THE INTEREST RATE AND ISLAMIC BANKING

H. SHAJARI AND M. KAMALZADEH*

1. INTRODUCTION

The rate of interest has been a highly complex and important phenomenon since long. For this reason, it has entered into all economics and related literature. For instance, though not an economist, Aristotle had a view on it and in fact considered it immoral. His reasoning was very simple: "interest is the price of time and time belongs to God". One can, however, perceive objective reasoning following this subjective one: a close relation between production and employment, on the one hand, and the rate of interest, on the other, can be observed. At present, however, such dependence can be confirmed by applying statistics. For example, as a means to promote its balance of payment position, the U.S. government increases the rate of interest,[1] as a result of which unemployment rate will rise. Also, at the time of unification of the two Germanies, the Bundesbank, worried about higher unemployment, opposed any rise in the rate of interest.

There is, however, no proper statistical information from Aristotle's time. Yet, we can set forth this crucial question: "why was interest rate rejected on religious ground? Can this entirely be moral and subjective"? The answer is "no". Though we have no strong documents on hand, it could have been similar to the present situation when the negative effect of the rate of interest on economic activities is observed.

Interest on money is one of the main obstacles to development of trade and business. Moreover, the usurer group, from the society's point of view, cannot be in harmony with other groups. In a situation of interest rate upsurge, the usurer group will get better off while manufacturers and other businessmen

* Department of Economics, Isfahan University, Isfahan, Iran.

get worse off. In other words, money lenders take a greater part of profit shares of economic activities produced by manufacturers.

It remains for us to find out, how should we deal with the interest rate dilemma? Is it possible to get rid of the problems referred to above by replacing the simple rate of interest with an administered one? Of course, this can be done with the help of the modern monetary and banking institutions. This is the issue to which we subsequently turn.

2. MONEY AND THE INTEREST RATE

If we base our arguments on the Classical and Neoclassical theories of interest, the idea of terminating or replacing the interest rate by another variable would fade out. This is so because, in these theories, the rate of interest depends on two factors, "Time Preference" and "Marginal Efficiency of Capital (MEC)". The theories of Wicksell and Keynes, however, created new hopes in this area. In order to justify the Quantity Theory of Money, Wicksell went on in an unusual way to discover the relationship between the quantity of money and the rate of interest (the maladjustment of the interest rate was his key hypothesis). In this way, he distinguished two different rates of interest, "natural rate", and "market rate of interest", which cleared the way for detachment of monetary interest and the MEC. His development (1898 and 1906) of these formulations dominated macroeconomics for three decades until it was submerged by Keynes' declaration that: "Interest is the price of money and not saving". Hence, he announced the distinguishing characteristic of the rate of interest and the MEC.

This indicates that while regulating the money stock, it is possible to control the rate of interest. This, however, only gave rise to a new question: Can we relate the interest rate to changes in purchasing power of money? It was from this, perhaps, that the idea of the real rate of interest emerged.

Although Irving Fisher brought the rate of inflation into the calculation of the real rate of interest, this is not the issue with which this paper deals. We tend to create a proportional equality between purchasing power given and the one received during a particular period of time. From here the **"Compensation Rate"** comes into the picture.

3. THE COMPENSATION RATE

Indeed, the question: Could commercial banks maintain the purchasing power of people's savings during a specific period of time? raises the idea of the compensation rate. In the past, however, during the commodity standard (gold is the commodity usually associated with a commodity standard), this question could not be that sensitive. This is due to the fact that, under the gold standard a unit of money is specified as a given weight of gold. Therefore, in that system, the monetary price of commodity (gold) is fixed. Hence, during inflationary periods, the monetary price of gold, would automatically neutralize the declining purchasing power of money. Of course it is true that under the gold standard monetary authorities tried to stabilize the gold price, but they never completely succeeded. In the modern monetary system, during times of inflation, the purchasing power of money would, without any compensative factor, decline. This element would continually damage saving and time deposits of people. The owners of these deposits enjoy a couple of bank services, though.

Hence, we can compute a rate which, while taking into account bank services, maintains the purchasing power of money for a period of time. Such rate, (compensation rate) can be defined as:

$$\mathbf{Rc = Rp - Bs} \qquad \mathbf{(1)}$$

where **Rp** denotes the rate of inflation and **Bs** the rate of bank services offered. For example, if inflation rate is 0.10 **(Rp** = 0.10) and bank services rate offered is 0.04 **(Bs** = 0.04), the compensation rate **(Rc)** will be 0.06. By relating **Bs** to the rate of inflation, we can adjust the fluctuations in the compensation rate. In fact, with rising inflation rate, the offered rate of bank services will also increase. We may show this relation with α, which may be written as:

$$\mathbf{Bs = \alpha\ Rp} \qquad (2) \text{ where } \alpha \geq 0$$

substituting (2) into (1), we get:

$$\mathbf{Rc = Rp - \alpha\ Rp}$$

or:

$$\mathbf{Rc = Rp\ (1 - \alpha)}$$

The coefficient, α, can be determined by monetary authorities and it can play the role of an adjustable element. During rising prices $\alpha<1$ and during falling prices $\alpha>1$.

In determining α, the central bank can take the community's tendencies into consideration. In other words, not only proportional equality in purchasing power at present can be created, but also, with imposing anti-inflationary policy via changing α, this equality can be achieved through expected prices.

The following table shows hypothetical changes of α and calculation of Compensation Rate.

A HYPOTHETICAL CHANGES OF α AND CALCULATION OF COMPENSATION RATE

Rp	**α**	**1-α**	**Rc**
0.02	0.1	0.9	0.018
0.05	0.2	0.8	0.040
0.10	0.3	0.7	0.070
0.20	0.4	0.6	0.120
0.80	0.7	0.3	0.240

It is observed from the table that with the increase in the rate of inflation, α **Rc** increases, and vice versa. This is the same thing that we earlier referred to as effects of central bank policies on the economic behaviour of the community.

4. THE COST OF SERVICE PRINCIPLE

We can call a bank an institution which produces and sells a variety of services, like bank loans. What banks sell, however, is not money but just a simple service. This can, conceptually, be better understood when we take into account the new system of banking operation. In this system, banks are not mere mediators between owners of deposits and receivers of loan. In other

words, banks do not just loan out the money they have received from owners of deposits, but they loan out the money which they themselves, while depending on cash reserves, have created. Banks undergo a great risk, though.

In such circumstances, it would be rational that those who benefit from bank services pay the relevant cost. Any diversion in the cost of services, however, depends on changes in production cost and/or i) The compensation rate, ii) Current expenditures (private & public), iii) Depreciation of capital, and iv) Normal Profit.

It is obvious that with any variation in the α coefficient, following changes in the general price level, the cost of bank services, too, will change. By this method, changes in the cost of services will have an anti-fluctuation effect during economic cycles.

It must be noted, however, that other banking operations, such as purchases of bonds, which create income for banks, reduce the cost pressures on banks. This in turn, decreases the cost of services. As a result of this banks are led to such kind of activities which enable them to increase their competitiveness in decreasing the cost of services.

5. THE INTEREST RATE AND EQUILIBRIUM

5.1 The Interest Rate and Supply and Demand for Loanable Funds

Does the rate of interest on money at present depend on supply and demand for loanable funds, and is it their equilibrating factor? Taking into account the banking system and its monetary transactions, the answer is almost negative. This is because, we observe that in some countries, like Iran, the rate of interest is determined by the central bank. In some others, it is mainly influenced through the open market and discount rate mechanism. And still in others, it is influenced for pursuing other economic and social goals such as stabilization of the general price level, creating more employment, short-term international flow of funds, and so on. In many countries preferential interest rate mechanism (i.e. multiple rates) is used with the aim of increasing investment in different sectors.

Finally, the positive slope of the saving curve against the rate of interest, while accepting the functional relationship of saving and national income, becomes doubtful. This is true because any rise in the rate of interest

causes the investment to decline. This in turn reduces the national income which decreases saving, and vice versa.[2]

Therefore, so far as the saving and interest rate relationship is concerned, unlike the classical assumptions, the saving curve may be negatively sloped. Thus, the status of interest rate as an equilibrating factor becomes entirely dubious. In this context, a comparison of slopes of saving and investment curve, against the interest rate, provides unusual results.

Moreover, there are serious suspicions against interest rate and other economic objectives. For example, the use of the interest rate for controlling inflation is no more satisfactory. This is, firstly, because inflation often takes place with stagnation. The inflation phenomenon in times of depression cannot be simply adjusted through interest rate variations. Secondly, in cases of low elasticity of demand, the excess burden of interest rate will simply fall on the final consumer. In such situations, the interest rate transforms itself into an inflationary variable. Finally, in the long run, via decline in investment and production, rise in interest rate turn out to be more inflationary.

It must be admitted that in certain cases, interest rate policy is effective in controlling inflation. This, however, would have obvious negative externalities. In this connection, the hypothesis of "simultaneity" has no sense. That means, a reduction in the rate of interest can, by promoting business and investment, help to decrease unemployment. This is what the interest free banking system is about to achieve.

5.2 Interest Rate and the Flow of International Funds

The effects of the rate of interest on the flow of short-term international funds has, to a large extent, been exaggerated. Though it is possible to influence the flow of international capital by increasing the rate of interest, we must note that, in the first place, such a flow has a small range of performance. For instance, the rise in the rate of interest, in many countries, has not absorbed more funds. Furthermore, the cumulative debts have exceeded the debt capacity of many countries.

Thirdly, in order to compensate for the risk caused by probable changes in the external value of money, we have to transact in the foreign currency forward markets. This would frequently cause the real rate of interest

to become higher than nominal rate of interest. This, however, does not enter into usual calculations.

Finally, despite negative externalities of such a policy, reducing the crisis of balance of payments has never been possible through changes in the rate of interest. Numerous problems of many industrialized countries confirm this. In all these instances, interest rate has had only a weak impact.

6. CONCLUSION

The existence of interest on money, and its high level, have been one of the main obstacles in promoting investment and business since older times. The genesis and expansion of banking and resulting mobilization of financial resources have helped decrease the rate of interest. However, omitting the rate of interest as the price of money (which is according to the Islamic law, prohibited, and from moral point of view, seems unacceptable too) is not possible. This is particularly true in the absence of new explanations and interpretations of its essence.

In order to achieve certain economic and social goals, central banks have intervened in the determination of the rate of interest and have also used it as a monetary instrument (which has many negative externalities). This has, therefore, eliminated the interest rate as an equilibrating factor. Thence, the establishment of an interest free banking system was made possible. We suggest that under such a system deposits may be treated as a kind of purchasing power which it has received from owners of the deposits and must at the time of repayment pay its equal.

Due to this, a new variable called "Compensation rate" has been introduced. This rate would create a proportional stability of purchasing power with a coefficient adjustment (α). This variable would reach its minimum when the economy gets stabilized. During periods of inflation it prevents the purchasing power of the saved funds from falling.

Taking the "cost of service principle" and establishing a rate based on it for loans and similar banking services would decrease the burden of interest to a large extent. This makes funds more economical which in turn promotes the expansion of investment. By rejecting interest as an equilibrating variable and the imposition of this principle, managed distribution of the banking system assets gets substituted for market distribution. This enables the central

banks to produce a more efficient banking system for the economy as a whole. From the banks' standpoint, this will reduce their net profit. But ultimately it will be compensated by positive economic effects because the possibility of investment for such sectors (like agricultural sector in many LDCs) which presently are unable to use complete banking service would increase. Moreover, the extra income thus generated will benefit banks via increased business and additional savings. In such a state, the rise in the net profit of banks is made possible through growth in the volume of banking operations and not increases in the interest rate.

NOTES

1. From this, it is clear that the rate of interest is not solely determined by the intersection of demand for and supply of loanable funds. But it is practically led by central banks. This argument has important implications in for our discussion.

2.If $S= f(y)$

$I=f(i)$ $f' < 0$

then with any rise in the rate of interest investment and subsequently the national income will decline. Reduction in saving is the logical result of such a behavior which is caused by the increase in the rate of interest.

Therefore: $S= f(i)$ $f' < 0$

in which S denotes saving, Y the national income and i refers to the rate of interest. Hence, the expression for saving and the national income changes can be given as

$\Delta S = s(\Delta Y)$ (1)

similarly we have the expression for the national income and investment changes

$\Delta Y = k(\Delta I)$ (2)

Substituting (2) into (1), gives us:

$\Delta S= sk(\Delta I)$ (3)

Investment and interest rate relationship is given by:

$\Delta I=-h(\Delta i)$ (4)

substituting (4) into (2) and the result into (1):

$\Delta S=-skh(\Delta i)$ (5)

Using this relationship, we can write the negatively sloped saving curve in relation to the rate of interest

$\Delta i/\Delta s=-1/skh$.

REFERENCES

Ariff, Mohammad, (ed.) (1982), *Monetary & Fiscal Economics of Islam*, Jeddah: International Center for Research in Islamic Economics, King Abdulaziz University.

Chacholiades, Miltiades (1982), *International Monetary Theory and Policy*, London: McGraw Hill Inc.

Dornbusch, Rudiger and Stanley Fischer (1994), *Macroeconomics*, 6th ed., New York: McGraw Hill.

Gapinski, James H. (1982), *Macroeconomic theory, Statics, Dynamics and Policy*, Tokyo: McGraw Hill Inc.

Hawtrey, R. G. (1974), *The Gold Standard in Theory and Practice*, London: Longmans, Green, 5th edition, (first edition 1944).

Henning, Charles N, Pigott Williams & Scott Robert, (1975), *Financial Markets and the Economy*, Prentice Hall Inc.

J.R. Hicks, (1971), "Mr. Keynes and the Classics", *Econometrica*, Vol. 5, 1937, reprinted in M.G. Mueller, *Readings in Macroeconomics*, (1971), London: Holt, Rinehart and Winston.

Keynes, J. M. (1936), *The General Theory of Employment, Interest and Money*, London: Macmillan.

Rizvi, Syed Anwer (1988), *Interest Free Banking*, Mashhad: Islamic Economic Research Conference.

Robertson, D.H. (1937), "Alternative Theories of the Rate of Interest: Three Rejoinders", *Economic Journal*, 47 (September), (The rejoinders are by R. G. Hawtrey, B. Ohlin and D.H. Robertson).

Robertson, D.H. (1937), Note on J.M.K.'s "The `Ex Ante' Theory of the Rate of Interest"', *Economic Journal*, 47 (December).

Robertson, D.H. (1966), *Essays on Money and Interests*, (edited by J.R. Hicks), Collins.

Shirazi, Habib (ed.), (1988), *Islamic Banking Contracts*, Tehran: Banking Training Center, Central Bank of the Islamic Republic of Iran.

White, William H (1971), "Interest Inelasticity of Investment Demand - The case from Business Attitude Surveys Re-examined". *American Economic Review*, Vol. 46, 1956. Reprinted in M.G. Mueller (1971), Readings in Macroeconomics, London: Holt, Rinehart and Winston.