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Developing economy banking: the case of Islamic banks

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Abstract By 2003, there was a total of 176 Islamic banks around the globe with their total assets close to \$147 billion. This article shows that this form of specialized banking may help in promoting growth in these developing economies. During the transition phase of a developing growth economy to a full fledged market based economy many structural changes are required in its financial institutions, especially since the role of a financial intermediary in supplying funds to growing new industries is crucial. At the same time, the potential for destabilization resulting from improper resource allocation, due to either faulty risk assessment or the design of the contract, could be significant. Also, this article examines the implementation of an Islamic banking system and how Islamic banks can provide liquidity and aid in the money creation process through offering transactions accounts with compensation for inflation to risk-avoiding depositors.

I. Introduction

By early 2003 there were at least 176 Islamic banks around the world, handling over \$147 billion dollars. Only 32 of these banks are in an Arab state (Info Prod Research, 2003). As recently as 2003 there has been news about the introduction of Islamic Hedge Funds which could tap in to the capital of Islamic families which could be worth trillions of dollars in asset management (Butcher, 2003). Since the demise of communism, it is been almost axiomatic that economic growth and private initiative go hand in hand. According to banking statistics the growth rate of Islamic banking has outpaced the traditional banking in the past decade. Transformation oriented developing economies (TODEs) and emerging democracies, as a result, have made the transformation of their societies in to full fledged market based economies (MBEs) a centerpiece of their overall strategies. Among the new countries hoping to move in this direction, is the fall of Saddam Hussein's regime in Iraq in April 2003. This type of transformation in any developing economy requires, among other things, mobilization of private financial resources. Absence of effectively functioning capital markets shifts the onus of this task on financial intermediaries, especially banks. Since the scope and characteristics of the banking function vary widely in MBEs, a natural question is what configuration of banking functions would be most propitious during the transition phase of the TODE.

In the centrally planned economies under communism, banks were essentially a conduit for the central plans to carry out the task of allocating financial resources. A consensus exists that these banks would be a hindrance rather than help in the process of economic transformation. A superficial similarity between the banks under communist regimes and the Islamic banks has been absence (or minimization) of compensation to the providers of capital, whether it is from the depositors to the bank



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or from the bank to the business enterprises. Because interest performs the market clearing function, its absence connotes arbitrary allocation or misallocation of financial resources. This inference has led to the widely held belief that Islamic banking has been or will be a hindrance in the transformation process of the TODE.

This article addresses the issue of an effective banking system during the transition phase of the TODE, and contends that the Islamic banking system is the most appropriate choice during the transition, its effectiveness can be enhanced if the issue of compensation to the capital providers is adapted to the changing needs of the TODE in the face of globalization of the financial markets, albeit, while maintaining the spirit of religious tenets that guide the Islamic banking system.

In sections II and III we describe the salient features of the Islamic banking system and TODE respectively. Section IV describes the role of banks in the MBE. Section V justifies the use of equity like contracts between the bank and the business enterprise. Section VI establishes the maximum effectiveness of the Islamic banking system during the transition of the TODEs. We also suggest adaptation of the Islamic banking system to meet the needs of the changing environment.

The benefits of having an Islamic system, even if one does not call it Islamic, is investigated from a theoretical underpinning for the growth oriented Islamic nations and the newly emerging countries that are part of the developing world. The transition of a developing growth economy (DGE) to a full-fledged market based economy (MBE) requires many structural changes, especially in its financial institutions. Many academicians believe that reform of the banking sector is the key for the transformation of developing economies. However, an instantaneous adoption of MBE-based banking system is not advisable because its efficacy requires in place a number of prerequisites. Thus a fundamental issue is to identify a banking system suitable for the developing growth economies.

II. Characteristics of Islamic banking systems

Islamic banking and the prohibition of interest was not founded on the principles of economics. It was developed as a result of a decree sent by the almighty creator Allah. Since that time scholars have strived to find a logical explanation for this decree. (The history of the prohibition of interest goes back to the time of Aristotle (Ghannadian and Klein, 1991) and is not the focus of this article.) Such efforts were intensified during the oil boom of the 1970s. With wealth increases among Moslem OPEC members and concomitant strengthened resolve for modernization also came the frustrations and dissatisfactions associated with the rigid requirements of Islamic Banks. For over 1,400 years all communities in the Middle East which were under Islamic law and culture had the basic principles of Islam guiding their thoughts and actions. The holy Koran expounded the notion of *riba* which decreed that interest payment was usury and all faithful believers would neither pay nor receive interest payments. Some have interpreted *riba* as any interest payment, while others interpreted it to encompass only "excessive" interest payment.

The prohibition of interest payment under Islamic law (*Sharia*) stems from treatment of money strictly as a medium of exchange, i.e. money in itself does not have any value, and therefore it should not lead to more money. Even if the money is put in a bank or lent to someone, a certain return should not be derived from it. Given the strict prohibition of interest payment, a question is to what degree can the banks or

enterprises raise capital for investment? Moslem scholars' answer to this question revolves around risk. The provider of the capital (lender) is entitled to rewards from a business venture as long as that the provider is also willing to share the burden of losses with the user of the capital (borrower).

The principles of risk and profit sharing can be specifically applied to the various activities which define the scope of Islamic banking. Trade financing or *Morabaha* involves the banks buying what the merchant wants and then selling to him later at an agreed price (including a service fee). Essentially, *Morabaha* is a swap or a repurchase agreement, and the excess of the agreed price over the current purchase price tantamount to interest payments by the merchant for the use of money. However, some scholars have maintained that this is not interest since the bank holds title to the goods, albeit temporarily. Investment sharing or *Modaraba* is the basic principle of the *Sharia* where all parties share risks and rewards of an investment project, and the bank is also involved in the management of the project or has a voting representative in board meetings. *Mosharaka* is similar to *Modaraba*, but the investment partnership involves profits and losses based on equity participation of the bank and the entrepreneur. Under *Mogadara* the bank can float bonds to finance a specific project, but as opposed to *Modaraba* the bank becomes a silent partner. Similarly, *Muzarara* involves sharing of profits and losses between farmers and landowners in a business form. Also the bank can engage in forward agreements for buying and selling goods under *Salam* just as any commercial bank. All the above principles are in agreement with the holy decree of prohibition of explicit and certain interest payments. In addition, any form of speculation, short selling and margin trading is severely restricted from an Islamic perspective.

The misconceptions that have existed in the developed (mostly Western) countries have focused on the political aspects of this type of banking as opposed to the benefits derived from an equity contract under certain requirements, even in the most modern countries. Before we engage in describing the implementation of this type of a bank, we need to review the structure of TODE and the problems which may exist there, followed by a description of commercial banks in a MBE. Table I shows some of the Islamic banks operating in various countries. It is a partial list of banks exclusively engaged in Islamic banking around the world. There are many other banks specifically in Arabic and Islamic countries that provide Islamic banking as part of their total offerings.

III. Features of a TODE

At the outset it should be noted that the TODE is not a monolithic entity just as there is no single prototype of the MBE. Consequently our use of the term TODE would only consider the caricature of the prototypes and not all variations. For instance, TODE may comprise a centrally planned economy, e.g. erstwhile communist country like Russia, a hybrid economy like India, and an Islamic country like Pakistan. A basic feature of the TODE is that information technology is poor and the capital markets are at best under-developed. Thus, the capital markets as known in the Western world do not exist in TODEs and the prototypical financial system displays the following characteristics.

First, prices in general (interest rates in particular) do not perform the market-clearing role. Second, since capital markets are inefficient, prices are accurate barometers of demand and supply forces. Third, the capital market if it exists does not allocate funds on a risk-and-return basis, which requires measurement

Saudi Arabia	Islamic Development Bank Al Baraka Investment & Development Co. ICIEC Al Rajhi Banking & Investment Corporation
Kuwait	Kuwait Finance House The International Investor
Bahrain	ABC Islamic Bank (E.C) Faysal Islamic Bank of Bahrain
Jordan	Jordan Islamic Bank
Sudan	Al Baraka Bank
UK	Dallah Al Baraka
Switzerland	Faisal Finance Dar Al Maal Islami Group
Malaysia	Bank Islam
Indonesia	Bank Muamalat Takaful Islamic Insurance International
India	Al-Falah Investment Ltd Al Ameen Islamic Fin & Development Corporation
USA	Amana Mutual Funds Trust American Finance House, LARIBA Bank Failaka Investments Inc. Takaful USA MSI Financial Services Corporation Manzil USA

Table I.
A grouping of major
Islamic banks around the
world

Source: Islamic Finance (2003)

of risk through formulation of probability distributions of events. In turn, this requirement underscores the pivotal role of expectations and thereby information availability and processing. Fourth, the scope of financial intermediaries is severely circumscribed by either the government or the structural roadblocks, and their ability to carry out the basic function of channeling funds between households and enterprises is adversely affected. Fifth, although banks play a significant role in money creation processes, their contribution to information to information generation remains inconspicuous. Sixth, accounting practices, even when regulated, are not useful for information dissemination. Similarly, laws regarding contracts and bankruptcy, even when enacted, are haphazardly enforced and thus fail not only to protect investors and borrowers alike, but also to expedite transactions among various parties through standardization of contracts.

Finally, the lead-time required in carrying out production processes is excessive and leads to enormous stock of inventory of cash for synchronizing claims and obligation of enterprises. Bottlenecks in obtaining short-term credit or seasonal loans only lead to underutilization of capacity. The above characteristics of the TODE are in sharp contrast to the characteristic feature of the MBE.

IV. The role of banks in the MBE

In the MBE, the bank's major task as an intermediary between the depositors and the borrower is to generate information on prospective borrowers and their investment projects. This information production helps the financial intermediary to estimate the

riskiness of the project, and decide whether to finance the project and on what terms. Moreover, the financial intermediary, after lending money to the enterprise, monitors the performance of the project and thereby ensures collection of payments, a portion of which is passed on to the depositors. The individual depositor is unable to lend money directly to the prospective borrower, as this information production and monitoring are costly (Diamond, 1984). Further, even when information and monitoring are costless, limited resources of the individual depositor preclude him from realizing the actuarial risk incidence; hence, the individual depositor faces the risk of ruin, which is avoided by the bank through pooling depositors' resources and thus spreading the risk. Thus, the depositors delegate the investment function to the bank. From the borrower's perspective, the bank provides an economically efficient conduit that avoids the costs of search of potential investors and their demand for excess premium for non-actuarial portion of risk. Thus the bank's efficiency in information production and ability to spread risk allows the bank to exist[1].

It is widely recognized that the bank as an outsider would have less knowledge about the project proposal than the enterprise seeking funds. This initial, *ex ante* information asymmetry regarding the enterprise's anticipated cash flows may not be resolved on realization of cash flows if the outcome is not verifiable by the bank; thus, there is *ex post* information asymmetry. These *ex ante* and *ex post* information asymmetries have a critical impact on availability, form and terms on which the bank provides funds to the enterprise. Suppose there is only *ex ante* information asymmetry, the cash flows actually generated by the project are accurately observable by the bank and can be subject to contractual obligations (that is, realized cash flows can not be diverted by the enterprise for purposes incongruent to the contract with the bank). In this case, there are two likely scenarios. The initial *ex ante* asymmetry may revolve around the mean, or the variance of the future returns. If there is an *ex ante* information asymmetry regarding the mean returns but not the variance of returns, the entrepreneurs and the bank will prefer a debt contract (see, for example, Myers and Majluf (1984) and Leland and Pyle (1977)). When there is *ex ante* information asymmetry regarding the variance of the project but not the expected returns, two mutually exclusive cases exist. If the bank is more pessimistic than the enterprise, the bank would over-estimate the risk of the project, i.e. variance of returns on the project, and prefer an equity participation. On the other hand, when the bank underestimates the variance of the return, it would prefer a debt contract.

When *ex post* information asymmetry prevails and the bank is unable to accurately observe the realized returns, the moral hazard problem crops up: the enterprise has no deterrent from understating realized returns. Under such a scenario, the debt contract is the only potential alternative available to both parties. Even then, the feasibility or desirability of a debt contract depends on whether the bank can significantly reduce information asymmetry through measures such as:

- audited or verified financial statements that follow accepted accounting standards, i.e. costly verification of state or delegated monitoring (Diamond (1984));
- loan covenants whose violation accelerates the loan payment schedule or creates potential for either bankruptcy proceedings or foreclosure, i.e. costly bankruptcy (Diamond, 1984)[2]; and
- asset collateralization (Akerlof *et al.*, 1986).

In short, the dominance of debt contract in a MBE (except in the case of variance overestimation by the bank) is predicated on the following premises. First, the bank can estimate the expected risk of all projects in a given risk class; this knowledge allows the bank to charge the interest rate commensurate with the risk class. *Pari passu*, the bank is able to finance a large number of projects to experience the actuarial risk, and thereby at least break even in terms of returns. Further, in case of *ex post* asymmetry the bank is able and willing to contain the problem of moral hazard through a combination of measures such as costly verification of state and collateralization.

V. Significant features of an equity contract

From the discussion in section I, it is evident that the DGE in transition lacks adequate historical base to form a meaningful distribution of returns. Indeed, we may connote the end of the transition period by the formation of an adequate information base. Should a bank in growth oriented developing economy offer a debt contract to a potential borrower during the transition period? Two sets of considerations for favoring debt contract are noteworthy. Under the first set, the bank may offer such a contract with full collateralization of assets. However, the entrepreneur may not possess such assets. Further, even when suitable assets are collateralized under a contract, enforcement of such an agreement may be time consuming, costly or even impossible. Finally, even if we were to assume existence of an expeditious legal framework to enforce such an agreement, the enterprise's assets may be special purpose or have smaller liquidation value than their counterparts in a MBE because of formidable impediments in the goods market. Hence, only a few enterprises are likely to meet the collateral requirements in order to qualify for the loans. The resultant stringent loan policy would mean, moreover, a longer period to form an adequate information base, lengthening the transition period in the process.

The second set of considerations for a choice of debt contract is credit extension by the bank at a fair price to a large number of enterprises in order to realize the actuarial risk. However, in this case, deterrents for the moral hazard may still not be in place, or costly to enforce. Further, the bank only obtains a ceiling on the returns in dealing with the "good" enterprises, and the losses from "bad" ones may threaten the existence of the bank, given that the loans are fairly priced. Indeed, rumors of such losses may create bank runs that may precipitate the demise of the banking system. Sufficiently high interest cost does not ensure adequate compensation, since the "good" enterprises may be deterred by the high interest cost from undertaking the project, while the "bad" enterprises may rush in because they deem the price reasonable. The resultant adverse selection effect will only work against the bank's interest and may even threaten its survival. Finally, given the large number of loans, the bank's monitoring effort will be either ineffective or extremely costly. All in all, the debt contract will not typically be a suitable vehicle for the bank during transition period for an erstwhile TODÉ.

The choice of equity contract alternative, however, should not rest on unattractiveness of the debt contract. Given the nature of the TODÉ, it is fair to assume that the focus of the bank would be on the volatility measure, since the mean value of profitability can be estimated from the related experiences or even the MBEs. The measure of volatility may not have reasonable analogies elsewhere and is likely to be overestimated by the bank, especially since the manager (even with proper training)

has little or no decision-making experience. In this scenario, the equity contract would be desirable.

The preference for the equity contract will also be bolstered by institutional realities. Only the debt contract has connotations for contract and bankruptcy laws, which may not be in place, are unenforceable, or carry sufficiently high enforcing costs that may drive the bank out of business. When the manager has been properly trained to make sound economic decisions and the information base is still not in place, the bank can insist on equity contracts with the anticipation that it would actively participate in some cases yielding high returns, and use monitoring efforts elsewhere that would deter entrepreneurs from inflicting high losses on the bank. The proportions of active participation and exclusive reliance on monitoring will depend on the bank's size as well as its financial and managerial resources.

On the funding side, the bank also has a choice. It can offer depositors either fixed returns (interest bearing accounts) or variable returns (investment accounts) that depend on a predetermined proportion of realized returns. In both cases account holders have a senior claim to bank stockholders on the bank's assets. The equity contracts on the asset side of the bank's balance sheet have an intuitive appeal for funding through investment accounts: the two-sided equity contract (with the entrepreneur and the investor) will reduce the threat of bank failure to a minimum. In brief, a TODE should prefer a two-sided equity contract by its banks over a two-sided debt contract typically offered in a MBE-based banking system.

VI. Problems associated with suggested equity contracts

Szego (1993) provided a system which resembles the Islamic banks with the development of a compartmentalized system. Szego (1993) views a function of private banks in the open economy to:

- provide transactional or payment services to enterprises and households alike;
- aid transformation of maturity needs for enterprises, i.e. credit services; and
- aid capital formation for enterprises.

He suggests compartmentalization of the banking system along these three lines in order to prevent runs or systemic risks, to minimize monitoring or insurance costs, and to meet the critical constraint of managerial manpower. Viability of such a system calls for liquidity in the market for government securities; and a standardized accounting system.

There are three problems with the compartmental approach. First, it does not allow a banking system to reap the benefits of information economies. An enterprise using the services of all the three segments may provide information to one banking segment without revealing that information to another. For instance, checking account activities of a firm may reveal payment patterns to its suppliers that may have a critical bearing on the credit granting bank which, on its own, would not have a timely or costless access to this information. Two related observations are pertinent. First, a strict standardization of accounting system does not ensure avoiding either time delay or higher expenses for a particular banking segment. Second, formation of an information base, a critical task during transition, is taken for granted under the Szego (1993) suggestion.

The second major problem with Szego's (1993) suggestions is the ambiguity regarding how or which compartment would be critically involved in the money creation process. This process requires deliberate mismatching of assets and liabilities, whereas the compartmental process is predicated on the premise of a maturity matching.

Finally, the compartmental approach does not permit to realize the full potential benefits of risk sharing and risk pooling. During the transition process, given the appetite for both financial capital and consumption, the real interest rates would be high even for riskless government securities. In risky ventures, because of the lack of relevant past data, risk would be difficult to measure and would very likely be overestimated. In turn, the credit banks and the investment banks individually would be unable to spread their risk, however it is measured, over a smaller number of entities (by definition). A combination of these mutually complementary forces of risk measurement and risk pooling would only drive the risk premium high, and in some cases sufficiently high to desiccate the demand for credit and capital. In brief, in spite of some attractive features, the compartmental approach is likely to delay, if not disrupt, the transformation process.

Removal of the compartments in the Szego (1993) system leads to its resemblance to an Islamic banking system. The following discussion deals with the salient features of the Islamic banking system.

VII. An Islamic banking system for a growth economy

An Islamic bank is very similar to a modern Western bank in almost all functions which would empower it to mediate any shortcomings or surpluses that may exist in an economy which functions on a monetary exchange system. The Islamic bank requires a diligent management team to balance the different levels of credit (personal credit, secured credit, letters of credit), and also function as a specialist in estimating project risk and estimated returns. The major difference that exists in the Islamic bank is the prohibition of interest that forces the bank to act as an investment company, which sells its stock to the public. In this capacity the bank does not have a maturity-matching problem or duration gap management, which is a functional problem of Western banks in general.

The framework of Islamic banking has been extensively documented by Karim and Ali (1989), Khan (1986), and Siddiqui (1981). The basic premise of this form of banking is development of partnership and cooperation where profits or losses from the projects being financed by the bank are shared by the bank and the enterprise. The bank in essence is a mutual fund with money creation ability. The Islamic system does not permit interest payments; however, this prohibition does not, as is often mistakenly assumed, proscribe returns emanating from risky investments. Below, several different models of commercial banking will be discussed

Models of Islamic banking

The Islamic banking system has evolved over time. The traditional bank model emphasizes deposit acceptance on a contractual basis from the depositors and loans those funds to borrowers on long or short-term basis. The resultant profits or losses are passed on to the depositors. Over time the Islamic banking model has come to distinguish between two kinds of deposits. Demand deposit or transaction accounts,

which pays no interest or return, and may even carry service charges payable to the bank. These accounts will be very liquid and payable on demand for the depositor. The bank may use a proportion of these deposits for non-investment loans with no interest. The second type of deposit is the investment account (*Modarabeh*), which is the critical source of funding for the bank. Here the bank provides an equity contribution to the enterprise that is funded, not only by the bank's own equity, but also by investment accounts. Thus, these account holders become indirect stockholders with no guarantee on the value of their account. There are ambiguities in the distinction of the nature of investment account holders and the bank stockholders. The bank generally uses its specialists to evaluate the project and estimate the duration of project and commensurate returns. The realized profits or losses are prorated based on a pre-negotiated contract between the investment account holders and bank stockholders

Under some contracts the bank actively participates in monitoring the operation[3], while under other contracts it plays the role of a passive shareholder. Agreements regarding profit sharing and management participation (or monitoring) are determined by negotiations and past experience with the enterprise. The equity contract is justifiable for the following reasons in the development of an Islamic country. First, the strict law on individual conduct and the social custom discourages an individual from immoral and unethical conduct. The problem of moral hazard that is pervasive in a MBE is thus greatly reduced in an Islamic society. (In the theory of financial intermediation, absence of moral hazard implies *ex post* resolution of information asymmetry.) Further, a lack of an adequate information base for risk assessment suggests overestimation of risk. Hence, as described above, equity contract is the optimal contract between a financial intermediary and an enterprise.

Haque and Mirakhor (1986) assert that an equity contract is superior to debt contract because the enterprise can improve profit due to absence of some limitations normally imposed by debt. They also point out that the level of investment will increase in an economy as a result of banking with equity participation. Wieltzman (1984, 1985) has shown that equity participation can in effect increase the potential for profits along with the benefits of decentralized decision making. Their arguments, however, are predicated on the premise of absence of moral hazard as suggested by Khan (1983) and risk overestimation by the bank.

Inflation in an open economy

It is all but impossible to have a closed economy and achieve a steady growth rate. Most growth oriented developing economies including those of the Middle East have transformed their economy to an open one in the last two decades. The level of flexibility of their exchange rate is not the debate here, but the level of inflation in the economy is significant due to the possibility of the ratchet effect where flexible exchange rates have an inflationary bias. Depreciation of the currency increases the cost of traded goods, but appreciations do not cause parallel reductions in price. There is also the possibility that flexible exchange rates cause economic instability and inflation due to the fact that export supply elasticities are too small.

In effect the government may do all in its power to control inflation from the monetary aspect of the money supply, yet open economy economics may cause importation of some inflation. Under Islamic law, even though it is illegal to reward one

for just owning money, compensation for a loss in purchasing power can only be achieved if the holders of the demand deposits are guaranteed to be paid a sum (which does not have to be fixed) to maintain their purchasing power. This payment could be paid to average balances on a monthly or quarterly basis, based on the consumer or wholesale price index used by the government. The investment account holders and a proportion of the reserve balances, which would be used for investment by the bank, will subsidize this compensation for inflation along with some interest-free loans to the needy, or short-term loans.

One aspect of inflation needs to be emphasized here. In a closed economy, it may be possible for a government to accurately predict the future rate of inflation caused by the fiscal and monetary policies followed by the government. On the other hand, in an open economy, inflation rates cannot be predicted with certainty. This entails the risk in loss of purchasing power for the depositors. Hence, the compensation for their risk assumption is in the spirit of Islamic laws. A promise of such compensation may be critical for augmenting savings, which in turn will accelerate economic growth.

VIII. A banking system for a growth economy

Since the investment account is the focal point of funding under the Islamic banking, the significance of the transactions account has not been properly highlighted. In the DGE, the transactions account plays a significant role, especially in the money creation process, since the set of investment accounts basically resembles a mutual fund. Further, the transactions account enables the bank to augment the information base through, say, generating history of the enterprise's payment behavior, and provide insights into its attitude towards risk since the enterprise carries balances not just for transactions, but also for precautionary and speculative purposes.

Two interrelated issues surface here: compensation required from or to the transactions account, and guarantee or insurance for the deposit amount. The Islamic position of absence of interest payments does not hamper the augmentation of savings if balances receive inflation compensation.

Similarly, money creation would imply that resources from these accounts could not be kept 100 percent in liquid form. Any sound maturity mismatch of assets and liabilities should generate returns, a portion of which can be passed on to these account holders. But this mismatching also entails the risk of bank runs. To the extent that investment deposits and stockholders' equity have claims that are subordinated to those held by the transaction account holders, 100 percent reserves may not be called for the transaction accounts. By the same token, the need for insurance of these accounts by, say, the government may not be uniform. Indeed, the premium for insurance may be calculated on the basis of liquidity maintained by the bank on the asset side, and investments in government securities of permissible maturity, and cushion provided by the relative size of its investment accounts and the bank equity on the liability and equity side of the bank's balance sheet.

Thus, modifications in a prototypical Islamic bank in terms of adequate compensation to the transactions account holders in the form of interest payments and some form of insurance for these accounts may be necessary to suit the needs of a developing economy so as to encourage savings behavior, popularize use of banking for transactions settlement, and accelerate formation of the information base for risk assessment purposes.

The proposed banking system is similar to the one recommended by Szego (1993) where banks perform two different responsibilities:

- (1) provide liquidity and money creation function through transactions accounts; and
- (2) credit analysis and capital formation through investment account.

However, unlike Szego's recommendation, we suggest that both functions should be carried out by the same organization in order to capitalize on economies in information production.

In brief, the new structure of an Islamic bank will be characterized as follows:

- *Assets.* Resources in excess of prudent liquidity reserves (primarily dictated by transactions needs) would be invested in equity contracts. Debt contracts would be resorted to only when the bank has a great deal of confidence in the viability of either the enterprise or the project under consideration (low return volatility), or the liquidation value of the collateral comfortably covers outstanding loan (enforceable contract and high liquidity potential).
- *Liabilities and equity.* Liabilities will be in the form of transactions and investment accounts. Transactions accounts would have the most senior claims against the banks and have a guaranteed return; the government may guarantee a portion of the principal amount. The guarantee, in turn, may be dictated by the asset portfolio in the form of cash and government obligations of the permissible maturities. Investment accounts would have a subordinated claim to the transaction account; it could be withdrawn to an extent periodically without a penalty. Investment account holders would receive a pro rata share on the returns (losses) generated by bank's investment and they would have a claim on such investments senior to the bank stockholders.

Though the transitional system may look like a universal banking system as practiced in Germany, it differs from universal banking in one major way. The depositors in a universal banking system do not participate in project returns, and are typically compensated by fixed interest rates.

IX. Conclusion

The debt contract between the commercial bank and the enterprise is feasible as well as desirable in a fully developed economy because the bank has an adequate database to accurately assess the riskiness of the project being financed, the bank does not find it necessary to verify the outcome at great expense or effort, and the bank is thus able to undertake a sufficiently large number of projects to realize the actuarial rate of return. Even in the case of failure, the bank is typically able to minimize losses by enforcing guarantees or utilizing collateral to satisfy its claims against the borrower.

For a DGE, it is well recognized that the conditions of verification of outcome are not met. As a result, conventional prescriptions for a sound banking system have revolved around standardized accounting practices as well as legal and regulatory frameworks with teeth. This study shows that this condition by itself is insufficient for the DGE to expediently complete the transition to a MBE, and in the absence of the other two conditions, adequate database and risk pooling ability, a debt contract will unlikely to be effective in achieving that goal.

This study suggests that a two-sided equity contact, where funds are invested on the basis of sharing profits and losses, is an attractive option for the bank in all developing economies undergoing transition, especially when an inadequate database leads the bank to overestimate the risk. Equity participation in the enterprise also allows the bank to be properly compensated for its monitoring efforts without inflicting excessive costs on the enterprise. The resultant avoidance of a moral hazard problem permits the fund providers (depositors) utilizing the conduit of the bank to realize the proximate actuarial risk commensurate with return. Needless to say, the bank will not exclusively focus on funds provision strictly on the basis on equity participation: it will also offer conventional deposit accounts with safe returns that would not only satisfy the transactions needs of the economy, but also aid the money creation process, while expediting formation of the informative base.

This paper does not address the problems of implementing either the macro-economics structure of laws and regulations or the bank's planning, decision-making and monitoring frameworks. This paper does not suggest that Islamic banking is not appropriate for developed countries, but suggests that it will accelerate growth and is a much more suitable system for developing countries going through a growth stage.

Notes

1. Information production function has been highlighted by Leland and Pyle (1977) and Diamond (1984). In addition to the money creation function, there is one other explanation advanced for existence of financial intermediaries in MBEs: asset transformation function (Benston and Smith, 1976). Basically, this last function revolves around liquidity or maturity risk and as such is a special case of risk sharing function.
2. It has also been shown that costly screening of the enterprise can make debt contracts feasible, presumably through reducing the *ex poste* information asymmetry.
3. This arrangement is known as *Mosharekat*, which is equivalent to an equity contract. This is unlike *Mozarebeh* where the bank is a silent partner but shares in the equity (like non-voting shareholders). For additional information on other types of banking activities, see Khan and Mirakhor (1986).

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