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Shaikh, Salman

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Salman Ahmed Shaikh MS (Szabist, Karachi)

Lecturer, University of East, Pakistan

salmanahmed_hyd@hotmail.com

www.islamiceconomics.viviti.com

Abstract

This paper reviews limited, but precious academic literature on central banking and monetary management in Islamic finance. It discusses the building blocks of an Islamic monetary system. It discusses how savings would feature despite discontinuation of interest, how inflation will be checked with central banks not having at its disposal conventional OMO, how liquidity will be managed in banking sector when central bank wants to inject liquidity or mop up funds. How and to what extent the institution of Zakat would enable the government to meet its fiscal targets and does not crowd out private sector. How balance of payments and exchange rate stability can be managed in an interest free economy. If in the short term, the government or central bank needs alternative source of revenue other than Zakat, they can issue GDP linked bonds. This could replace T-bill and provide a base instrument for OMO and liquidity management in the banking and financial sector.

Keywords: *Islamic corporate finance, pricing of capital, interest free finance, Interest, Interest free economy, Usury, Time value of money, Riba, Musharakah, Mudarabah, Ijara, Salam, Istisna, Qard-e-Hasan, Diminishing Musharakah.*

1. Introduction to Salient Features in Islamic Monetary Regime

Monetary policy guidelines extracted from the Islamic economic principles can be categorized under the following heads.

1. Interest free economy
2. Assets backed money supply creation
3. Low to moderate inflation
4. Stable exchange rates
5. Increased Savings

1.1 Interest Free Economy

The proposed Islamic economic framework will be interest free. Interest will not only be removed from the banking system, but also from the economy. Fiscal incentives will encourage new entrants in oligopolistic markets and increase competition. The increased competition will depress prices to their natural level.

Furthermore, the fiscal space will also enable the government to use price discrimination in giving targeted subsidies to the poor and needy as discussed later as well.

1.2 Assets Backed Money Supply Creation

Islamic banks will provide financing to create assets. Assets backed financing will result in productive activities and the funds will flow to the saving surplus units to saving deficient units in an efficient manner. Therefore, unrestrained money supply will not be possible. The problem of too much currency chasing too few goods will not occur and it will not result in inflationary pressures.

1.3 Low to Moderate Inflation

Four of the most important drivers of inflation are interest rates, depreciation of money, indirect taxes and price distortions due to imperfect markets. As it has been discussed above that in the proposed Islamic economic framework, interest will be removed from the economy and the money supply expansion will be dependent upon asset creation. Furthermore, fiscal incentives i.e. no indirect taxes and lenient tax rates on income/production bringing new entrants will make markets competitive and bring the prices down to their efficient level. Price manipulation and output restrictions resulting in deadweight loss will not occur in the proposed economic framework. Hence, inflation will grow at its natural level. The goods in which certain individuals have a greater consumer surplus, the price for them can be set higher using price discrimination.

1.4 Stable Exchange Rates

Since the focus is on increased productive capacity and not on deficit financing and tax base broadening along with fiscal incentives, the value of the currency will not be sacrificed to finance the deficits. Furthermore, fiscal incentives will lure foreign investors. A handsome license fee can be charged from foreign investors to finance government deficits in the short run before the

proposed economic framework starts bringing its true advantages.

Exchange rate stability improves if balance of payments situation improves. Balance of Payment improves if the country's exports increase at a higher rate than imports. With interest not adding to the cost, it will decrease the cost of production and hence make exports more competitive. With no interest in the economy complemented by a wealth tax, equity investment will be boosted and the firms will be in a better position to generate financing through equity mode. Hence, investment in better technology and expansion to reap economies of scale would become possible.

1.5 Savings

In the interest based monetary system, the inflation sometimes cross interest rates and the real interest rate earned on an investment goes negative. In the proposed economic framework, inflation is adequately controlled and with stable exchange rates, the return on investment will remain positive even if it is not fixed.

If interest based system can survive and induce savings even when the real interest rates are negative, there is no reason why the proposed economic framework can not survive with all the right mechanisms in place to achieve positive return on investment. Interest rates in U.S.A reached the zero bound in December 2008.

Krugman [September 02, 2009] in his New York Times article titled "How Did Economists Get It So Wrong?" analyzed the current financial crisis and Fed's response in following words:

> "But zero, it turned out, isn't low enough to end this recession. And the Fed can't push rates below zero, since at near-zero rates investors simply hoard cash rather than lending it out. So by late 2008, with interest rates basically at what macroeconomists call the "zero lower bound" even as the recession continued to deepen, conventional monetary policy had lost all traction.
>
> Now what? This is the second time America has been up against the zero lower bound, the previous occasion being the Great Depression. And it was precisely the observation that there's a lower bound to interest rates that led Keynes to advocate higher government spending: when monetary policy is ineffective and the private sector can't be persuaded to spend more, the public sector must take its place in supporting the economy. Fiscal stimulus is the Keynesian answer to the kind of depression-type economic situation we're currently in."

The proposal presented in this book also favors fiscal expansion by way of decrease in tax rates, increasing tax base along with prohibition of interest and providing an alternative to interest based monetary system that will not have the problematic features of interest. Therefore, interest based system can be overtaken and the economy can be run on a sound footing provided the proposed holistic approach is taken and implemented with sincerity.

2. Dealing with Scarcity of Capital

Business cycles are a reality. Infact, as per Islam, they must exist as this world is a place for test and this test requires some people to be privileged and some to be deprived. The deprived and privileged are both tested for patience and thankfulness to Allah and how they take care of society and its needs. But, interest as a system of allocation of resources ensures a fixed return to one and variable/uncertain for another. That is why, business cycles affect borrowers negatively. Hence, leveraged companies thrive in upturns, but lose in downturns. Equity financing ensures justice.

Interest makes capital scarce, brings oligopoly in capital goods industries and monopolistic competition in consumer goods industries i.e. market imperfections. Market imperfections lead to mismatch between supply and demand, hence create downturns every now and then in economy. This downturn leads to monetary easing to increase Aggregate Demand, but the market remains imperfect even then because capital is still scarce with interest and no wealth tax (more prominently in developing countries with indirect taxes greater than direct taxes). If it is followed by cost-push inflation, it gives rise to Stagflation eventually. In Stagflation, monetary economics fail and further exacerbate the situation with output decreasing and capital made scarcer with increase in interest rates. Inflation can be better checked through supply chain management and removing market imperfections complimented by progressive taxation.

Business Cycles will continue to exist as they are natural, but the loss/profit would be shared. Therefore, markets will not produce speculative surplus output and that will stabilize business cycles.

Stagflation (Inflation rises and GDP growth decreases) defies both Okun's law (If GDP increases by 3%; unemployment decreases by 1%) and Taylor's Rule [Monetary tightening by more than unity (i.e. >1% increase in interest rates) for a unit % increase in inflation (i.e. 1%)].

Furthermore, Inflation in U.S is down, but not entirely due to monetary policy. Food prices are down due to subsidies and energy needs of U.S are also met not entirely using market (i.e. due to political factors and influence in resource rich countries to procure resources cheaply).

Even if interest rates were decreased to around zero bound in U.S, Inflation has not risen. Economists especially from Chicago School analyzing Great Depression criticized Central Bank for having not adopted monetary easing and thereby worsening the sentiments. Great Depression, as we all know, occurred after Stock Market Crash. In the 'Great Recession' today, Central bank in U.S is not adopting tight monetary policy because inflation is tackled through non-market forces (Subsidies and Political influence in resource rich countries to meet demand at affordable prices) because U.S did not have that financial capacity nor the political influence at the time of Great Depression unlike today. But, this monetary easing has still not caused private investment and private sector borrowing to increase and the huge trade and fiscal deficit of U.S is still not causing the crowd out effect and same is the case in Pakistan after the reduction in policy rates.

These bearish sentiments in economic downturns, as Keynes said, can only be revived by Public investment either through increasing government expenditure in public sector enterprises or by providing subsidies to private sector enterprises. No matter how hard one tries to deny it, when one considers the bail-out package for financial sector as well as producing sector, one can not say government has no role to play in capitalism.

In a proposed Islamic economy, interest will be discontinued by a legal decree complimented by an imposition of broad based wealth tax (Zakah). An imposition of wealth tax (Zakah) would ensure that loanable funds increase even when there is no interest. The loanable funds would be invested in equity modes of financing including Mudarabah and Musharakah. Investments in equity will be exempted from wealth tax. This would ensure that investors get a minimum return i.e. tax savings plus income on their equity investments. This tax exemption would also ensure the availability and supply of loanable funds.

In an interest free economy, income only bonds could still be introduced. These bonds need to be serviced provided there is income. The service payments on these bonds will be tax deductible. Tax deductible feature would benefit issuer and the compulsory servicing of bond in case of income would benefit investors to invest in blue chip companies. Companies which are not in the ranks of blue chip companies would issue convertible income only bonds. Since there is a one sided promise, it will not be against any of the Islamic principles. Exemption of investment in income bonds would also ensure the availability and supply of loanable funds in income bonds market.

In the proposed financial framework, dividends will allowed to be tax deductible; thereby, benefiting the company to benefit from tax advantage and increase the frequency of dividend

payments and make it a regular feature. This will further boost and compliment the availability of loanable funds.

Modigliani & Miller (1963) argued that value of a levered firm is greater than the value of an unlevered firm. The difference in value comes from the tax benefit accruing to a levered firm. But, they ignored the bankruptcy costs and the case where even if a company is solvent, the economy may go through a recession.
Furthermore, if this tax benefit is provided to an unleveled firm by making dividends to be tax deductible; then, value of a levered firm may cease to have any extra value greater than an unlevered firm.

By discontinuing interest by way of a legal decree, primary market activities in equity markets will increase since companies will no longer be able to generate finance through debt. Therefore, increase in listed companies will expand the market and diversify trading opportunities for investors.

3. Role and Functions of Central Bank in Islamic Economy

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

Interest free banking has been introduced in many Muslim countries since 1960. It has widened in scope, size, sophistication and reach ever since then. In academic literature relevant to the role and functions of central bank and monetary management based on Islamic ideals, we find concepts such as refinance ratio (Siddique, 1982), Qard-e-Hasan ratio (Khan, 1982), Mudarabah based lending between commercial and central banks and restricting high powered money by way of RRR than relying on OMO (Chapra, 1983), Time Multiple Counter Loan (Mehmood, 1991), composite stock (Zangeneh & Salam, 1993) and central bank having equity stake in commercial banks (Uzair, 1982) to name a few.

Now, we come to the various practicable alternatives that have been suggested to see whether the literature offers us a clue as to how capital may be priced holistically and look for various

ways in which a central bank in an interest free economy can carry out its functions and roles. Chapra (1983) realizing that the two important instruments of monetary policy in the capitalist economy, discount rate and open market operations in interest-bearing government securities will not be available, he recommended following important measures for devising an alternative system of central banking in Islamic finance.

i) Managing Monetary Base

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

ii) Public Share of Demand Deposits

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

iii) Statutory Reserve Requirement

Commercial banks should be required to hold a certain proportion, say, I0-20 per cent, of their

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

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

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

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

Zangeneh & Salam (1993) presented two possible alternatives for money management i.e. alternative of discount rate and open market operations in Islamic finance. They recommended that the central bank could charge the borrowing bank a weighted average rate of return in different sectors of the economy plus or minus a discretionary premium to discourage borrowing if the economy is facing inflation. In recession, the central bank could charge the borrowing bank a weighted average rate of return in different sectors of the economy minus a discretionary discount (i.e., provide a subsidy) to encourage borrowing from the central bank. In this mechanism, the central bank would charge the borrowing bank a rate depending on the profit rate that prevails in the economy, plus or minus a policy premium or discount factor depending on the condition of the

economy. At the time of providing funds, the central bank could use the last month's, last quarter's, or last year's data to calculate the relevant rate for short term borrowings of commercial banks. However, as soon as the central bank determines the actual profit rate for that particular time period, it could recalculate its share of the profit or losses, based on the agreed terms at the time resources were made available by the central bank, and charge the commercial bank for the loan or reimburse the bank for the overcharges.

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

As can be observed from this literature review that efforts have been made in the past to delineate a mechanism for managing money supply (by limiting high powered money, using variable required reserve ratio, using full reserve ratio etc) instruments to be used in Islamic money market (Productive sector performance linked instruments for liquidity management), managing liquidity in financial sector (using two-way Mudarabah model, refinance ratio, Qard-e-Hasan ratio, composite stocks etc) and the role and functions of central bank. But much of that academic research has not translated into practice.

In the following lines, we propose a distinct, viable and stable alternative benchmark for public finance which will be usable for pricing government bonds, the trading in which will create a source of public debt financing and replacing conventional OMO by providing a base instrument in OMO in Islamic monetary framework.

Institution of Zakat: Alternative for Public Finance

Zakah is a religious obligation to pay a part of wealth and income to the government. Nisaab on wealth was basically specified in silver. For calculation purposes, people used the cross rate between gold and silver and determined their nisaab in gold as well. This cross rate has changed historically; that is why, we will have to resort to the original base i.e. 612 grams of silver. One important implication of this principle is that tax exemption amount in silver is much lower than gold using current cross rate and hence taxable assets will increase in magnitude. If the wealth, production or livestock exceeds the minimum exemption limit, Zakah would be levied as per the ceiling rates defined for each category of wealth or production.

It is generally understood that Zakah is only 2-½% on capital. But rates of Zakah are different on various heads of income. Agriculture economy existed 1400 years ago. If there was Zakah on agricultural produce, there should be Zakah on industrial produce if it exists today. Ushr and Khums was in principle a production tax. It should be imposed today on all heads of income and production (Ghamidi, 2007).

The classification is as follows:

a) 2-½% on cash, wholesale value of held for trade inventory and capital in excess of need payable once a year at a particular set date. Diamond and precious stones should be taxable as Zakah is paid out of wealth and all that constitute wealth should be taxable. Property/Vehicle & other assets used for personal consumption beyond a limit (in excess of need) should also be taxable.

b) 5% on production using both labor and capital. It is applicable on production in industries and agriculture or on any other income earned where both labor and capital are utilized. It is charged at the completion of the production process.

c) 10% on production using either labor or capital. It is applicable on rental income, dividend income, income from selling securities yielding capital gains, salaries and pure service industries such as consultancy. It is charged as soon as the income is realized.

d) 20% on production using neither labor nor capital. This is applicable on treasure or any other natural gift obtained without using neither labor nor capital.

Production is not limited to agriculture nowadays, but major part of it is coming from industries. Therefore, Nisaab for industrial production will have to be defined for the first time. As discussed above, Nisaab implies the minimum exemption amount; it can be increased as well as defined afresh on new assets, production or income added into the tax net over time.

To estimate Zakat, the following model is established:

$$\mathbf{ZR = 0.025\ [ZA - (MNA \times P_{MNA}]}$$

Where

ZR = Potential Aggregate Zakat Revenue

ZA = Potential Aggregate Zakatable Assets
MNA = Minimum Nisab Amount i.e. market value of 612 grams of silver
P_{MNA} = People with Minimum Nisab Amount

Zakatable assets include all assets above the value of nisab except the assets in personal use and means of production. Minimum Nisab Amount is the market value of 612 grams of silver. Population with minimum nisab amount is to be estimated looking at wealth distribution of population.

On the surface, it can be seen that as zakatable assets increase, Zakat revenue increases and as population with minimum nisab amount increases, Zakat revenue also increases. Minimum nisab amount in silver terms would remain constant, but is value in currency would change. But, the effect of inflation would impact almost all endowments of an individual overtime.

Alternative for Public Finance Other Than Zakat

Saleem (1992) has pointed three narrations of the Prophet explaining that the government cannot levy any tax other than Zakah. This will serve as an automatic check on the government to effectively and efficiently collect and spend the proceeds of Zakah.

The narrations of the Prophet explaining this rule are mentioned below:

a) There is no [legal] share [for the society] in the wealth [of people] except Zakah." (Ibni Maajah: Kitab-uz-Zakah).

b) "After you have paid the Zakah of your wealth, you have paid [all] that was [legally] required of you." (Ibni Maajah: Kitab-uz-Zakah).

c) "No tax-imposer shall enter paradise." (Abu-Daud: Kitab-ul-Khiraj).

Looking beyond imposing more taxes, we have another alternative proposed by eminent scholar Muhammad Taqi Usmani. Usmani (2003) proposed issuance of GDP growth linked instruments to finance public debt. His proposal can be further polished by making a secondary market for it by directing banks to meet their statutory requirements through this instrument. This instrument will be a major investment alternative for money market players.

It will not be the same as bonds indexed for inflation. Bonds indexed for inflation are not recommendable as inflation does not always imply growth in production especially in stagflation. Moreover, inflation is more subjective and relative a measure to index an instrument with. Indexing the instrument based on Nominal GDP growth rate will be appropriate as the benchmark used will be related to production.

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

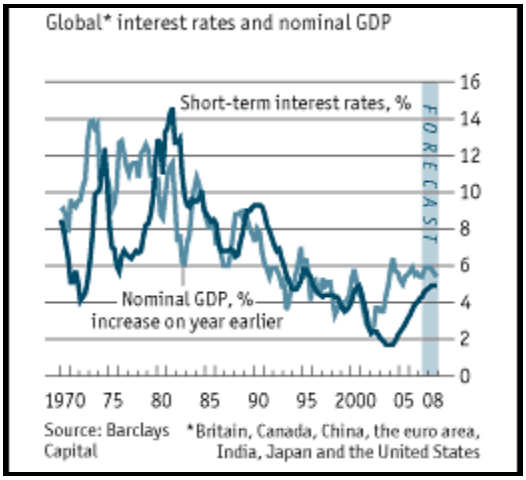

Figure 1: Nominal GDP (t-1) and Nominal Interest Rates (t) for a group of big economies (Source: The Economist)

It can be seen that both variables virtually moved together throughout the period and especially since 1990. Therefore, it is plausible to use Nominal GDP growth rate as the benchmark for Islamic money market. Since this figure confirms the movement of both variables in the same directions, it can be used for indexing multilateral loans, loans between central banks and between central banks and international financial and development organizations such as IMF, WB, IDA, IDB, ADB etc.

It will not only compensate the financier for parting with liquidity and capital, but also provide a stable mechanism for recipient countries to get out of debt trap with debt servicing linked with output performance benchmark and it will provide relief in the balance of payment and foreign debt management to central banks in developing countries.

Conclusion

This paper reviewed limited, but precious academic literature on central banking and monetary management in Islamic finance. It discussed the building blocks of an Islamic monetary system. It discussed how savings would feature despite discontinuation of interest, how inflation will be

checked with central banks not having at its disposal conventional OMO, how liquidity will be managed in banking sector when central bank wants to inject liquidity or mop up funds. How and to what extent the institution of Zakat would enable the government to meet its fiscal targets and does not crowd out private sector. How balance of payments and exchange rate stability can be managed in an interest free economy. If in the short term, the government or central bank needs alternative source of revenue other than Zakat, they can issue GDP linked bonds. This could replace T-bill and provide a base instrument for OMO and liquidity management in the banking and financial sector.

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