Managing Risks and Liquidity in an Interest Free Banking Framework: The Case of the Islamic Banks

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Abstract

Risk and liquidity management are not just an interesting topic in Islamic Banking, it is a huge issue for all banks whether Islamic or not and for those who supervise these banks. Good risk management practices and processes do not have a religion or a colour or a country. There are plenty of good risk takers in Islamic Banks and some bad ones. It is the same in the conventional banking sector. Islamic banks have brought a new innovation in the banking industry whereby transactions must pass through owning real physical assets. Risk and liquidity management are of crucial importance in the overall banking environment, and they have clear relevance also to the specific environment of Islamic banking. In itself, Islamic banks are growing rapidly and have their own particular techniques on these issues, as elaborated on in this article. The use of profit-sharing modes in Islamic banks changes the nature of risks faced by these institutions.

In this paper we give a brief description of how an Islamic bank performs. We then try to clarify the risks that the Islamic banks are exposed to. We attempt after that to identify the practices of these banks for mitigating it with an emphasize on the liquidity risk and its challenges.

Keywords: Islamic banking, Profit and Loss Sharing PLS, Risk Management, Liquidity risk

1. Introduction

Islamic financial system is an important area of contemporary academic and policy Interest. It has received increasing attention in recent years and has become a well-developed and sophisticated one (Note 1). Its uninterrupted development continues, as reflected in the publication of countless journals, books, and research reports throughout the world. Individuals, universities, research organizations, and governments are all participating actively in this development. As a result of accelerated development, in recent years several studies have been undertaken to explain how the Islamic banks perform (Note 2). Most of these researches analyze the functioning of an Islamic banking system based on a Profit and Loss Sharing (**PLS**) principle, and discuss the possible impact of such a system on the mobilization of savings, on the allocation of scarce resources through banks, on investments, generation of real economic activity, and the effectiveness of monetary policy.

A vast literature (Note 3) has appeared on the subject of Islamic banking and the associated themes such as Islamic economics, Islamic finance, and Islamic monetary system and so on.

The Islamic banking system is currently spreading fast throughout the world. The success of this new system is indicated by the rapid growth in number of banks, branches, accounts, and sums of money it handles. Growth is being made in establishing an Islamic Capital and Inter-Bank Money Market, an Islamic Rating Agency and an Islamic Financial Services Supervisory Board. These developments mean that the Islamic financial industry has become systemically significant for the international financial system.

This huge success has been perceived as a profitable opportunity for some Western style commercial banks to generate new business by providing Islamic banking services in order to encounter increasing demands of a growing Muslim population in Western countries and all over the world.

Western glorious conventional financial institutions such as Citigroup, HSBC, JF Morgan, Barclays, Kleinwort Benson, Deutsche Bank, Lloyds, JP Morgan, Royal Bank of Scotland, Algemene Bank Nederland (ABN) AMRO, Goldman Sachs, American Express, ANZ, Grindlays, United Bank of Switzerland (UBS), Commerzbank, Société

Général and BNP Paribas have started introducing interest-free products to their customers(Note 4). Similarly, multinational corporations such as General Motors, IBM and Daewoo Corporation have begun to use interest-free services. European as well as American academic circles have taken interest in the subject. So far, a large number of PhD theses have been written on the subject in many Western universities (Note 5), prominent Western scholars and institutions (Note 6) are actively contributing books and articles in the area of Islamic finance.

Risk has remained an important area of research for conventional finance as well as Islamic one (Note 7). Conventional finance has already developed several tools for managing risk. Islamic financial institutions face a variety of types of risks related to Islamic modes of investments and finance (Note 8). Since, the business of Islamic banking has many distinctive features, the nature and magnitude of risk confronting such institutions may be significantly different.

The paper is organized as follows. In section 2 we give a quick review of the essential foundations of the Islamic finance followed by a short description of the Islamic banks operations in mobilizing and utilizing of funds, with some explanation on the Islamic modes of financing. In section 3 we clarify the special risks surrounding the Islamic banks and those which it has in common with the conventional banks. We then attempt to identify the practices of these banks for mitigating it with an emphasize on the liquidity risk and its challenges.

2. Islamic banking features

Surely, prohibiting the receipt and payment of interest forms the core of the Islamic banking, but it is supported by other principles of Islamic doctrine such as: advocating risk sharing, promotion of entrepreneurship, discouragement of speculative behaviour, a financial transaction should not lead to the exploitation of any party to the transaction, preservation of property rights, transparency and the inviolability of contractual obligations (Note 9).

Islamic finance is a form of financial innovation (Note 10). Most importantly, it demonstrates that business and Islamic laws considerations are not mutually exclusive.

The term "Islamic banking" refers to the conduct of banking operations based on Islamic principles. As a financial intermediary, the basic mechanism of the Islamic bank is to accept deposits from surplus persons on the liability side and offer financing on the assets side to the deficit persons. While conventional banking uses the interest rate mechanism to perform its task of financial intermediation, Islamic banking relies on profit/loss sharing for purposes of financial intermediation (Note 11). Therefore, instead of charging interest, for an Islamic bank the capital is rewarded with a variable rate of return depending on the profit or loss resulting from the use of the funds during a given period. The depositors also share in the profits of the bank according to a predetermined ratio. There is thus partnership between the Islamic bank and its depositors, on the one side, and between the bank and its investment clients, on the other. This is in contrast with a conventional bank, which mainly borrows funds paying interest on one side of the balance sheet, and lends funds, charging interest on the other (Note 12).

How can a bank operate without using the interest rate mechanism?

2.1 Principles Underlying the Islamic Banking System

Islamic banking is based on the Islamic teachings, in particular concerning the prohibition of interest. Islam forbids the charging of interest but encourage the earnings of profits. In this system investors are not guaranteed any prefixed amount of profit from the bank. Neither any predetermined income or interest, nor repayments of the principal deposit amount are guaranteed to those who invest within the Islamic system.

The factors which distinguish Islamic banking from conventional banking are:

Interest: All forms of contracts and transactions must be free from interest. Interest is generally understood to mean any return for the use of money. The basic principle is that within Islamic banking, it is not permissible to charge any return for the mere use of money (Note 13). Charging interest on loans is considered unjust since money is considered to be simply an intermediary between goods. There are differences between sale/trade and interest-based transactions. The first category of transactions is subject to the natural conditions of uncertainty and risk in relation to time and the second is not. Capital involved in trade may grow or decline through time, whereas, in interest-based transactions, capital automatically increases over time. Whereas conventional financial institutions "trade" in money with buying this later from depositors and selling it in the form of loans, Islamic financial institutions must trade in real assets or services. Many reasons have been advanced as to why usury has been forbidden, but perhaps the most important is the belief that capital should not generate profit unless combined with human effort or unless risk is involved. Thus interest on loans is an unfair payment since under conditions of uncertainty no borrower can guarantee that enough profit will be made to pay the interest due. Uncertainty about the future makes it unjust to guarantee return on capital or loan when no human effort has been exerted.

Value of the money: Under Islamic laws, money has no intrinsic value but merely serves as a medium of exchange effectively created to be sought not in itself but for other commodities. Money does not reproduce. It grows when it is invested in a tangible economic activity. Money serves also as a measuring tool, a way of defining the value of a thing

Uncertainty or Gharar (Note 14): it refers to acts and conditions in exchange contracts, the full implications of which are not clearly known to the parties. This is something very similar to "asymmetric information". The concept of *gharar* generally refers to uncertainty (lack of knowledge) and also it implies deceit. All business transactions, which cause detriment in any form to any of the parties in a contract, are forbidden. It may be in the form of hazard, peril leading to uncertainty in any business, or deceit or fraud.

Maisar Pure Games Of Chance: has also been described as involving two parties in a combative game played for the sole purpose of winning at the expense of one's opponent. The gain accruing from such a game is unlawful, as is the act of playing it, for it diverts one's attention from productive occupation and virtuous conduct. Any transaction undertaken for purely speculative purposes are not allowable within Islamic banking. Allowable trading or investment transactions which involve the risk of incurring losses as well as earning profits are not included in this definition of speculation.

Prohibited activities or commodities: Islamic law prohibits using or dealing in certain commodities or activities. Islamic financing will therefore be inappropriate in financing any enterprise involved in any of the following types of activities or commodities: Pork, conventional Finance at interest, Tobacco, Gambling, Alcoholic liquor…

As it has been mentioned above, the Islamic banking system is based on the abolition of interest which requires the replacement of interest-based modes of financing with new financial techniques. However, the prohibition of treading with interest rate does not mean that capital is costless in an Islamic system. Islam recognizes capital as a factor of production but it does not allow it to be remunerated by interest in any form. This obviously poses the question as to: what will then replace the interest rate mechanism in an Islamic framework? In this context Numbers of alternative financial instruments have been developed by the Islamic banks to provide various kinds of financial products. In Islamic banking, deposits are treated as shares and depositors purchase equity position regardless of where the bank invests their capital.

2.2 Mobilization of funds:

Just like conventional, Islamic banks are dependants on their depositors' money as a major source of funds, with the exception that they are not allowed guaranteeing any rate of return on the basis of interest. Moreover, the nominal value of some deposits accounts cannot even be guaranteed, because they are reliant upon the profit- and loss-sharing scheme. This characteristic mainly applies to investment accounts. Islamic banks mobilize funds from their clients through three main different kinds of accounts: savings accounts, current accounts and investment accounts.

A. Current Account:

As with conventional banks, this account essentially provides for safekeeping of one's deposits. Withdrawals from this deposit account, including checks drawn for and against it, are guaranteed by the bank. The depositor does not share in the risk or return in any form. Depositors are supposed to give their explicit approval to the bank to use their funds, without any return. The funds accumulating in these accounts can only be used to balance the liquidity needs of the bank and for short-term transactions on the bank's responsibility. The bank, however, should guarantee payment of these funds on demand.

B. Savings Account:

This deposit account basically serves the need for the safekeeping of one's surplus funds. No return is expected in these accounts but the bank may at its absolute discretion pay the depositors a *positive* return periodically, depending on its own profitability. Such payment is considered lawful in Islam since it is not a condition for lending by the depositors to the bank, nor is it predetermined. The savings account holders are issued with savings books and are allowed to withdraw their money as and when they please. This type of account operates in two different ways. According to the first way, the Islamic bank requests permission from such depositors to make use of their funds so long as the funds remain with the bank, in return it guarantees to them getting the full amount back from the bank. However in the second case, savings accounts are treated as investment accounts but with less severe conditions as to withdrawals and minimum balance.

C. Investment Account:

Also known as profit and loss sharing (PLS) deposit or participatory deposit. The depositors and the Bank discuss terms of the contract according to it; depositor provides funds to be invested in assets and projects that the bank manages its operations. The Islamic banks cannot guarantee the capital of investment account holders. Profits, generated by the business, if positive, are shared between depositor and the Bank as per a pre-agreed ratio. In case of loss, which is not due to negligence or misconduct of the entrepreneur, losses are absorbed by Depositors; effectively bringing down the value of the asset created with its investments and the value of the deposit. This participation of investment depositors in the risks of banking is unique to Islamic banking. However, the risks should be minimised through a proper management of the Islamic bank in order to maintain the confidence of the depositors in the system. These accounts reflect a divergence from the conventional banking system. Customers will be encouraged to deposit their funds in investment accounts on the basis of a predetermined profit-sharing ratio for a specified minimum period. The profit-sharing ratio is usually predetermined according to the nature of the deposit account, whether the distribution of profits is considered on a short or long-term basis. The long-term deposit accounts usually have a higher profit-sharing ratio because they are more stable and the bank may use the funds for long-term investments. Although depositors, of short or long-term, can withdraw their funds whenever they like. To share in the profits, they must keep their money in the bank at least for the contracted period. So, for example, no profit-share would be given for a six month deposit account if the depositor withdraws the fund after only five months. This feature exposes the bank to even higher liquidity risk if losses are expected, and to alleviate this risk, the bank may require that notices be given before withdrawals are allowed.

2.3 Uses of funds:

The financial techniques used by Islamic banks are mostly based on equity participation (Note 15). These techniques, with the closely comparable Western techniques, are:

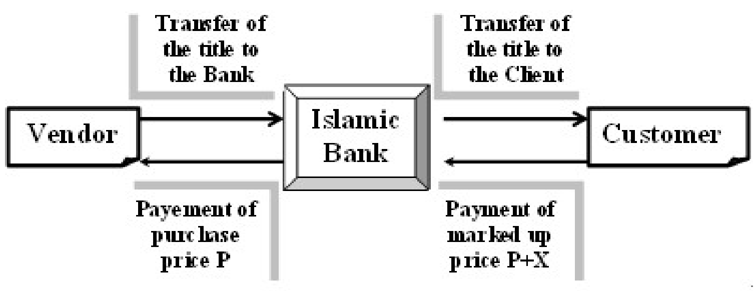
A. Murabaha (mark -up):

Murabaha refers to contracts in which the Islamic bank purchases the specified goods upon the request of a client, who makes deferred payments that cover costs and an agreed-upon profit margin. Each Murabaha transaction must involve two separate contracts; one, in which the Islamic bank acquires the goods from a supplier, and a second, in which the bank sells the goods to the client. As a result, financing of the client by the bank does not occur through the transfer of money, but through the transfer of a tangible asset.

The condition of its validity is based on the fact that the bank must have the ownership and possession of the commodity before it can sell it to its client. Possession may be physical or constructive. The latter means a situation where the bank has not taken the physical delivery of the commodity yet it is in control of the commodity with all the rights, liabilities and risks including the risk of destruction. In modern day trade and commerce, physical possession may not matter in the presence of adequate documentation showing ownership and constructive possession. The order placed by the client is not a sale contract but it is merely a promise to buy. In cases where the promise is not binding on the client; the client even after putting an order and paying the commitment fee can rescind from the contract. The Islamic bank bears the risk of possessing the commodities until they have been delivered to the client.

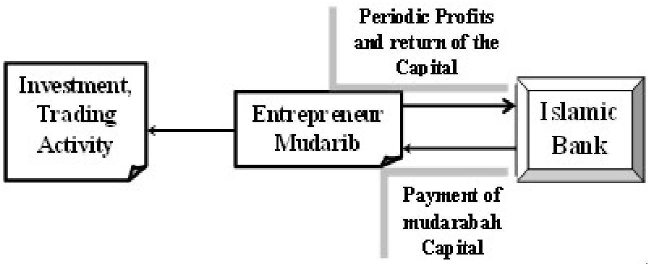
in contrast to the interest system in which delayed payments would automatically mean increased interest payments, the late payments by the client cannot be penalized in *Murabaha* contract as Islamic banks cannot, in principle, charge anything in excess of the agreed upon price. Non-payment of dues in the stipulated time by the counterparty implies loss to banks. To overcome this problem, the Islamic banks can resort to what is called 'mark-down' which is the opposite of 'mark-up'. 'Mark-down' amounts to giving rebates as an incentive for early payments. Ownership resides with the bank until all payments are made. The Islamic bank may obtain some collateral from the client to ensure payment.

Critics can be addressed to Murabaha contracts. The mark- up added to the original cost of the good is equal to or, in some cases, even higher than the amount of interest that a borrower would pay in conventional banking practice. Besides this criticism, the timeline between the purchase and the sale is likely to be the time it takes to sign the two contracts. As a result, the bank experiences an extremely small amount of risk in exchange for a comparatively profitable return on an asset-backed basis.



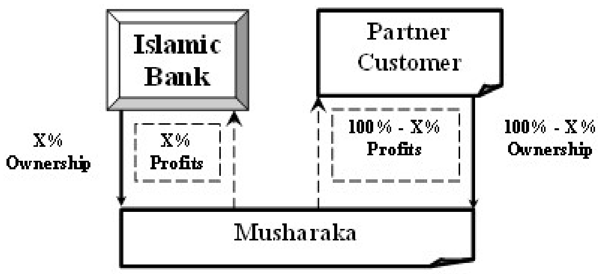
B. Mudarabah (Silent partnership):

Mudarabah is a contract between an investment manager, the client, and the capital owner, the Islamic bank that acts as a silent partner. In this arrangement all the capital needed to finance the operation is provided by the Islamic bank while client provides the expertise, management and labour required for the operation. Mudarabah contract does not guarantee any fixed rate of return. The profits which results from this enterprise are shared between the bank and the client, entrepreneur, according to a prefixed percentage. In case of a loss, which doesn't result from negligence or misconduct on the part of the entrepreneur, the bank has to bear all the losses and the entrepreneur's loss lies in not getting any reward or compensation for his effort.



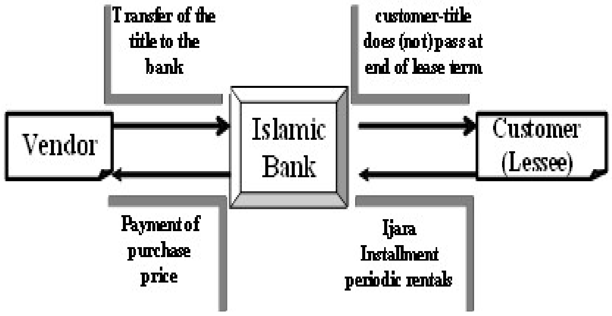
C. Musharaka (limited partnership):

Musharaka is an investment partnership where the Islamic bank joins another entity to set up a joint venture, both parties participating in the various aspects of the project in varying degrees. All providers of capital are entitled to participate in the management but not necessarily required to do so. The partner and the bank share in the profits according to the pre-agreed proportions, which may be different from the proportions of capital contributed. Any losses of the enterprise will be borne by the partner and the bank according to their capital contributions. Under a diminishing musharaka the partner client buys out the bank's share after a period of time. A musharaka contract is similar to a mudarabah contract, the difference being that in the former both the partners participate in the management and the provision of capital.



In practice the Mudarabah and Musharaka contracts have real problems with moral hazard and asymmetric information which are serious in these kinds of arrangements. A trustworthy entrepreneur is the cornerstone of these arrangements. Consequently, the fact that the bank or investment account holder bears all the loss of the investment in the event of failure may encourage the entrepreneur to behave against the interests of the bank. Moral risk may arise when the entrepreneur declares a loss or a profit lower than the real; because of lack of honesty and integrity. The Islamic bank must have access at all times to the entrepreneur's accounts to inspect and keep track of the accounts. If any misconduct, dishonesty or negligence is established against a client, he will be subject to punitive steps, and may be deprived of availing any facility from any bank in the country, at least for a specified period.

D. Ijara (operating lease):



Ijara is a leasing agreement whereby the bank buys an equipment or productive asset for a customer and then leases it back over a specific period. The client avoids initial capital outlay. In some cases, the customer is able to buy the item at the end of the contract. The Islamic bank retains the ownership of the asset with all the rights and the responsibilities that go with ownership.

The menu of instruments listed above does not exhaust the possible contracts that Islamic law permits. Any profit earned on money is a reward of bearing risks of the business. Thus, the Islamic bank will perform the typical functions of financial intermediation through screening profitable projects and monitoring the performance of projects on behalf of the investors who deposit their funds with the Islamic bank. A variety of services that are offered by conventional banks may be supplied by Islamic banks without any need for modification in the nature of the product, as long as, there is no debtor-creditor relationship involved in the process. Other banking services such as money transfers, bill collections, and trade in foreign currencies at spot rate where the bank's own money is not involved are provided on a commission or charges basis. (See Table 1)

One of the main functions a financial institution, is to effectively manage risks that arise in financial transactions. In the Islamic framework, the concept of undertaking business risks is encouraged, and the level of return is related to the level of business risks. The nature of Islamic financial instruments implies that Islamic banks face different types of risks associated with these instruments.

3. Does Islamic banking risk differ from the conventional banking risk?

The risk profile of an Islamic bank is almost similar to the conventional interest-based bank. However, the Islamic banks face two types of risks. The first type of risks they have in common with conventional banks such as credit risk, market risk, liquidity risk and operational risk. But due to specificities of the Islamic banks the nature of these risks may changes. The second type is of new and distinctive risks that the Islamic banks face as a result of their unique asset and liability structures. Consequently the processes and techniques of risk identification and management available to the Islamic banks could be set into two types standard techniques. The first set of techniques which are similar to those of conventional framework and not in conflict with the Islamic principles of finance and the second set of techniques which are new or adapted and are supposed to meet the Islamic law.

3.1 Risks specific to Islamic banks (Note 17)

Risk is legitimate when it is necessary for value creating. But when no value is added, it is a form of gambling. To be accepted in an Islamic view, the risk shall be inevitable and thus inseparable from real value adding transactions.

Islamic banks face other types of risks different from those encountered by their conventional counterparts due to specific requirements to comply with the Islamic teachings:

A. Commodities and inventory risk

This type of risk arises from holding items in inventory either for resale under a Murabaha contract, or with a view of leasing under an Ijara contract. In a murabaha contract the client has a right to change his mind and may decide not to go ahead with the transaction. It's probable that the client may go back on his terms in the murabaha or ijara contracts which will introduce an element of risk in the transaction. Once, this latter found, the bank will be responsible for the charge. In Ijarah contract, Islamic bank is exposed to the risk on the residual value of the leased asset at the term of the lease or if the client terminates the lease earlier (by defaulting), during the contract.

B. Rate of return risk

Rate of return risk differs from interest rate risk in that Islamic banks are concerned with the result of their investment activities at the end of the investment-holding period. Such results cannot be pre-determined exactly. This may increase responsibility in managing their investment deposit holders' expectations and their liabilities to current account holders.

A consequence of rate of return risk may be the displaced commercial risk which arises from the probability of the bank not being able to compete with other Islamic or conventional banks. Therefore the Islamic bank may be under market pressure to pay a return that exceeds the rate that has been earned on assets financed by Profit Loss Sharing deposit holders when the return on assets is under-performing as compared with competitors' rates.

C. Legal and Islamic laws compliance risk

In many countries where Islamic banks coexist with conventional banks, there is a pressure to apply to the same regulation for both types of banks and a common legal framework is generally developed. No separate regulatory laws have yet been set to govern the operations of Islamic banks, which have been trying to benefit from the support that the conventional framework can provide, expect three country which have their whole financial system Islamized with an Islamic central bank. Islamic banks are more exposed to the risk of changes in government fiscal and monetary policies than the conventional banks as they participate in profit-and-loss of the business enterprises. They are also exposed to reputational risk arising from negative publicity about the Islamic banks' business practices, particularly relating to non-compliance to Islamic laws in their products and services, could have an impact upon their market position, profitability and liquidity.

D. Equity position risk in the banking book

Risks inherent in the holding of equity instruments for investment purposes. In particular, for Islamic Bank, the relevant instruments are typically those based on the Mudarabah and Musharakah contracts. A consequence of the equity position risk is the fiduciary risk which is resulting from the management of investment accounts. This type of risk refers to the probability of the bank being guilty of negligence or misconduct in implementing the deposit, investors' funds, through mudaraba or mucharakah contracts. Such legal liability would expose the bank to direct losses associated with breach of its fiduciary responsibility toward its depositors as well as indirect losses resulting from the decline in the market price of its listed shares. The depositors may, as a result, lose confidence in the bank and withdraw their deposits.

E. Withdrawal risk

Withdrawal risk arises in Islamic banks as they pay depositors a share of the profit that is not fixed *ex ante*. A variable return on Profit and Losses Sharing accounts introduces uncertainty regarding the real value of deposits. The Islamic banks are under pressure to give returns similar to other institutions, as they believe that the depositors will hold the bank responsible for a lower rate of return and may cause withdrawal of funds by the depositors. In order to increase the public's confidence on the Islamic banks, the interests of depositors and other users of financial services need to be protected.

3.2 The most common areas of risks with conventional banks

Types of risks similar to the conventional and the Islamic banks could be set as follow:

A. Credit Risk

Credit risk happens when the counterparty fails to meet its obligations timely and fully in accordance with the agreed terms. It is the risk of loss due to the other party defaulting on contracts or obligations. This can lead not only to an increase in the liquidity crises but also declines the quality of the bank assets.

This problem may arise for Islamic banks especially when there is a problem of asymmetry of information. The uncertain honesty of the entrepreneur and his misdirected use of funds can lead banks into difficulty. The prohibition of interest does not permit Islamic banks to postpone debts on the basis of a re-negotiated higher mark-up rate. This can provide an incentive to their dishonest clients to default, thereby exposing these banks to additional credit risk.

B. Market risk

The risk of adverse deviations of the mark level prices or rates of assets and liabilities due to the market factors, economic changes or external events. Islamic banks take up "risk sharing" funds, whereas conventional banks take "capital certain" deposits where repayment must be made. There is the implicit requirement for both parties to a given transaction to share in the loss as well as the profit.

C. Exchange Risk (Note 18)

This risk refers to the adverse exchange rate movements on foreign currency positions taken by the Bank which causes suffering losses. According to the Islamic teaching, currency transactions on a deferred basis are not permissible. Trading of currencies wherever undertaken by an Islamic bank is on a spot basis Letter of credit and trade finance for example often poses an exchange risk.

D. Operational risk

Operational risk is the risk that arises from human error and/or deficiencies in information systems, internal processes or controls, resulting in direct or indirect loss. In the Islamic banking context, operational risks can impact just as much as in conventional banking, with the additional element of possible operational defects causing failure to comply with the Islamic laws. Also the Islamic bank may not have enough qualified professionals (capacity and capability) to conduct the Islamic financial operations.

E. Liquidity Risk

Such risk results from the mismatch between the maturities of the two sides of the balance sheet, creating either a surplus of cash that needs to be invested or a shortage of cash that needs to be funded. Also liquidity risk arises from either difficulty in obtaining cash at reasonable cost. As interest based loans are prohibited Islamic banks cannot borrow funds to meet liquidity requirement in case of need. Furthermore, the sale of debt is not allowed

3.3 Risk Management

Identifying, measuring, managing and monitoring various risk exposures are among the main elements of risk management process. In order to do that, the Islamic bank must establish appropriate risk management environment and sound policies and procedures to control these risks. This can be done by:

(1) Creating a risk management environment by clearly identifying the risk objectives and strategies of the institution and by establishing systems that can identify measure, manage, and monitor various risk exposures. To ensure the effectiveness of the risk management process, Islamic banks also need to establish an efficient internal control system: Adequate Internal Controls.

(2) Preparing a periodic risk reports such as credit risk reports, operational risk reports, liquidity risk reports and market risk reports.

(3) Setting up an Internal Rating System (IRS), Internal and external audit with management Risk information.

(4) Enhance transparency and comparability of banks through suitable disclosures about the quality of capital, accounting standards, risk exposures, and capital adequacy.

(5) Providing facilities and supporting institutions. These include a lender of last resort facility, deposit protection system, liquidity management system and legal reforms.

To counter the problems due to the asymmetries of information, Islamic banks can essentially get involved in the decision making and management of the firm by holding equity positions, extensive screening and information-gathering. As a result, the bank will be able to monitor the use of funds by the project more closely and reduce the moral hazard problem. Also Mudarabah or musharakah on a regressive scale can be adapted.

The Islamic banks shall clearly define their credit risk-mitigating techniques including, but not limited to, having in place:

A methodology for setting mark-up rates according to the risk rating of the counterparties, where expected risks should have been taken into account in the pricing decisions;

Permissible and enforceable collaterals and guarantees;

Clear documentation as to whether or not purchase orders are cancelable; and

Clear procedures for taking account of governing laws for contracts relating to financing transactions.

To mitigate the credit risk majority of the banks has credit limits for individual counterparty

In case of the client's death the Islamic bank can avoid these risks by means of insurance which is to be bearable of course by the client, as it is a cost added to the murabaha expenses.

3.4 Liquidity Risk management in the Islamic banking framework (Note 19):

Liquidity is the ease by which an asset can be exchanged for another with little or no loss of value; usually cash. Liquid assets are those held in cash or are invested in instruments which can be converted rapidly into cash.

Monitoring and controlling liquidity is one of the most critical responsibilities of bank management. Islamic financial institutions, like their conventional counterparts, are subject to liquidity risk. Liquidity risk can arise in financial intermediation due to the different maturity profiles of liabilities and assets.

Liquidity can be divided into two types: Liquidity of assets: Inability to sell assets at current market prices, and the Liquidity Instability of Liability (LIL), which refers to the inability to assess sufficient funds to meet payment obligations in a timely manner (instability of deposit base over a long period of time).

The bank manager tries to maximize his/her bank's return on total assets by investing as much of the cash available. However, the management is also challenged by the need to have enough liquidity to meet any mismatch of the term structure (maturity dates) of assets and liabilities.

The liquidity risk of Islamic banks, which mainly takes the form of mismatch between assets and liabilities, is, however, partly originated from the shortage of long-term funds.

Ways to manage liquidity risk:

A bank with a strong liquidity profile should generally be able to survive. Much of the funds of Islamic financial institutions come through PLS investment accounts without any fixed obligation attached to them. Rather the problem for Islamic financial institutions has been excess liquidity. Islamic banks need to be even more cautious about the maturity structure of their assets. In order to remain solvent, banks need to maintain assets of a short-term nature.

The cancellation of the *murabahah* contract increases the potential for liquidity problems. that's why in the case when a customer cancels a non-binding purchase order the Islamic bank should monitor and control their exposures to suppliers, and especially during delivery between suppliers to the Islamic bank where a customer is acting as an agent; identify whether the risks associated with the assets will be borne by the supplier or the customer (which acts as agent and accepts the assets from the supplier). For example, the Islamic bank may enter into a purchase contract with a supplier on a "sale or return" basis, with an option to return the purchased item within a specified period

The Islamic bank should create a right balance between the two objectives of safety and profitability because maintaining too much liquidity hurts the profitability objective.

The current use of secured commodity *murabaha* and short-term trade financing has enabled Islamic banks to invest their short-term surplus cash.

The Islamic bank should try not to depend on a few large depositors they should rather try to mobilize their deposits from a large a cross section of depositors as possible. Diversify their sources of deposits. There are two major types of fund providers: (a) current account holders; and (b) PLS deposit holders. These account holders require a degree of liquidity to be maintained by the Islamic bank to meet their requirements for withdrawals.

Surplus liquidity with Islamic banks cannot be easily transferred to conventional banks since the Islamic banks do not accept interest; however there is room for exchange of surplus funds among the Islamic banks especially when they are performing side by side with some other Islamic banks. The greater the number of Islamic banks and wider their activities, the greater will be the scope of cooperation in this field.

The maturities of their investments should be well studied through the identification of any future shortfalls in liquidity by constructing maturity ladders based on appropriate time. The Islamic banks classify cash flows, including behavioural methods, and may consider differentiating the types of cash flows as Known cash flows – the maturities and the amounts are known in advance. This category includes receivables from Murabahah, Ijarah, receivables and Diminishing Musharakah.

The Islamic bank should make periodical cash-flow analyses under various market scenarios and conditions. The scenarios may vary, depending on local market conditions, and may be based on (a) a "normal" operating environment (for example a steady state condition); and (b) scenarios of adverse circumstances (for example non-linear events and chaotic conditions). The analysis shall include assumptions about the repayment of invested capital to the PLS deposit holders. Islamic bank shall assess the effect of the level of their dependency on current account holders' funds.

The Establishment of specialized institutions for managing liquidity risks has helped to solve the liquidity problems.

A. The Liquidity Management Centre LMC and the International Islamic Financial Market (IIFM)

The Bahrain Monetary Authority established the Liquidity Management Centre (LMC) in 2002 with the goal of allowing Islamic banks to handle their liquidity needs. The LMC (Note 20) is designed to establish a link between the existence of excess liquidity and the need for quality assets for Islamic financial institutions. The establishment of the LMC facilitates the creation of an Islamic inter-bank money market enabling Islamic financial services institutions to manage their liquidity as the conventional banks do.

In a similar vein, the Malaysian Inter-bank Islamic Money Market (Note 21) has been operating since 1994 with several Islamic instruments.

Also the International Islamic Financial Market (IIFM) is designed to facilitate a cooperative framework among the financial institutions involved with Islamic finance and to address the liquidity requirements of the industry. The introduction of equity funds which were compatible with the Islamic laws and the launch of Islamic asset-backed securities more commonly known as Sukuk.

B. Islamic investment certificates (Sukuk)

Conventional bonds that yield interest are of course prohibited under Islamic law. *Sukuk* is an Islamic bond which has similar characteristics to a conventional bond, the difference being that it is asset-backed and represents proportionate beneficial ownership in the underlying asset. The return on the *sukuk* derives from the yield generated by the client's lease of the asset.

According to the *Accounting and Auditing Organization of Islamic Finance Institutions* (AAOIFI) the sukuks are "certificates of equal value representing undivided shares in ownership of tangible assets, usufructs and services or (in the ownership of) the assets of particular projects or special investment activities". (AAOIFI Standard No. 17).

Currently, 14 different types of sukuks, which are traded on the *Scripless Securities Trading System* (SSTS) (Note 22), are recognized. The sukuks include the right to some calculable rate of return as a share of profit *(secondary notes)* and the repayment of the principal amount *(primary notes)*. It reflects participation rights in the underlying assets.

Although sukuks help in mitigation and managing risks, it carries certain types of risks. Sukuks transform different kinds of assets and contracts into financial certificates therefore each sukuk structure can have different risk transformation proprieties.

C. Non-bank financial institutions

Islamic Mutual Funds, Islamic investment companies, Islamic Insurance: Takaful Companies and the stock market can offer solutions to liquidity risks problems.

(1) Islamic Mutual Funds:

- Short term investment funds: these can provide liquidity for specialized investments or provide an alternative to fixed deposits and other money market instruments offered by conventional players. These short term funds can be denominated in any of the major currencies.

- Leasing funds: there are also many leasing funds, as leasing has historically been an efficient and flexible Islamic instrument. The difference between these Islamic funds lies in the quality and diversification of the assets being leased, or the performance of the lessees, through various participative lease structures.

- Commodity funds: these give investors exposure to genuine commodity price risk in asset class that includes oil, livestock, grains and industrial metals.

(2) Islamic Insurance (Takaful) Services:

Takaful (Note 23), which is an Islamic law-compatible risk intermediation industry, offers highly valuable services to individuals, families, businesses and the economy. Without *takaful* coverage, Islamic banks and asset management institutions are exposed to potentially insurable risks that add to operational costs and impair competitiveness.

(3) Islamic Capital Markets:

Capital markets including both primary and secondary segments provide the financial sector with three vital functions: pricing of assets and risk management, liquidity management, and specialized services in resource mobilization and allocation. Development of a well-functioning capital market is therefore critical for a sound and efficient Islamic banking system.

Major Islamic Stock Indices now include: Dow Jones Islamic Market Indexes, FTSE Global Islamic Index Series, Global's GCC Islamic Index and the Kuala Lumpur Shari'ah Index. The technology is expected to be gradually in common usage in major markets. As a result real-time data on the indices will enhance the market microstructures for the Islamic capital market.

Conclusion

This paper has attempted to shed light on some aspects of the risk management for the Islamic banks. While the conventional banks guarantee the capital and rate of return, the Islamic banking system, based on the principle of profit and loss sharing, cannot, by definition, guarantee any fixed rate of return on deposits. In some cases the capital is not guaranteed either, because if there is a loss it has to be deducted from the capital. Non-PLS modes of financing may appear less risky, but they do in fact carry special risks that need to be recognized.

This paper argues for the need for Islamic banks to strengthen risk management practices. Without an efficient capital market to operate within, Islamic banking finance will not continue to grow meaningfully. The market requires liquidity and price transparency to enhance a secondary market.

In addition to the many specific risks inherent to Islamic banks, there are a number of more general factors that make Islamic banking riskier than conventional banking. To begin with, Islamic banks have fewer risk-hedging instruments and techniques available, since the prohibition of interest disables Islamic banks from using conventional risk-hedging tools such as options, futures and forwards Although Sukuks can be traded, most are held to maturity. The Sukuks even if they were traded and liquid are medium to long term. Perhaps "Financial Takaful (insurance)" seems to present solutions to this problem.

The preceding discussion makes it clear that Islamic banking is not a negligible or merely temporary phenomenon. Islamic banks are here to stay and there are signs that they will continue to grow and expand. The Islamic banks present some innovative ideas which could add more variety to the existing financial network.

Investments in research and development and financial engineering are more needed to develop product for resource mobilization, liquidity management and risk management as Islamic banks increase in view of their growing size and in response to the rapidly changing regulatory requirements and operating environment brought about by globalization and heightened competition. Also the establishment of specialized Islamic institutions for managing risks is needed.

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Note 2. The Harvard Islamic Finance Information Program Database (http://www.hifip.harvard.edu] provides references including Country info Database, and publications database. Other web sites provide articles related to the Islamic Finance: see the References.

Note 3. The Journal of Islamic Banking and Finance, and The International Journal of Islamic Financial Services, Islamic Economics Studies, Journal of Research in Islamic Economics Review of Islamic Economics.

Note 4. Ina Burghardt Carolin Fuß (2004). Islamic Banking Credit Products in Germany and in the United Kingdom European Business School International University Schloß Reichartshausen Working Paper Series N°. 12-2004 October 2004.

Note 5. Durham University, Loughborough University, the London School of Economics, university of Birmingham, in the United Kingdom, the Harvard and Rice Universities in the United States…

Note 6. International Monetary Fund, the World Bank, The Islamic Financial Services Board (IFSB), International Islamic Financial Market (IIFM), General Council for Islamic Banks and Financial Institutions (CIBAFI), The Arbitration and Reconciliation Centre for Islamic Financial Institutions (ARCIFI), The International Islamic Rating Agency (IIRA) et The Liquidity Management Centre (LMC).

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Note 14. In contemporary financial transactions, the two areas where *Gharar* most profoundly affects common practice are insurance and financial derivatives. Jurists often argue against the financial insurance contract, where premium are paid regularly to the insurance company, and the insured receives compensation for any insured damages in the event of a loss. In this case, the jurists argue that the insured may collect a large sum of money after paying only one monthly premium. On the other hand, the insured may also make many monthly payments without ever collecting any money from the insurance company. Since "insurance" or "security" itself cannot be considered an object of sale, this contract is rendered invalid because of the forbidden *Gharar*. Of course, conventional insurance also suffers from prohibition due to *Riba* since insurance companies tend to invest significant portions of their funds in government bonds which earn them *Riba*.

Note 15. See Table 01 for more details.

Note 16. Abdul Malik Mirza and Abdel-Karim Halabi (2003). Islamic Banking in Australia: Challenges and Opportunities Journal of Muslim Minority Affairs, Vol. 23, No. 2, October 2003.

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Note 20. http://www.lmcbahrain.com

Note 21. www.iimm.bnm.gov.my

Note 22. The SSTS is a system operated by the *Bank Negara Malaysia* (BNM)'s real time gross settlement/delivery-versus-payment system through which sovereign and unlisted corporate bonds are registered, cleared, and settled via the *Real-time Electronic Transfer of Funds and Securities* (RENTAS), Malaysia's scripless book-entry securities trading and funds transfer system. SSTS also maintains securities accounts for financial institutions.

Note 23. Takaful is simply an Islamic alternative to the conventional insurance system. The takaful concept aims to provide services to policyholders by protecting the participants against inability to overcome future unwanted events and difficult times through the creation of a defined pool contributed out of their common resources. *Takaful* is based on the system of cooperation, mutuality and shared responsibility. However, in a case whereby the loss does not occur to the participants within this specific period, the participants are entitled for the whole amount of paid premium, together with the share of profits made out of the cumulated paid premium based on the principle of *Mudharabah* financing technique.

Table 1. (Note 16) Summary of main features of Islamic Financing Techniques

Feature	**Mudharabah (profit-sharing)**	**Musharakah (profit-sharing)**	**Ijara (leasing)**	**Murabahah (mark-up-based)**
Role of capital provider in the management of funds	Nil	Full control the use of the finance	Full control the use of the finance	Full control the use of the finance
Risk bearing by the capital provider	To the full extent of the of the opportunity cost of capital	To the extent of the proportion of capital in the total investment of the enterprise	Same as in Mudharabah	To the full extent of the capital
	For the entire period of the contract	Same as in Mudharabah	Until the asset completes its life or is finally disposed	Only for a short period until the goods are purchased and taken over by the finance use
Uncertainty of rate of return	Complete Uncertainty	Same as in Mudharabah	Same as in Mudharabah	Uncertainty only for a short period
Cost of capital	Uncertain ex-ante	Same as in Mudharabah	Fixed and predetermined	Fixed and predetermined

Table 2. Types of risks facing operating Islamic Banks

	Type of risk	Definition	Institution		Depositors	
			Bank	**Shareholders**	**Demand**	**Investment**
TRANSACTION RISKS	**Credit risk**	Credit risk is failure of counterparty to meet his or her obligations timely and on the agreed terms of the contract	The bank faces counter-party risks in the various forms of contracts: such as, bay mua'jal, mudaraba, musharaka, murabaha,		They face the risk that the bank does not honor requests for withdrawals at face value	They face the risk that the bank does not honor requests for withdrawals at market value
	Market risk	Market risk is the risk associated with change in the market value of held assets				
		Mark–up risk is risk of divergence between the murabaha contract mark–up and the market benchmark rate	The bank may incur losses if the benchmark rate changes adversely			
		Foreign Exchange risk is the risk of the impact of exchange rate movements on assets denominated in foreign currency	This exposes the bank to risks associated with their deferred–trading transactions			
BUSINESS RISK	**Business risk**	Business risk results from competitive pressures from existing counterparts				
		Displaced Commercial risk is the risk of divergence between assets' performance and expectations for returns on liabilities	Displaced commercial risk may adversely affect the value of the bank's capital. Return on equity goes down	Shareholders are exposed to the risk of not receiving their share of the bank's profit		Investment depositors may have to forgo receiving their mudarib share
		Withdrawal risk where the bank is exposed to the risk of withdrawal of deposits	Withdrawal risk exposes the bank to liquidity problems and erosion of its franchise value			
		Solvency risk is the risk of a bank having insufficient capital to continue operations	Solvency risk may expose the bank to loss of its reputation	Solvency risk exposes the different stakeholders to counter – party risks		

	Type of risk	Definition	Institution		Depositors	
			Bank	Shareholders	Demand	Investment
TREASERY RISK	Asset & Liability Management (ALM) risk	Asset & Liability Management(ALM) risk is a balance sheet mismatch risk resulting from the difference in terms and conditions of a bank's portfolio on its asset & liability sides	This may adversely affect the bank's capital			
	Liquidity risk	Liquidity risk is the risk of bank's inability to access liquid funds to meet its obligations	The bank is exposed to risk of failure to honor requests for withdrawals from its depositors		They face the risk of not being able to access their deposits when they need to	
	Hedging risk	Hedging risk is the risk of failure to mitigate & manage the different types of risks	This increases the bank's overall risk exposure			
GOVERNANCE RISKS	Operational risk	Operational risk is the risk of failure of internal processes as related to people or systems	The bank incurs losses due to occurrence of that risk hence may fail to meet its obligations towards the different stakeholders	This risk adversely affects return on equity		This risk adversely affects return on assets
	Fiduciary risk	*Fiduciary risk is the risk of facing legal recourse action in case the bank breaches its fiduciary responsibility towards depositors and shareholders. *Risk of loss of reputation	Legal recourse may lead to charging the bank a penalty or compensation. This may lead to withdrawal of deposits, sale of shares, bad access to liquidity or decline in the market price of shares if listed on the stock exchange	This risk adversely affects return on equity		This risk exposes investment depositors to economic losses
	Transparency risk	Transparency risk is the risk of consequences of decisions based on inaccurate or incomplete information which is the outcome of poor disclosure	Losses may occur as a result of bad decisions based on inaccurate or incomplete information			

	Type of risk	Definition	Institution		Depositors	
			Bank	Shareholders	Demand	Investment
SYSTEM RISKS	**Business environment risk**	Business environment risk is the risk of poor broad institutional environment including legal risk whereby banks are unable to enforce their contracts.	Business environment risk increases banks' exposure to counter-party risk as weak contracts are not easily enforceable			
	Institutional risk	Institutional risk is the risk of divergence between product definition and practices	Institutional risk exposes the bank to counter-party risks due to the unsettled nature of the contract			
	Regulatory risk	Regulatory risk is the risk of non-compliance with regulations due to confusion, bad management or mistakes	Banks may be penalized for non complying with the rules or regulations. It could be an issue with the regulator or supervisor			

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