

ISLAMIC MONEY AND BANKING
(INTEGRATING MONEY IN CAPITAL THEORY)

INTRODUCTION CHAPTER :(1385/5/7)

0-1: Background

This book is product of nearly three decades of research in Islamic economics. The results of such a long period of research have been reflected in 30 papers and three books most of them written in Persian. The third book which is about a comparative analysis of money and banking in Islamic and capitalistic systems and published three years ago received recognition of " best economic book of the year" in my country, Iran. That book combined with my experience both in research-teaching, as a member of draft initiating committee of "usury-free banking operations act" of Iran, and my responsibility in the Bank of Industry and Mine (Tehran-Iran) can be regarded the main sources of this book.

As I read and think more and more the more I become convinced that Islamic banking is capable to save capitalism and be void of problems whose origins can be found in the fallacies of capitalism. These fallacies made me cast doubt, during my studying years for Ph.D. degree at Texas A&M University, about working of capitalism. These doubts became primary steps towards my conviction that Islamic banking is a viable system which is able to pass the test during hardships.

Capitalism has proved, over and over in the past 70 years, its inability to cope with problems during economic hardships. Most, if not all, problems encountered in capitalistic countries are not external to them, they all are rather internal. Internal inconsistencies all are inherent in capitalism. What external sources can be blamed for economic instabilities of industrially developed countries manifested in high unemployment at times of low inflation rates and high inflation rate at times of low unemployment rate? Business cycles, stagflation and inequitable distribution of income and wealth are natural consequences of capitalism.

Social costs of inflation and unemployment are prohibitively high and shall be given top priority to solve; something capitalism is incapable of achieving. Stanley Fischer, using money demand for the United States, calculated that lowering the inflation rate from 10% to 0% would generate a welfare gain of at most 0.8% of output for 1999. Jarrett and Selody went on to extend their bivariate analysis of inflation-productivity nexus to include hours worked, produced an estimate of 0.32 increase in productivity growth for each 1% fall in inflation for 1982.

Unemployment costs are also extremely high. For example, unemployment cost the German federal and local governments 70.5 billion Euros (69 billion US dollars) in 2001. Of the cost, 55% were paid directly to the jobless and 45% were losses of the governments at the federal, state and community levels in tax revenues and Social Security contributions, which people out of job were unable to pay. However, the unemployment cost was fewer than the 72.6 billion Euros (71.1 billion US dollars) in 2000. Unemployment amounted to 3.85 million people on average in 2001 in Germany.

"In England, the pioneer of private enterprise, the first stages of accumulation were carried out with utmost brutality. In the later stages, with the evolution of head-counting democracy, and now ..., all classes have come more or less to accept the idea of all a welfare state... The process of accumulation, however cemented great inequality into the system, and this is now an impediment to realizing the accepted ideal." (J.Robinson; 1979; p.240). According to some statistics released

in 2001 the richest 1% of the US population own 50% of everything.

I confidently claim that we have more than sufficient Islamic sources to derive rules, guidelines, and hypotheses in order to build an Islamic system. We, as Muslim economists, have to blame ourselves for not being able to derive such rules, hypotheses and guidelines from the two eternal sources namely The Holy Quran and Hadith. These two sources have been in our hands for over 14 centuries but we have failed to make proper use from them. This failure is probably due to our loss of faith as we witness new inventions, discoveries, and new products developed continuously in industrial countries. Even laymen admit this superiority of these countries over developing countries in these regards. However, they do not, by any means, imply that we, in Muslim countries are inferior in other areas to them. Development history of European countries, and later in America, is a good evidence to support the claim that Muslim countries were superior not only in the so-called social sciences but also hard sciences we should be proud of. But it is not enough. Developing countries (Islamic included) possess relatively enormous stocks of knowledge which is not reflected in their economic indicators. What we lack, we have to confess, is weak social capital a principal components of which is the lack of environment to transform these stocks into flows (i.e., practice). It seems to me that the higher the rate of transforming these stocks to flows the more developed a country would be no matter how small and negligible the stocks are. One can easily find reliable evidences to prove above assertion for both groups of countries.

There have been many independent minded Western outstanding economists who had realized that there had been some problems with interest rates in capitalism. Their dissatisfactions have taken different expressions but they refer to some economic concepts. Let us take just a few of them for record. S.Gesell argues that it is the rate of interest which sets a limit to the rate of growth of real capital (1939; pp.239-42);Maurice F.C. Allias, the 1988 Nobel Prize winner has taken similar position and in his Economics of Interest, (1947). J.M.Keynes, the most influential of all who well deserves the title of Einstein of Economics in his general theory writes:" If I am right in supposing it to be comparatively easy to make capital goods so abundant that the marginal efficiency of capital is zero, this may be the most sensible way of gradually getting rid of many of the objectionable features of capitalism." He further takes a strong position by writing" ... the evidence indicates that full, or even approximately full, employment is of rare and short-lived occurrences";(1964; p.221 & pp.249-50, respectively). If he is right, as he rightly is in that unemployment these inherent in capitalism then another Nobel Prize winner, M.Friedman's statement follows in that zero nominal rate of interest is a necessary condition for optimal allocation of resources(1969; p.1-50), since optimality in labor force means full employment. Further research accomplished by H.L. Cole and N. Kocherlakota, (1998) has shown that zero nominal rate of interest is not only a necessary condition but also sufficient. This means that zero nominal rate of interest guarantees full employment, and vice versa, which is a very strong statement the numerous evidences prove it. The seemingly contradictory evidence of Japan has been dealt with in above lines.

Given that above evidences are true which we, as Muslim economists heartedly believe, they support the divine rule in the holy Quran which prohibits interest and called it Haram. Although we did not have any noticeable contribution as the above striking results but our responsibility starts from where Western economists have stopped.

Most important question to be asked at this point is how a banking system could be run with no interest to be given and received. Obviously, Qard-ul Hassan is not the solution; we can use different Islamic modes of contracts whereby money could not be exchanged for money; even in the form of M-C-M where C (commodity) is just used to exchange money for money (i.e.-M). It is the task of this book where you should expect the banking operations to be interest-free with no doubt that it will work. To make sure that everything stands where they belong to, this book has also benefited from insights of some strong and convincing statements made by economists like Prof. J.Robinson "... ideology and economic analysis are indissolubly mixed and that the dominant ideology exerts disproportionate power in the discipline at any moment of time...",

(1977; pp.1318-39), and also the very strong and articulated position Prof.C.G.Harcourt has taken in that:"... ideologies ... affect the topics discussed, the manner of discussion, the factors included or left out or inadequately stressed in arguments, comments and models, and attitudes shown, sympathetic or hostile, to past and contemporary economists' works and views... "; (1969; pp.369-405).

This book which has been written on the basis of Islamic ideological background is no exception to above assertions. It is hoped that older tools of analysis used throughout the book direct us to Islamic solutions even if they all seem unorthodox. I did not intend to enter into ideological issues, but have, instead, admired and adhered to a man-made system on the strong belief that Allah (SWT) in absolute impartiality and with absolute love to his creatures has guided us to set up a system which would be able to guarantee the social well-being. This, in economics, is the message of Allah and we hope that we have been able to shed light on the concept of money and interest and also been able to integrate money in capital theory as the primary steps toward the ultimate goal. However, the blame of any shortcomings and misconceptions that still remain in this book shall be directed to the authors alone and not to Islam and Islamic teachings and guidelines. In the conclusion I believe that had the human beings adopted Divine Laws in conjunction with wisdom we could have had a much better world; given that Divine Laws have the right of veto.

0-2: Reasons to write this book

Inflation, unemployment, stagflation, inequitable distribution of income and wealth (Problems of Capitalism)

Even if profit is residual but price level, wage rate and interest rate are not; they are interdependent with each other in such a way that one variable determines the trend and movement of other variables, if not the magnitude of the other variables. The logic behind this is the same as that in prices. Any change in price of one commodity is apt to change the prices of other commodities (vertically or horizontally) in one way or another, unless they happen, rarely, to be independent. This is "the problem" in economics. There is not only a one-way relationship between two variables, but there are two or many relationships. The problem would be more complicated if we have many mutually interdependent variables. Let us make this point clear that by interdependency we do not mean the same thing as "simultaneous equations system". In such a system there are three distinct variables, namely endogenous, lagged endogenous (or predetermined) and finally exogenous. In an interdependent economics system we have the first two variables but the only exogenous variable is population, and hence labor force as opposed to simultaneous equations system where exogenous variables would be many. In other words, in an Islamic system everything, but population, is determined within the system. This is due to cooperative nature of Islamic economics system where everybody works for the benefits of his own and his society. This is how a positive synergy develops. In this system population (or say it specifically) labor force is exogenous and plays the pivotal role and determines the rest of the variables playing their own roles in this economy. The overall product of such a society is greater than the sum of individual products. Let us call it super-additivity to use A.Rapoport's terminology, (1970, p.79). If we assume only two individuals compose a cooperative society to value of the game to a union of these two must be at least as large as the sum of the values to the individuals separately. This is because players joining in a cooperative, hence coordinating their efforts, can always do at least as well as if they had not joined the cooperative.

It is true that abstraction is a valid method of discussing problems of economic life but at what price this abstraction has to be made? The price that human beings have paid so far has been extremely too high. As it seems logical we are not allowed to impose complexities and incompatibility of mathematics to economic complex problems. If the existing knowledge does not allow us to solve such complex problems in economics we have to quit using the limited knowledge but not economics. Our ignorance and inability to prove that a thing exists, does not

prove that a thing does not exist. Every once in a while it comes to my mind that it was probably due to the so complex nature of human beings that economists were not able to understand and put it in a manageable framework that they have thought him being selfish and always works to the best of his own interest .

It is the problem of externality whose vast presence in Islamic economics makes it more complex than otherwise. According to my understanding the ultimate goal of Islamic economic system is to achieve and maintain "justice". One way to look at the tools to achieve this supreme humane goal is to maximize positive externalities and minimize negative externalities within Islamic framework. There seems to be no need to emphasize that Islamic teachings about Muslims' behavior are primarily based on generating positive externalities and avoiding producing any negative externalities. Positive and negative externalities include many forms; to name just a few of them, respectively, are cooperation among individuals and caring about others well-being in consumption, no harm and not being harmed rule, Qard-ul Hassan,... from one hand and avoiding Israf (extravagance) , prohibition of Riba (interest), alcoholic drinking, gambling, ... on the other hand. This is probably one reason we may call Islamic society a " grand cooperative ". To deal with the problem of cooperation in general requires its own tools of mathematical analysis. Capitalism has produced its own mathematics on the basis of self-interest. The mathematics used to solve such a problem is zero-sum game, so to speak. That is, anyone's gain is another person's loss. This behavior is not only true for individuals within a political boundary but also among different countries. In almost all types of analyses it is primarily assumed that no externalities exist, with few exceptions. Textbook materials on, e.g., the theory of demand, theory of production, theory of cost, welfare economics,... are all predominantly occupied by such an assumption(or zero-sum game constraint) that as if there can be no positive externalities. Pareto optimality is a good example in this case.

In non-constant-sum two person games it may happen that some of the outcomes are preferred by both players to other outcomes. In such games, the interests of the two players are in general not dramatically opposed. They may be partially opposed and partially coincident. Furthermore, equilibrium could also be achieved, (A.Rapoport; 1970, p.64). However it is not true that if both players choose a strategy (pure or mixed) containing equilibrium, the outcome will necessarily be equilibrium. Nor is it true that the payoffs to the respective players must be the same in all equilibrium outcomes. In many cases both players can get more in some outcomes... than in others of which Edgeworth box diagram is a good example in trade.

In a non-zero-sum game it may happen that, as two players cooperate to get a maximum payoff for themselves, they may increase the payoffs to the other player so that he gets even more than a coalition would get all of which he might be a member.

The framework of the grand cooperative society of Islam which is made of N-players working together to achieve Justice is in fact "an increasing sum game" and as such is an immediate need for the proper mathematical tools to be developed to handle complex issues of a society abundant of externalities stemming from cooperation. The existing tools of analysis quite often used to analyze capitalistic issues are not capable to perform such a very important task. We do not claim that this book provides the readers with such tools; we are looking into the future for such a powerful mathematics to be developed. The nature of human beings is so complex that conventional mathematics fails to analyze. This does not mean that nothing has been done in the past. It is worthwhile to note that some advances have been taking place and the issue has attracted some scholars in the West. Just as a record we need to mention the outstanding works of some pioneers like J. Von Neumann & O.Morgenstern (1947), J.C. Harsanyi(1959), M.Davis and M.Maschler(1963), R.J.Aumann & M.Maschler(1964) and M. Davis & M.Maschler (1965). However the needs to handle the very complex problems arising from an increasing sum cooperative game in a comprehensive manner is far beyond reach. The software computer program may help quite a bit. As was said before, it is probably in the absence of such tools that human beings have been assumed to possess a very naïve nature and whose behaviors could easily be estimated and predicted. An Islamic economy is the one that, using A.Rapoport's

terminology, possesses "increasing returns" due to its cooperative nature. Increasing the size and magnitude of cooperative makes possible an increase in the utility of each Muslim member of the cooperative. In such an economy, additional members of cooperative are always welcome, and in the grand cooperative it is possible to achieve a distribution of payoffs such that each member will receive more than he could receive in any other economic system. Many researches have been conducted under the title of "increasing-sum game" most of them either misunderstood the point in this game or they have ignored it. Instead of conducting research on players who attempt to maximize the joint payoffs of both sides, they have concentrated on a game where each one of the two players tries to take the larger portion of a continually growing pile of money. To them the "increasing sum" has been taken to mean growing amount of money whereas our concern is about the positive synergy being developed from cooperation such that each player enjoys larger return than playing on selfish grounds. In other words, as the pie gets larger the larger would be the return the each member of the cooperative than otherwise. Very few researchers have concentrated on this special and complex topic, namely C.G. McClintock (1972) and P.A.M. Van Lange (1999). This book is an endeavor to show that above assertion is valid and avails itself to be tested against facts.

0-3: Purposes of writing this book:

I am, quite honestly, dissatisfied with the state of Islamic banking on both existing literature and apparent applications in countries it has been claimed that Islamic banking has been launched. The literature is quite often written in an apologetic manner (Mohsin S. Khan & A.Mirakhor; 1987, pp.24-26 and p.31) in that: (1) there be no conflict with the traditional interest based banking ;(2) which is the natural result of (1), the concepts have been misunderstood and consequently misused. For instance rate of profit has been used instead of rate of interest! And it is not clear how investment is negatively related to the rate of profit. Furthermore, the proof of the existence of LM curve and that of the demand for money in an Islamic system is essentially baseless. It is because it is the speculative demand for money which is essential to study the demand for money. While in the absence of interest rate there can be no speculative demand for money. It is not hard to prove that interest rate is necessary and sufficient condition for speculation.

Therefore, the reader of this book should expect our book to be void of such misunderstandings and misuses. As a result of avoiding this misleading approach they should expect our concepts, approach, analysis and conclusions to be completely different from the conventional system and, hence, unorthodox.

To fully comprehend different aspects of Islamic economics, seems to me, requires an Islamic environment to be visualized by the researcher as close as possible to the environment existed during the prophecy life of our Prophet Mohammed (PBUH). This is rather very difficult, if not impossible, task. It requires lot of exercises, especially in the world where Islamic rules and behavior all are rarely seen. Islamic economics is a comprehensive way of life, it cannot be thought of as something composed of heterogeneous elements each of which taken from different textbooks and environment not necessarily Islamic. It has to be done in an environment unique, or as close as possible, to Islam. A different abstraction is needed here where our vision from true Islam plays crucial role. If the principal author has any claim to make it is due to his long exercises he had the opportunities to perform since the three-year before Islamic revolution in Iran in a suitable environment. In so doing we can expect the best results to be achieved following the behavior of our Prophet Mohammad (PBUH), both in Mecca and Medina. For example, to destroy all idols and replacing them with new teachings (from Quran) in the same place. This is an excellent example how "it takes a theory to kill a theory" works. There are many writers who never intended to kill a theory but have tried to live with it. Why to be ashamed of speaking out what we have learned from holy Quran and Hadith. Experience shows that our affiliations with institutions which provide finance or of which we are an employee do not allow us to think independently from such institutions no matter how they behave. Independent thinkers can only be found at universities, under certain conditions, where they do not feel they are indebted to someone or some institutions. Only independent Muslim and non-Muslim scholars

seem eligible to write an Islamic economics, in general, and Islamic banking, in particular. However, these scholars find it rather difficult to finance their researches if they want to remain independent. As a result they are forced to sacrifice their precious lives without worldly reward but with great reward from Allah (SWT). Economic science has rightly been called the queen of social sciences have been nourished by such individuals and not necessarily by members of the biased organizations.

What readers can and should expect from scholars of Islamic economics is not papers, books and seminars based on capitalistic principles blended with some Islamic terminologies. Not only books and papers are full of such blends with least Islamic characteristics, international and local seminars are no exception to this rule. Millions of dollars are spent annually on such seminars. Muslim conservative scholars, most of the time, appraise their own and other Muslim countries for what we have not accomplished! These seminars often financed by international and semi-international organizations do not customarily hire scholars with different views; they are looking for applauses and praises often reflected in communiqués of such seminars. The underlying governments are proud to be praised by some of this kind of scholars. The intellectual body of developing Islamic states lacking the minimum expertise becomes happy of the contents of such communiqués. This does not allow them to improve; in fact such empty praises and admirations are detrimental to any step towards progress. Government officials of many, if not all, developing countries are quite often reluctant to hear any criticism as to the working of their state agencies. But those open to hear criticism have shown, in the past, to have taken serious steps towards progress; something infrequently noticeable in developed countries.

Implementation of Islamic banking in few Muslim countries has no other fate than do researches in this area. Had they properly implemented Islamic banking there would not have been high inflation rates, prohibitive unemployment, inequitable distribution of income and wealth; and more importantly social capital which is weakest among many comparable countries. The author believes that even opponents agree on the fact that even if Quran and Divine Laws do not have anything to offer but they offer unquestionable lessons on solid and sustained social capital, which is, to his belief, the most important factor of development. The history of economic development has gone through different stages. It was once claimed that accumulation of physical capital plays the most important role of all. After a while human capital was announced to be the most important element. Recently, after so many years of wasting resources, economists have finally reached the point to confess that social capital plays the most important factor of development; something Islam had to offer about 1400 years ago. The evidence of this claim is the rapid spread of Islamic teachings all over the world in the nearly state of Islam and during the prophecy life of Mohammad (PBUH); something weakly proven to exist in Muslim countries. Its strong existence has been proved to exist in developed countries. In fact, strong social capital is synonymous with development. Again, it is my strong conviction that the greater and faster the stocks of knowledge and/or material things transformed into flows, i.e. practice, the more developed a country would be. However, it should be realized that under-development does not imply, by any means, lacking of scientific stocks. The point is about the speed of transformation of stock of knowledge to flow of practice. It can also be witnessed that numerous tiny stocks of knowledge possessed by inhabitants of a country if combined together can lead to high development. What I also believe is that both Quran and Hadith have come to build social capital. There was no need to have had physical laws in such precious sources because social capital is sufficient factor to discover them; otherwise no conceivable benefit could be attributed to the holy Quran and Hadith.

Social capital attributed to Islam with many factors composing it originates from Iman (the belief) of Muslims. Iman, i.e. the principal feature of Mo'men, does not come from tongue in declaring he or she is Mo'men or Mo'meneh but it has two other inseparable components; they are belief in heart and deeds (actions). Failing to distinguish between these elements makes some scholars (Humayon A.Dar & J.R.Presley; 19? PP.5-7) to claim that Muslims in locality like London, do not behave Islamically! Many of us may be called Muslim by confession through our mouths but not almost all could be classified Muslim as described in Quran. The place of Iman (the belief) is

within an individual in his or her heart and that shall be reflected in his or her deeds. Going from tongue to heart and from heart to deeds is not but changing stocks to flows. Let us give it a try and test how many of us and our countries are able to change stocks to flows. We believe that the underlying philosophy of prohibition of Riba (interest) and its derivatives does not lie within Riba, per se, but to its social consequences; very rarely touched in the existing literature on Islamic economics and banking. The evidence that Islamic banking has not truly been implemented in Muslim countries is the economic evils of such countries like high unemployment and inflation, inequitable distribution of income and wealth and economic instability which have suffered millions of Muslims. The absence of Riba and its derivatives combined with Islamic behavior have made me convinced that the truly Islamic system would be self-regulating and self-adjusting system with no economic evils named above.

This book is, in fact, the echo of the voice of an Iranian Muslim economist which reflects his dissatisfaction from implementing of this so-called "interest-free banking" in some Muslim countries (Iran included) as well as the existing literature on this vital area. It is instructive to all to recall the response of a Muslim scholar, working for a semi international institution and admiring its performances in vain, on my question about the Islamic banking practice in his own country(different from his work location) to be : " it is as Islamic as it is yours!".

0-4: What has been done in this book?

It is interesting to note what Professor Joan Robinson has declared,(1979;p.116): "A new business sets out with a sum of money, whether owned by the proprietors or borrowed at interest". She further asks: how can finance be treated as a factor of production and seeks a return independent of capital, whatever that is. Prior to that in 1953 she revived the old question and asked whether the quantity of capital, was supposed to be the sum of money or a list of "machines ". It is clear that when a brilliant economist like her has found herself in the theory of capital in such a position that could not help herself out of it, there must have been something, somewhere, to be either fallacious or wrong. She had found her entangled in both (being incapable to capture) mathematical expertise used in such a theory, something she has admitted to have never learnt and had to think, and the way capital had been defined. There are some points to be raised here: (1) When she writes" a new business sets out with a sum of money..." she, like other capital theorists, who was outstanding among them, failed to distinguish between "money" and "capital". It is true that all new businesses set out with a sum of money but, as we understand, as soon as money is legally combined with a factor of production it changes into actual capital. Something rarely found in writings of such theorists. (2) Answer to the question she has raised: "how can finance be treated as a factor of production?", (ibid), lies in the answer given above. A business is a legal entity whose properties are different from their properties of the proprietors or the borrowers.(3) When she seeks for a rate of return to capital independent of capital, the point that is missed is that production is the outcome of a group of things and human being. Labor and capital are best described as dependent rather than independent factors of production. In other words, labor and capital before they could be considered substitute of each other they are compliments. Total rewards and their rates going to labor and capital are consequently interdependent. F.Ramsey's model, in which income of the society is divided between wages and profits, looks closer to our idea in this book than any other model. However, we have to understand that in a grand Islamic cooperative the game played by all members of such a society is neither zero-sum or positive sum game but increasing sum game. This might be the very concept of Al-Barakah; the evidence of which is the Holy Verse which stays Allah's hand is with community. Al-Barakah can be defined of any excess of output produced by group in a cooperative manner over the sum of each individual output produced separately. We should bear in mind that the mathematics involved to find solution to the problem posed here is very complex as is the very nature of human beings. Nevertheless, the complexities involved here shall not, by any means, make us hopeless. It is the task of both economists and mathematicians to develop the techniques required. However, in order to make the difficult task little easy is to change the underlying moving goal, inherent in increasing sum game, with respect to the rewards to be made to the labor and capital, to pre-specified numbers normally settled in such an economy with the

consent of both owners of labor and capital.

Finally, this book is one of many different readings of Islamic banking. It differs from other readings in the following aspects:

(1) The author has long been greatly inspired by the logic behind the Quranic world-view to begin with; then by the writings of M. B. Sadre in his *Iqtisa-duna* and of M. Mutahhari in his numerous books on different aspects of Islamic teachings; to them I owe a great deal.

(2) Original thinking dates back to more than a quarter of a century which is reflected in the author's Ph.D. dissertation (1976).

(3) It is the result of many papers on different aspects of Islamic banking written by the author.

(4) Unlike some of the papers (e.g., Mohsin S. Khan & A. Mirakhor) which have found great similarities with the conventional banking, the author has found no similarities, at all; to say the least.

(5) The findings are neither borrowed nor are of the kind of following a specific writer, except one which is about the attribute of money. Following Gordon Tullock's implicitly labeling it as being a "public good" without him going through the details and reason(s) as to why it could be considered as public good. In above respect the author has come up with the findings that not only the results and analyses of the most writers are not endorsed but also they are the opposite; hence unorthodox. This was the natural outcome of his own understandings with no claim, at all, of being free from fault(s).

(6) It casts serious doubts on the validity of many essential propositions of monetary theory; specifically the five core propositions constituting the quantity theory of money: (a) Proportionality of money and prices; (b) Neutrality of money; (c) Monetary theory of price level; (d) Causal role of money; and (e) Exogeneity of the nominal money stock. These treatments have been done through integrating money in capital theory; something has long been ignored but is essential in bringing equality between savings and investment (a pre-requisite to full employment). Abolition of interest on money is necessary condition for full employment but non-existence of speculation in any market (money, or otherwise) is sufficient to bring forth full employment. This is another peculiarity of this book, no other Muslim or non-Muslim economist, as far as his knowledge allows, has ever addressed to.

0-5: What can and can you not expect from this book:

There is something very important you should expect from this book. Its relevance and importance is not less than that of Islamic banking. That is: "money" in an Islamic framework.

It is surprising to find almost no essays about this vital concept in the literature of Islamic banking. It seems that scholars have taken this concept and its derivative, i.e. interest rates, for granted; as if the same properties of money in capitalism apply as well in Islamic setting. At least, these writers could ask whether the properties of money would remain intact when rate of interest is to be zero in an Islamic framework.

Quite amazingly how could one write on Islamic banking without bothering to ask about the functions of money, the definition of interest rates, the definition of Riba, and the difference between Riba and interest, if any. Is it not that banks are legal institutions through which legal functions of money could be facilitated in order to be performed? Is it not that the functions of banks, as joining device between micro- and macro-economics, are directly related to the properties of money in any economic system? If capitalism questionably considers money as a private good and approves a reward to it as interest rates, it further and doubtfully considers

banks as private institutions. Two false statements do not make the third true; although one follows the other. In such statement a fallacy exists. I shall call "interest" the prime fallacy which produces further fallacies like money being a private good.

In the literature of Islamic banking disproportionate space has been allocated to money, interest, and Riba. This, I believe, has been the main source of dissatisfaction on the part of great contemporary economists and myself in that no reaction has been seen by these economists. These results, obviously, have confused them in that such a banking system is no different from conventional one except mere changes in concepts and labeling those Islamic terminologies. I raised this point to Dr. Mohsin S. Khan in Tehran in 1992, details will follow. I told him how was it possible for an economist to write on Islamic banking before he had asked himself what to money is all about in such a system? He, at that time, gently admitted my objection and added that: now I understand why Islamic Development Bank (IDB) has raised such a question: what is money in an Islamic system? However, he subsequently and surprisingly failed to do any effort, at least, once and for all, ask such a question. I, now, relate his negligence in this regards to many obvious and basic mistakes him and his co-author, A.Mirakhor, in their joint paper, (1987), have made. When money is not distinguished from capital and when profit rate is substituted for rate of interest then money market will develop, LM curve will be consequently derived and investment would have negative relation with the rate of interest?! The conclusion of such a paper was happily announced that: "... the Islamic model of banking, being based on principles of equity participation, bears striking resemblance to proposals made in the literature on the reform of the banking systems in many countries, particularly in the United States."?, (1987; p.31). Nevertheless, they were right in writing:"... this model does provide a reasonable portrayal of the types of Islamic banking systems that have been put into practice in certain countries." (ibid). These "certain countries", I am sure, includes Iran in which the banking interest rate (Riba) was above 15% with four millions jobless and annual inflation rate of over 15%?!

In his paper, Dr. M.N.Siddiqi writes: "money in a money economy must not cease to perform the function of a store of value. Although the carrying costs involved in Zakah would certainly make an impact, they cannot obliterate precautionary and 'speculative' motives (as the function of the changing profit-loss expectations). While abolition of interest and the Zakah levy would eliminate wide fluctuations, there will still be in need for a monetary policy to ensure stability";(M.Ariff,, editor; 1978[1982], p.27).

This short unqualified statement raises many important inter-related complex questions such as: (1) What the true meaning of store of value is, as used by the original inventors? (2) Does it have any relation with speculation in the money market? (3) Is it not that speculative demand for money is a function of interest rate? If so, (4) how such a demand can exist in the absence of rates of interest environment; i.e., Islamic system? (5) Is Islamic banking system a monetary or financial institution? Does it still use monetary or financial policy? (6) Are monetary policy tools used in capitalism still valid in Islamic system? (7) What kind of monetary policy tools, if any, can be used in Islamic setting? (8) Is it not that interest rate is both necessary and sufficient condition for speculation and as the result speculation in any market will produce interest rate in terms of itself? (9) On these grounds how speculation will be justified in an Islamic society?

None of the above questions has been answered by either Dr.M.N.Siddiqi or any other Muslim and non-Muslims economists interested in Islamic economics. This book tries to find analytical answer to above questions and the author hopes that he has successfully, but partially, achieved this goal. By doing this he also hopes that he has extended the existing frontiers of Islamic banking without repeating previous mistakes. He further hopes that the book provides more questions for the reader than answering questions.

Another main book in this area of Islamic banking is that of Dr. M. Umer Chapra (1985). His attempts are undoubtedly admirable. The content of this book and the type of analysis are comparatively and relatively better than others. He is right in writing that:" The speculative demand for money is essentially triggered by interest rate fluctuations in the capitalistic

economies...The abolition of interest and the levy of Zakah... would not only tend to minimize this speculative demand for money... but also impart greater stability to the total demand for money."(1985; pp.187-88). He has taken a relatively more conservative position than does Dr. M.N.Siddiqi. Nevertheless, do we need, at all, to talk about demand for money in such a system? Is it not that the only part of demand for money which has raised new problems for capitalism is the speculative part? Is it not that the transaction demand for money is of no interest to economists to talk about? If abolition of interest rates would prevent speculation, the important part of demand for money, to take place, then what kind of monetary policy is applicable in such setting? When he further writes:"... the variable in terms of which monetary policy should be formulated in an Islamic economy is the stock of money...the Islamic Central bank should gear its monetary policy to the generation of a growth in money supply which is adequate to finance the potential growth in output..."(op.cit. p.189). Not only some of the previous questions raised would be valid here, too, but also what do we mean by adequacy of money supply? How this could be calculated by Islamic Central Bank? Is it obvious that it is not operational in that any figure for money supply could be accepted as "adequate". The whole book talks about monetary policy, as is clear from the title **of the** book. Why should not we take a firm stand on the fact that no monetary policy, whatsoever, is valid in this system? Through all valid and Shariah-compliant contracts signed by Islamic bank, money will change its legal properties to (actual) capital. This is in total contrast with conventional banks which all are monetary intermediaries. This is so because the legal property of loan given by depositors to such banks will be maintained by loaning out to customers. Quite differently, Islamic banking is, on the one hand, the advocate of depositors and the partner of investors, so to speak, on behalf of depositors, on the other hand. This will totally change the properties of such banks from monetary institutions to financial institutions; hence financial policy not monetary policy.

The author has come to the conclusion that misconceptions, and sometimes mistakes, in the literature of Islamic banking is so prevalent that years of reading is needed to go through all of them and make corrections. Instead of spending years in such a way on the literature which is nothing but waste of time and resources, the author has preferred to write on the basis of his own understanding of Islamic banking with due references to the original western sources wherever required. The skilled reader is left to compare the reasoning and the style of analysis of this book with other materials and then decide. His hope is that the contents of the book are operational enough to be used by experienced bankers with least difficulties.

Prof.M.Ariff is among rare Muslim economists who correctly believe in the invalidity of monetary policy tools in an Islamic setting. His deep admirable insights have shed light throughout his writings. He seems to have been given more thoughts into Islamic economics than into writing (M.Ariff; ed.1982; pp.1-24).

0-6: Two big questions about money:

Let us ask a question which may be central to all other related questions in this book: why central banks of all countries on the earth, whether socialistic, capitalistic or Islamic or any other mixture of them, have been made responsible to produce (print), distribute and manage the volume of money? Is there any common feature among such countries in order to make the central banks of these countries to perform the same functions? Do they have common goals? If yes, how these goals can be achieved by central banks? Is there anything peculiar to "Central Bank" or "money"? Or is there something peculiar in money which gives the central banks of all countries the power to print, distribute and manage it?

It makes sense to accept, by all means, the last question and concentrates on money itself; something that has rarely been done by economists. The amount of literature on money is not comparable to that on banking. The textbooks on money and banking are clear evidences in that a negligible percentage of such books have been devoted to money. Such treatment to a very powerful and crucial concept such as money is not only unfair but also it does not give clear idea to the reader what it is and what it can be. The potentiality of money, i.e., it's power to transform

it from what it is to what it can be is a legal question which has rarely, if any, been touched. This leads us to another big question. Let us now take up each question in turn.

Question # 1:

Is money like any other private good? If answer to this question is positive then another question comes to one's mind as: why it is not allowed to be produced by the private sector? It is amazing to see it to be produced and managed by the public sector, i.e. Central Bank which is part of the government, but a market have been developed by the private sector. The reverse has been witnessed and is commonplace but not the opposite.

Before proceeding to further analysis a related question which at first may seem rather funny, comes to mind as follows: why in no single country of the world there is a Central Bank to produce, distribute and manage "shoes" , "pen" , "automobile" , "refrigerator", and the like? If one can not find it easy to give answer to such simple questions, one has to come to the conclusion that there should be something peculiar to money that central banks have been made exclusively responsible for it. We wish, in a section of this book, to explore into this peculiarity. Our frame of analysis, which has been proved, to me, to be very powerful and instructive, is legal properties. This frame is central to our analysis; however unorthodox, throughout this book.

Question # 2:

Another question relevant to money which deals with externality is to ask: is there any potentiality in money which makes it so special? The relevance of this question becomes clear when we recall that items or products with externalities are best manipulated if it is given to the hands of the government with the goal of optimal amount to be made available to the general public.

Private goods are, by definition, are those products for which there is no, or negligible, externality. However public goods in contrast, are those goods with considerable externalities in such a way that if social costs and social benefits are taken into account to produce these goods, optimum quantities could be produced by government; but if they are given to the private sector less than optimal is produced. This is, obviously, due to considering private costs and private benefits but ignoring social considerations.

Furthermore, in case of private goods, they are products whose ultimate feature is the same as the original one. Nevertheless, the ultimate product of public goods after all externalities have been capitalized will be different from the original product. Many examples can be thought of as having such characteristics; education, health, amenity, and the like are ordinary examples. To make long story short, in case of "thoughts" in the category of education, in general, and research in particular, could be put into practice and produce sophisticated private goods. This is why we believe these "products" due to their highly valuable externalities are to be controlled, managed and stimulated by the public sector. Boundaries of public goods are not limited to those mentioned above. We suggest, in this book, that the boundaries to be expanded to include a neglected and very important item; the so-called "money". Money has very powerful potentiality to be transferred into actual capital. We will make our own assertion, in the following pages, about the properties of money in an Islamic state. It is one of the many peculiarities of this book, rarely, if at all, found elsewhere.

The importance of actual capital cannot be exaggerated; the engine of economic growth is actual capital. There is no guarantee that the conventional banking system by providing money loans (i.e. potential capital) is capable of transforming it into actual capital. In theory, which is our main concern in this book, as long as the borrower can provide a mortgage of the value to safely cover the amount of loan, conventional banks are happy to grant loans. Where these potential capitals go (whether to produce goods, to speculate in money or land or any other properties) does not concern these banks. They want to make sure that the principal plus interest charges on loans will be paid back by borrowers to make them able to pay the depositors the guaranteed rate of

interest plus some interest income for themselves. This is the main source of divergence between saving and investment. The mere intermediary function of interest-based banks and their negligence where borrowed monies go seems to be the principal problem of capitalism; the result of interest-based loans. To fill the gap between saving and investment necessitates, as the initial task, to forbid interest and then transform the functions of conventional banks from a monetary to a financial institution. Such institutions will never ever give the so-called "money" to any legal or real person unless they can be assured that something valuable (in the context of Islamic economics) will be produced. This task can be achieved within many legal forms such as Musharakah, Installment Sales, Salam, Mudarabah, etc. To these and many other related problems we will return in coming chapters.

It seems reasonable to claim that the main reason for market failure in the case of money is to consider it as private goods. Treating money, with all its potentialities (i.e. positive externalities) inherent in it, as a private good and ascending it to the same level as other private goods by use of charging interest rate in order to make capital artificially scarce is a big unforgiving mistake in human history. This is, probably, the reason S.Gesell and J.M.Keynes had been worried about the most. Investment, which Western economists thought to be responsive to the rate of interest, is a totally different legal product compared to money. Rate of interest is return to money but profit is the return to capital (investment) being, customarily, defined as change in the stock of capital. Interest costs being part of the cost of production, or the necessary part of investment charges in capitalistic system would, in many cases, be passed on to the consumers. Why should then an investor be worried about? With some reservations, he/she is expected to equally respond to both labor and interest costs. Furthermore, investment is not only, by definition, a long run decision but also is undertaken by a group ready to take risk whereas interest rate is a daily, if not hourly, determined price whose responsible agents (i.e. speculators in the money market) play a destructive role in the community. How can one logically reconcile this dichotomy? An investor needs a healthy environment to decide which projects are appropriate to undertake. The destructive daily fluctuations of interest rate does not allow such an environment to be established and maintained in that a negligible increase in rate of interest will make tens or even hundred different investment projects unprofitable. In brief, we would like to start, in an Islamic setting, from potentialities to produce output and go thereafter to changes in money stock. This process will produce enormous tangible economic consequences. As it appears, this is totally in contrast with the capitalistic system where Western economists try to start from changes in money stock and then go, via changes in interest rate, to output. As pointed out earlier, some independently minded Western economists have reached the conclusion that zero nominal rate of interest is not only a necessary condition for optimal allocation of resources but also sufficient. However, they have not incorporated this conclusion in an analytical manner. This is our task in this book.

Speculation in money and any other market does not allow Say's law to be operative. The classical assertion that supply creates its own demand by which we have been taught by J.S Mill's Principles of Political Economy, (Book 3, Chap.14, Section 2), that : " what constitutes the means of payment for commodities is simply commodities. Each person's means of payment for the production of other people consists of those which by him possesses." They have failed to realize that artificial risk existing in every speculative transaction brings about some income for someone in such a way that although someone has the power to purchase the commodities society needs most, i.e. necessities, they may (and will) not choose to use it because they have already possessed these commodities. These are the sources of widening the gap between haves and have-nots and are naturally demanders of luxuries. Why is there any need for money market to exist if you can have an efficient capital market? At the time we are able to bring money down from its ivory tower to where it should be, i.e. to perform its function just as the medium of exchange and detach "store of value" function normally expecting in capitalistic system then we could be sure that we have succeeded to have an efficient system being capable to maintain full employment, stable prices, and equitable distribution of income (and wealth). This requires a thorough so-called "surgical operations". Capitalistic system has quite often been proven to be unable to achieve above humane goals. Something similar is required today in

economics, as well. Future of economics belongs to Islamic economics.

I do not claim, by any means, that my definition of capital and its measurement as "the aggregate value, type, and arrangements of all heterogeneous assets of legally established firms in a country" is free from criticism. But what I claim is that the goodness of fit in such a heterogeneous world is close to reality. Economists have to come down from the ivory tower of their abstractions and making their theories more compatible with facts of life. Economists quite often do not accept some concepts of accounting but surprisingly build some of their theories based on them. We will return to this point in details in the book where appropriate. My views, however different, are close to those of Professors Joan Robinson, R.F.Harrod, and A. Woods. To this end my definition of capital being defined as the value, type, and arrangements of assets of a (legally established) firm is a flow concept in a production function like:

$$Q=f(K, L).$$

It is because its services flow constantly in such a way any stoppage of the flow will bring about halt to production.

Why heterogeneity of capital goods should be a problem? One answer to this vital question has been that, in general equilibrium theory, capital goods have to be aggregated, in value terms, since the rate of profits on their value is uniform, see (C.G. Harcourt, p.283). This answer is unsatisfactory in that there is no reason for the rate of profits to be the same in all industries because it is contrary to the facts of life. Every capital good has its own rate of profit depending on various conditions. If in the general equilibrium we are looking for a uniform rate of profit for capital goods, the abstraction process forces us to find one specific rate. To this end we can take the weighted average of the rates of profits enjoyed by all industries in the country. Furthermore, at this stage of analysis, i.e. the general equilibrium, we are also looking for a uniform wage rate; whereas we could think of every labor, or at least in some specific profession, to have distinct capability and hence receiving different wages. That is, we are not only faced with heterogeneous capital goods but heterogeneous labor, as well. When it comes to the problem of reswitching techniques and measurement of marginal productivities what we need to ask at the beginning is the relevance of these problems. Moreover, in general equilibrium analysis it is implicitly assumed that all markets (and the unknowns to be determined) are independent of each other. In human societies, and specifically in a cooperative society as exhibited by Islamic economics to be a grand cooperative, every variable depends upon others. Specifically rate of profit determines the reward to labor; these variables determine rent on land; all these factors determine average price level. Prices and costs determine the rate of profit. Simultaneity shall not be misunderstood with interdependencies of equations. A clarification is needed to show the difference. Let us take either the Classical or the Keynesian model. In either of these two systems it is not clear how price level, rate of interest, and profits are to be determined. However, in both models the variable appears in the next equation. This is not what we mean by mutual interdependencies among economic variables. All economic variables, in an Islamic framework, are to be determined by the system. These variables are endogenous except population whose value is exogenously given to the economist.

0-7: What shall be done in the future?

The standard mathematics used in traditional (capitalistic) economics is based on the philosophical foundations of capitalism in the sense that selfishness has penetrated into all aspects of this system. In other words, although mathematical tools can be thought of as neutral, however, their developments are such that to suit such a framework. In this sense they cannot be neutral. Selfishness by definition means a zero-sum game in the sense that an individual's gain, with given resources, is another individual's loss. But in a system such as Islamic in which every individual Muslim is responsible for others and they work in a grand cooperative setting and, for that matter, all economic variables are interdependent and as the result of cooperation a positive synergy will develop such tools of analysis are incapable of handling. As was said

before, we should be dealing with increasing sum game. The mathematics involved in such a game is very complex and has not been yet developed. The inadequacy of existing mathematics to handle such complex problems does not, by any means, imply that we have to ignore such a promising system. However, there have been endeavors put forward by some economists to solve special problems like the one by J.Von Neumann & O.Morgenstern in 1947; J.F.Nash in 1953 and J.C.Harsanyi in 1959, among other pioneers. Undoubtedly, although these efforts have been valuable and become cornerstone of further researches, but needs to solve problems of such a cooperative game goes beyond the existing literature. Human being's behavior are based upon their beliefs and they do what they think are best to them. Sometimes these behaviors take many forms of cooperation; they do not stop for scientists to find solution to their problems. This kind of behavior has been found, and will be found in future, for many times because behaviors often precede long before having a scientific framework for. Human beings feel something in their hearts, or in their intuitions, if you will, that tell them something different has to be done; different from what their wisdom dictates. Co-operation has old history, probably as old as the history of man but the academic knowledge to this respect is very young. If we are looking for a better society this is the direction that social sciences, in general, and mathematics, in particular, have to take.

Islamic banking: the underlying environment of analysis, performance and expectations: State of Affairs

Let us start our subject by a word or two from Prof. Joan Robinson in her Economic Philosophy (1964). She believes that the moral rules concerned with economic life are expressed in ideology. Economic system, whether Marxian or orthodox, is partly a scientific study of society and partly a vehicle for propagating ideology. She also believes that whether or not ideology can be eliminated from the world of thought in the social sciences, it is certainly indispensable in the world of action in social life. It is also believed that in order to inflict harm to a belief (ideology) it is better to badly defend not to offend it.

To evaluate the performances of the existing literature on Islamic banking in terms of harm-good criteria we need some knowledge about the backgrounds (ideologies) of the writers and their scientific commitment to Islam. It does not seem hard to understand how and why their thoughts have been shaped the way they are, because they are, more or less, reflected in their writings.

The writers on Islamic banking (an integral part of Islamic economics) can be crudely grouped into the following classes:

Class 1: this class refers to their pioneers of Islamic economics, in general, and Islamic banking, in particular. They started their writings in 1960s in USA, Canada, and some European countries. They included holders of Ph.D. degrees and also students of economics. This class of scientists was somehow independent with no more weak affiliation with big organizations.

Class 2: this refers to relatively late comers whose writings almost coincided with both the world events of the 1980's and the Islamic revolution in Iran. These events brought about the momentum for further researchers in Islamic economics. They can be classified as "rent-seekers".

Class 3: the inexperienced researchers whose efforts are undoubtedly well, and are assets of Islamic Ummah are in this class. However, it is recommended to them to think more than they should write and have a good command over both the Islamic and the capitalistic ideologies and their respective world views before they start writing. This recommendation is based upon the belief that Islamic system is complex enough to deserve a thorough and deep insight.

Above three classes could be grouped with another perspective into four classes not necessarily independent from each other and not necessarily mutually exclusive. They are as follows: (1) those who have had their education in the West and remained in non-Islamic environment

(country) whose lifestyles and thoughts have been over-shadowed by non-Islamic (capitalistic, so to speak) features. (2) They have become strongly affiliated with some financially powerful institutions, again, whose objectives are that no serious opposition could be made; otherwise the chances are in lose their jobs. (3) The combination of classes (1) and (2). This category is the most vulnerable of the previous two classes not only the environment they live in does not allow them to purely think about Islamic teachings but also they feel they are indebted to the institutions they are affiliated with. (4) The last category which is the purest of all of those who not only live in an Islamic environment but also they are not indebted to any institutions, public or private. These are the independent-minded Muslim or non-Muslim economists. The farther an economist stays away from both non-Islamic environment and also from finance providing institutions the purer the ideas and results of his researches.

0-8: What is Islamic economics?

It has long been demonstrated by some pioneer Muslim economists that Islam has within itself an economic system. This book does not intend, at all, to start the argument again. However, few sentences are in order due to the fact that earlier writers have, somehow failed to be articulate about.

As soon a school of economic thought is introduced we automatically enter into a comparative analysis. Such an analysis naturally revolves around the following axes of comparison (A. Eckstein, 1973, p.6):

1-property relations 2-kinds of economic freedoms 3-the characteristic of incentive systems
4-the character of the coordinating or resource allocating mechanism 5-locus and system of decision making

Above five axes have been professionally addressed to by M.B.Sadre, an outstanding religious scholar, in his two volumes of "Iqtisa-duna" which means "Our Economics". No further attempt is required because his effort is as comprehensive as any further attempt does not add anything to our understanding of the subject. There seems to be no need to duplicate them here. I confess that, as far as Islamic school of economic thought is concerned, my analysis in this book is almost entirely based upon his arguments, unless otherwise specified.

The importance of property holding derives from its role as a source of control and a source of claims upon the product or the income produced by it. In the case of owner-managed enterprises, the two aspects--control and claims--are automatically merged. However, in other forms of enterprise organization not only are control and ownership separated, but the control and claims function of ownership itself becomes divided. At the same time, custodial control also may, and often does, carry with it control over the distribution of claims. Property holdings, therefore, can provide power over the allocation and distribution of resources, output and incomes. This is why they have been one of the most important criteria in distinguishing and comparing economic systems.

In an Islamic setting an individual Muslim does not have any claim over interest (Riba) income; other incomes in the form of speculative income on money (or commodities) are also prohibited in that they are interest(Riba) related incomes. As mentioned earlier, any speculation in any durable commodity market would produce interest (Riba) in terms of itself. This will become clear as we proceed in the main text. These two issues --interest (Riba) and speculation-- are central in our analysis. It should be obvious that no money market can exist under such a system; something earlier writers have often failed to understand. If the following two propositions: (1) the demand for money itself is necessarily always speculative in a wide sense; and (2) once the future of the rate of interest is uncertain people have the opportunity to speculate in the hope of securing profits from knowing better than what the future will bring forth; from J. Hicks and J.M.Keynes, respectively, are collected and put together, the conclusion, as stated above, is automatically derived from them. Numerous futile attempts have been made to produce Islamic

money market and also Islamic monetary policy, the irrelevances of which will be discussed in the main text.

What the reader can expect is that in an Islamic framework we would only have three markets; namely, labor, capital, and commodity markets. All of which revolve around the rate of profits in its own narrowly defined concept. Profits, in this sense, are the reward to capital investment; and by no means reward to money. The reward to money is nothing but interest (Riba). Careful analysis and understanding is required to distinguish interest (Riba) income from any other incomes. Sometimes interest emerges not from purely exchange of money for money but from exchange of money, via a commodity, for money. As is the case in stock markets where stocks play the interim role in exchanging money for money to which we will return in pages that follow. To correctly understand the interim role of stocks in stock exchange markets reminds us of Professor Joan Robinson's famous caveat: "the purpose of studying economics is not to acquire a set of ready-made answers to economic questions, but to learn how to avoid being deceived by economists".

It may perhaps be safe to view Islamic economic system in A. Eckstein's perspective in that our recognition of this system is a different and new one which is a reflection not merely of its differences from the prevalent system but also all of its weights given to specific elements like labor, money, interest, capital, and profits. In such a system Shariah-compliant activities which produce positive externalities are to be maximized and those activities with negative externalities are to be minimized. This will allow us not to follow an unattainable utopian state; however, efforts have to be made up to their utmost level possible.

0-9: Economic justice as the ultimate goal:

It is an extremely hard task for an economist to demonstrate the Islamic ideology. The author is not in a position to say anything about it both because :(1) it does not concern us here, due to the fact that it does not serve the purpose of our book. It just serves me to build my model upon something that has long been discussed and challenged, especially by M.B. Sadre; and (2) he has no claim on that subject because it requires different expertise to which he is ignorant. However, few sentences are in order to say about the place of justice (equity) in an Islamic system.

I feel that much of the debate and controversy about the meaning and place of justice stems from the fact that it is mostly regarded as tools and steps towards some goals, perhaps mostly, welfare. To give justice the same rank as other tools and steps will allow us to either ascend it in a higher position or descend it to lower one. However, if it is regarded as the ultimate goal, as it is in the Islamic settings, one will not be able to change its positions. The two economic systems known to several generations, i.e., capitalism and socialism, have long struggled over an equity-efficiency criteria. The former claims that it is mostly after efficiency and equity will be achieved later in the future; but the latter claims that it is after equity and to achieve it you have to, partly, sacrifice efficiency.

We need a system in which efficiency-equity can simultaneously be obtained. That is, a system all elements and tools of analysis are equity-oriented. This, obviously, brings about the controversial issue of the neutrality and non-neutrality of tools of analysis. The problem at this stage, to which we will return later, can be solved with due consideration of the legitimacy of tools used. The origin of legitimacy goes back to legality. Legal aspects of the analysis throughout this book make it distinct from other types of treatments.

With respect to socialistic system, one is apt to ask a relatively simple question as to what kind of equity is it to give no reward to capital? The ready-made answer to this question is that when capital is owned by the state, there need be no reward to the state. At this point answer related question comes to one's mind: what kind of reading is it that all human beings are absolute altruists? The inherent contradiction in this system allows us to go back and look for dimensions

of human beings. We as Muslims have been taught on the basis of Quranic teachings that human beings are both selfish and altruist at the same time. To this end the following rules are in order:

1-Priority of detraction of harm to attraction of good.

2-Priority of social to individual benefit. According to my reading of Islamic teachings, the social cost-benefit considerations have led to the injunction against both extravagances (Israf) and waste (Itlaf) both of which are Haram in Islam.

3-Rule of not harming others and not being harmed; known in Arabic as Rule of "Laa-Zarar wa Laa-Zeraar".

In regards to above statements and propositions both Divine Rules and wisdom have their own parts to play; however if there is any conflict between the two, then the Divine Rules have the right to veto wisdom. One powerful example is interest (Riba), which is the pillar of capitalism suffices to prove the right of veto given to Divine Rules. It took many generations and tremendous time and resources for human beings to realize the truths that lie in the following two Quranic verses:

1-...But God hath permitted trade and forbidden usury ;(2:275).

2-God will deprive usury of all blessing, but will increase for deeds of charity ;(2:276).

It was and will ever be a great honor of both Professor Milton Friedman who argued in 1969 that zero nominal rate of interest was necessary condition for efficient allocation, from one hand, and of H.L.Cole & N. Kocherlakota, again, who subsequently demonstrated in 1998 that zero nominal rate of interest is not only necessary but sufficient condition for efficient allocation, on the other hand. These findings can best be served as the most powerful evidence of market failure in the case of money.

The question now is about the meaning of justice. Before answering this question we have to confess that its complexity comes from the fact that it is one of many absolute concepts in Islam which is emphasized the most. This does not mean that, on the basis of it being hard to attain, we have to ignore what social-economic justice is all about. It is one out of many societal states in which there is least hostility, greed, hatred, discrimination, and jealousy but most possible cooperative feelings, social responsibility and respect, commitment-binding and love among individuals composing the society. These are the signs of justice. The higher the cooperative feelings, happiness, and love the higher the degree of justice; and the more the hostility and jealousy among individuals the higher would be inequity in that society. In other words, with justice everything stands on its proper position. If there is no better position for things, there would be justice in its absolute sense. This might help us find the proper answer to the meaning of justice but is beyond the scope and capabilities of the author. However, we should try our best to reach this absolute state possible. But we have to confess that this is very hard, if not impossible, task; I have gone little further than this in this regard in my earlier book (1379H=2000-2001 Gregorian calendar; pp.62-67). Different societal states demonstrate different justice levels in different countries. They could accordingly be ranked.

Now, the most important question is how could this societal state, i.e. justice, be attained? The answer is not too difficult as it first seems. In an Islamic framework as soon as Divine Rules and injunctions are carefully observed justice will be attained. In other words, such rules and injunctions are, quite expectedly justice-compliant. Justice and such rules and injunctions are within themselves; i.e. one generates the other. It goes both ways in the sense that, on the one hand, following these rules and injunctions generate within themselves justice and, on the other hand, following justice implies within itself that Divine Rules and injunctions have been followed. In mathematical terminology following these rules and injunctions is necessary and sufficient condition for obtaining justice.

Islamic economic system would generate a social environment within which obeying the rules that are equity-compliant based upon Divine Rules justice will be forthcoming readily and spontaneously within itself. It should not be misunderstood that the result comes later; one is within the other with no sequence as to the order of events. Above statement is one of perhaps many readings of Islamic teachings. It, therefore, by no means imply that it is the only and the ultimate reading. However, the claim that it may perhaps reduce the prevailing conflicts contained in any other economic system and at the same time is consistent within its elements is a humble claim.

It is worth asking the question what is the relation between cooperation and justice, if any? We seek the answer from J. Rawls. He says: "The circumstances of justice may be described as the normal conditions under which cooperation is both possible and necessary."(1971; p.126). Let us see what Quran has to tell us about the amount of cooperation needed to be exerted in an Islamic state.

Holy Quran (2:286): On no soul doth God place a burden greater than it can bear.

Having had in mind that the necessary condition to maintain justice (equity) is to follow Allah's rules and injunctions. Again, the most important point in this regard is to note that justice does not come about "after" all injunctions and rules have been followed; rather it comes "with" it. In other words, Divine Rules and injunctions bear with themselves the blend of justice; they are not separated. These two do not follow the cause-effect course of events; one is not without the other.

In my interpretation of economic justice not being in conformity with causality relationship I have been undoubtedly totally inspired by many verses of the Holy Quran. For example, we read the following: So, verily, with every difficulty, there is relief. Verily, with every difficulty there is relief (95:5-6); furthermore, Allah merges night into day, and He Merges day into night, and Verily it is Allah Who hears and sees [all things] ;(22:61).

In following Divine Rules and injunctions we should be sure that according to Quranic verse noted above, (2:286), Allah does not place a burden to His creatures greater than they could bear.

Above Holy verses could, as well, be used for many other cases; they are not, to my understanding, exclusively useful for economic justice in relation with its rules and injunctions. Another example which might also be fruitful is education or specifically learning by doing, introduced first by K.J. Arrow in his celebrated model (1962). Learning immediately comes with doing and doing has learning content with it. After every stage of learning there is higher stage that could be learnt. This process keeps going to higher and higher stages up to a "professional" level. Obviously, at every stage of learning-doing something is learnt. This rule is not only applicable to each individual but also applies to different degrees of knowledge of the existing population, as well. Everybody knows something. The distribution of knowledge among the world population is unambiguously normally distributed. Furthermore, this rule also applies to different points of time in a dynamic sense. Ever improved discoveries during past centuries are remarkably fruitful evidences for this claim. Every object around us embodies within itself "memories" of past experience(s). Nothing at the present time is independent from the past. "Past" has within itself "present" and "present" has, in turn, within it "future". Continuity of events necessitates such dependencies.

Let us go back to the pioneers of the " learning by doing". In Solow's words:"...it is the essence of this model that even the Titanic is still contributing to maritime productivity. Even if it can no longer carry passengers, the fact that it was once built makes all current serial numbers a little bigger than they would otherwise be, and therefore all current capital more productive than it would have been if the Titanic never existed";[in: M. Brown(ed.); 1967]. An interesting implication of Arrow's concept of learning is that "an act of investment benefits future investors, but this benefit is not paid for by the market", [K.J. Arrow (1962); p.168]. This further necessitates

"cooperative behavior" in order to capture the benefit, in addition to the assertion made by J. Rawls as a pre-requisite for maintaining justice.

As said above, the long debate over the trade offs between equity and efficiency has been the consequence of ranking equity at the same level as efficiency. How many generations will it take to change inequities in American economy, as mentioned before, by Prof. M. Friedman, as being a situation where 1% of the population own 50% of everything to a state of "justice" as claimed by some growth theorists, like S. Kuznets. Past evidences show that the process has been considerably slow; furthermore, the tools of economic policies do not contain elements of equity to guarantee such a state of affair to become a reality. This reminds one of a popular statement about the economic consequences of capitalism: "rich gets richer and poor gets poorer".

The kind of justice we are concerned about is also one of many relative concepts; hence the ultimate, absolute, justice seemingly unattainable. This means that for human societies it is a gradual process and is the outcome of too many actions and interactions on the part of economic agents. If these actions and interactions are either of those kinds which do not have justice elements with them or the outcome of which brings about injustice, it is hard to be convinced that justice would ever be attained. The gradual process should lead us to achieve first approximation of "the" absolute justice.

It is instructive to note that Halal (authorized) and Haram (forbidden), according to M. B. Sadre, are nothing but those actions and things that either have with themselves elements of, or the outcome of which is, justice and injustice, respectively. Riba (interest, in any form and any degree) is the most important thing in Islamic banking the outcome of which brings about injustice; hence declared Haram and strictly prohibited.

Equity is, quite often, mistakenly used to mean equality. The source of misunderstanding seems, to me, arises from mixing the following two logical assertions made earlier: (1) Equals should be treated equally; and (2) Equal treatment of unequals is merely Zulm (injustice). The first assertion guarantees amenity and justice; the second one, hatred and hostility.

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NOTE: References cited in this part of the book can be found at the end of forthcoming chapters.