The Islamic macroeconomic model: How to Apply it

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Introduction

Islamic economic macro models can be broadly divided into two categories. Both categories ignore the neoclassical microfoundations based on the utility-maximizing individual, the profit-maximizing firm, the typical macroeconomic agent, and the different versions of strict rationality attached to an all-knowing decision-making unit. Both approaches give due attention to the importance of equity and the role of Zakah and Awqaf in providing a significant share of public services.

The first category was inspired by Mannan (1970), Siddiqui (1981, 2006), and Chapra (1985, 1996) and elaborated by Khan and Mirakhor (1994) and Iqbal and Mirakhor (2011), in addition to Mirakhor and Zaidi (2007). This profit and loss sharing (PLS) approach implicitly assumes a *pure equity-based system* and draws important conclusions about its efficiency, equilibrium, and stability. Meanwhile, it ignores the institutional details of the monetary and financial structure. When discussing monetary policy, the traditional policy tools are usually listed, with the exception of those that use the rate of interest. The neoclassical straightjacketing into a stable equilibrium remains. The trouble with this category is their insistence on the pure equity model as a representative of the Islamic macro model. At an early stage, many have thought that to be a first approximation. Yet, the tendency has persisted from 1970 to the current century. Pure equity is not a correct characterization of an Islamic economic system. Economywide optimization would require a mix of equity and debt finance. The latter has been provided through *several-sale* finance contracts.

The second category proposes a detailed institutional structure of the monetary or financial sector of an Islamic economic system. This structure has distinctive features concerning money creation and finance allocation. Furthermore, the money market contains the necessary instruments for the anchor and conduct of monetary policy. In other words, the rules of Shari'ah concerning economic behavior have been translated into a behavioral structure attached to an institutional framework. This category has been offered by Al-Jarhi (1981, 1983) with several consequent modifications and improvements. Most importantly, it started with a Hicksian IS-LM [1] structure, which is neoclassical. The author has later decided to switch to a disequilibrium structure.

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[1] Hicks (1937) introduced a neoclassical model, which he claimed to be of Keynes. The IS curve represents the saving-investment equilibrium, while the LM curve represented the demand for and the supply of money equilbrium. The intersection of both schedules represents the neoclassical stable full employment equilibrium. It became famous as the IS-LM model. Hicks (1980) later admitted that his model was not that of Keynes but of the neoclassics.

This chapter describes the Islamic macroeconomic model according to Al-Jarhi's approach. It provides recommendations on applying this model to the macroeconomy for economic development and stabilization purposes. In this regard, the chapter considers gradualism and institutional competition as the two driving forces behind the implementation. As to the latter, the legal and regulatory environment is continuously modified to provide both conventional and Islamic economic institutions working side by side to have an equal opportunity to operate, leaving the competition to have the final say for the public to judge the usefulness of each.

How money is created

Issuing money

In the conventional monetary model, money is created in the form of credit balances to be lent to the treasury as well as to banks. The treasury uses these balances to cover the deficit in the government budget. Banks use the balances as reserves to cover their (interest-based) lending to the public.

Under the fractional reserve system, the neoclassicists claim that banks create money as a multiple of reserves, which are initially issued by the central bank in the form of the monetary base. Banks allegedly issue money as multiple reserves in the form of derivative deposits through lending to the public. The maximum amount of money issued would be equal to the monetary base multiplied by the money multiplier, which would be equal to the reciprocal of the required reserve ratio.

Some theorists, however, argue that banks do not wait for the central banks to issue the monetary base. They instead take the initiative to make loans and create derivative deposits, then rush to the central bank to cover their reserve positions. The central bank finds itself, at least in the short run, forced to oblige (Moore, 2001). This opinion later found convincing empirical support (Kydland and Prescott, 1990). This means that the concept of the money multiplier has been a myth, with no factual support. At any rate, money in a conventional economy is issued *on a lending basis*. What then is the basis for issuing money in an Islamic economic system?

Before we answer this question, it is important to note that the misunderstanding regarding the money multiplier has led to theories that assume the homogeneity of money, which ends up claiming that money is only a veil, as changes in its rate of growth would only affect prices, leaving real variables unchanged.

Furthermore, the application of fractional reserves has weakened the grip of the central bank on the money supply, as most of the money supply would be issued by banks in a multiple of the monetary base. It also allowed banks to gain wealth at the expense of the public as they lend money to the public at a rate of interest, while the public is the only party that can be credited with giving the money its quality as money, through bestowing on it their general acceptance. Moreover, the use of the required reserve ratio as a tool of monetary policy appears to be counterproductive, as any change in the ratio would produce multiple changes in the money supply, threatening to make the monetary policy a source of instability.

Based on these three reasons, Al-Jarhi's model (Al-Jarhi, 1981, 1983) insists on the application of total reserves to provide the central bank with absolute power to control the money supply, to prevent the wealth redistribution in favor of banks' shareholders, and to do away with a tool of monetary policy that mostly led to instability.

In Al-Jarhi's model, money is created as credit balances to be credited to the central bank investment accounts with banks under the name of central bank deposits or central deposits, CDs for short. They are placed in Islamic banks based on the Mudaraba contract. The newly issued money would be allocated to Islamic banks according to their record of profitability and safety. Issuing and retiring new money by adding or subtracting from CDs would be the first and utmost tool to manage the money supply

To assist in managing and fine-tuning the rate of monetary expansion, the central bank issues monetary instruments called central deposit certificates, CDCs, which would be offered to banks, financial institutions, and the public. Their proceeds are added to CDs and similarly allocated among banks.

The CDCs represent an undivided common share in the Mudaraba pool of assets created by banks through their financing provided to the household and business sectors, using Islamic finance products. Such products are based on Islamic finance contracts that range from a partnership in a product, partnership in profit, investment agency, and Ijarah, as well as sale finance that includes deferred-payment sale and deferred delivery sale.

The CDCs stand to compete with other investments, like shares, fund certificates, and Sukuk. However, it is distinguished by being the lowest-risk monetary asset, thanks to the automatic diversification by the central bank, who knows the most about its member banks.[2] Therefore, on the liquidity scale, it stands as the nearest asset to money in liquidity, while it pays a rate of return that is equal to the average of returns on all assets included in the Mudaraba pools of all banks in the economy[3].

Estimating the real rate of growth: why?

We start with a relatively stable state of (disequilibrium) prices, where pressures of excess demands or supplies are in a state of moderation, that is, with moderate pressure on prices towards upward and downward movements to their nearest disequilibrium values. Meanwhile, markets would be characterized by a degree of monopolistic competition, where markets are generally fragmented by brand names, geographic locations, and related price-searching tactics on the sides of both buyers and sellers.

Prices in such an environment vary with the degree of price differentiation related to the promotion and advertisement activities and the related services provided by sellers. Traders, meanwhile, stay busy with price searching in a way that makes it impossible for any market to reach a stable equilibrium, due to the interactions (emergent or strategic behavior) between traders in addition to the information-cost differential between markets. This, we argue, is the real state that is far removed from the neoclassical attachment to stable equilibria, which increasingly appears as a fanciful idea.

In this disequilibrium mode, the movement towards or away from equilibrium would become vigorous or weaker depending on the extent of excess demands and supplies in markets and the degree of awareness among traders ~~with~~ of these excesses as well as their expectations about their effects. Some would expect price increases and therefore continue buying. Some others would expect price declines and therefore go for selling. In such an environment of uncertainty, expectations are mostly disappointed. Prices would thus continue to approach or go further from equilibrium, which continues to give rise to traders' interaction or emergent behavior.

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[2] Despite the fact that the Mudaraba contract suffers from information asymmetry, the central bank supervisory role over banks enables it to monitor banks continuously, which renders information asymmetry nil.
[3] Such would be a weighted average.

In this economy, a higher rate of monetary expansion is followed by excess demands for all commodities to varying degrees. This leads firms to seek financing to provide more supplies. The fact that banks, using Islamic modes of finance without resorting to ruses, provide finance either to suppliers alone or demanders and suppliers together would closely connect the finance sector with the real sector, which is mostly disconnected in a market economy. It would attenuate price rises and allow the finance sector to positively influence the speed of adjustments in commodity markets.

Excess supplies would tend to go down, depending on the extent of monetary expansion and the responsiveness of supply to increased availability of financing. What stands between the economy and equilibrium is the state of uncertainty, which caused producers to raise their supply by an amount that is always significantly or slightly below or above what is needed to reach equilibrium.

Let us remember that we have started with an economy in disequilibrium, and then the emergent behavior got hotter with the increase in monetary expansion. Because of the initial and following conditions, the relationship between monetary expansion and price stability remains central. To the extent that monetary expansion remains within the limits of economic growth, excess supplies dominate the scene, keeping disequilibrium prices calm. Once monetary expansion exceeds the limits of economic growth, excess demands dominate, forcing prices out of control. Therefore, the monetary authority must monitor the relationship between monetary expansion and economic growth for the benefit of reaching price stability.

If the increase in the monetary expansion is far below economic growth, excess demand would be modest, and so would their effect on the speeds of adjustment and price levels. The opposite is also true. If the increase in monetary expansion exceeds economic growth, excess demands would be proportionately higher and the increase in prices would be larger.

While we make no claims to a perfect or competitive asset market, we can nonetheless claim that there would be some reasonable degree of general awareness among investors regarding the trade-offs between different investments (stocks, Sukuk, fund shares, investment deposits in different banks, and direct investment).

We would not, therefore, indulge in making assumptions parallel to those made by the "efficient market hypothesis". Some of those assumptions can be mentioned here as examples. First, the collective expectations of stock market investors are accurate predictions of companies' prospects. Second, share prices fully reflect all information pertinent to the prospects of traded companies. Third, changes in share prices are due to changes in information relevant to prospects. Such assumptions would make all knowledgeable prophets out of investors and provide a baseless rationalization for a theory that claims that financial markets are stable and not subject to fluctuations, which is contrary to reality (Keen, 2011).

Such general awareness would motivate investors to take the existence of the trade-offs as much as possible in their investment decision. This implies no claim to their considering all possible alternatives or being rational in the calculative sense.

Due to extremely curtailed speculations, for reasons be explained later, the absence of hoarding puts more steam in increasing the commodity supplies. However, this process will continue to work, as long as monetary expansion stays within the requirements of real growth.

The continuous interaction among investors, based on bounded rationality, supported by a state of limited awareness of trade-offs between assets, will lead the rate of return on CDCs, or RCDC, to approach the average

rate of return on national wealth[4]. The difference would be the market assessment of the risk premium that CDCs enjoy, due to the nature of their issuer and the high diversification of the issuer's portfolio[5].

The central bank would therefore have two options concerning anchoring monetary policy. The first is to use the rate of return on CDCs, or the RCDC, as a presumed approximation of the real rate of growth. The second is to attempt to estimate the real rate of growth using the RCDC itself. With either option, the central bank has to monitor inflation, as it would deliver the final say on whether the rate of monetary growth is overshooting or undershooting real growth requirements.

How the real rate of growth would be estimated, based on the RCDC, is the next step. Being aware of the risk premium, the central bank can estimate the rate of growth of the economy as equal to the RCDC plus an estimated risk premium that changes from time to time, depending upon the state of expectations about

i   the performance of the real sector,

ii   its fundamentals, and

iii   the attitude of traders in the financial market.

Notably, the financial market in this model has a much smaller amount of speculative trading, defined as trading based on price expectations and/or the rate of return of the financial instruments. The reason is that financial-market trading cannot be financed. This is a prohibition that Al-Jarhi adds to his model, based on the fact that finance of speculation is more like a Ponzi scheme. Admittedly, this would not remove all speculative trading but would reduce it much below what is familiar in contemporary financial markets. Based on this, the real rate of growth would be equal to the RCDC plus some nonlinear function of the difference between the rate of return on shares (possibly estimated by the rate of growth in some stock market index) and the RCDC.

Monetary management

Islamic finance reform

Islamic finance has succumbed to the use of ruses to mimic conventional finance. While Islamic finance is costly to document and implement, conventional finance is simpler and less costly. The benefits of Islamic finance are significant, but they tend to be external macroeconomic benefits that cannot be internalized by a single bank. Naturally, in the absence of regulatory discipline, due to the disinterest of monetary authorities, Islamic finance has spent much effort in structuring products that have the Islamic garb while being conventional ~~in essence~~. No

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[4] Let us remember that central deposit certificates, CDCs, are titles to assets created through investment (not loans) by banks, which pays the central bank a rate of return every financial period. The central bank in return pays CDCs holders the average of the same return after keeping its profit share. The CDC rate of return, RCDC, is the average rate of return on all central bank deposits, CDCs, whether emanating from a deliberate change in the money supply or through sale of CDC's in the open market.

[5] Central deposits are invested in all areas of the real sector, corporate and noncorporate, listed and unlisted. Therefore, they carry a degree of diversification that has a wider range than placing funds in the portfolio of a financial market index or any other combination of listed companies.

economy can therefore benefit from adopting an Islamic finance camouflage for conventional finance. Reform must be done head-on before the economy can make use of the benefits of Islamic finance (Al-Jarhi, 2016; 2017d).

The RCDC and the rate of real growth

The rate of return on CDCs or the RCDC is a market-determined measure of investment profitability (or the rate of growth of wealth) in a large section of the economy. This makes it rather useful in estimating an approximation of the real rate of growth for the whole economy. Once the central bank has a money-market determined indicator that can be used to estimate the real rate of growth, the latter would become an ideal anchor for monetary policy. Whether the supply of money should be changed and by how much can be figured out through comparing the RCDC and the rate of inflation. As inflation (as well as deflation) is known to have serious efficiency and redistributional drawbacks. To avoid them, the monetary authority must seek absolute price stability. Initially, the central bank would anchor the rate of growth of money to the RCDC. To the extent that there is no inflation or deflation, such policy should be judged successful.

We assert that the real rate of growth is a function of the RCDC, particularly in the case of no inflation or deflation. However, this must be subject to some reservations. First, the CDC trading in the money market would produce a series of disequilibrium prices over time. Traders would be uncertain about prices. They would take the present as a guide to the future, in the way Keynes introduced uncertainty into his model. In contrast with Keynes' model, in an Islamic economy, those who would wish to speculate at a wider scale would not be financed for this purpose, as the financing of trading in financial instruments would be prohibited. The tendency of trying to predict where the trading herd is heading would not find the financing support to make it profitable to seasoned traders. The mere reliance on current conditions and the information regarding economic fundamentals would settle the trading price of CDCs, and consequently its rate of return, close to but never at its equilibrium level.

This provides the central bank some guidance to the state of economic growth that can be sharpened by looking at the inflation rate. The extent to which inflation is close to zero indicates how closely the central bank estimate of the rate of growth, based on the RCDC, approximates its actual value. Such comparisons should help the central bank fine-tune the rate of monetary expansion to reach two objectives: (i) provide the monetary requirements for growth and (ii) maintain price stability.

It is therefore important that Islamic banks do not provide any finance to speculators[6]. This would increase the usefulness of the RCDC to be used in estimating an approximate rate of growth. Moreover, it facilitates monetary management by monitoring the rate of inflation to gauge monetary expansion to price stability.

We have argued that the RCDC can be a base for estimating real growth, provided that financing of trading in the financial market is not available. The value of the RCDC will not be the same as the value of the real rate of growth, except under very restrictive assumptions. The central bank has therefore two options. The first is to use the RCDC as the only guide to monetary policy while monitoring the rate of inflation. If it exceeded zero, the central bank would have overshot the rate of monetary expansion that is commensurate with the target of price stability. It, therefore, has to reduce monetary expansion, using the excess of inflation above zero as a guide.

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[6] Financing speculators in the financial market is considered as some sort of a Ponzi scheme (Keen, 2011).

In reverse, if the rate of inflation drops below zero, a similar but upward adjustment process would be required in monetary expansion. The hunch is that the RCDC would be a useful guide of monetary policy in the short run, which is the most relevant period for stability.

Alternatively, the central bank can make its estimate of the real rate of growth, based on the RCDC. However, it has to keep monitoring the rate of inflation for fine-tuning. It appears a much easier task to rely solely on the RCDC, without attempting to estimate the rate of growth and while monitoring the rate of inflation, to be the better guide to monetary policy.

Summary of the estimation method

In an environment of highly subdued speculation, the difference between the real rate of growth and the RCDC would depend upon the state of expectations under uncertainty. Therefore, we can postulate that (real rate of growth, g − RCDC) would be a nonlinear function of the rates of growth of investment and consumption and the financial market trend, measured by the rate of growth of the general market index, as a proxy variable for short term expectations under uncertainty. The market index should include stocks and Sukuk.

In other words:

$$g \ - \ RCDC \ = \ f\left(\dot{I}, \dot{S}, \theta\right) \qquad\qquad \text{(Equation 1)}$$

Where:

- $\dot{I}$ is the rate of growth of an investment.

- $\dot{S}$ is the rate of growth of consumption.

- θ is the rate of growth of the financial market general price index.

- The estimated real rate of growth (g) for the current RCDC is used as an anchor to monetary policy.

- Monetary expansion would be equated to (g),

While monitoring the rate of inflation,

If inflation > zero, reduce the rate of monetary expansion; if inflation < zero, increase the rate of monetary expansion.

Table 1.1 Monetary survey in an Islamic economy

MONETARY SURVEY IN AN ISLAMIC ECONOMY

ASSETS	LIABILITIES
CASH IN VAULT	Money
NET FOREIGN ASSETS	Money in Circulation
DOMESTIC LIQUIDITY	Demand Deposits
Finance to households & businesses	Investment Accounts
Finance to central & local governments	Households investment accounts
Finance to non-banking financial institutions	Business Sector
Central Deposit Certificates	Investment Accounts
	Central Deposits

Through this process, the central bank may realize that it should change the rate of monetary expansion. If the desired change in the money supply is large, a change in the volume of CDs would be in order. If the change is not so large, the money supply can be fine-tuned through open market operations in CDCs (table 1.1).

Monetary management in mixed systems

In the case of mixed-finance systems, where Islamic and conventional finance are practiced side by side, the management of the money supply would be more complicated, unless the financial market authority prohibits financing speculation, and particularly through trading at the margin. Furthermore, Islamic banks must be prohibited from financing the purchase of stocks and other financial instruments for short-term acquisition. This step of financial reform would facilitate monetary management a great deal. Otherwise, the central bank's use of the RCDC to estimate an approximation of the real rate of growth would result in a distant approximation. Gauging monetary expansion to a distant approximation of the real rate of growth would not help approach price stability[7].

If the prohibition of financing speculation were not an available option, the CDC market would become a part of the financial markets' gambling casino. CDC prices and rates of return would not be useful in calculating a good approximation of the rate of growth. As disequilibrium prices, they would stand at a much larger and less certain distance of their (presumed but imaginary) equilibrium level.

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[7] in the case of a mixed system, the regulator needs to enforce standards for Shari'ah compliant shares, Sukuk and funds, in order to facilitate investment carried out by Islamic banks. The importance of regulation and supervision of Islamic finance assumes a much greater importance. The regulator cannot use the same regulatory and supervisory rules to both types of Islamic and conventional institutions.

In such a case, the monetary authority must decide whether to continue using its monetary management approach, particularly inflation targeting, or move to a higher and perhaps easier level of monetary management under the rules of Islamic finance.

How finance is allocated

Under Islamic finance, money would be used by banks to provide financing of economic activities (public and private investment and ~~private~~ consumption) carried out by the government, firms, and the public. Financing would be provided in three major categories: permanent and/or diminishing partnership in profit and product (several forms of Musharaka)[8] fixed or diminishing, restricted and unrestricted profit and loss sharing, or PLS (Mudaraba), restricted and unrestricted investment agency, or Wakala, deferred-payment sale finance (Bai' Bethaman Ajel and Murabaha), and deferred delivery sale finance (Salam and Istisna').

There are many regulatory rules and safeguards that the monetary authority must put into force to ensure that Islamic finance is properly working within its paradigm (Al-Jarhi, 2016). To ensure proper allocation of finance, the central bank is advised to apply the rules listed in the appendix.

Government budget finance

In this macroeconomic model, the government is barred from using borrowing from the central bank to finance its budget deficits. Its activities can be divided into two main categories. The first is its pure public goods, which cannot be subject to the exclusion principle[9]. For this category of goods, the government must use the political process through which it can obtain tax revenues to finance its production. The second category is quasi-public goods. Their production and distribution can be designed to be amenable to the exclusion principle. Examples include speedways, bridges, water passages, and the like. They can be designed with turnpikes or gates to exclude non-payers. They can therefore be financed through offering bids through build, operate, and transfer (BOT). The government itself or bid-winners can apply for financing for such ventures through Islamic banks. In either case, banks must decide such cases based on feasibility alone.

Instead of borrowing from the central bank, the government will gain a significant amount of seigniorage. All the money supply (a minimum of 25 percent of GDP) is being placed as investment accounts with Islamic banks. The rate of return on such accounts should exceed the rate of interest, like it on real investment, not conventional loans. Besides, the central bank will earn a commission on CDCs. Such income would be credited to the central bank and consequently will flow into the government budget. Furthermore, this investment income has an element of being countercyclical. When the central bank expands the money supply in the face of an economic decline, monetary expansion necessarily means more investment and more government income, which can be used in the fiscal expansion. The ultimate result is that in this model is that both monetary and fiscal policies are effectively tied together.

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[8] Musharaka, Muzara'a, Mugharassa, and Mussaqah.
[9] The exclusion principle is to make commodities available only to those who pay their prices. Others would be excluded. There would be no chance for taking a free ride. This can be done with private goods and semi-public goods. Pure public goods, once provided, become available to all, and none can be excluded. They must therefore be financed through taxation.

Islamic finance is also amenable to crowdfunding. The government can finance some of its social services through Sukuk (equity-based financial instruments), which, when properly structured, can be effective in mobilizing large amounts of resources to finance economic activities[10].

Awqaf and public services

Public services, like health, education, garbage collection, and recycling, sustainable energy, as well as many other types can be at least partially provided through Awqaf[11]. Such public services can be financed through waqf funds. Such funds can be placed with banks as investment accounts whose earnings are earmarked for a particular use. They can also be used to finance income-earning assets whose returns can be perpetually earmarked to support certain activities. This latter method would be more effective if direct investment brings in higher returns than investment accounts with banks. Similar arrangements can be developed to provide students' scholarships, teachers' supplementary salaries, support of research institutions, and so on.

In other words, Awqaf can be used at the widest possible scale to provide a good share, if not all of the public services to relieve the government and, consequently, taxpayers from financial burden. A decided advantage of finance through Awqaf is that it could provide for the independence of educators and researchers from government and business influence. Such arrangements can be extended to institutions that require independence, like the judiciary, the election supervisory institutions, and so on.

Zakah and public services

Based on economic reasoning, equity or social justice is a valuable social service. Economic reasoning is based on labor productivity. One of the reasons for poverty is that the poor may have lower productivity on the account of the lack of human capital (in the form of education and training) as well as the lack of physical productive assets. Once both elements are provided, the poor become more productive. National GDP, employment, and growth would be positively influenced. Therefore, equity, in the form of narrower wealth and income differences, leads to improvements in productivity, which in turn would assist in economic development[12].

From an Islamic vantage point, all citizens must be capable of fulfilling their basic needs, including food, clothing, and shelter, as a minimum. When the society is sufficiently rich, merit wants must also be added, like education, transport, communications, marriage, and employment. If we excluded the level of income that is sufficient to provide for basic needs as well as merit wants[13] any income or wealth over and above such level must be subjected

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[10] The relative effectiveness of Sukuk in resource mobilization is directly related to being common undivided shares in income earning assets, not in debt. They can earn higher rates of return that would attract investors of all types.

[11] At certain periods of Muslim history, Awqaf covered all education and health services provided. This important innovation of the Islamic economic system has been copied in other cultures in the form of "public foundations."

[12] This point runs against the neoclassical assertion of the existence of a trade-off between equity and efficiency.

[13] This level is an interpretation of the concept of Nissab. Some prefer to use its measure in grams of gold used at the time of the Prophet. Others prefer to define it by the cost of obtaining basic needs and merit wants, which would vary from time to time and from society to society.

to a levy called al-Zakah. Zakah is levied on all assets and/or their returns (rental, profit, etc.). Some prefer to narrow down the list of zakatable assets, but we prefer to join those who make it all-inclusive.

Zakah is earmarked for certain uses, the most important of which is redistribution aiming at enriching the poor. Enrichment here is taken to mean that the poor become capable of covering their basic needs and merit wants during their lifetime. Such a redistributive process must be conducted yearly to reach wealth (human and physical) maintenance for the poor, that is, a level of wealth that is sufficient to produce an income to cover both basic needs and merit wants.

The ideal method which we have repeatedly proposed is to make Islamic banks custodians of collected Zakah and allow them to invest the same temporarily until they are used. Meanwhile, Islamic banks would use such proceeds to establish microprojects whose titles would be transferred to the qualified poor. Each project would produce enough income to support the needs and wants of a poor household. Meanwhile, since this process of redistribution would be time-consuming, the poor would be provided income maintenance until each family possesses a suitable microproject of its own. Title transfer would also include education and training to make the household capable of managing their project. The sale of projects after their possession by the poor should be restricted and closely monitored to make sure that such a sale would not return them to poverty.

Financial markets

Conventional financial markets have failed to some extent to provide sufficient fund mobilization for economic development. They have mostly turned into gambling casinos with an open gate too hot money that has been a source of instability and contagion. The reason behind this gambling tendency is the gambling contracts that allow for transactions based on fictitious sales and betting on future prices as well as interest rates. It was pointed out by some that the common use of such contracts was an important element behind the latest Great Recession of 2007–2012 (Keen, 2011). However, no country so far has come forward to make their use illegal.

Since such contracts are strictly prohibited under the system of Islamic finance, financial markets would be a good candidate to play an important role in mobilizing resources for growing economic activities. However, care must be taken to prevent the financing of short-term trading in the financial market. This would serve as a backdoor for gambling activities.

Provided that such safeguards are effectively implemented, an Islamic financial market would become an effective tool for resource-mobilization for investment. Financial instruments that would be available include corporate shares, fund shares, and Sukuk. Moreover, Islamic banks may issue their certificates of investment accounts to circulate together with CDs. They would all be equity-based, that is, giving their holders common undivided shares in firms or assets.

The formation of such markets would not come automatically, especially when moving from conventional to Islamic finance systems. The financial market authority must start by allowing each financial market in the country to start an Islamic financial market in which all instruments would conform to the rules of Islamic finance. It should follow this with setting standards for the shares, Sukuk, funds, and hedging that must be followed before allowing such instruments to be listed in an Islamic market as an Islamic financial instrument. Gradually, some Islamic financial markets would become able to function side by side with conventional financial markets. This would facilitate subjecting all financial markets to the rules of Islamic finance.

Monetary policy

Once the Islamic finance part of the monetary and financial system is established, the central bank can exercise Islamic monetary policies with vigor. The total supply of money would be augmented or reduced by adding to or subtracting from CDs. The fine-tuning of the rate of monetary expansion can easily be accomplished by open market operations in CDCs.

A question arises regarding monetary policy in a mixed economic system. Let us assume that a country starts with a fully conventional monetary and financial system. As commonly practiced, some Islamic banks and non-banking financial institutions may be in operation, but they are uninvolved in monetary policy. To have a viable Islamic finance sector, we suggest the following:

1   The practices of Islamic banks in operations must be streamlined to remove all finance products that camouflage interest-based finance, like Tawarruq, debt trading, international Murabahas, and risk trading. This would lead to a significant increase in Islamic banks' profitability, raising the profits distributed to the holders of investment accounts. There would be a gradual shift of funds from conventional to Islamic banks.

2   All Islamic finance windows would be considered as a first step to move from conventional to Islamic finance within a certain number of years. Then all branches would be closed as they are replaced by full-fledged Islamic banks.

3   Holders of investment accounts in Islamic banks must be treated as shareholders. They should be allowed to take a share in management that is commensurate with their share in the resources invested by the bank. That would lead to a new type of banking institution that is predominantly managed by investment account holders. It would also remove the information asymmetry associated with the Mudaraba contract, upon which investment accounts are based.

4   A percentage of the money supply equal to the market share of the Islamic banking assets in total assets can be placed as CDs with Islamic banks. The percentage would be adjusted with the change in the market share of Islamic finance. Similarly, the remaining part of the money stock ~~can be placed as time deposits in conventional banks~~ can be subject to the same rules under conventional monetary systems. Such a procedure would go hand in hand with the application of the system of total reserves Islamic investment accounts as well as demand deposits in Islamic banks.

5   The system of total reserves would be introduced gradually, raising the required reserve ratio while increasing CDs with Islamic banks ~~and central bank time deposits with conventional banks~~.

6   CDs would grow at the expense of conventional demand and time deposits with conventional banks. The use of CDs and CDCs would become increasingly more influential in monetary policy.

7   Within a period of two to four years, Islamic banks should dominate the scene, and monetary policy would depend more exclusively on CDs and open market operations in CDCs. the economy would start enjoying a higher level of price stability and higher growth. Investment account holders would enjoy rates of profits that are comparable with the rates of return on equity, after adjusting for the risk differential.

Development policies

Once the Islamic monetary and financial system is established, the central bank finds itself with much more economic influence than is usually perceived for central banks. First, it would have much more power in controlling the money supply, with the application of total reserves. Second, it has the power to allocate a good part of the financial resources (the total money supply) for banks towards investment. This opens the door for designing and implementing an investment policy by the central bank, which would ultimately become a policy for economic development.

The central bank, jointly with the relevant ministry (of economy, treasury, planning, etc.) can set some development priorities concerning the sectors and regions to be targeted for higher rates of investment. The profit share, which should be clearly defined in the investment-account contract, can be subject to central bank control as a policy variable. Restricted PLS deposits can be allowed with higher profit shares to customers to encourage the financing of certain types of investments and in certain types of sectors or geographic locations. The profit share can be one of the tools of influencing the size of credit money in the economy being directed sectorally or geographically. The central bank is well advised to gauge and monitor profit shares without directly interfering in the investment process.

Fiscal policy

Fiscal policy would focus on reducing the tax burden through good governance and supervising the institutions of Zakah and Awqaf to ensure their viability in bearing a good share of providing public services and establishing the equitable distribution of wealth. Furthermore, the government should adjust its spending activities to the changes in seigniorage resulting from countercyclical monetary expansion or contraction. This would keep both fiscal and monetary policies highly coordinated.

Trade and exchange policies

Once the Islamic finance program is implemented, the economy will have a rate of inflation that will narrowly oscillate around zero. This would place the currency of the country at an impeccable position vis-à-vis other currencies. The stability of the exchange rate attracts more investment, especially through shares, fund shares, and Sukuk. The country would enjoy a significant improvement in trade competitiveness. The country would also enjoy investment inflows that would be an additional factor in strengthening its currency and improving its current account balance.

As a result, international financial flows would take place through the equity, not the lending, path. The debt problem would disappear. Investment flows would seek an outlet of a longer-term than those sought by hot money, which usually seeks the purchase of debt instruments. Instability and contagion through the financial markets become a thing of the past.

Dealing with crises

Will our economy after reform become an ideal economy in the neoclassical sense, meaning that it would enjoy a stable equilibrium with no crises? Of course not. The neoclassical utopia does not exist. The economy will have prices moving towards ever-changing equilibria but never reaching equilibrium. Crises can happen, either because of policy errors, laxity in the application of rules, natural disasters, or imported shocks, especially if an economy is modest in size with great interdependencies with several trading partners.

However, when an economic crisis takes place, policies to confront it should be radically different from the policies used to confront, for example, the last Great Recession.

Let us assume some form of a crisis and see how it would be dealt with. If a large group of farmers obtains financing to build their homes through *Ijarah Muntahia Bettamleek*, their leased homes are securitized by Ijarah Sukuk, through which Sukuk holders own the leased part of the homes (which is declining over time) and get paid their share of the principal and the rent. Sukuk are also traded in the financial market.

The onset of the crisis could be a crop failure. Farmers find themselves unable to pay their Ijarah installments. Sukuk holders will get no lease payments. If all behaved like the American administration during the International Financial Crisis, homeowners would be kicked out of their homes and declared bankrupt. The part they own of their houses would be sold under duress for negligible prices. Sukuk values would decline to almost nothing. Farmers would not be able to purchase their basic needs. Aggregate demand would significantly decline, and the economy would enter into a recession.

The government would allocate huge amounts of taxpayers' money to bail out banks to prevent a bank run. Banks get more resources but avoid lending, which perpetuates the crises getting worse over time. They instead place their money in government debt instruments.

In an Islamic economic system, the handling of the crisis is very different. First, homeowners, as debtors suffering from temporary insolvency, receive from banks free rescheduling with no increase in their debt. The central banks increase the volume of their CDs with banks to allow them to provide rescheduling while keeping their volume of investment growth. Since farmers will not be bankrupt and will obtain free rescheduling, they can obtain bridge assistance from Zakah and Awqaf institutions to maintain their purchases of necessities. They can also obtain financing for cultivating their next crop from banks. In total, aggregate demand will not significantly decline, and hence there is no reason for a recession.

Sukuk holders may not be able to get the same level of payments on their Sukuk, but they are assured of continued payments in the future, as farmers' finances are still sound. There would be no sudden dip in Sukuk prices. Sukuk prices will suffer only to the extent that this year's payments are partly reduced and partly pushed forward to the following periods.

Most importantly, no taxpayers' money would be spent to bail out banks. Meanwhile, no bank failure would be recorded.

How can we make use of Islamic macroeconomics?

An Islamic macroeconomic arrangement can push an emergent economy to a take-off stage where growth would reach unprecedented levels. To apply the macroeconomic model, a country can take the following steps that gradually add an Islamic macroeconomic structure to its economy, with all the expected benefits. The steps are ordered in a time sequence as a game plan.

1   Streamlining the Islamic finance sector through the following steps:

1.1   Issue an Islamic-finance product handbook and establish a training program for the employees of participating banks to learn the subtle secrets of Islamic finance and how to implement it.

1.2   Adjust the banking law to include specific rules that enable participating banks to operate at a higher level of compliance and to improve their governance process.

1.3   Convene a meeting of entrepreneurs, Islamic bankers, and some academicians to discuss how businesses and participating banks can cooperate to improve the Islamic finance sector on the one hand and provide more resources to businesses on the other.

2   Set new rules for participating in banking windows and branches to make them a temporary step towards full-fledged Islamic banking.

3   Adjust the rules regarding governance to allow for more involvement of investment account holders and better Shari'ah governance.

4   Start to implement the system of total reserves gradually, perhaps within 2–5 years. As the required reserve ratio is raised, the central bank would provide more time deposits to conventional banks and CDs to participating banks.

5   Establish Awqaf funds whose proceeds would be invested in participating banks until they are placed into suitable industrial, agricultural, or commercial investments. Income gained from investing would be directed for the following purposes:

5.1   An education waqf to spend on the education sector, to include all the young in elementary and high school education and all high school graduates into university education. Also, the waqf would encourage specializations that are lacking in some economic sectors. The waqf would also finance basic research in strategic fields with the cooperation of the business sector.

5.2   A health waqf to spend on improving and augmenting health services in all hospitals, with donations to improve hospital equipment and provide supplementary salaries and financial incentives to professors in medical schools and doctors in hospitals.

5.3   An infrastructure waqf that supports developing water resources, planting the barren parts of the land with fruit and timber trees, establishing energy production from sustainable sources like solar energy, improving the transportation network, and modernizing the communication network.

6   Any reduction in government expenditures that results from using these waqf funds should be used to reduce the tax burden on the poor.

7   Establishment of two Zakah funds, one to be spent on making microprojects whose titles would be transferred to the qualifying poor, with a view towards their wealth maintenance. The other would be used for income maintenance of the qualifying poor until they can have a title to a microproject.

8   Establish an Islamic financial market in Bursa Istanbul with standards for shares, Sukuk, and funds, and relevant listing and trading rules.

9   Establish Sukuk funds for the following purposes:

9.1   Finance of agricultural cropping, produce distribution locally, and exports of produce. This would include the development of animal wealth and the promotion of meat, poultry, and fish production, and trade.

9.2   Finance of industrial projects, especially those that have higher technology content, like electronics, computers, and mobile phones.

9.3   Finance of domestic and international trade.

9.4   Provide extra finance to firms to enable each to substitute their domestic and international debt with domestic Islamic finance.

9.5   All Sukuk would be marketed at the retail level so that individuals can purchase and hold Sukuk easily. Moreover, they should be marketed domestically and internationally. Sukuk funds would be established to provide investors with bundles of Sukuk with more variety in combinations of return and risk.

10   Start apportioning the money supply as time deposits and investment deposits in conventional and Islamic banks, respectively.

11   Once Islamic finance reaches 25 percent of the total financial assets, monetary policy based on CDs, CDCs, and absolute price stability should be gradually introduced.

Appendix Start Here

Appendix

Regulatory rules for finance

The use of these finance contracts or modes is subject to the following (regulatory) rules:

•   Contracts can be mixed and matched to form financial products that fulfill the banks' business objectives of return and safety and customers' objectives of finance requirements.

•   Contracts are well defined. They cannot be mixed and matched to provide ruses to camouflage selling present for future money or interest-based finance, as in the cases of 'Eina sale and Tawarruq. Unlawful products must be included in the bank regulations to ensure enforcement.

- In the cases of PLS finance, safeguards must be provided to reduce information asymmetry including mixing with Musharaka and placing the burden of proof on the Mudareb, requiring good bookkeeping and feasibility studies.

- Islamic banks must be equipped with capabilities to make and review feasibility studies and participate in the management of the firms they finance.

- The central bank must ensure balanced use of finance modes. If left alone, Islamic banks would focus on Murabaha, because of its close but incomplete similarity with the classical loan contract. It is also amenable to ruses that allow for mimicking conventional finance through the use of agency (Wakala) contract.

- Debt sale must be prohibited, except at its nominal value.

- Pure risk trading must be prohibited. No finance should be provided to financial market speculation, sometimes named as Ponzi schemes (Keen, 2011)[14].

Appendix End Here

Notes

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[14] An example of Ponzi transactions under the guise of Islamic finance is shares Murabaha, which commonly exercised by Islamic banks everywhere.

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