

# ISLAMIC DINAR AND 100 PERCENT RESERVE REQUIREMENT MONETARY SYSTEM

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## ABSTRACT

*The Gold Dinar/Islamic Dinar is studied as a currency that mobilises financial resources into Shari'ah-compliant ends within a general system approach to complement relations between money, finance, and the real economy. Thus, a 100% Reserve Requirement Monetary System (100% RRMS) is formalised in the context of the gold standard that mobilises resources and stabilises currency value within the money, finance, and real economy complementary relations. Such complementary relations are established by circular causation on the basis of the Islamic epistemology of unity of knowledge applied to systemic relations. Unity of knowledge as the epistemology ultimately, arises from the unity of the divine law (Tawhid). Upon this episteme, the arguments stand the reasoning and formalism of the Islamic socio-scientific system.*

**Keywords:** *Islamic economics and finance; monetary economics; Islamic Dinar; money and real economy.*

## OBJECTIVE OF THIS PAPER

The Islamic Dinar, backed by gold as a medium of exchange, must be engineered into a gold-backed monetary system. This is presented in this paper as the development of a 100% Reserve Requirement Monetary System (100% RRMS) backed by the gold standard. The 100% RRMS is explained as a micro-monetary system. In this, the Gold Dinar/ Islamic Dinar, as a currency medium, pursues productive enterprises conformable to the Shari'ah, while emulating dynamic life-fulfilling regimes of socioeconomic development. Thus the 100% RRMS is one-in-all, through pervasive complementarities between money, finance, real economy, and social choices. Money is micro in

respect of specific projects, and complementary ethical and economic goals, that it must be pursued in the Islamic political economy.

Thereby, 100% RRMS stands upon specific institutional relations between the Central Bank, the Commercial Bank, the Real Economy, and Households. This also delineates functioning of the money, finance, and real economy interrelationships through a general system of circular causation between them, and with the critical agents and sectors endowed by their respective variables. At the end, we ask the question: Can such circular causation interrelations be found in any other existing monetary system than the Islamic one, as critically explained in this paper? Upon what principles does the general system of circular causation stand so as to give rise to the 100% RRMS?

### **The Gold Dinar and the Islamic Dinar**

The Gold Dinar introduced in the Malaysian private sector has proven to be a medium of valuation of goods in market exchange (Billington, 2002). This happens on the basis of the value of a given unit of gold that the Dinar embodies. Since gold prices can remain high compared with the dollar, as is presently the case and is expected to remain so for some time, it is surmised that a small fraction of the gold value embedded in a Dinar will be able to finance a large value of market transactions including international trade (Mydin, 2004; Mydin & Larbani, 2004).

The argument in favour of the Dinar used in the case of international trade is that units of the Gold Dinar will be parceled to all countries in the consortium of such a gold standard. Consequently, the exchange value of the currencies will be measured on the basis of the gold standard, which will remain globally fixed. The value of trade in any one country in respect of specific commodity exchange will thus be settled by the claim on a small fraction of the gold held by the trading partners, but the same amount of gold is in circulation globally, sustaining thereby, a stable level of gold prices, and hence exchange rate. The gold-based prices of exchange will remain stable, therefore inflation will be low.

### **Economic Consequences of the Gold Dinar**

Commodity trading will be subject to the usual market process of demand and supply. The amount of gold liquidated between the trading partners will depend on the market exchange of goods and

services. Hence, with an increasing amount of gold in small quantities backing up the market transactions in commodities, a reciprocity in trade will be required between the trading countries. Strict reciprocity will automatically establish the repercussion effect between partners in trade, and bring about a good impact on production, growth, and development. Consequently, exchange of gold between countries does not diminish the stock of gold held by them. On the contrary, the gold backing of commodity exchange enhances the productive capacity of the trading countries, whereas the gold prices remain constant. The resulting uniformity of exchange rates in commodities between countries depends on the productive capacity of the two countries as maintained by the quantity of gold in circulation in the real economy.

The result is an ultimate stabilisation of all kinds of prices, particularly prices of goods and services, the aggregate price level, and exchange rate. Among the prices of services are those of productive factors. It is therefore expected that gains in factor productivity will enhance such price movements. With factor prices remaining stable, prices of goods and services will remain stable as well, and increased production of complementary tradable goods will be possible. Consumers' (household) well-being and producers' menus are induced by increasing returns to scale. Along with production, growth, and development, technological diffusion also heightens as the circulation of gold frees activity in international trade.

### **Social Consequences of the Islamic Dinar in a Gold Standard**

On the social front, conjoint with the economic and global relations, distributive equity is complemented with economic efficiency at the economy-wide level. Price stabilisation, gains in consumer well-being, stable employment and investments, and technological change are expected to follow an adaptive path of change to higher levels. Such a regime of development would conform to heightened human resource adaptation.

Trade becomes the engine of transference of gold, and thereby, of goods and services through trade. In the midst of such social and economic adaptation, gains in consumer and producer well-being also imply complementarities between different productive factors. Consequently, distributive equity (*e.g.* employment) is gained simultaneously with economic efficiency (*e.g.* capital investment). A balanced socioeconomic development is attained.

## **A Question Regarding the Inverse Relationship between Real Economic Activity and the Quantity of Gold in Circulation in the Case of Islamic Dinar**

So a small fraction of gold in circulation can back up a large quantity of trade in domestic and international cases. Through this, the gold value remains intact, whereas the socioeconomic development of trading countries proceeds along steady paths of change. All the good things in life are promoted as complements in such a regime of change.

The question though is this: for the Islamic Dinar, and thereby, the gold-backed money in circulation to become a medium of exchange, these currencies must enter the Monetary Stock and Monetary Policy mechanism nationally and globally. Without this most crucial change in the Monetary and Real Economy relations, the extended effectiveness of the Islamic Dinar and gold-backing will dissipate, as speculators will surely hoard gold to alter the exchange rates. The value of target currencies will be suppressed while increasing the value of gold in world bullion markets. However, the high value of gold so set does not occur through productive processes, consumption, and distribution. Consequently, the enhanced socioeconomic well-being effects of the high value of gold will leak out. Prices will run high due to the lack of productive supply, and gold will back up unproductive goods and services caused by speculation.

In order to introduce the Islamic Dinar as a gold-backed asset for productive socioeconomic change in economy and society whilst affecting consumers, producers and productive factors together, it is necessary that gold enters a supervisory and regulatory system in concert with productive forces. For example, the gold-centered and fixed exchange rate ideas advanced by Robert Mundell (Mundell, 2000) helped to engineer the EURO as an endogenous currency and the EU as a geo-political economic bloc that promotes the Mundell ideas. Today EURO is an endogenous Monetary Stock (standard) that pursues trade and production levels, rather than speculative ends.

### **Endogenous Money-Real Economy Relations of the Gold-backed Currency in Circulation**

In a gold-based standard, the value of EURO required to back up the productive activities would match the value of gold that does the same function. Consequently, the quantity of EUROS in circulation will be equivalent to the stock of gold, as if gold was in circulation. The EURO

would become gold-backed (Tlaga, 2000), but as we see, EURO is well-regulated by complementary relationships between economics, financial instrumentation, society, and politics (Choudhury, 2001).

On the other hand, movements in the USD are quite different from those of the EURO. Lower productivity and lower trade penetration of the US economy world-wide renders it to compete with the EU, Japan, and China in international trade. Consequently, a low USD exchange-rate policy is pursued to reverse the voluminous trade deficit that the US holds with these countries. Yet, the USD exchange rate is made to fluctuate between the two ends of current account management and capital account management. Resulting volatility in the USD has thus marked the speculative nature of global trade and monetary system in terms of the fluctuating USD.

In order to introduce the Islamic Dinar as a medium of exchange globally for the Ummah and thus to be subjected to monetary and trade regulations, the Dinar must be considered merely as a currency unit of the monetary system that is backed up by the gold standard. The gold-backed Islamic Dinar is not money per se.

Thus money in Islam is not a commodity as usually misunderstood by many in Islamic economics and finance. Gold is simply a standard against which the monetary system realises its trade and stabilisation goals with both economic and social consequences, and regulatory practices. The Islamic Dinar so construed, now becomes a currency of the Ummah. It paves the way toward an Islamic Free Trade, and subsequently to an Islamic Common Market, and thereafter to an Islamic Economic Union.

## DEFINITIONS

### Exogenous and Endogenous Money

In the economic literature exogenous money and endogenous money are defined in the following way: (Desai, 1989); say that the money aggregate  $M$  is related to three variables –  $x$  denoting price,  $y$  denoting output, and  $z$  denoting other variables.  $M$  is endogenous if the following circular relations hold and are both explainable as well as estimable:

$$M = f_1(x, y, z); \quad X = f_2(M, y, z); \quad Y = f_3(x, M, z); \quad Z = f_4(x, y, M) \quad (1)$$

These relations between the endogenous (circularly related by feedback causation) variables would show strong endogeneity if the estimated relations are statistically significant. This would lead to robust predictions of any one variable with respect to the other ones. Otherwise, the relationship is weakly endogenous, that is differentiated in reference to given levels of statistical significance. On the other hand, if one of the relationships in (1) is violated or is not estimable then the system is exogenous and this independence between the given variables also causes independence of the monetary aggregate from the other variables in the system of circular causation.

Choudhury (1997; 2001; 2004) expanded the system (1) to show strong endogeneity by making  $z$  as a knowledge-variable that generates a circular causal relationship between all the variables. The origin of  $z$  as a knowledge-variable in this sense of its universality and interconnectedness influencing all the variables is a substantive issue of an epistemological nature in Islamic socio-scientific theory. Within this broad area, money interrelates with  $x$  and  $y$  through their causal relationship with  $z$  as the knowledge-variable. The result is a knowledge-induced circular relationship between  $x$ ,  $y$  in money-economy interrelated endogenous system.

The endogenous relationships between money and the real economic variables  $x$  and  $y$  through the primal role of the knowledge-variable ( $z$ ) in the system presents substantive conceptualisation and application that demands structural changes involving polity-market interaction and all that this invokes in a knowledge-induced evolutionary general equilibrium framework of Islamic political economy (Choudhury, 1996).

Choudhury (1991) had also shown that the strongly endogenous monetary relationship can exist under the necessary and sufficient conditions of, (1) a knowledge-induced evolutionary system of interactive, integrative, and dynamic interrelationships (referred to interchangeably as the IIE-process, equivalently the Shuratic learning process); and (2) a 100% RRMS backed by the gold standard in the knowledge-induced evolutionary system of Islamic political economy.

### **Quantity of Money in Circulation**

In the language of the 100% RRMS,  $Y$  prevails over  $i$ . The implication is that the function of money ( $M$ ) is understood simply in terms of its relation with output ( $Y$ ) in the expression,  $M = M(Y)$ . This expression

can be further extended by including a rate-of-return,  $r(p)$  on  $Y$  as a function of its price  $p$ . Now,  $M = M(Y, r(p))$ , but the way that  $r(p)$  arises is a substantive issue, which we will examine. By extending to the vector of variables,  $(Y, r(p))$ , e.g. including real economic activity and economic integration, and respective rates of return, we write,

$$M = M(Y, r(p)) \quad (2)$$

In this form of the money equation resembling the quantity theory of money and prices, money denotes the total value of spending in the Shari'ah-compliant outlets to a scalar transformation. Thus the flow of money is equated to the value of resource mobilisation into Shari'ah-compliant directions.

### Money and Spending in Shari'ah-Compliant Outlets

Furthermore, spending in the Shari'ah-compliant market activities is found to be the source of economic stabilisation, economic growth, and social well-being. The social well-being concept is explained in terms of the principle of pervasive complementarities between knowledge-induced goods and services, which in the case of expression (2) are money, output, and real rates of returns in terms of exchange prices.

As one example of the form for expression (2), the total spending variable  $S$  can be related to real output by the equation,

$$S = A.(Q/p)^a \quad (3)$$

where,  $Q$  denotes nominal GDP,  $p$  denotes the price level,  $A$  is a parameter, and  $a$  is spending elasticity coefficients of real output level.

Expression (3) can be written in estimable form in terms of growth rates as,

$$g_s = a_1 \cdot g_Q + c \cdot g_u \quad (4)$$

where,  $g_s$  denotes the growth rate of spending,  
 $g_Q$  denotes the growth rate of output, and  
 $g_u$  denotes the growth rate of the random variable.

It is known that the real aggregate demand (spending) function would be flatter than the supply curve of real output. Hence,  $g_s < g_Q$ . Therefore, the rate of growth of real output growth is expected to be higher than the real spending rate.

The above result is affirmed by Metwally (1989), who found a statistically significant relation between real output growth and investment growth; investment being the second major component of total spending in the aggregate demand function. Since real rate of growth of output is an indicator of real productivity growth, we concluded that inflation is halted when the rate of growth of real productivity exceeds the rate of growth of spending, and this in turn is a statistically significant positive function of real M1.

### Interest Rate Effect on Money Supply

Metwally estimated that the rate of interest has a significantly negative relationship with the rate of growth of money demand (M1). Now by combining the above results we deduced the following results:

$$i \downarrow \Rightarrow \text{Spending} \uparrow \Rightarrow \text{Investment} \uparrow \Rightarrow \text{rate of return, } r \text{ increases} \\ \text{and stabilises} \uparrow \Rightarrow \text{stability in M1} \uparrow \Rightarrow \text{inflation stabilises.} \quad (5)$$

Expression (5) can be extended to the following circular causation relationship under the effect of sustained reinforcement of the result of (4) on the basis of household preferences to spend in the goods things of life, as the Qur'an encourages spending in moderation. Thus,

$$\text{Stable } r \Rightarrow \text{inflation stabilises} \Rightarrow \text{further spending} \uparrow \Rightarrow \text{M1} \uparrow \Rightarrow \\ \text{circular causation} \quad (6)$$

A strongly endogenous relationship in the circular relation underlying (6) is proven by the 95% level of significance for the estimated coefficients in Metwalli's regression equations.

The continuity of the circular causation in expression (6) would depend on household preferences of productive spending in accordance with the Shari'ah. That is, Shari'ah-compliant financial instruments are used to generate complementary relations between money and the real economy, and thus bring about complementary linkages in the general system of interaction, integration, and creative evolution of the money and spending variables. The preferences so formed are carriers of the knowledge-variable in the large-scale general equilibrium system of circular causation.

The final implication then is this. Metwalli's results, which were time-dependent regression estimation, do not produce the circular causation, as we have explained in knowledge-simulation circular causation that relate to the development of wellbeing by complementarities between the Shari'ah-compliant outlets. Circular

causation between the simulated variables and social well-being index require both market-driven and institutional discourse (*Fiqh*) in the Shuratic process (IIE-process) to discourse the problem of money-real economy complementary relations, policies, and strategies.

### Issues Relating to 100% RRMS and the Open Economy

Prices and rates of return in the 100% RRMS are productivity-driven within a complementary framework of resource and factor utilisation. Since the rate of growth of the quantity of currency money, such as the Gold Dinar/Islamic Dinar, matches with the rate of growth of output and is functionally related with the total productivity in terms of factors of production, therefore, the trade sector becomes a component of this total relationship. Now the prices of exports relative to the prices of imports as commodity terms-of-trade are driven by complementary relations between goods and services in exchange. The exchange rate as the relative price of national currency is simply the relative price of export-to-import. Thus exchange rate is productively determined in the 100% RRMS by relating currency money (Islamic/Gold Dinar) to the real economy.

Policy regulation on monitoring the exchange rate is not independent of the money-real economic relationship. The exchange rate in this sense remains in a state of float depending simply on the market-institution interlinked capability in reinforcing the knowledge induction of the 100% RRMS.

We can prove the market-institutional driven nature of relationship between exchange rate,  $e$ , and the terms-of-trade,  $t$ , in terms of export prices  $p(X)$ , import prices  $p(M)$ , with  $X$  as volume of exports and  $M$  as volume of imports.

$$\begin{aligned}
 e &= \text{Currency (national)}/\text{Currency (international)} \\
 &= \text{value of spending in exports}/\text{value of spending in imports} \\
 &= p(X).X/p(M).M \\
 &= p(X)/p(M).(X/M) \\
 &= t.(X/M).
 \end{aligned}$$

Finally we obtain,  $e/t = X/M$ . (7.7)

The relative price,  $e/t$  is monitored by market-institution interrelationship in the 100% RRMS revolving around trade and monetary issues of the Islamic political economy. Such features impact on both  $X$  and  $M$ .

## **The Question of Ummah Stability by Means of the Shari'ah-driven 100% RRMS**

While the setting up of the 100% RRMS will increase the socioeconomic stability, social well-being and prosperity of the Ummah, it will also cause a natural trend in Ummatic transformation to become more integrated and self-reliant in trade and development. The transformation will come about by a blending between market and institutional forces. Trade will thus be increased within the Ummah circles. This will cause trade diversion away from the non-Islamic world. It is therefore impossible that the economic stability of the 100% RRMS within the Ummah will be transmitted to the non-Islamic world unless there is extension of this to the global order.

The above-mentioned trade effects would be felt both on the export and import sides. Export effect can be shown by the shift in the Ummatic inter-communal supply curve. Import effect is shown by the Ummatic demand shift. On the side of trade with the outside world, an increasing product diversification and output expansion will relate with Ummatic transformation. There will be less dependence on import from the outside world. Thus, on the matter of imports from the other world, there will be a reduction by the degree of product-diversification within the Ummah to satisfy the needs. Hence, higher terms-of-trade are maintained for the Ummah while preferential trading arrangements exist within it. The role of monetary and financial policy harmonisation in the 100% RRMS and the institutional transformation ensuing from the impact of technological change will further contribute to this momentum of change.

The above kinds of changes arise purely under market-driven forces of inter-communal trading and development arrangement. The shifts in the supply curve and the demand curve during post-Ummatic transformation and the stabilisation of terms-of-trade globally are due to developmental impetus within the Ummah in relation to the global order.

### **Regulatory Relations in the 100% RRMS**

We have defined the 100% RRMS in the light of endogenous money-real economy social interrelations as both the 100% mobilization of bank deposits held in commercial banks into productive assets, goods, and services in market exchange, and also the holding of 100% of un-mobilised funds of depositors at the commercial banks and in the Central Bank. Consequently, the commercial bank has no scope to direct funds in interest-bearing savings. Instead, the returns

on money between the commercial bank, and the real economy is perfectly shared between the depositors, the commercial bank and a diversified number of shareholders of the outlet into which funds are mobilised. Hence, the rate of return on money equals the rate of return on assets and tradable of the real economy.

The accumulated amount of excess funds, after resource mobilisation has been in place by the commercial banks, is held at the central bank where it is supported by a stock of gold. However, since such residual funds would be residual in a vibrant money-real economy social interrelationship with  $r$  increasing along with socially productive spending, therefore, only a proportionate quantity of gold stock would be required to assign denomination to the currency in circulation. Since two currencies cannot exist within the same economy in the case of 100% RRMS, therefore, the denomination of held funds, in terms of the proportionate stock of gold, would be applied to all money in circulation in the real economy.

The seigniorage from the cost of production of a proportionate amount of gold to back up the residual un-mobilised funds forms a percentage charge on the residual reserve held within the central bank. The central bank collects this seigniorage from the commercial bank. The seigniorage revenue overwrites the cost of managing the funds by the commercial banks. The clientele is protected from devaluation of the currency value by its gold backing.

In this way, the clientele benefits in two ways. Firstly, it is a shareholder with a proportionate profit-share of his mobilised funds through commercial banks into socially productive spending. Secondly, his un-mobilised funds are protected from devaluation by the gold backing. In both of these cases, money now becomes gold-backed money in circulation and held at the central bank. The commercial bank can at any time draw out of such accumulated reserves with the central bank to finance projects in tandem with the socially productive transformation of the real economy demand.

In the 100% RRMS, commercial banks lose their ability to exercise multiple credit creation, and thereby, accumulate large volumes of interest payments from inter-bank lending and other lending. Money is thus created out of nothing in such fractional reserve requirement system to the benefit of large savers, banks, and corporations (Shakespeare, 2003). Besides this, commercial banks can also borrow from their reserves held at the central bank so as to generate new loans, and thus earn profits from the interest spread between the prime rate and the commercial rate.

In the 100% RRMS, the absence of savings in liquid funds in commercial banks turns all inter-bank capital flows to be of the profit-sharing type in venture capital, trade financing, and equity participation. Consequently, the quantity of money in circulation matches with the existing spending value. Speculation is avoided by such a matching formula. Volatility as well as uncertainty is avoided by the stability of relative prices arising out of the complementary money, finance, and the real economy. Now there cannot exist an incentive to save in liquidity in such a monetary system.

Indeed, Keynes (1930) considered savings as a lure for money to be a withdrawal from productive economic activity when savings does not equal expected investment in the short run. The 100% RRMS is thus a monetary system that, by its systemic nature of complementary relations, discourages savings while encouraging and enhancing resource mobilisation into the real economy. Savings and resource mobilisation are opposite activities between the financial and real sectors, respectively.

### **Denominating Currency Value in the Gold Standard**

The central bank sets the value of the gold-backed currency by allocating a stock of gold, say  $G$  that is equivalent to the purchase of a dynamic (driven by adaptive technological change) basic-needs basket of goods, say  $X$ . Such basic needs are dynamic over time and learning. Thereby,  $G = p.X$ , denotes the value of spending in  $X$  at prices  $p$  (treat  $p.X$  as vector multiplication).

Next, consider a quantity of money  $M$  being held at the central bank as residual holding that cannot be mobilized, but will be required later on by the commercial bank. Since  $M = p.X$  (vector multiplication), therefore,  $M = p.X = G$ .  $M$  is backed by gold to the extent of spending in  $X$  at prices  $p$  (vectors). Since the dynamic basic-needs/life-fulfilling basket is invoked in this gold-backed valuation of money, therefore, all money in circulation in the real economy is backed by the same gold standard. Thereby, prices are stabilised by gold backing in terms of money growth being measured by the rate of growth of output.

The central bank is responsible for overseeing the health of the economy by consulting with commercial banks on the allocation of funds in socially productive directions and fixing the gold-backing for the quantity of money in the economy.

How much gold stock would be required to maintain the 100% RRMS? A minimal amount, for  $\Delta M = M1 - M2$ ; where  $M1$  denotes the potential

quantity of money in circulation if the commercial bank deposit was fully mobilised at a point in time.  $M_2$  denotes the actual quantity of money in circulation through the commercial bank. The actual case would be that a certain amount of foreign debt hangover will exist and the central bank must create a quantity of money to liquidate this, if otherwise, the private sector is unable to fully securitise the debt by debt-equity swap.

Hence<sup>2</sup>  $\Delta M = M_1 - M_2 = (G_1 - G_2)(1 + g) = \Delta G \cdot (1 + g)$ . That is,  $\Delta M / \Delta G = (1 + g)$ . This is equivalent to  $(\Delta M / M) / (\Delta G / G) = (1 + g)$ . That is, the rate of elasticity of money with respect to gold remaining in a steady state is determined by the economic growth rate.

In the ideal case when full mobilisation of resources takes place through the commercial bank, then too  $\Delta M \neq 0$ ; consequently,  $\Delta G \neq 0$ . That is because a stock of gold-backed money must always remain with the central bank for purposes of valuation and supply on short notice as needed in case of excess demand in a growing non-inflationary economy in the absence of interest rates and the presence of spending.

Thus there is an inverse relationship between resource mobilisation and the stock of gold. The function of the central bank is simply to oversee the health of the economy, maintain the gold standard, and provide necessary guidance to the commercial bank and the stabilisation of the life-fulfilling regimes of socioeconomic development.

### Final Question

From the above explanation we noted that the general system of complementary relations is essential for establishing the viability and working of the money-real economy interrelationship. Since monetary theory has deep epistemological beginnings, it remains to be seen whether there is any such theory in the literature that is backed up the kind of general system of money, finance, and real economy relations of the 100% RRMS explained in this paper. The conclusion is that as long as economic and finance theory is premised on the postulate of marginal rates of substitution, there will always be a conflict and tradeoff between the financial sector and the real sector. Financial resources will be driven between these two sectors wishfully by the money masters without complementarities between the two sectoral activities.

The linking between money and finance on one side and the productive activities of the real sector as argued by mainstream

economics as based on the savings hypothesis is flawed. Savings into specific financial options is driven by the rate of interest and the level of real disposable income, but output and interest rate are oppositely marginal substitution of each other. Savings occur over time-dependent movements of financial resources. At every point along the time-path there is withdrawal from potential output via savings to fuel future output growth. This is a permanent feature of mainstream reasoning based on capital accumulation via savings. However, the truth of the matter is that potential output is always withdrawn from real sector activities, leaving behind a cumulative trail of lost potential output. Thereby, interest rate as an incentive for savings is a risk-free rate that compensates the saver for an output that has no productive source.

To get out of this enigma of mainstream economic and financial reasoning, the savings hypothesis has to be abandoned. That is, regimes of fluctuation between interest-bearing withdrawal (Saving – Investment)  $> 0$ , and counter-cyclical situation (Investment – Savings)  $> 0$ , must be reduced. The real economy and the financial sector then gravitate around Saving = Investment. This means economic stabilisation.

This is achieved by regulatory policies and preference formation at the level of household preferences and production menus at the level of businesses. Preferences are realised by knowledge induction on the Shari'ah-compliant good things in life. This always means business acceptance of household preferences along the lines of dynamic life-fulfilling regimes of development. Life-fulfillment regimes of development comprise Shatabi-type necessities, comforts, and refinements (Biraima, 1988/89). Businesses then pick up productive responses to such household preferences. Finally, money and financial instrumentation come about through the 100% RRMS to pursue such dynamic life-fulfilling regimes of development.

The general system of complementarities between the critical functions of the money-real economy interrelations while replacing the development reasoning on resource mobilisation in Shari'ah-compliant outlets, as opposed to savings, is a distinct vintage of economic reasoning.

Its epistemological foundation is premised on a pervasively complementary worldview contra-marginal rates of substitution found entrenched all of mainstream socio-scientific postulates. The epistemological foundation of unity of systems and their entities arise from the symbiotic worldview of Tawhid (oneness of the divine law)

and find their presence in every Islamic socio-scientific understanding. This is the episteme of unity of knowledge that remains distinctly opposed to both mainstream economics and the prevalent Islamic and financial thinking that imbibes mainstream reasoning of marginal substitution, differentiation by competition and scarcity of resources, and the savings hypothesis.

Without the Tawhidi epistemological origin of essential Islamic reasoning, it would not have been possible to structure the pervasively complementary relations as follows:

Let  $\theta$  denote the social understanding gained at any stage of learning as between preferences, menus, and money-real economy interrelations according to the tenets of the Qur'an and the Sunnah  $(\Omega, S)$ , followed thereafter by Fiqh discourse regarding the complementary worldview (unity of systemic knowledge). Thus  $\theta \in (\Omega, S)$  is the Fiqhi consequence of Shuratic form of discourse and Ijtihad (deriving rule from  $(\Omega, S)$ ).

Now let,  $p(\theta)$  denote prices of goods and services under exchange by the micro-monetary action, where

$r(\theta)$  denotes rate of return on spending,

$i(\theta)$  denotes rate of interest that is phased out under the impact of gains on  $r(\theta)$ ,

$T(\theta)$  denotes trade variable, both in the national and international contexts,

$E(\theta)$  denotes productive factors,

$M(\theta)$  denotes the quantity of money circulated in the 100% RRMS, and

$SWF(\theta)$  denotes the social wellbeing criterion measured in terms of attained levels of complementarities between the variables in the general system of 100% RRMS.

$\uparrow$  denotes increase;  $\downarrow$  denotes decrease;  $\rightarrow$  denotes implication.

$(\Omega, S) \rightarrow \theta \uparrow \rightarrow \{p(\theta).Q(\theta)=\text{spending}\} \uparrow \rightarrow r(\theta) \uparrow \rightarrow i(\theta) \downarrow \rightarrow T(\theta^*) \uparrow \rightarrow e(\theta) =$   
 exchange-rate stabilises  $\uparrow \rightarrow E(\theta) \uparrow \rightarrow M \uparrow \rightarrow \dots SWF(\theta) \uparrow \rightarrow$  repeated  
 in continuity by sustainable complementarities in reference to the  
 episteme of unity of knowledge between socioeconomic variables,  
 policies, financial instruments, preferences and menus so evolved in  
 the midst of 100% RRMS.

Every variable is a function of  $\theta$  because of the epistemological reliance of such variables primarily on the Tawhidi learning dynamics carried by  $\theta \in (\Omega, S)$ .  $\theta$  is discoursed across coordinating institutions (*Shura*) while discoursing the epistemological understanding of the money,

finance, and real economy issues by means of  $\theta$ -values (Fiqh). The process continues across similar co-evolutionary processes of learning in Tawhidi unity of knowledge.

## CONCLUSION

The idea of the 100% RRMS explained in this paper to bring out the meaning of Islamic/Gold Dinar as currency with a monetary system of the Ummah is quite different, and in fact opposite to the 100% reserve requirement of mainstream economics (Boreham & Bodkin, 1988). Mainstream economics prior to the collapse of the Bretton Woods institutions was based on the Central Bank acquiring large stocks of gold to shore up the currency value in all forms of transactions, both circulatory and speculative. The latter particularly, therefore, made the gold stock depend on short-term interest rates of speculative assets. Savings ensuing from wealth so created was turned into gold by a stipulated holding ratio between liquidity and gold, as determined by the statutory reserve ratio. A large stock of gold was thus the cause and effect of a Money-Commodity-Money system that rested on a mainstream 100% reserve requirement monetary system. The function of commercial banks in relation to the central bank was still one of credit creation through the excess reserve ratio after the statutory reserve ratio was set in light of the desired gold/liquidity ratio determined by the central bank.

Instead, in the 100% RRMS Islamic case, money and its function are redefined. Money is now a stock of currency circulated as Dinar and produced by the central bank for mobilisation through commercial banks for the purpose of resource financing of real economic activities. Money is thus equal to the value of total spending in the economy-wide sense. This concept of money negates savings, and replaces it by resource mobilisation in every way recommended by the Shari'ah for establishing moral and social meaning measured by the well-being criterion as the objective goal. Money and asset valuation in the 100% RRMS are further reinforced by the gold-backing of assets.

For the Muslim world today, a re-birth of the 100% reserve requirement with gold numeraire is essential. It is also a revolutionary academic concept in monetary theory. This *Idea* emanates from the Qur'an vis-à-vis the Qur'anic injunction on trade-versus-interest. Furthermore, the open economy implications of such endogenous money-finance-real economy complementary linkages are profound. They would give important lessons for the political economy of global relations

between the Muslim World and the non-Muslim World using an Ummatic transformation process with the 100% RRMS, if this was to come about in the near future.

The gold-backed monetary system was blessed by the Prophet Muhammad to succeed (Allouche, 1994). It is in the books of the early Islamic writers on the worldly application of the Shari'ah; see Islahi (1988) on Ibn Taimiyyah and Ibn Qayyim. Today it stands as the sure revolutionary way for returning a great portion of humankind back to regimes of long-term sustainability and stability with extensive well-being for all. A comprehensive political economy of Ummatic transformation with 100% RRMS ought to be taken up as an immediate programme for discourse and implementation at all levels across the Muslim World.

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