure 1:** Evolution of money over the period of time (Based on Chapra, 1996)

(41/662-132/750)2 the ratio reached 1:12, while in the Abbasid period (132/750-656/1258), it reached 1:15 or less. In addition to this continued long-term decline in the ratio, the rate of exchange between the dinar and the dirham fluctuated widely at different times and in different parts of the then Muslim world (Chapra, 1996). The brief evolution of money has given in the following figure.

Is monetary policy a new phenomenon in Islam? To answer this question we have to go back to the first Islamic state established by our beloved Prophet (PBUH) in Medina. In the early Islamic state there was no basis for changes in the money supply through discretionary measure as there were no banking system and commodity money were extensively used instead. Moreover, credit has no role to play in creating money because: first of all, credit was used only among few traders and secondly, regulations governing the use of promissory notes and

negotiable instruments were in such a way that the credit was not capable of creating money. Promissory notes or bills of exchange (draft) were issued for purchase of a real commodity or receiving an amount of money. These documents could not be issued merely for purposes of credit. After issuances of these documents, the creditor could sell the note but the debtor was not allowed to sell the money or commodity before receiving it (As-Sadr, 1989). Therefore, there was no market for buying and selling of negotiable instruments, speculation, or use of money market fund. Thus, credit could not create money.

The above rule affects the equilibrium between the goods market and the money market based on cash transactions. In 'Nasiah'<sup>4</sup> or other Islamic legal transactions where a commodity is bought now but payment is made later, money is paid or received for commodity or an economic service. In other words, money is exchanged only in a trade which creates real value-added in economy which falls under the framework of Islamic legal criteria. Other transactions like gambling, usury, kali-bi-kali transactions<sup>5</sup>, buying and selling of superficial promissory notes were prohibited by Islam. As a result, the equilibrium between money and goods circulation in the economy was always maintained. Considering the relative stability of velocity of money in any given period, we can conclude that the volume of money in the economy was always equal to the value of goods produced. Like current monetary policy instrument, open market operation, buying and selling of the negotiable instrument by the Bait ul Mal (the central bank) was not used in the early Islamic period(As-Sadr, 1989). Interest rate regulation, increasing or decreasing the rate of interest on loans made by banks, was not available because of prohibition of *Riba* in Islam. As-Sadr mentions legal system governing, savings, investments, and trade has

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<sup>4</sup> The term defined in As-Sadr as rate of return on deferred sale

<sup>5</sup> Transactions in which neither the commodity nor the price of that good is delivered at the time of finalizing a deal.

provided mandatory devices, for the execution of monetary policies which, on the one hand, guaranteed an equilibrium between money and goods, and on the other hand, prevented the diversion of savings away from real investment and creation of real wealth in the society. As-Sadr further states that, giving spiritual and religious rewards for work and all other types of legitimate economic activities and participation of the companions of the Holy Prophet(PBUH) themselves in trading and agricultural activities, had increased the worth of these activities in the eyes of Muslims (As-Sadr, 1989).

### ***3.2 Islamic monetary economics equity vs. interest rate***

The reemergence of Islamic economics, specially Islamic banking in the middle of the last century has motivated economists to develop a comprehensive theoretical framework of modern Islamic monetary policy. After Jeddah and Islamabad conference in 1978 and 1980 respectively, considerable amount of literature on the subject matter has emerged. Ariff (1982) conducted some preliminary observations on the working of monetary policy in an interest-based economy and the possibilities in an interest-free economy. The three main goals of Islamic monetary policy were recognized: a) economic well being with full employment and optimum rate of economic growth; b) Socioeconomic justice and equitable distribution of income and wealth and c) Stability in the value of money (Chapra, 1985). First and third goals are already covered in conventional monetary policy but second goal has added new dimension in the theory of Islamic monetary policy.

Stream of literature has flowed and economists proposed different Islamic monetary policy theories but two views were dominant. On the one hand, use of conventional tools available for conducting monetary policy only rejecting interest rate based instruments (Chapra and others),

on the other hand, use of equity based profit and loss sharing securities to conduct monetary policy in addition to other *shari'ah* compliant available tools.

Naqvi (1981) argues that an equity-based economic system is unstable. This is because equity-financing, in contrast to interest-financing makes the return on investment unstable. Hence an element of uncertainty is introduced into the investor's expectations. Therefore, to hedge against the probability of a loss, ways and means must be found, through some kind of deposit insurance scheme, to guarantee ... the normal value of deposits. [Otherwise] ... not only the banking system, but the entire economy will become highly unstable (Naqvi, 1981). Moreover, he is convinced that in an interest-free economy people would save and invest optimally only if forced to do so by the state.

By supporting the argument provided by Naqvi (1981) Timur Kuran (1986) argues that prohibition of interest is unenforceable in a large heterogeneous society. Equity based profit and loss sharing contracts constitute a beneficial instrument in the absence of a well-functioning stock market, they do not prevent relatively risk-averse individuals' need to lend for interest. He further argues that not all banks would be content with lending to firms on a profit sharing basis, or that firms would necessarily desire to borrow on this basis.

While answering criticism of Naqvi, Zarqa argues that the uncertainties facing any real investment (whether common to all business or specific to the given enterprise) are there regardless of how it is financed. Equity financing does not change the level of uncertainty, it only redistributes the consequences of uncertainty over all parties to a business. Debt-financing, in contrast, relieves the financier from uncertainty by shifting it on to the real investor (equity holder) who then alone bears the entire risk of the enterprise. He also argued that, equity

financing, by spreading the same risk over more heads, would promote stability. Each party can absorb its modest share of a loss without significantly upsetting its normal activities or defaulting on its obligations, hence no panic reactions are generated among other business units. Regarding deposit insurance, he argued deposit insurance has little to do with interest vs. equity financing. Rather, it has to do with fractional reserve banking system which always faces the risk of a panicky run on the banks - with many depositors asking to exchange their deposits for cash on short notice. The author argues that the general consensus suggests that elimination of interest, especially when coupled with other institutional features of an Islamic economy, tends to enhance stability.

Islamic financial system can adjust relatively faster to shocks than would the traditional system (Khan, 1986). Henry Simons (as cited in Khan 1986) argued that interest-based banking system is unstable and lead to financial crisis and proposed 100 percent reserve banking and equity-based financial system. Khan(1986) proposed a theoretical model of interest-free banking and concluded that in equity-based banking system that excludes predetermined interest rates and does not guarantee the nominal value of deposits, shocks to asset positions are immediately absorbed by changes in the values of shares (deposits) held by the public in the bank. Therefore, the real values of assets and liabilities of banks in such a system would be equal at all points in time.

The debate on stability of interest-free economic system has been going on. In the mean time, a group of researchers have tried to develop a tentative framework of Islamic monetary policy starting from money demand and supply, Islamic financial system, ISLM framework to explain interaction of monetary policy and real sector. In the following section, significant contributions made by Muslim economists in the eighties and nineties will be discussed.

### ***3.3 Demand and supply of money in Islamic monetary economics***

A well-behaving and stable money demand function is required by almost all theories of macroeconomic activities and particularly for the smooth operation of an effective monetary policy. An unstable function undermines the monetary policy which becomes a source of economic disturbance.

Demand for real money balances depends on the level of real income and the expected return, conventionally interest rate, on financial assets. Firstly, this is so because individuals hold on to money to finance their expenditures which in turn depends on their income. The demand for money depends also on the expected return on the financial assets. The higher the expected return on the financial assets the less worthwhile it is to just hold on to money. Khan (1996) argued that this part of demand for money may not be directly speculative demand. He further explains that besides the transaction demand for money, there is a demand for meeting the short-term borrowing needs of others. With the importance attached to *qard hasan* and with the embarrassment attached to not helping in a brother in need, the Islamic environment would motivate everyone to keep some cash to meet the short-term borrowing needs of others.

Khan (1996) also states that the speculative demand for money would also exist in interest-free economy as the expected rate of return will be more volatile than the fixed interest rate and hence give rise to a greater urge to speculate. He argues that though speculation will always be on expected rate of return, it can always be translated into the profit-sharing ratio prevailing in the market. Thus, the higher the profit-sharing ratio, the lower the speculative demand for money and vice-versa. Moreover, there is some institutional control on speculative demand for money in the form of *zakah*. Finally, he argued that speculative demand for money will be overshadowed by altruistic demand for money.

Chapra (1992) argues that Islamic economic system tries to regulate money demand by a strategy that relies on a number of instruments: a) a socially-agreed filter mechanism; b) a strong motivating system to induce the individual to render his best in his own interest as well as in the interest of society; c) restructuring of the whole economy with the objective of realizing the *maqasid* (aim) in spite of scarce resources; and (d) a positive and strong goal-oriented role for the government.

The above given elements of the Islamic economic system may not only help minimize the instability in the aggregate demand for money but also influence the different components of money demand in a way that would promote greater efficiency and equity in the use of money. The relatively greater stability in the demand for money in an Islamic economy may also introduce greater stability in the velocity of circulation of money.

The demand for money in an Islamic economy may thus be represented by the following equation (Chapra, 1996):

$$M_d = f(Y_s, S, \pi), \text{ where}$$

$Y_s$  represents goods and services that are related to need fulfillment and productive investment and are in conformity with the values of Islam;

$S$  represents all those moral and social values and institutions (including *zakah*) that influence the allocation and distribution of resources and that can help minimize  $M_d$  not only for conspicuous consumption and unproductive investment but also for precautionary and speculative purposes;

$\pi$  represents the rate of profit or loss in a system which does not permit the use of the rate of interest for financial intermediation;

Therefore, it can be argued (normative in nature) the profit rate alone is the determining factor in the performance of a portfolio in interest-free economic system. Investors do not need to rebalance their portfolios as there is no ex ante interest rates change. That's why Chapra (1992; 1996) argue that there would be no speculative demand for money in interest-free system.

After successfully stabilizing money demand and maintaining general well-being and development of common people, the second most important questions of, firstly, how to bring aggregate money supply into equilibrium with such money demand, and secondly, how to bring the allocation of this money supply in conformity with the needs of goal realization without using coercion. The first question attains further significance as the two most important instruments of monetary management in the capitalist economy, discount rate and open market operations in interest-bearing government securities would not be available in an Islamic economy (Chapra, 1996). However, Khan and Mirakhor (1989) argue that open market operations could be conducted with securities that do not bear a fixed rate of return. In line with that Kia and Darrat restated that even though under the profit-risk-sharing banking system, the central bank will lose one of its monetary policy tools, i.e., interest rate, but can rely on a more powerful tool, i.e., to control money supply. In other words the CB can target monetary aggregate. The central bank can keep the money supply at its optimal level. At this level, the stable money demand allows the central bank to always operate at the optimum money supply where the consumer surplus is maximized. Assuming demand for money is stable, Friedman (1969) shows the optimum level of money supply can be achieved when the interest rate is zero (Friedman cited in Kia and Darrat, 2007).

### ***3.4 An interest-free monetary policy framework***

Khan and Mirakhor (1989) in their seminal paper on Islamic monetary policy developed a theoretical model of an Islamic financial system by generalizing the standard IS-LM model to study the effects of monetary policy on the macroeconomic variables of an Islamic economy. They argue that monetary change in money supply and use the flow of *Mudarabah* financing as an intermediate objective would work equally and affect economic variables. For example, an expansionary monetary policy would reduce rates of return and increase output.

Authors further argue that Islamic economy rejects the concept of a predetermined interest rate and permits an uncertain rate of return based on trade and profits, banks in an Islamic economy can strictly operate only on some type of profit and loss sharing basis. Authors discussed a number of alternatives proposed by Islamic scholars that satisfy such requirements. Most importantly, the question of how monetary policy would be expected to operate in an interest-free economy as interest rate based monetary instruments are unavailable, therefore, suitable substitutes would have to be found if monetary policy is to continue to play a role in Islamic economies. Authors mentioned the following alternatives: changes in reserve requirements, overall and selective controls on credit flows, changes in the monetary base through management of currency issue, and moral suasion. In addition to that open market operations could be conducted with securities that do not bear a fixed rate of return. They also pointed out that the monetary authorities also have the possibility of directly changing the rates of return on both deposits and loans by altering the ratios in which the banks and the public are expected to share in the profits and losses that are associated with the transactions, i.e., the profit-sharing ratios. Through performance of its regulatory, supervisory, and control functions, as well

as its lender-of-last-resort role, the central bank can continue to exert substantial influence on the financial system.

However, this is still a somewhat controversial issue as there are certain scholars who believe it would be inappropriate for the central bank to unilaterally change a contractually-determined ratio (Chapra, 1992; 1996). At the same time, other writers have argued in favor of regulating profit sharing ratios to achieve the goal of monetary stability, provided such actions affect only new deposits and not existing ones (Khan, 1986). At the same time, Hasan (1991) raised a number of questions against certain aspects of Khan and Mirakhor's model and the conclusions drawn from the same. He admitted the fact that the rate of return ( $r$ ) the banks receive on loans must in some way be related, as Khan and Mirakhor hold, to the rate ( $rb$ ) the banks pay on their liabilities. But he pointed out that even with the simplifying assumptions of operational and other costs of bank being zero,  $r$  and  $rb$  could not be equal. He claimed that if one can show that  $rb < r$ , the conclusions of the models could be questionable as the whole exercise was hinged on the equality of these two rates. According to Hasan, the equality of the two rates was just not possible under a "two tier *mudarabah*" based banking system (Hasan cited in Siddiqui, 2008).

Another important theoretical contribution was made by Fahim Khan (1996) in which he developed a model of income determination, growth and economic development in an interest-free economy. It was emphasized that growth in the Islamic economy can be manipulated on the supply side by mobilizing human resources through peculiar nature of Islamic financial system. With the help of the model the author shows that Islamic financial system generates an implicit macro framework that leads the economy towards full employment and then sustains it to further growth and development.

The conventional ISLM framework<sup>6</sup> was used to link a simple income-determination model to growth in the economy but the framework was developed under the assumptions of an Islamic economy. The author particularly highlighted the investment and money demand functions in an interest-free economy to link this to the process of economic development. According to this model, investment is the function of profit-sharing ratio in an interest free economy and relationship between profit-sharing ratio and investment is negative, moreover, mathematical model shows the profit-sharing ratio is negatively correlated with output.

The summary of other notable contributions in early Islamic monetary policy are as follows. Khan (1986, 1992) focused on the financial side, and presented a macroeconomic model in order to establish that monetary policy would work in an interest-free economy in the same way as in interest-based economy but with better speed of adjustment economy in disequilibrium situations. Non-guarantee of the deposits provided the main ground for his argument.

Khan and Mirakhor (1994) highlight the *mudarabah* mode deposit mobilization, and lease financing instruments that might be available in the Islamic financial system. They point out that apart from the Islamic banking system there would also be primary, secondary and money markets. There are great similarities between their thinking and what is available in conventional economics. Of course, the instruments like *mudarabah* and *musharakah* certificates are expected to have *Shari'ah* legitimacy. They regard macroeconomic stability, characterized by price stability and viable balance of payments position as the chief goals for monetary policy. As for monetary policy, their conclusion is as follows: Monetary policy of an Islamic state takes place in a framework in which all conventional tools normally available in a modern economy are at the disposal of the monetary authorities with the exception of the discount rate and other policy

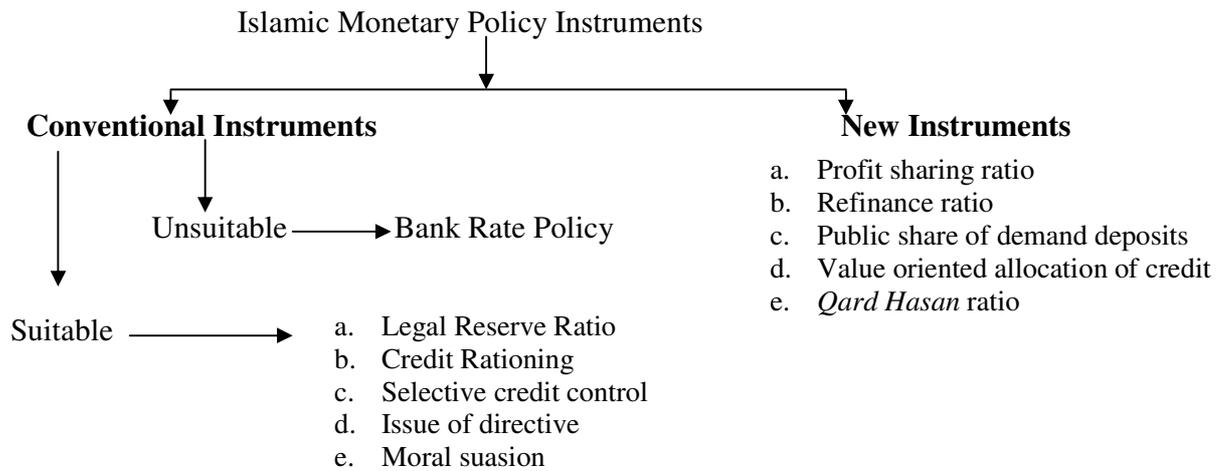
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<sup>6</sup> Author named his framework IS-LAM

tools that involve interest rate. All other tools, namely open market operations (where equity shares rather than bonds are traded) and credit policies, can be as effective in an Islamic system as they are in the conventional Western system. Additionally, the authorities in an Islamic system can utilize reserve requirements and profit-sharing ratios to achieve changes in the stocks of money and credit (Khan and Mirakhor, 1994).

Choudhry and Mirakhor (1997) focus on the tools for monetary policy. Their main proposal is use of equity-based government securities with rates of returns based on budgetary surplus for the purpose of monetary management. This study, like the others noted above, does not spell out blueprint of Islamic economy and, therefore, remains silent on the role of monetary policy in Islamization of an economy.

A good deal has been written on goals of Islamic monetary policy and conventional instruments suitable for Islamic economic system and unique Islamic monetary instruments have also been proposed since the developments in the Islamic finance from the late-1970s and onward. By analyzing literature we can show the key Islamic monetary policy instruments in the following figure.



**Figure 2:** Islamic monetary instruments

#### ***4. Empirical literature on Islamic monetary economics***

Although Islamic banking and finance have progressed significantly for the last four decades but we have not seen much Islamic monetary policy theories after remarkable work done in the eighties and nineties. In the following section, some empirical evidence supporting the earlier Islamic monetary policy theories, interest-free money demand, role of Islamic banks in monetary transmission mechanism will be discussed briefly.

Kia and Darrat (2007) have studied profit-sharing banking systems by modeling money demand behavior in Iran. They have estimated demand for M1 and profit-sharing deposits over the period 1966–2001. It is found that the demand equation for profit-sharing deposits is particularly stable and policy invariant in Iran despite numerous policy and non-policy shocks. They argue for profit-sharing banking system and suggest that profit-sharing monetary aggregates are credible instrument for monetary policy-making. Their findings support well with theoretical evidence (e.g., Chapra, 1992, 1996; Khan, 1986) indicating that the profit-loss-

sharing banking scheme insulates the monetary system from interest-rate exposure risk and minimizes financial instability

In one of the few earlier empirical works, Darrat (1988) examines empirically whether the absence of interest-bearing financial assets from the Tunisian economy would enhance (or hamper) the stability of her financial system. Non-interest money supply is defined as currency in the hands of the public plus their demand deposits at commercial banks. As is typically the case in most developing countries, all demand deposits in Tunisia are non-interest bearing. On the other hand, interest-bearing money supply is defined as the public's time and savings deposits at commercial banks. He used time series data from 1960 to 1984 for Tunisia as the case study as he argued cross section data from several Islamic countries would lead to biases due to heterogeneity. Moreover, non-availability of reliable data from Muslim countries at that period was also mentioned. It is found in his study that non-interest monetary assets exhibits better stability than interest-bearing. In addition to that, interest-free monetary system has a structurally stable public's demand for financial assets. Moreover, by using the regression, he found that the growth of non-interest-bearing aggregate adheres more closely to movements in the monetary base than does the growth of interest bearing aggregate. Therefore, he argued that Islamic interest-free monetary system is financial more stable and efficient than interest-based monetary system especially in view of recent financial crises and rampant bank failures in contemporary economies.

In more recent studies, many economists have looked into the effectiveness of monetary transmission mechanism under Islamic banking system. Sukmana and Kassim (2010) by using the co-integration test, impulse response functions, and variance decomposition analysis for Malaysia during the period of January 1994 to May 2007 find that that both Islamic banks'

financing and deposit play important roles in the monetary transmission process in the Malaysian economy. In particular, both Islamic deposit and financing are shown to be statistically significant in linking the monetary policy indicator to the real output. They argue that monetary authority should also consider the Islamic banks in the implementation of monetary policy in Malaysia. The results also imply that ensuring the stability of the Islamic financial institutions is just as important as that of the conventional counterpart to achieve an effective transmission of monetary policy in the economy. They also find that Islamic deposit is a very important source of financing. They argue that a heavy reliance on deposit to some extent is not healthy for the Islamic banks given the existence of the displaced commercial risk and the preference for smaller tenor of deposit among the customers. They recommend the Islamic banks to raise fund other than deposit. One of the solutions would be to develop the Islamic money market which could provide the Islamic banks with an alternative source of funding.

Serhan Cevik and Joshua Charap have studied the empirical behavior of conventional bank deposit rates and the rate of return on retail Islamic profit-and-loss sharing (PLS) investment accounts in Malaysia and Turkey, using monthly data from January 1997 to August 2010. They found them cointegrated and a significant positive correlation. Also, by using pairwise and multivariate causality tests they found that conventional bank deposit rates Granger cause returns on PLS accounts. There could be many plausible explanation but the authors argue mainly on moral hazard and ex-post information asymmetry in PLS instruments, lengthy due diligence, not appropriate or cost effective for short-term financing needs, lack of secondary markets for PLS-based financial products complicates liquidity and credit risk management at Islamic banks, and intense competition. In addition to that Islamic banks tend to use non-participatory, debt-like instruments in creating assets, while funding their operations mainly through the participatory

PLS model, and are able to remain competitive with conventional banks through utilization of profit equalization reserves. They conclude that participatory financing requires the development of Islamic money markets and the modernization of regulatory frameworks. It is also important for assessing the impact on monetary policy transmission (Cevik and Charap, 2011).

Cevik and Teksoz (2012) empirically examine the effectiveness of monetary policy transmission in the Gulf Cooperation Council (GCC) countries using a SVAR model for the period 1990–2010, with quarterly data. They find the interest rate and bank lending channels appear to be effective in transmission, while exchange rates do not play an important role due to the pegged exchange rate regimes. They argue that bank lending tends to increase with monetary expansion and that the impact of monetary policy shocks typically depends on the propagation mechanism. Moreover, the effectiveness of interest rate and bank lending channels depends largely on the bank balance sheets. They further argue that the issuance of *Sharia*-compliant securities, *sukuk* in local currency in recent years helped to sterilize surplus liquidity from the interbank money markets. They conclude that strengthening financial intermediation and facilitating the development of liquid domestic capital markets—would advance the effectiveness of monetary transmission mechanisms in the GCC countries.

Zaheer (2012) found that Islamic banks in Pakistan even though similar in size like conventional small banks but behave like large banks during contractionary monetary policy and continue lending irrespective of their liquidity positions. Therefore, they argued that monetary policy would be less potent if Islamic banks grow in size and their current asset-liability structure remains intact.

Basu et al. (2015) argue that Islamic and conventional banks in the Gulf Cooperation Council (GCC) are segmented and Islamic banks have excess liquidity which deters their growth. They ask for concerted efforts to build Islamic liquid interbank and money markets, which are crucial for monetary policy transmission through the Islamic financial system. They argue that it can be achieved by deepening Islamic government securities and developing *Shari'ah*-compliant money market instruments.

With the rapid development of Islamic banking, the importance of Islamic monetary policy framework has gained importance but still not enough empirical literatures to support the distinctiveness and effectiveness of it. The non-availability of data hinders the process but current review shows that Islamic monetary policy could work effectively with comprehensive Islamic economic framework and Islamic banks can play vital role in monetary transmission mechanism. In addition to other legal and regulatory issues, the lack of financial intermediation, non-existence of *Shari'ah* compliant financial instruments hold back the development of Islamic banking system.

### ***5. Implications***

At the advent of global financial crisis conventional monetary policy has failed to regulate the money market and the consequence of which has been observed in the global financial market. Even though there are only two countries, Iran and Sudan, operate under interest-free economic system but emergence of Islamic banking and finance in many Muslim and non-Muslim countries compel us to develop interest-free monetary policy framework. Most importantly, many Muslim majority countries have been suffering from higher inflation and

unemployment which create output instability and also hinder the equitable economic growth. To overcome this sustainable monetary policy is required.

Comparative analysis shows that Islamic monetary policy can adopt many conventional instruments which are in line with the *Shari'ah* guidance such as: Legal Reserve Ratio, Credit Rationing, Selective credit control, Issue of directive, and Moral suasion etc. As interest rate, the key tool of conventional monetary policy regulation, is prohibited in Islamic economic system, the need for sustainable alternative is the order of the day. However, Khan (2004) argued against complete elimination of interest by a legal decree and favored free market forces to bring the interest rates down to zero. Khan further stressed on providing incentives for the use of equity over debt financing. He proposed following policy measures: i) reducing reserve requirements to increase supply of loanable funds; ii) enforcing unlimited liability; iii) gradual decline in interest to make investments in debt based instruments less lucrative and shift loanable funds towards equity based instruments; iv) allowing dividend as a tax deductible expense; and v) providing fiscal incentives to non-leveraged firms and disincentives to leveraged firms. At the same time, some researchers argue to eliminate fractional reserve banking and impose 100% reserve requirements for demand deposits (Khan and Mirakhor, 1989, 1994). In post-crisis scenario, there is an interesting development in many developed countries where nominal interest rates hit almost zero or close to zero, known as so called Zero Lower Bound. Consequently, many Central Banks have started experimenting with unconventional monetary policy instruments and some countries even go beyond zero and impose negative interest rates. It clearly shows that interest rate has lost its importance as a major monetary policy instrument and it is high time to seek for viable alternative instrument.

From theoretical analysis we have also observed many economists propose equity based profit-sharing instruments for conducting open market operations and control deposit level of Islamic banks. However, conducting monetary operations through *Shari'ah*-compliant instruments is challenging, for example, Iran and Sudan are facing the same problem (Kammer et al., 2015). To this end, it is necessary to adapt monetary policy instruments and spur the development of Islamic interbank markets. In addition to weakening the transmission channel for monetary policy, the scarcity of instruments also forces Islamic banks to hold higher unremunerated reserves, affecting their ability to compete with conventional banks. *Sukuk* issued by governments appear to be suitable collateral for monetary operations in the context of Islamic banks as currently practiced in Sudan and Iran (Hussain et al, 2015).

## **6. Conclusions**

Islamic monetary economics have been evolving for the last four decades or so. While an Islamic economics system appears viable in theory, as well as to some extent in practice, significant obstacles and problems remain. Some of these include the following: lack of or non-existence of floating rate assets for Islamic banks, interbank market, *Shari'ah* compliant short-term financial instruments, fiscal dominance, foreign relationship banking and others.

Monetary policy of an Islamic state takes place in a framework in which all conventional tools normally available in a modern economy are at the disposal of the monetary authorities with the exception of the discount rate and other policy tools that involve an interest rate. All other tools, namely open market operations (where equity shares rather than bonds are traded) and credit policies, can be as effective in an Islamic system as they are in the conventional system. Additionally, the authorities in Islamic system can utilize reserve requirements and

profit-sharing ratios to achieve changes in the stocks of money and credit, although there is still some dispute among Muslim scholars on the appropriateness of these particular measures.

Theoretical and empirical literatures argue on stability of money demand in interest-free economy. The effectiveness of Islamic monetary policy has also been emphasized in several studies with the help of ISLM framework. The role of Islamic banks in monetary policy transmission mechanism is still somewhat controversial but empirical investigations have been going on.

To restate one of the principal goals of Islamic monetary policy is to ensure macroeconomic stability, characterized in the main by price-level stability. The establishment of a stable macroeconomic environment is a prerequisite for increased savings, investment, and foreign capital inflows all of which are central to the growth process. Basically, without macroeconomic stability economic growth can falter and not be sustained. Furthermore, without broad-based economic growth the basic structural and social transformations which make up the process of Islamic development will not occur, and the other objectives of the Islamic society, such as a more equitable distribution of resources and income, providing useful employment, improving living standards and the quality of life, and the alleviation of poverty, are unlikely to be met.

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