

COMPARATIVE ECONOMICS OF SOME ISLAMIC FINANCING TECHNIQUES

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There are several Islamic modes and techniques of financing as alternatives to interest based financing. Each of these techniques has different economic implications for those who provide the finance and for those who use the finance. This paper presents some economic dimensions of the major Islamic financing techniques in a comparative perspective. The comparative economics of these techniques has been discussed with respect to (a) their distinctive economic features, (b) role of these features in economic decision making, and (c) macro-economic consequences

It has been argued that the permissibility and availability of a variety of modes of financing with different economic implications gives tremendous flexibility to individuals as well as society in the management of their financial affairs.

.1. INTRODUCTION

There are several Islamic modes of financing which serve as alternatives to interest based financing. There is, however, divergence of views between theory and practice about the order of preference of these modes of financing. The theoreticians are, generally, of the view that profit/loss sharing should be the most widely prevailing mode of financing in the financial system of Islam ¹. Contemporary practice of Islamic banking, however, is overwhelmingly dependent on the use of markup based techniques. Profit sharing is the least popular mode of financing in most of the Islamic banks in the modern world ². Some theoreticians have been quite critical of this practice ³. This controversy can be understood and synthesized by analyzing the economics of the various types of Islamic financing techniques.

Furthermore, each Islamic financing technique has different shades of economic implications for the capital providers and capital users. Techniques differ according to the extent of participation in management by the capital provider. They also have different implications on uncertainty and variability of cost of the capital for the capital user. The economics of different techniques needs to be studied for the capital provider and the capital user for theoretical as well as practical purposes.

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The differences in the nature of Islamic financing techniques have implications for the economy at the macro level as well. Some techniques may be suitable for achieving a certain set of macroeconomic objectives of the society while some others may be suitable for other objectives. A comparative study of the macroeconomic implications of these techniques, therefore, can hardly be overemphasized.

No systematic study has so far been done on the subject of comparative economics of various Islamic financing techniques. The first ever reflection on the comparative aspects perhaps appeared in the Report of the Council of Islamic Ideology, Pakistan, on "Elimination of Interest from the Economy" [1980]. While evaluating the techniques of Islamic financing as alternatives to interest based financing, the report briefly discussed the comparative economics of these techniques. Keeping in view the economics as well as other considerations, the Report concluded that the ideal alternatives to interest in an Islamic economic system are profit/loss sharing and *qard-hasan*. Though there might have been a lot of discussion during the deliberations of the council on the comparative economics of these techniques, not much was included in the report on the subject. Also, the main focus of the report was on the macro aspects. It did not make any observations on the implications of these techniques on microeconomic decision-making.

Later, several attempts were made to study the economics of profit loss sharing (PLS) based system. These include Chaudhury [1974], Khan [1984], Khan [1985], Habibi [1987] and Siddiqi [1988]. In all these studies PLS meant financing techniques based on *mudarabah* and *musharakah*. Moreover, the objective of these studies was a comparison with the interest based system only. These studies did not make any comparison of the economics of PLS based techniques with those of other Islamic techniques. However, some writings on the practice of the contemporary financial institutions did make brief remarks on the comparative economics of various techniques. These include Attia [1985], Mannan [1986] and Ahmad [1987], among others. But these remarks were far from sufficient and hence the subject of comparative economics of various techniques has generally been ignored.

This paper makes a very modest attempt to present, in more detail, some economic dimensions of the major Islamic financing techniques in a comparative perspective. It is only a first step towards making a more detailed analysis of the comparative economics of various Islamic financing techniques.

There are several possible financing techniques which conform to the Islamic principles. Some of them were prevalent in the period of the Prophet (peace be upon him) and the rightly guided Caliphs and these have been discussed in the *fiqh* literature. Others have emerged recently to meet the contemporary financing requirements within the light of the teachings of Islam.

There are five basic modes of financing. They are :

-)i(*Mudarabah*
-)ii(*Musharakah*
-)iii(*Ijara*) Leasing(
-)iv(*Bay'-Salam*
-)v(*Bay' - Murabahah (Bay' Ajil)* (or Mark up based Technique(

All Islamic financing techniques in theory and practice are direct or indirect reflections of these five modes. Some techniques may combine features of two or more of these modes. The present paper concentrates on these five basic techniques only⁴.

The comparative economics of these techniques may have two dimensions: (a) their distinctive economic features, and (b) role of these features in economic decision making and in shaping the features of the economy and its institutions.

The economics of these Islamic financing techniques is discussed, in the following pages, in these two main dimensions.

.2ECONOMIC FEATURES OF ISLAMIC FINANCING TECHNIQUES

A lot of literature is available, mostly in Arabic, that explains in detail the legal structure of the above mentioned financing techniques. The comparison of these structures from economic point of view has not been a subject of any rigorous exercise so far. The following distinctive features have been derived from review of the literature on individual Islamic financing techniques.

2.1Nature of Financing

Financing techniques can be distinguished from the point of view of the nature of financing involved in each techniques. *Bay' salam* and mark up based modes can be regarded as debt creating modes of financing since financing in these two modes is in the

nature of a debt. Here finance user stands obliged, to pay back the entire financing (or the commodity as agreed in *bay' salam*).(The repayment by the finance user is, in fact, predetermined in advance and hence becomes a sort of debt from the finance user's point of view. On the other hand ,*mudarabah* and *musharakah* are non-debt creating modes in the sense that the finance user is not obliged to pay back the total amount of financing. To some extent *ijara* can also be regarded as a non-debt creating mode of financing. In *mudarabah* and *musharakah* the finance user pays the cost of capital according to the profits/loss that he makes out of the use of the financing whereas in *ijara* ,only the rent is paid which may be a small part for any particular user of the total value of the asset. The debt creating modes involve a debt burden on the user irrespective of how much he benefits from the funds. Non-debt creating modes do not carry a debt burden. The user pays according to the benefit he gets from the financing.

2.2 Role of Finance Provider in the Management/Use of Funds

In *bay' salam* ,the finance providers have no role in the management of the funds by the finance user. Once the finances have been handed over the finance user is free to use the funds as he thinks best. In a sense *mudarabah* can also fall into this category because the finance provider is not allowed to interfere in the management of the enterprise in which his funds are being used. On the other hand ,*musharakah* gives an opportunity to the finance provider to have a role in the management of the funds. In the case of mark up based financing and lease-based financing the finance provider has full control over the use of the funds since funds are deployed by the finance provider himself .

2.3 Risk Bearing by the Finance Provider

In both *mudarabah* and *musharakah* the entire capital invested by the finance provider is at stake. The finance provider in *mudarabah* is responsible to bear all the financial loss of the enterprise in which the finances were used. His entire finances are, thus, at stake until the project is completed and the finances have been recovered. In the case of *musharakah* the finance user will bear the financial loss in proportion to his capital in the total investment of the enterprise. In this case too the entire capital of the finance provider remains at stake until the project is completed and the finances have been recovered. Almost similar is the case with leasing where the entire amount of capital remains at stake as the capital owner is responsible for all the risks attached to the life of the asset. The capital will be under risk until the asset successfully completes its anticipated productive life. The risk bearing in *bay' salam* arises due to the uncertainty of

the future prices of the commodities involved in the contract. In all of these four cases i.e. *mudarabah*, *musharakah*, leasing and *bay' salam*, the finance provider puts at stake the entire amount of his capital as well as the opportunity cost of capital for the entire period until the capital is received back.

In mark up based financing risk bearing is there but is less than that involved in the above mentioned four techniques. The risk bearing in mark up is only up to the stage when the goods are handed over to the capital user and not until receiving back the capital as in the above mentioned techniques. Once the goods are handed over to the finance user, all risk lies with him and the finance provider shares no risk till the recovery of the finance.

Other things remaining the same, the mark up based financing involves minimum risk for the finance provider compared to other techniques because of the following reasons.

-)i) Finance provider does not bear risk for the entire period of the contract. The risk is only for that period in which a spot sale is made and until the goods are handed over to the client. For the remaining period of the contract, the amount of financing plus the agreed mark up is in the nature of debt and is risk-free. All other financing techniques carry the risk throughout the period of the contract.
-)ii) Mark up based financing requires knowledge of only current prices of the goods involved in determining the financing and a return on it. In the other techniques, some anticipation or forecasting has to be made about values of various variables involved in financing. This introduces an element of risk to the extent that the anticipations or forecasting may not come true. *Bay' salam* requires forecasting future market prices; leasing requires forecasting the productive life of the asset and *mudarabah* and *musharakah* require forecasting the profitability of the enterprise/activity in which investment is to be made.

2.4 Uncertainty of the Rate of Return on Capital for Finance Provider

It has been mentioned above that all Islamic financing techniques involve risk bearing by the finance provider. He has to bear the risk of loss of capital if he allows the use of money in any of these modes. This means that any return that he may expect, *ex-ante*, has some element of uncertainty. It is a common mistake to regard the trading based and leasing based financing techniques as fixed return techniques. The misunderstanding arises on the basis of the following arguments:

Mark up : Since the mark up is fixed and predetermined as a percentage of the capital amount this technique is considered to have a fixed rate of return. The mark up itself is considered the fixed rate of return.

Leasing : Since rent is fixed and predetermined it is considered to imply a fixed rate of return because renting an equipment worth US\$ 100,000 at an annual rent of US\$ 10,000 means a 10% fixed rate of return on capital.

Bay' Salam : Since the quantity and price of the goods to be purchased from the finance user are known and fixed in advance, the finance provider is assumed to have fixed the rate of return in advance.

In all these cases the amount charged to the finance user is usually assumed also to be the rate of return on capital. This is actually not the case. There are risks of losses involved for the finance provider in all these techniques. In mark up based financing a financier faces all risks normally involved in a trading activity such as goods getting damaged during transportation, storage, etc. Furthermore, the finance provider also runs the risk that the goods purchased for the finance user may not be finally accepted by the finance user on account of quality or any other pretext. These risks thus keep the rate of return uncertain until the goods have been finally handed over to the finance user.

In *bay' salam* financing though the price, quality and quantity of the goods to be delivered to financier are predetermined, the actual rate of return remains unknown until the goods in question are delivered to the buyer and he is able to dispose them of in the market. His actual rate of return will depend on the actual prices at the time of disposing of the goods compared with the prices paid for the goods and on the cost incurred in disposing of the goods.

The rent on an asset cannot be treated as a rate of return on capital invested in the asset for the following reasons:

-)i)The owner of the asset is uncertain about the total life of the asset. The asset can bring earning only during its productive life. Also, the owner is not aware what price the asset will fetch if he decides to dispose of the asset any time during its productive life.
-)ii)The owner of the asset is also uncertain about the extent to which the asset will remain on lease during its productive life. On expiry of the contract with the first lessee, the owner is uncertain about the time it will take him to find the next lessee and the rent that will be agreed upon with him. Even if the first lease continued it is quite possible that at any point of time the lessee may demand revision in the rent due to any possible defect that may adversely affect the productivity of the asset or the service for which it was rented.

Mudarabah and *musharakah* generate risks primarily at the end of the finance user. When it is a matter of financing only the finance owner has little role in the case of *mudarabah* and may have only a secondary role in the case of *musharakah* in attempting to control the risk of loss. On the other hand, leasing, mark up and *bay' salam* based financing involves a risk that is not generated at the end of the finance user. In leasing the risk is associated with the anticipated life of the asset and its continuous employment on rent. In mark up based financing the risk is involved during the purchase of the required goods and their handing over to the client. In *bay' salam* the risk occurs during the receipt of goods from the client and their disposal in the market. In all of these three modes the finance user has nothing to do with the risk being faced by the finance owner.

2.5 Cost of Capital for the Finance User

The amount that the finance user ends up paying to the finance owner over and above the original finance obtained is referred here as the cost of capital.

The cost of capital in case of *mudarabah* ,*musharakah* ,and *bay' salam* remains uncertain until the completion of the contract. The cost of capital in the case of leasing and mark up based financing is predetermined and fixed .

Thus, whereas the rate of return on capital is always supposed to be variable and uncertain, it is possible for the cost of capital to be fixed and predetermined if leasing and mark up modes are used.

2.6 Relationship between the cost of capital and the rate of return on capital

In the case of *mudarabah* and *musharakah* the cost of capital and the rate of return are explicitly the same. In the case of leasing, mark up and *bay' salam* based financing, the cost of capital and the rate of return on capital, however, are divergent. The case of mark up and leasing is straightforward. The finance user pays a fixed and predetermined cost. In the case of *bay' salam*, the rate of return for the finance owner (being dependent on the price that he is able to get in the market minus the cost of marketing) may be different and unrelated to the cost that the finance user is obliged to pay.

Table 1
Comparative Features of Islamic Financing Techniques

TECHNIQUES					
Techniques	<i>Mudarabah</i>	<i>musharakah</i>	<i>Ijara</i>) Leasing(<i>Bay'al Salam</i>	<i>Murabahah</i>)markup(
Features					
Nature of financing	Investment based	Investment based	Leasing based	Combination of debt and trading	Combination of debt and trading
Role of the capital provider in the management of funds	Nil	Full control	Full control on the use of the finance	Nil	Full control on the use of the finance
Risk bearing by the capital provider	i) To the full extent of the capital as well as of the opportunity cost of capital. ii) For the entire period of the contract.	Same as in Mudarabah	i) To the full extent of the capital as well as of the opportunity cost of capital . ii) Until the asset completes its life or is finally disposed of .	i) To the full extent of the capital as well as of the opportunity cost of capital. ii) Even after the expiry of the contract until the goods are finally disposed of.	i) To the full extent of the capital . ii) Only for a short period until the goods are purchased and taken over by the finance user.
Uncertainty of rate of return	Complete uncertainty	Complete uncertainty	Complete uncertainty	Complete uncertainty	Uncertainty only for a short period of the contract
Cost of Capital	Uncertain ex-ante	Uncertain ex-ante	Fixed and predetermined	Uncertain ex-ante	Fixed and predetermined
Relationship of the cost of capital and the rate of return on capital	Perfect correlation	Perfect correlation	Weak Correlation	No correlation	Strong correlation but not perfect

.3ECONOMIC ROLE OF ISLAMIC FINANCING TECHNIQUES

Islamic financing techniques can have different effects on decision-making of economic agents as well as on the macroeconomic framework of the economy. Broadly speaking, the economic role of various Islamic financing techniques may be studied from the following aspects:

-)i)Households' consumption - saving choice
-)ii)Firm's investment decision making
-)iii)Financial intermediation

-)iv) Macroeconomic implications
-)v) General equilibrium at micro and macro level.

In the existing literature, there is very little discussion on the comparative aspects of various Islamic financing techniques in the above mentioned dimensions. However, they appear in the joint discussion of the economics of two Islamic financing techniques, namely *mudarabah* and *musharakah* which are jointly referred to in the literature as profit-sharing techniques. An attempt has been made in this section to infer the comparative economics of various techniques from the limited discussion in the literature on the economics of profit sharing techniques.

3.1 Household Consumption - Savings Choice

Two Ph.D theses written in American universities have attempted to rigorously show that profit sharing techniques make the lender⁵, i.e. saver, worse off⁶. For example, Rafi Khan [1983, pp. 112], tried to prove that irrespective of the profit-sharing ratio, eliminating interest and introducing a pure profit-sharing system would inevitably make the lenders worse off, compared to the interest-based system⁷.

Apart from the Shylockian flavor in this argument emphasizing the "lender's" welfare without weighing it against the welfare of the other sections of the society,⁸ there is a fundamental flaw in the methodology of arriving at such an argument. Such arguments are always based on the assumption that profit-loss sharing system means suppressing the interest rate to zero for the savers. In theory, as well as in practice, it has been made clear that the Islamic financial system does not mean non-positive expected rate of return on savings.

If we intend to make the comparison with the interest based system, we have to ask the question, "will the banks working with Islamic financing techniques be able to provide a risk-return package, on the average, better than, same, or worse than that in interest based system?" It will be argued later in this section on financial intermediation that the portfolio diversification and choice of various financing modes can enable an Islamic bank to reduce its overall risk on its investment to an almost negligible level and still make at least as much profit as the bank would have made by operating on the basis of interest.

If a saver wants to use leasing or mark up or *bay' salam* modes to advance his money to the user, then obviously the bank's risk-return package will be the floor for

making any investment in these techniques. Lenders being small savers may not have the expertise or know-how to grab a leasing or trade-business that may yield them a risk-return package, on the average, better or at least equal to the profit-sharing based risk-return package offered by the banks .

In the case of leasing and mark up based techniques, the welfare of the finance user is expected to be lower than in profit sharing techniques (and may be close to what it is in the interest based system) because these techniques imply fixed cost of capital for the capital user in almost the same way as in the case of interest.

The user may be implied to be a little better off in the case of leasing based financing compared to the trading based financing because of lesser repayment problems in the former than in the latter in case the user suffers a loss in his project. In leasing-based financing, if there is a loss the lessor will simply take his asset back and the lessee will be obliged only to worry about the unpaid rent, if any. In the case of trading-based financing, if there is a loss the finance user will have to worry about the repayment of the entire capital plus the agreed upon mark up.

In *bay' salam* ,since the cost of capital is unrelated to the rate of return, the user may end up worse off compared to profit sharing techniques. Also, in case of loss, the user faces the same problem of repayment as in the case of the mark up based techniques.

Leasing, mark up and *bay' salam* based techniques, however, have one advantage over *mudarabah* and *musharakah* from the point of view of the welfare of the finance user. The former techniques can be utilized for meeting the household consumption needs, whereas profit sharing techniques of *mudarabah* and *musharakah* cannot be utilized for this purpose. In the profit sharing based system, those needing funds for consumption purposes will find themselves in a difficult situation to get their needs financed. This problem can be overcome in the leasing and mark up based financing. The users of funds for consumption purposes thus may find themselves better off under mark up, leasing and *bay' salam* modes than under *mudarabah* and *musharakah* modes.

3.2 Firms' Investment Decision-Making

Profit-loss sharing techniques make the capital owner share the profit according to actually realized productivity. Thus, the actually realized return on profit is the price of capital which will determine its allocation.

Modigliani and Miller (1980) have proved very convincingly in the context of corporate finance that it is not the interest rate which determines the cut off point for the selection of investment in an enterprise. According to their analysis, irrespective of whether the source of financing is own savings or interest based loan or issuance of common stocks, investment in an enterprise will be made only if the expected rate of return in the enterprise is greater than or equal to the actual rate of return in the comparable class of firms ⁹. This is a clear argument against those who believe that interest plays an important role in the allocation of capital resources ¹⁰ and that its replacement by profit-sharing techniques may deprive the economy of the benefits of a useful instrument.

Among PLS techniques, *musharakah* may have an edge over *mudarabah* in the sense that in *musharakah*, capital owner has a right to interfere in the management and hence can have some control over the problems created by informational asymmetry and moral hazards. *Mudarabah* is void of any such control.

The role of leasing and mark up based techniques for an investment decision may be close to the case of interest because as far as the capital user is concerned he knows with certainty how much he will have to pay for the capital. But for the capital owner, investment decision will depend on the rate of return on capital which will be different from the cost of capital to be paid by the capital user, because the capital owner has to make an allowance for uncertainties and other things already mentioned in section 2. Hence, there will be a divergence in the supply price and demand price of capital. This divergence is a result of the fact that the capital user does not have to bear the uncertainties that the capital owner does. It may also be noted that since an upper limit on their profit is fixed by the rent or the mark up which are not related to the profitability of the enterprise, these techniques may not have as primary a role in investment decision making as profit-loss sharing techniques.

It has been argued that *mudarabah* financing will imply an infinitely elastic demand for *mudarabah* funds ¹¹. This is because the *mudarib's* stake in the enterprise remains constant at the level of the opportunity cost of his labor irrespective of the total financial investment of the finance provider in the enterprise, whereas the expected rate of return is an increasing function of the financial investment. Every *mudarib*, therefore, would like to have as much investment as possible from the capital owner.

This argument, though correct, has no economic significance unless we also discuss the supply of *mudarabah* financing and the simultaneity in the determination of supply and demand. Supply of *mudarabah* financing will not be independent of the profit sharing ratio for the supplier. Suppliers' profit sharing ratio will in turn depend on the expected incomes and the risks involved in the project for which finance is being demanded. While increased supply of funds may increase the income (depending on the nature of the production function), it may also increase the risks (depending on the nature of human capital of the entrepreneur using the finance). An equilibrium level of profit sharing, thus, will be simultaneously determined at a level where supply and demand are equal. The argument of infinitely elastic demand under *mudarabah* is a result of the misconception that cost of capital under *mudarabah* is zero.

Cost of capital is the share in the profit that *mudarib* pays to the *rabbul mal*. A utility maximizing *mudarib* will, of course, be motivated by the higher expected profits. The increased supply of capital, however, will not come at a constant profit sharing ratio. Profit sharing ratio will be an increasing function of the supply of capital because the risks of giving higher amounts to a single *mudarib* may increase at an increasing rate. This may simply be reflective of the diminishing marginal entrepreneurship of an entrepreneur (compared to the diminishing marginal productivity of labor). On the other hand, the productivity of the enterprise increases at a declining rate as more and more capital is invested. It is obvious that a *mudarib* will demand capital to the extent where his total profit is maximum. This argument has been elaborated more rigorously in the Appendix .

It may be noted that the upper limit on the supply of the capital will depend on the asset that the *mudarib* is putting at stake in the business. If the *mudarib* is skilled or professional labor, the capital owner may become willing to invest high amounts of capital with one particular *mudarib*.

The same argument applies to *musharakah*. Since in *musharakah* the capital user has his own capital as well, and since the capital owner has a right to interfere in the management, the supply of capital may be relatively higher than that under *mudarabah* for a given price of capital (i.e. for a given expected rate of return on capital.)

Since leasing and mark up based techniques imply a fixed cost of capital in the same fashion as the interest rate, the nature and determinants of the demand for investible resources may not be very different from the case of the interest based system. Leasing based techniques may sometimes be to the advantage of the capital user

compared to mark up based techniques because the capital user is responsible only for the payment of the cost of capital and is not responsible for the capital goods itself. Under certain other circumstances, mark up based financing may, however, be preferred over leasing based financing as already discussed in the previous section.

Nadeem ul Haque and Abbas Mirakhor [1985] have argued that under profit sharing techniques the level of investment will increase because elimination of interest will allow the firms to invest up to a level where the marginal productivity of investment becomes equal to one. Simple interpretation of the conclusion is that the investment will continue to be undertaken until the return or profit on the last unit of money invested becomes zero. Waqar M. Khan [1985] also shares this line of argument.

It is to be noted that investment decision-making requires that the marginal unit of investment yields at least $(1 + r)$, where r is the opportunity cost of capital. In the interest based system, this decision rule means that the last unit of investment brings a return at least equal to the rate of interest. The argument of Nadeem ul Haque and Abbas Mirakhor, shared by Waqar M. Khan, implies that the profit sharing techniques mean zero interest, therefore, investment can be done until its marginal productivity becomes zero. This is not a correct line of argument.

Islamic injunctions do not imply that the opportunity cost of capital is zero. In an Islamic framework, a profit maximizing firm ¹²will continue investing until the marginal productivity of capital becomes equal to the opportunity cost of capital. Without arguing whether or not interest rate represents appropriately the opportunity cost of capital, it requires no argument that when the capital is scarce, the opportunity cost of capital can well be represented by the rate of return on alternate opportunities for investment of comparable nature.

The presence of Islamic banks which can offer a positive rate of return on deposits with negligible risk due to diversification of their portfolio produces a lower limit to the opportunity cost of capital¹³.

It can easily be visualized that in the case of leasing based financing there may be a mismatch between the demand for assets needed by entrepreneurs and assets that capital owners can possibly supply, at least in the short run. This is so because of the divergence in the cost of capital and the rate of return on capital. Hence, under overwhelming use of leasing based financing it is possible that substantial amount of capital may remain unemployed for considerable time and there can still be an excess

demand for capital. The same may be true for overwhelming use of all such techniques where the cost of capital and the return on capital do not converge and are interrelated.

3.3 Financial Intermediation

Financial intermediation is an important institution of a modern economy. The banks make economy more efficient. Islam promotes efficiency. The emphasis in the Qur'an and Sunnah on avoiding waste and doing things in their best way is a simple reflection of the fact that efficiency is a religious duty.

This section discusses the economic role of various Islamic financing techniques in the banking system.

On the liabilities side, while dealing with depositors, the bank as well as depositors, in principle, have only one option and that is the *mudarabah* technique (though present practice may show some deviation from this principle). The bank will promise the depositors to share, in a certain ratio, whatever profits it makes by using the funds of the depositors. The depositor's share will then be distributed among all depositors on a pro-rata basis. In case the bank undergoes a loss on the funds of the depositors, then all depositors will bear the loss on a pro-rata basis.

Since the bank, as an institution of financial intermediation, invests only depositors' funds, i.e., does not mix its own capital with the depositors' funds, the *musharakah* techniques may not be applicable on the liabilities side. The same applies to leasing and trading based (mark up as well as *bay' muajjal*) techniques because the depositors neither participate in leasing nor in trading while depositing their savings with the bank. The bank will, however, have the option of offering packages to its depositors with varying degrees of return and risk. This makes the banks working with Islamic financing techniques more flexible in taking care of the preferences its depositors and thus mobilizing their savings. All depositors will be exposed to some risk as they stand liable to share the losses of the bank in case of such an eventuality.

Banks, however, have the ability to minimize the total risk by spreading their investments to a large number of clients on the assets side. The larger the spread, other things remaining the same, the lower the risk. In this process, obviously, the bank may not be able to make high profits, yet there is no *a priori* reason that the bank will not be able to make as much profit as they were making in an interest based system, particularly in a capital scarce economy while keeping the risk at a negligible level.

On the assets side, the scholars writing on the theory of Islamic banking argue in favor of *mudarabah* and *musharakah* as a suitable instrument for the banking system on account of the following advantages:

-)i) It is consistent with the financial intermediary nature of the bank. A bank simply selects a suitable entrepreneur and invests its funds with the entrepreneur and waits for the result, sharing of profits/losses.
-)ii) It is capable of being utilized for varying periods of investment and with a variety of entrepreneurs, small or large, allowing the bank a whole spectrum of varying degrees of risk and return .

The disadvantages of this instrument for the banking system, however, are stated to be the following:

-)i) The concept of the *mudarib* being *amin*) trustworthy) is the corner stone of the application of this financing technique. The fact that *rabbul mal*) bank in this case) bears all the loss in *mudarabah* may result in moral hazards (a behavior not consistent with the interest of the capital owner (¹⁴on the part of the users of the bank's funds.
-)ii) The presence of moral hazard may not allow the bank to make large investment with a single *mudarib* .This may affect the profitability of the bank. The use of investment funds of the bank will depend, among other factors, on the stake that the *mudarib* puts in. Unless a secondary market is well functioning for *mudarabah*) through *mudarabah/muqaradah* certificates/bonds), no single *mudarib* will be able to offer a business in which he could have a very large stake on his own. The *mudarabah* investments of banks, thus, will have to be low in the absence of secondary markets.

The advantages of *musharakah* are the following:

-)i) The possibility of moral hazard is reduced because the client would be making his own investment as well. The problem of informational asymmetry too would be reduced as the bank also has a right to interfere in the management of the project in which it has invested.
-)ii) The bank is able to invest in large concerns because the clients owning large stakes in the business would not put the banks in a disadvantageous

position in terms of risk. This may help in improving the bank's profitability by enabling it to invest in larger and already established concerns with high profitability and low risk.

)iii)It is possible to do *musharakah* for long as well as for short periods for industrial as well as commercial, agricultural and service sectors .

Though *musharakah* financing gives the banks a right to participate in the management of the funds, there remains a possibility that the bank simply waves its right to interfere in the management and just performs the role of financial intermediary. All economies have a shortage of capital, especially risk-bearing capital .¹⁵Those in demand for bank capital would try to behave in a way so as to have continued financial relations with the bank. It should, therefore, not be difficult for the bank to select, from a large number of finance seekers, such parties with which the bank may not feel the need to get involved in the management. Hence, the bank can stick to its function of financial intermediation only.

Leasing and leasing based financing would require a bank to deviate from its basic character as a financial intermediary. It will have to involve itself in the following activities:

-)i)Purchasing an asset which requires certain marketing expertise and then keeping its ownership until the asset is disposed of (which sometime may require storage capacity also.)
-)ii)Maintenance of the asset and bearing of all costs associated with it in respect of maintenance and replacement if it is deficient or fails to perform the service for which it has been leased. This may often require some knowledge and expertise about the assets under lease.
-)iii)Disposing it of when the asset is not needed which requires not only bearing all the risks resulting from price fluctuations but also some marketing expertise.

All this will require the bank to engage in activities beyond financial intermediation. Any leasing contract that will absolve the bank from all these activities will fall into the category of financial leasing which is not permitted according to *shari'ah* principles.

Since most of the deposits are short term and the profit on them is required to be declared periodically say, annually or biannually, the banks will be compelled to depend

on short term leasing. Short term leasing, however, will create extra burden on the banks, because the frequency of purchasing, reselling and the maintenance work will be higher as a result of shorter period of leasing contracts. Banks which are interested only in doing financial intermediation may not like to engage in leasing based financing.

Commercial banks, therefore, should not use leasing based excessively if they are interested in financial intermediation only. Leasing based finance, however, can prove to be very useful in development financing. Leasing development finance corporations already exist in practice.

One advantage of leasing based financing is that there is no informational asymmetry involved as in the case of *mudarabah/musharakah*. If the bank is not satisfied that its clients will declare correct profits, it can provide them financing through leasing instruments/equipments/assets. The issue of moral hazard, however, will still be there, as the clients may use the assets in an inefficient way and thus impose unnecessary costs on the bank (who is the owner of the assets).

Mark up based financing is an instrument similar to leasing based financing with the difference that in this case the bank earns income from trading instead of leasing. This financing technique has several advantages over leasing based financing. The risk bearing period in trade financing is less than in the leasing based financing. The bank knows its profit as soon as the purchase/sale transaction is completed, even though the bank's investment has not been fully recovered. This technique also makes the bank go beyond the business of mere financial intermediation. It will have to take up the job of being a trade-house or a trade company as well besides being a financial intermediary¹⁶.

Bay' salam also requires the bank to take up trading. But it is not as convenient to the bank as the mark up based financing technique in terms of quickness of determining the bank's profit (which ultimately determines the level of return on deposits). Another disadvantage of the technique, which may make the bank not to prefer it, is that it does not give the bank any objective basis to anticipate its profits. It will have to depend only on speculation about future prices.

Before closing the discussion of the assets side, it may be instructive to note clients' preferences as well.

In the initial stages of Islamization, when the entire economic structure has not fully adjusted to the Islamic financial system and an appropriate commercial rapport has

not been established between the clients and the bank, the profit-loss sharing financing will usually be preferred by only such entrepreneurs who have low profitability or high risk in their projects. The clients who have highly profitable or low risk projects will prefer to use fixed cost financing techniques (i.e. leasing and mark up based) so that they can reap most of the benefits of their projects. For reasons already explained, mark up based financing will be preferable to leasing based financing beyond the PLS based financing techniques.

Bay' salam may not be very much preferred by the clients because of the possibility of being exploited by the bank in the process of speculating future prices.

Liquidity is one of the main concerns of commercial banks. The profit-loss sharing techniques may limit at least the very short run liquidity of the banks unless instruments are designed which have a secondary market as well .

Leasing based techniques create liquidity problems more than the profit-loss sharing techniques because leasing is generally more profitable the lengthier the period of leasing. The money invested in leasing business cannot be redeemed in short periods without adversely affecting the profitability of the bank. However, if some instruments can be designed on the basis of leasing having a secondary market also, then this may not pose a liquidity problem.

Mark up based financing is potentially better from the liquidity point of view as compared to the PLS or leasing based techniques .

Bay' salam may be better in terms of short-run liquidity as far as comparison with leasing based financing is concerned, but it will still be inferior to the mark up based techniques because of the time lag involved in the production of goods underlying the *bay' salam* contract.

.4MACROECONOMIC IMPLICATIONS

The macroeconomic effects of various Islamic financing techniques are discussed briefly under the following headings (on the basis of the microeconomic effects mentioned in the previous sections and without going into macroeconomic modelling.(

)i(Growth and development

-)ii(Inflation
-)iii(Employment and elimination of poverty
-)iv(Equity and income distribution
-)v(Stability

4.1 Growth and Development

Growth requires capital formation which in turn depends on the savings channelled into the productive sectors of the economy. While interest may be an instrument for mobilizing savings, it is not guaranteed that it will also channelize resources to productive users and will not simply raise the present consumption of one group of population at the cost of the savings of the other group. The emphasis of Islamic financing techniques is to finance production and not consumption. Among the techniques under consideration, *mudarabah* and *musharakah* can be used for nothing but to augment production and capital accumulation. Another contribution of these techniques towards development is that they make all the capital in the economy to be risk-bearing capital (a badly needed factor of production even in the developed economies). They also create new entrepreneurs (Khan, 1986). These techniques, particularly *mudarabah*, look for entrepreneurs who may provide capital with some positive earning. Hence, those who may not have decided to be entrepreneurs in an interest based system, may decide to be so when a risk-bearing capital is available¹⁷. The increased supply of risk bearing capital and new entrepreneurs may generate new sources of growth in the economy not available in the interest based system. Leasing can also be helpful for capital accumulation in the economy but commercial banks and investment companies in the private sector may use this for the purpose of financing consumption of durable goods as well. Leasing can best serve capital accumulation mainly through development financing institutions in the public sector. Trading-based techniques, both mark up and *bay' salam* based, are least conducive to capital accumulation compared to the other techniques because they simply add value of the trading service to the economy.

Since both *mudarabah* and *musharakah* can also be utilized in trading services instead of production of goods and services, it is possible that these techniques also may not necessarily turn out to be conducive to promoting formation of fixed assets and infrastructural development. The liquidity considerations in PLS financing (on the capital owner's as well as capital user's side) also may not allow the *mudarabah/musharakah* funds to be deployed in long term investments. Similarly, trading based techniques, being applicable only in trading, by definition, do not generate

capital goods. They only generate trading services. Leasing based techniques, thus, may be very much conducive to the formation of fixed assets and infrastructural developments and in making long-term investment. Leasing based techniques can also be utilized for financing such large projects as dams, roads, railways, airways, etc. Special institutions, however, will be needed to operate leasing based development financing .

4.2 Inflation

Mudarabah and *musharakah* techniques can finance only production and cannot finance consumption. These techniques thus may not be conducive to generating demand pull inflation in the economy. Other techniques can be conducive to generating demand pull inflation as they can be utilized for consumption financing as well. Leasing based techniques (and to some extent mark up based techniques) can generate cost push inflation because of the cost of capital is predetermined and may go up, for example, due to excess demand for consumer durable goods without creating a corresponding increase in output or productivity.

4.3 Equity Aspect: Employment Generation and Elimination of Poverty

In the interest based system, human resources with no capital have no choice but to be wage labor. They cannot enter the entrepreneurial or business class because business requires capital and they cannot afford benefiting from the capital of others for reasons already discussed. If capital is scarce in the economy, there may not be any employment opportunities for them for considerable time. Lack of capital may keep most of the female population and a substantial part of the male population just out of the labor force (i.e. neither working nor looking for work). If they had access to capital they could be mobilized through having their own economic activities, even if it was self-employment in petty trade, cottage industry, handicrafts etc. Implications of Islamic financing techniques in this respect are the following:

Mudarabah is mainly for meeting the capital needs of people with entrepreneurial capabilities but with no capital. Its utilization in trade can generate quick income for such labor which will not only help them meet their own needs but can also help them grow economically. A person having his own business, say, trade or a cottage industry, has incentives as well as opportunities to save and accumulate capital and hence improve his economic conditions. These incentives and chances are not available

when he is working as wage labor. Since he does not have the opportunity to best utilize his savings, he does not have as much incentive to save .

Musharakah can serve the same purpose for such class of population which may be having some capital but their capital is too little to be used for a meaningful enterprise. Availability of capital on *musharakah* basis will serve the same purpose that *mudarabah* will do with labor without capital.

Leasing and trading based techniques can also be helpful. There is, however, a fixed cost of capital involved in these techniques (rent or mark up) which low income groups may not be able to afford in the initial phases of the enterprise .

4.4 Equity Aspect: Reduction in Income and Wealth Inequalities

Mudarabah or *musharakah* techniques require the capital owner to share the profits with the capital user. They provide equal opportunities to all entrepreneurs to apply for financial resources from financial institutions. Their lack of own capital does not come in the way of their securing finance (as in the case of interest based system which requires creditworthiness and collaterals from the borrower) if their projects are otherwise profitable and promise good returns on the capital. These techniques thus can be a source of the circulation of wealth in the economy and hence provide better opportunities also for the class of society without capital.

Secondly, since the capital owner shares the profit and so do the human resources joining the *mudarabah* contract, there are greater chances of better distribution of the benefits of growth between capital owners and labor than in the case where labor gets a fixed wage and capital owner gets all the benefits of growth.

Leasing based techniques can also have similar effects. Human resources pay a fixed amount of rent and they keep all benefits of growth. Since trading based financing create debt obligations, which have to be fulfilled irrespective of what the human resources can earn, such financing may not be as fruitful as *mudarabah* ,*musharakah* and leasing based techniques in reducing income inequalities in economies where the labor supply is abundant and capital is extremely scarce .

4.5 Economic Stability

It has been shown that application of the *mudarabah/musharakah* based system on the liabilities side of the banks makes the banking system more stable than is the case in the interest based system [Mohsin Khan, 1987]. This is because the liabilities of the banks move in line with their assets and any shock on the asset side does not create an immediate crisis for the banks to go off their equilibrium position in the short run .

Furthermore, the flexibility of prices to adjust to changes in the supply and demand is crucial for ensuring stability of equilibrium. Capital pricing based on sharing profits and losses not only is helpful to keep supply and demand of capital in equilibrium but also to keep the supply and demand of entrepreneurs in equilibrium.

It has already been mentioned that interest rate may not fall into the set of factors affecting investment decisions of entrepreneurs but that the rate of return does. Hence profit sharing ratio can prove to be a more powerful policy variable to ensure stability and growth than the interest rate. Several writers have discussed macroeconomic stability in the context of the *mudarabah/musharakah* based system. None of them has shown any serious reservations on the efficient use of monetary policy in ensuring macroeconomic stability.

Mirakhor and Zaidi [1987] concluded in the framework of a general equilibrium macro model that the financial system based on profit-sharing techniques enables the economy to efficiently absorb any shocks to the asset position. In an earlier paper, Mohsin Khan [1987] had shown similar results in the framework of a short-run macroeconomic model of a closed economy.

No attempt has so far been made to analyze the impact of leasing based or trading based financing on the stability conditions.

Trading based, particularly mark up based, financing is close to interest based financing as far as the capital user is concerned. Hence it may not yield the same results that have been shown for the PLS based system. The effect of leasing based financing on stability will require a different model than the one used so far to study stability under the profit loss sharing system. The model for leasing based financing will have to take into account the explicit divergence between the cost of capital and the return on capital mentioned earlier. It will require extra variables to explain the divergence. No such attempt has been made so far.

.5GENERAL EQUILIBRIUM ANALYSIS

General equilibrium analysis in a micro framework is constrained by the failure of existing methodologies to account for uncertainties inherent in the economic activities of economic agents. The microeconomic framework for general equilibrium analysis, therefore, has not generally been the subject of Islamic economists. Ali Khan [1981] however, made an attempt to show the relevance of using the Arrow-Debreu type of framework for describing the Islamic economic system and then using the Koopmans-Montias framework to evaluate the outcome of the economy. The capital pricing on the basis of Islamic financing techniques (particularly on PLS basis) can fit in this framework, though definite conclusion may not be possible because of the methodological constraints.

General equilibrium analysis in macroeconomic framework, however, is possible and several attempts have already been made in this regard ¹⁸. All of these studies have incorporated profit-loss sharing based financial system in their analysis. Most of these studies have proved that the profit-loss sharing system is better than the interest based system in terms of various macroeconomic dimensions. Certain studies, such as Habibi [1987], do point out some negative aspects also of the introduction of PLS-based system in the economy. Notwithstanding some conceptual misunderstanding of the Islamic economic system, such studies also indicate in general an improved picture of the economy in a macroeconomic equilibrium framework.

No study so far has been made in the context of macroeconomic equilibrium to investigate implications of the leasing based or the trading based financial system .

.6PRACTICAL CONSIDERATIONS

The discussion in sections 2 to 5 has been carried out on purely theoretical grounds. The contemporary practice of Islamic banking has clearly shown that despite various theoretical claims about the superiority of the *musharakah* and *mudarabah* for commercial banking in an Islamic framework, the Islamic banks find mark up based financing as most suitable for the practice of Islamic banking on the asset side .

Waqar M. Khan [1985] attempted to explain why the *mudarabah/musharakah* based system may not be preferred vis-a-vis the interest based system. After establishing the superiority of the system over the interest based system for lenders as well as borrowers, he raised the question, why interest based system exists in competitive

societies? The same question applies to the contemporary practice of Islamic banks. If *mudarabah/musharakah* based techniques are generally better than leasing and trading based techniques for Islamic banks, then why Islamic banks are insisting to continue working on the mark up based technique and do not show their inclination to move towards the *mudarabah/musharakah*-based system? Waqar M. Khan answered the question in terms of the problems of informational asymmetry¹⁹ and the cost of information involved in these techniques. He argued that (interest based) debt minimizes the information cost and hence *mudarabah/musharakah* techniques having high information cost turn out to be inefficient as compared to the interest based system. This answer is not only far from being sufficient but it also does not address the root of the problem.

Firstly, there is no such thing as minimization of information cost in debt financing.²⁰ Debt financing, in fact, by-passes the need for information by requiring collateral and creditworthiness to ensure the repayment of principal plus fixed and predetermined interest [Green, 1987]. The issue of information cost is an issue of *mudarabah /musharakah* only and it has to be dealt with within this system by comparing the benefits with the costs of the system as a whole.

The issue of information cost, in fact, has been exaggerated by Waqar M. Khan out of all proportion²¹. The problem is certainly not as significant in a bank-client relationship where the financing is sought and provided for business and commercial enterprise and where hardly any client would like to have only one-time relationship with the bank (and hence cheat the bank by hiding the correct information about his business). Where more than one-time relationship is required and where there is competition in the market to bid for scarce (and risk-bearing) capital, the problem of losing on account of informational asymmetry cannot be as important as presented by Waqar M. Khan. The issue of informational asymmetry is present in all market transactions but the market can take care of such asymmetries. In almost all market transactions, some deadweight loss can be ascribed to some degrees of informational asymmetry involved in the transactions, but the transactions exist in the market because of the benefits involved in the transactions. The absence of *mudarabah/musharakah* from the market on account of information asymmetry could be acceptable if Waqar M. Khan had shown that the cost of information associated with these techniques would be higher than the benefits obtained from the superiority of the system that Waqar Khan himself established. In the framework of the need of a continued bank-client relationship for commercial purposes and in the framework of a competitive demand for bank finances, the problem of informational asymmetry is much less than what we find

in the marketing of several other goods. The fact that market for used cars exists should be enough to demonstrate believe that mere informational asymmetry cannot be a hindrance in the existence of *mudarabah/musharakah* techniques in the financial market²².

Certain conventions and institutions in a market will always be present to limit the scope for fraud due to information asymmetry, particularly when credit rating and client relations become important in repetitive transactions. Institutions and conventions can be developed if they do not already exist to restrict gains from fraud²³. There is also a possibility of developing an appropriate incentive system to induce an agent to disclose all information. Furthermore, there are sectors that have reasonably developed markets and where information asymmetry is almost non-existent. The corporate sector in developed economies is an example. Why the *mudarabah/musharakah* system with all its superiorities over debt financing, explained and rigorously proved by Waqar M. Khan himself, could not find its way in these sectors still remains to be answered even if Khan's thesis of informational asymmetry is accepted. There is, thus, a need to find an explanation beyond the issue of informational asymmetry.

.7CONCLUSION

Elimination of interest from an Islamic economy will not leave any vacuum for the financial dealings in the society. Islam provides a set of techniques that can be utilized to meet all financing needs. These techniques have different shades of application. The availability of this variety of shades in the financial techniques provides flexibility to the economic agents to manage their financial dealings .

In general, comparative analysis of various Islamic financing techniques clearly reveals that popular use of PLS based methods of financing will yield favourable results both at micro and macro levels not only in comparison with interest based financing but also in comparison with other Islamic financing techniques. It, however, does not mean that the other financing techniques are less important and need to be discarded. They have their own uses and applications both at micro and macro levels. They not only complement the profit-loss sharing methods but also provide flexibility of choice to meet the specific needs of different sectors and different economic agents in the society.

Notwithstanding the superiority of PLS based methods, the reluctance of the contemporary Islamic financial institutions to use them in their practice of Islamic financing is curious. The phenomenon of asymmetry of information leading to the so

called "dead weight loss in terms of information cost" cannot explain this reluctance. This is something that needs to be looked into beyond the issue of informational asymmetry.

DEMAND FOR MUDARABAH CAPITAL

Consider an entrepreneur demanding capital for an enterprise. With Y as output/income, K as capital and L as labor, we write the production function as:

$$Y = F(K, L) \text{ ----- (1.)}$$

Since labor and capital are sharing the income of the project and hence do not impose fixed costs, this production function also represents net income function for the project.

Assuming that the entrepreneur is the only labor in the project and hence the labor component is fixed, we can write the production function as:

$$Y = F(K) \text{ ----- (2.)}$$

As a typical production function we assume that this production function has declining marginal productivity of capital, i.e. $F'(K) > 0, F''(K) \leq 0$

The function, in other words, has the following form:

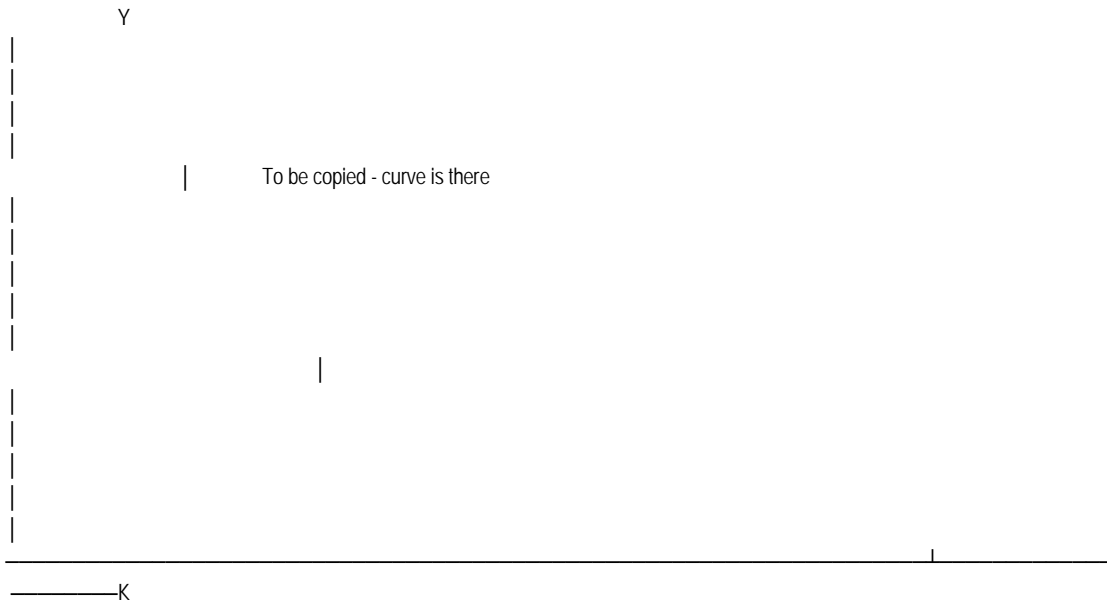


Fig (1)

On the other hand the provider of capital expects to receive certain return on his capital. His expected return, of course, will be directly related with the total amount he invests. In the very simplest form, this relationship can be a linear relationship of the type:

$$C = rK \text{ ----- (3.)}$$

Where C is total return that the provider of capital expects to earn on his capital and 'r' is based on his own utility function.

In the interest based framework, the provider of capital demands 'r' from the user of his capital. In the Islamic framework, the provider of capital cannot demand 'r'. It can only fix a share in the income or profit of the project.

Let this share be called 'a'. Since income, i.e. Y, is not fixed and varies at different levels of K, the profit-sharing ratio becomes a function of the amount of capital.

Using equations (3) and (2) we can write:

$$a = \frac{C}{Y} = \frac{rK}{F(K)} \text{ -----(4) 1}$$

This equation shows, that profit sharing ratio will vary as more and more capital is invested because C is increasing at a constant rate and Y is increasing at a declining rate.

This fact can be more clearly seen in the following diagram.

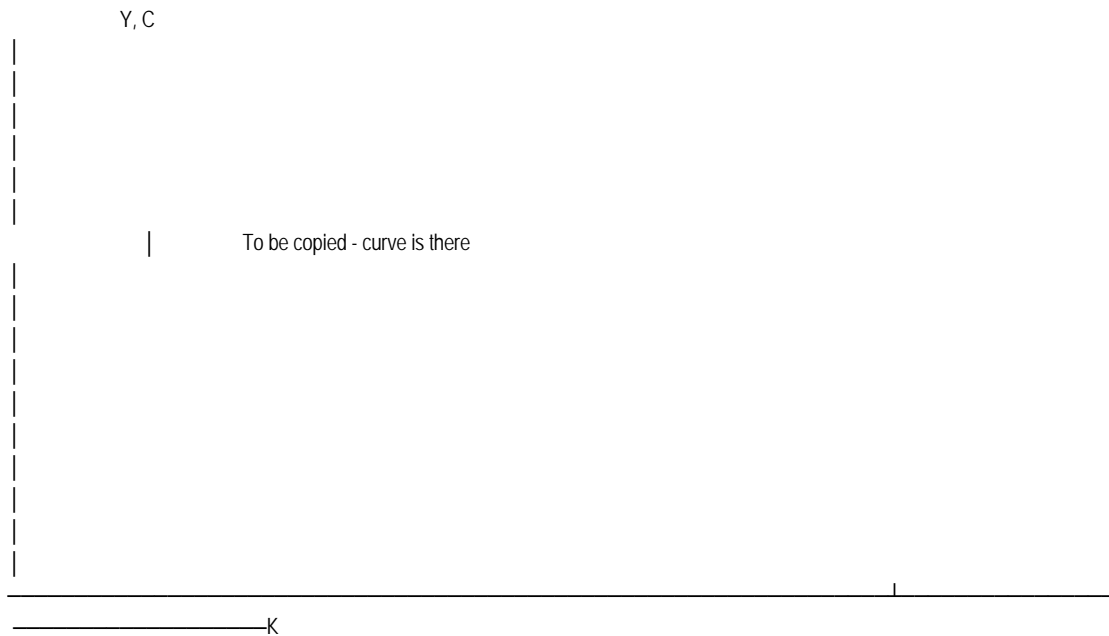


Fig (2)

The curve A is the production function representing equation (2). The line B shows the total return expected by the capital owner at different amounts of capital to be provided by him. This is a straight line representing equation (3).

Two things are clear from Fig (2). Firstly, the income sharing ratio 'a' is different at different levels of K. The value of 'a' can be observed at any level of K as a ratio of the corresponding value at line B to the ratio of the corresponding value at curve A.

It should be noted that beyond a certain level of K, the income sharing ratio starts increasing until it reaches a level equal to 1.0. This will occur at K_0 .

Secondly, it will not be in the interest of the entrepreneur to demand any amount of capital from the capital owner. A profit maximizing entrepreneur will demand only that much capital which will allow him to retain maximum profit. In terms of Figure (2), he would demand that much amount of capital against which the distance between curve A and Line B is maximum. (The distance between curve A and Line B measures the income to entrepreneur after paying the share of capital owner from the income of the enterprise.)

Hence, the assertion that under the profit-sharing system there will be infinite demand for capital is not valid *per se*.

The argument can be taken a step further.

Under the profit-sharing arrangement, the supply schedule for capital funds may not be a linear function as shown by equation (3). Since capital owner bears all losses of an enterprise, capital owner would not like to give as much capital as demanded by the entrepreneur at a constant rate of return 'r'. Giving all his money to one *mudarib* would mean putting all his eggs in one basket. He would like to spread his investment among different enterprises, unless an entrepreneur is willing to offer a return higher than 'r' - higher enough to compensate for the risk of putting more capital in one enterprise.

Thus a higher supply of capital for the same *mudarib* would mean a higher income-sharing ratio with the same *mudarib*. In other words, we will have to rewrite equation (3) as:

$$C = g(K) \text{ ----- (4)}$$

$$\begin{aligned} \text{with } g'(K) &\geq 0 \\ g''(K) &\leq 0 \end{aligned}$$

The profit maximizing entrepreneur then faces the following profit function:

$$\begin{aligned} P &= Y - C \\ R &= F(K) - g(K) \end{aligned}$$

Optimum demand for capital by *mudarib* will be for that level of K where, $F'(K) = g'(K)$

Once again this proves that the demand for *mudarabah* capital will not be infinite when $F''(K) \leq 0$ and $g'(K) \geq 0$.

This can be shown in the following diagram as well:

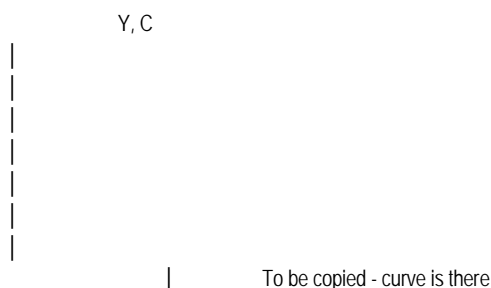




Fig (3)

Curve A represents the production function as shown by equation (2). Curve B represents the capital supply schedule of the capital owner as shown by equation (4).

Profit maximizing entrepreneur will demand K where the distance between A curve and B curve is maximum reflecting the maximum profit left with the *mudarib* after paying the income-share of the capital owner.

NOTES

- .1 See M.N. Siddiqi (1973), p.9.
- .2 See Ausaf Ahmad (1987), pp.45-47.
- .3 See Ziauddin Ahmad (1989).
- .4 *Qard hasan*) a pure loan without any return or interest) is also a mode of financing but has been excluded from the discussion as this mode is not considered to have a substantial role in the financial market of an economy.
- .5 It may be noted that in case of PLS and leasing and mark up based techniques the finance provider cannot be termed as lender in its true sense.
- .6 See Habibi (1987) and Rafi Khan (1984).
- .7 The argument of Rafi Khan (1984) is the following which is based on the framework borrowed from Branson (1979).
A consumer who has surplus funds now has to decide how much to be kept in money form and how much to be kept in a risk-bearing asset. In a PLS based system, a consumer will face a positive relationship between risk and rate of return. If he needs a higher return, he will have to face higher risk. This has been assumed to have a linear relationship as shown by the line OK in the diagram [a]. The curve AA is the indifference curve showing the preferences of a saver between risk and expected rate of return. The tangency of AA and OK lines at

point E shows the situation where the saver (and hence the lender) would be enjoying maximum welfare. He will be investing OM^* of his wealth and will be earning a rate of return R .*

Rafi Khan then presents the interest based situation and argues that the budget line will be at the position rK instead of OK as shown in diagram 4(b). The line rK is shown to start at a point much higher than the starting point of OK . OK starts at origin, implying no-risk, no-return situation. rK starts higher than the origin because of the positive rate of interest without risk bearing. Since the budget line in the case of interest based system is higher than in the case of PLS-system, the consumer will be at a higher indifference curve BB (enjoying increased welfare) in the interest based system compared to that in the PLS-based system as shown by the indifference curve AA .

Space for Diagram - to be copied please

The basic flaw in this analysis is simple. No doubt, in Islamic economy there is "no-risk no-return" but this adage, in no way implies that the budget line in the above framework must start from zero, the point far below the starting point of the interest based budget line. It has been argued in the section on financial intermediation that the ability of banking institutions to diversify their investment/asset portfolios can help them minimize their risk to an almost negligible level. This will obviously put a restraint on their profit-making capacity, but there is no *a priori* reason to believe why their profits (which in turn will determine the return on deposits) will force them to pay a return much less than the interest rate in the alternative framework. On the contrary, there are *a priori* reasons to believe that the rate of return on savings deposits in the PLS system may be higher than that in the interest based system. Hence there is no *a priori* justification that the budget line in the PLS system in the above framework will be below that of the interest based system and will have a higher slope than that of the interest based system. Hence the banks while anticipating higher profits cannot give the depositors a very low rate of return. The budget line under the PLS based system will primarily depend on the opportunity cost of capital (productivity of capital in alternative opportunities). The PLS based budget line thus will have the following features compared to the interest-based budget line.

-)i) Budget line under PLS based system will not start on Y-axis (as in case of the interest-based system), though the starting point may be approaching Y-axis as closely as possible.
-)ii) The starting point in PLS-based system, most likely, will be higher than that in the interest-based system because it will have to compensate for two elements - (a) productivity of capital and b) risk-bearing ²⁴. Thus a most realistic representation of PLS-based system in the Branson framework will be as follows:

Space for Diagram - to be copied please

The lender's welfare, thus, will most likely be at a higher level in the PLS based system as compared to that in the interest based system .

.8All such attempts which have proved worsening of lender's welfare could not find out what would happen to borrower's welfare. See Habibi [1987] and Rafi Khan [1984].

.9See Modigliani and Miller [1980] p,30 and 31.

.10See also M. Anas Zarqa [1983].

.11See Habibi [1987].

.12A profit maximizing firm, under competitive conditions, will simply be minimizing its costs and this situation can directly be inferred from textual sources to be desirable in the Islamic economy. Prohibition of *israf* requires the resources to be judiciously used which means minimization of cost as well.

.13See M. Fahim Khan [1987].

.14Moral Hazard is a term initially used in insurance business and basically refers to a behavior where an agent acts against the interest of his principal, or where an agent behaves inefficiently as a result of the nature of his contract.

.15 See Albach [1978].

.16Though contemporary practice has designed some instruments based on mark up financing which do not require the bank to involve in actual trading, the *shari'ah* validity of such instruments is questioned in some circles.

.17See detailed discussion of this aspect of PLS techniques in M. Fahim Khan [1986]. Also see Siddiqi [1973, 1983] and Mannan [1984].

.18Anwar [1987], Choudhury and Azizur Rehman [1983], Nadir Habibi [1987] and Mirakhor and Zaidi [1988].

.19Informational asymmetry refers to a situation where two contracting parties do not share the same information. In *mudarabah*, the principal or the capital provider has no right to interfere in the enterprise. The agent or capital user may not provide complete information about the business operations and about profits and losses. The principal does not have as much access to the information about the enterprise as the agent has. The agent thus, may get involved in what has been referred to as "moral hazard" (see note 14 above).

.20Waqar M. Khan could talk about minimizing of the cost of information even within debt financing by assuming that no collaterals are required under debt financing. Such an assumption is wholly unrealistic and hence is not relevant for understanding practical considerations for the existence of the interest based system vis-a-vis the PLS based system.

.21Waqar M. Khan's thesis is not quite suitable for understanding the Islamic interest free system. The model he has selected for the analysis has simplified and

modified the Islamic financial system so much that it hardly remains relevant for representing an Islamic system. Some of his simplifying assumptions are as follows:

- a) The model assumes a situation where there can be no loss in investment. Considering financing in such a system takes away all the novel peculiarities of the PLS techniques. The distinctive feature of PLS system (that may not be found in any other system based on profit sharing) is that PLS techniques force the capital owner to bear the loss in proportion to his share in the total capital of a project. If this peculiarity is assumed away, then the PLS system is hardly left with anything to be compared with.
- b) The model also assumes a situation where no collateral is required in the interest based system. Furthermore, it is assumed that in the interest based system, the lender is willing to accept a payment less than the rate of interest, if the borrower makes a profit less than the interest rate. Also, it is implicitly assumed that all interest based loans go to productive activity and cannot be used for consumption purpose. These are certainly not the features of the interest based system. They rather reflect the features of the PLS system. Such marked deviations from realities about the systems considered make his results quite doubtful from the point of view of understanding the two systems.

.22 The informational asymmetry in the marketing of used cars is much more than what can be assumed in PLS techniques because sale of a used car is one time relationship between the seller and the buyer. Furthermore, the seller is absolved of any obligations if any defect is detected in the car after the sale, whereas the bank's client will be responsible if any defect is found in his account. For further discussion on the market of used cars, see Akerlof [1970].

.23 See David Flath [1980].

.24 See Nadeem ul Haque and Abbas Mirakhor [1985]. Also see Waqar M. Khan [1985].

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