

# **Islamic Modes of Finance and Associated Liquidity Risks**

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## **Abstract**

The purpose of this paper is to analyze the sources of liquidity risk in Islamic banks, identify this risk in the various modes of finance used by Islamic banks, and to study the practices of these banks for mitigating it. In the process we also hope to identify further research issues and questions pertaining to measurement and mitigation of liquidity risk for Islamic banks.

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## **Introduction:**

Liquidity risk is said to be assassin of banks. Episodes of failure of many conventional banks from the past and the present provide the testimony to this claim. Therefore banks and more so their regulators are keen to keep a vigil on liquidity position of banks. Due to profit sharing nature of Islamic banks, in theory at least, they are likely to be more stable. However, we observe that liquidity risks have played a role in bringing financial distress to Islamic banks and some of them were forced to close.<sup>1</sup> Many different types of risks such as credit risk, operational risk etc., culminate in the form of liquidity problem for individual banks and the banking sector as a whole, therefore it sometimes becomes difficult to analyze this risk in isolation.

The recent literature on liquidity in Islamic banks focuses on management of surplus liquidity and deals with difficulties faced by Islamic banks in parking it for short-term earning opportunities. Ahmed (2000), Al-Sadah (2000), and Yousuf (2001) are some examples. It does not discuss liquidity shortages, possibly because majority of Islamic banks in the Middle-East are currently experiencing abundance of liquidity.<sup>2</sup> Nevertheless the risk of liquidity shortage is not of lesser importance because if non-earning excess liquidity is a source of protracted illness for the banks by way of reducing their earnings potential, a shortage of liquidity is an acute syndrome that can cause sudden death of a bank. Another strand of emerging literature dealing with the risk factors of Islamic banks has so far discussed credit and operational risks (see for example, El-Gari (2000), and Khan and Ahmed (2001)). But analysis of liquidity risk per se has not been adequately addressed.

The purpose of this paper is to analyze the sources of liquidity risk in Islamic banks, identify this risk in the various modes of finance used by Islamic banks, and to study the practices of these banks for mitigating it. In the process we also hope to identify further research issues and questions pertaining to measurement and mitigation of liquidity risk for Islamic banks.

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<sup>1</sup> A recent example is the closure of Ihlas Finans in Turkey in 2001 in the wake of liquidity crisis that had affected the entire banking sector. Conventional banks faced greater problems than Islamic banks during that crisis.

<sup>2</sup> Khan and Ahmed (2001), p. 147 quote a study commissioned by Bahrain Monetary Agency (2001) reporting that in a sample of the Islamic banks it surveyed, out of 13.6 billion dollars of their total assets 6.3 billion dollars were in liquid form. That is 46.3 per cent.

### **Definition of Liquidity Risk:**

Liquidity of an asset is its ease of convertibility into cash or a cash equivalent asset. Liquidity risk arises from the difficulty of selling an asset quickly without incurring large losses. For a banking and financial firm “liquidity risk includes both the risk of being unable to fund [its] portfolio of assets at appropriate maturities and rates and the risk of being unable to liquidate a position in a timely manner at reasonable prices.”<sup>3</sup> Sometimes it is defined in terms of maturity mismatch between assets and liabilities while at others it is defined in terms of asynchronous timing of cash in flows and cash outflows from the business.<sup>4</sup> The bank regulatory literature defines it as “risk to a bank’s earnings and capital arising from its inability to timely meet obligations when they come due without incurring unacceptable losses.”<sup>5</sup>

### **Sources of Liquidity Risk:**

Liquidity risk emanates from the nature of banking business, from the macro factors that are exogenous to the bank, as well as from the financing and operational policies that are internal to the banking firm. In case of Islamic banks the nature of *sharia* compatible contracts are an additional source of liquidity risk, particularly if the conventional financial infrastructure is maintained.

Banks provide maturity transformation. Taking deposits that are callable on demand or that on average has shorter maturity than the average maturity of the financing contracts they sell. While maturity transformation provides liquidity insurance to the depositors, which is valued by them, it exposes banks to liquidity risk themselves. Since banks specialize in maturity transformation they take pool deposits and take care to match their cash inflows and outflows in order to address the liquidity risk they face.

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<sup>3</sup> J.P. Morgan Chase (2000). The text [its] in square brackets is inserted by the author in place of name of the company JP Morgan Chase.

<sup>4</sup> See Merrill Lynch (2000).

<sup>5</sup> Office of the Comptroller (2000).

However, maturity mismatch at a given time is not the only source of liquidity risk. The risk of this kind can arrive from many directions and its pinch depends on various factors. In a nutshell its sources (i) on assets side depends on the degree of inability of bank to convert its assets into cash without loss at time of need, and (ii) on liabilities side it emanates from unanticipated recall of deposits. Using the categorization in Jameson (2001) and adding a few more we can break them into following behavioral and exogenous sources:

1. Incorrect judgment or complacent attitude of the bank towards timing of its cash in- and out-flows.
2. Unanticipated change in the cost of capital or availability of funding.
3. Abnormal behavior of financial markets under stress.
4. Range of assumptions used in predicting cash flows.
5. Risk activation by secondary sources such as:
  - i. Business strategy failure
  - ii. Corporate governance failure
  - iii. Modeling assumptions
  - iv. Merger and acquisitions policy
6. Breakdown in payments and settlement system
7. Macroeconomic imbalances

We can add to this list the 8. “contractual form”, 9. “*sharia* restriction on sale of debt”, and 10. “financial infrastructure deficiency” as additional sources of liquidity risk in the case of Islamic banks.

To the extent the timing of the cash flows can be predicted the liquidity risk can be controlled. But increasingly, the banks are getting involved in providing contingent credit and liquidity services to borrowers whose main source of funding lies elsewhere in the capital markets and who turn to banks only in contingencies. Thus the bank’s judgment on cash out-flows can turnout to be incorrect, hence the first source of liquidity risk. Further, involvement of banks in the derivative products with collateral requirements increases the possibility of large amounts of contingent calls for cash or security.

The second source of liquidity risk listed above stems from the unanticipated difference in the realized and assumed availability of funding, marketability of its assets or their use

as collateral in raising funds quickly, and the amount of haircut anticipated. This can happen due to causes general to the banking sector or specific to the bank. Sometimes a major bank (money center), on whom the smaller bank(s) rely, would experience a credit squeeze or a rating downgrade thus affecting the funds availability to the other banks.

The third factor, behavior of the capital markets in stressed condition, lies outside the control of a bank but it does have implications for liquidity of banks. First adverse movements in the capital markets change the availability of funds to the bank if it desires to raise it through them. Second, increasing reliance by the banks on whole sale markets rather than small depositors affects the composition of risk sensitive market savvy depositors in the depositor pool of the bank. These depositors are quick to move funds away from the bank at the first signs of trouble, thus increasing the probability of a 'run' on the bank or a liquidity problem.

The fourth factor is not a cause in itself but determines the preparedness of the bank to liquidity shocks. Larger the number of scenarios and range of assumptions for which a bank has stress tested its strategies against liquidity crisis greater is the likelihood of smooth management of the risk.

The fifth source is most difficult to envisage ex ante where “ a potential exposure to a liquidity risk is activated by a secondary risk source” (Jameson 2001, p.2). Current examples of such happenings include that of collapse of General American in 1999 and Long Term Capital Management (LTCM). The former closed down because it concentrated on short-term instruments for its funding needs and had heavily relied on a few (37) market sensitive institutional investors (money market mutual funds) for its funding. All other things were very fine with General American. The financial problems started elsewhere in an outside company which was providing re-insurance facility to it. Responding to this, General American made a business move and recaptured the re-insurance portfolio thereby self insuring all its obligations. As soon as the rating of General American was down graded because of its self insurance move, the institutional investors started recalling their funds creating a liquidity problem for it. General American was quickly assassinated within days.

Fragile and unreliable payments and settlement system is the sixth source of liquidity risk. Smooth operations of the banking sector and financial markets depend on sound operation of this system. A break down can trigger liquidity problems not only for a single bank but also for the entire banking and financial sector thus resulting in a generalized financial crisis.

Macroeconomic imbalances and sector wide shocks are another avenues giving rise to liquidity risk. These factors are particularly important in developing countries. Excessive government borrowing from domestic markets and banks increases cost of funding for the banks. In many restrictive environments it gives rise to financial repression where banks are required to finance government expenditures at less than the market price. In some cases the excessive government borrowing is accomplished by creating funding arbitrage leading to disintermediation – banks generating funds from cheaper sources and channeling them into short-term high return government securities<sup>6</sup>. In all such circumstances liquidity risk of the banks increases substantially either involuntarily or voluntary by changing the composition of asset portfolio of the bank. Then, any shock to the system can create liquidity problems for individual banks and for the banking sector as a whole.

Fiscal imbalances are not the only macroeconomic source of liquidity risk. Persistent current or capital account imbalances, large savings and investment gap, high inflation all can lead to similar risks.

Eighth source of liquidity risk in our above list stems from contractual forms of Islamic finance. Since we want to focus on it and it is new area that requires some explanation we discuss them in the following sub-section.

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<sup>6</sup> This has happened in Turkey giving rise to the financial crisis of 1999-2000. Banks had borrowed from foreign markets at cheaper rates and invested in Turkish Lira denominated government securities which were offering very high rates given the then pegged exchange rate. Thus asset portfolio of the banks got tilted towards short-term domestic currency denominated government securities while their liabilities start to accumulate in foreign currencies. When the foreign investors sensed that the large fiscal deficits were unsustainable along with a pegged exchange rate they started to exit the market by selling their holdings of government securities. Prices of these securities plummeted and interest rates shot up in the bond market. This not only deteriorated the value of assets of the banks but also reduced their fund raising capacity. The liquidity problem thus precipitated run on many banks leading to a liquidity and credit crunch a generalized financial crisis.

## **Contractual Forms and Liquidity Risk:**

The various contractual forms available to Islamic banks can be partitioned into three categories: (1) Sharing contracts such as *mudharabah* and *musharakah*, (2) trade based contracts such as *murabaha*, *salam*, and *istisna* and (3) service based contracts such as *ijarah*. Each of these contracts have various kinds of risk implications including the liquidity risk. The liquidity risk in these contracts can arise directly from the nature of the contract and also indirectly due to realization of other kinds of risks (such as credit risk and market risk) at some stage during the course of the contract. In the following we take each of these contract types and discuss the direct and indirect liquidity risk associated with it both on the asset side and liability side.

1. Profit Sharing Contracts such as *mudharabah* and *musharakah* does not pose an asset-liability mismatch problem for the bank if each deposit is invested in a specific project and depositors can only withdraw on maturity of the project in which their funds are invested.<sup>7</sup> While this eliminates liquidity risk to the banks it also wipes out the liquidity insurance possibility for the depositors. It also exposes the depositors to concentrated business risk. It then begs the question what is the role of bank as financial intermediary, why can't an individual directly invest in a project of his choice? Economies of scale and scope of the bank in monitoring of the investment projects are left as the only rationale for investment through banks.

However, there is one other rationale too. Banks can also work as providers of pooled investment opportunity to their depositors whereby depositors share in returns of an investment pool rather than take concentrated risks in one project. This value added to the depositors in the form of investment diversification can be another rationale for the existence of Islamic banks. This arrangement not only smoothes out the variability of returns to depositors but can also address their liquidity needs to some extent if the investment projects are of various maturity periods. In order to address the preferences of depositors for stable income stream and liquidity needs the bank would have to carefully select the projects that have non positive correlation of returns and whose revenue cycles are negatively synchronized with each other. In the normal circumstances

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<sup>7</sup> This assumes that accounting period for calculating returns on deposits is same as the accounting period for profit calculation on the projects where funds are invested.

the bank does not have any liquidity risk emerging from the liability side because no fixed returns are contractually committed to the depositors.

In the extreme event that a majority of depositors want to recall their investments the sharing assets are sellable in the market. The liquidity risk for the banks come into picture if these assets fetch a price lower than their fair market price. But this loss is shared between the depositors and the bank in proportion to their capital contributions. Thus the liquidity risk to the bank is reduced by this proportion.

At present, due to various reasons *musharakah* and *mudharabah* modes form only a small proportion of the asset portfolio of Islamic banks. Most of their assets are in trade based modes or *ijara*. Therefore we now turn to assess the liquidity risks embedded in such instruments.

2. Murabaha: Abstracting away from the operational details, in *murabaha* contract bank buys commodity for a client and sells it to him on a markup price to be paid later. Since *murabaha* receivables are debt payable on maturity they cannot be sold at a price different from the face value in secondary market. This is a source of liquidity risk for the bank, particularly, if average maturity of deposits are shorter than average maturity of *murabaha* contracts or if the deposits are sensitive to market returns. We will call the liquidity risk due to non-re-sellable nature of *murabaha* ‘primary liquidity risk’ associated with this instrument<sup>8</sup>.

There are other risks in *murabaha* that can also give rise to liquidity risk. Let us call them ‘secondary liquidity risk’ associated with this instrument. This is generated when business and other risks associated with *murabaha* contract affect the liquidity. For example, in a *murabaha* contract the ordering client has the right to refuse acceptance of the delivery for some reasons. If he rejects and refuses to receive the commodity the bank is stuck with it until another buyer is found. Thus cancellation risk also gives rise to liquidity risk for the bank. Similarly, if the buyer is unable to pay the due amount on time, which is essentially a credit risk, can also give rise to liquidity risk for the bank. It is also important to note that like any other sale contract there are operational risks in the procedure of carrying out *murabaha* contract. Likewise there are legal and litigation risks if some laws are

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<sup>8</sup> In terms of a related terminology used in conventional banking, this asset is not ‘re-priceable’.



violated or if a dispute occurs. This can also give rise to liquidity risk if the payment of price is stopped.

Some ways can be devised to reduce the secondary liquidity risk. For example, banks require the client to keep his business account with them. They often release funds in installments which contribute towards maintaining the bank's assets protected and liquid funds at its disposal. Our main concern here is the primary liquidity risk of *murabaha* finance.

3. Salam: It is an advance payment commodity sales contract where the delivery of the commodity is deferred.<sup>9</sup> When a bank signs to purchase a commodity on *salam* and pays out the price, its receivable is the commodity due at a specified future date that is stipulated in the contract. In the time of cash needs the bank is unable to exit the *salam* contract by selling it to a third party before maturity because of *sharia* restriction of "do not sell what is not in your possession." Thus there cannot be a secondary market for trade in *salam* contracts.<sup>10</sup> Also, even if the commodity becomes available it may not have an active market. This is a source of primary or direct liquidity risk associated with this finance.

Secondary or indirect liquidity risk arises in *salam* contract when some other risk associated with this contract materializes. For example,

- the credit risk with this contract is that the seller may not be able to deliver the commodity on the specified date. If it does happen, then the liquidity problem of the bank extends beyond the maturity date.
- Having not received the commodity it cannot sell it in the market to convert it into a liquid asset.

Another example of indirect liquidity risk is if the commodity is delivered but the

- quality or
- quantity or
- some other attribute

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<sup>9</sup> Jurists have identified specific conditions for validity of this contract which can be found elsewhere, for example see Usmani (1998).

<sup>10</sup> *Salam* was an exception to this general principle of trade. So *salam* on *salam* cannot be permitted.

of the purchased commodity is below the required specifications causing a legal dispute. The litigation risk which was a risk factor before the delivery now becomes a liquidity risk.

A way to mitigate the primary liquidity risk (as well as to avoid the delivery) in *salam* contract is to use parallel *salam*. The idea is to write a separate offsetting *salam* contract.<sup>11</sup> But the second *salam* has to be (i) an independent contract not contingent on the performance of the first *salam* contract, and (ii) must be with a third party (i.e., not with the counter party in the first *salam* contract or its affiliates).<sup>12</sup> However, as long as the credit risk and the risk of dispute exist the secondary liquidity risk (or indirect liquidity risk) of *salam* still remains, and even increases now because of the two parallel contracts instead of one contract.

4. *Istisna*: It is a manufacture to order contract for yet to be manufactured good on payment of an advance price either in full or in installments. The primary liquidity risk arises in the same way as in *salam* contract, since debt cannot be sold. However, the liquidity risk in *istisna* is lower than that of *salam* because it is permissible in *istisna* for the bank to provide funds in installments or even to defer the whole amount to a future date thus maintaining its liquid assets in the duration of contract. Whereas in *salam* full upfront payment is necessary.

The secondary liquidity risks of *istisna* are the same as for *salam* with two exceptions:

- (i) As opposed to *salam*, an *istisna* contract can be cancelled unilaterally before the manufacturer starts manufacturing. Therefore it involves definition and verification of this event. This feature can contribute to lesser or greater liquidity risk to the bank depending upon how well the event is defined, the ease of verification by a third party such as a court, and how much funds have already been advanced by the bank.
- (ii) Time bound delivery is not a must feature of *istisna* contract, however in current practice it is not left open ended otherwise it would have been hard to define an event of default. Thus secondary liquidity risk that is triggered by

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<sup>11</sup> See Khan (1992) and Khan (1995).

<sup>12</sup> The first condition is in order to meet the *sharia* requirements of: (a) prohibition of contingent sales, (b) prohibition of sale of a thing that is not in possession. The second condition is in order to meet the *sharia* requirement of prohibition of *aeena* or buy-back arrangement.

realization of credit risk is similar to that found in *salam*. The only difference being that some jurists (*fuqaha*) allow penalty for lateness in delivery on the analogy of permissibility of such measure in *ijarah* contracts.<sup>13</sup> This can induce stronger incentives for timely delivery thus reducing the chances and the duration for which the contract remains open to liquidity risk after a default as compared to a *salam* contract.

5. *Ijarah*: In an *ijarah* contract the bank first owns an asset which it leases to its customer. Or the bank gets a tangible asset on lease from a third party and subleases it to the customer. Liquidity risk comes in an *ijarah* contract when the bank has to pay the price of the asset upfront to acquire the asset before it can lease it to its customer. The liquidity risk depends upon whether or not the asset is readily resell-able in the market. This risk is however less than that is found in *murabaha* contract because *murabaha* is not re-sellable and re-price-able. The liquidity risk in hire-purchase (*ijarah muntahi bi tamleek*) is even lower because the sale price is built into the rental installments. However, the rentals cannot be drawn unless the asset is ready to provide usufruct to the lessee, therefore liquidity of this contract also depends on the time required to make the asset useable by the lessee after the agreement.

Above we discussed the liquidity risk of each individual mode of finance. In reality the situation is more complicated as the overall liquidity risk will depend on the proportion of each of these contracts in the bank's portfolio and the concentration and exposure to individual parties through them.

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<sup>13</sup> Usmani (1998)

## **Current Practices of Islamic Banks to Control Liquidity Risk:**

In order to curtail liquidity risk Islamic banks resort to various methods. We will discuss only the financial measures taken by these banks, however there are other internal administrative and external regulatory measures too that are not discussed here.

1. Deposit Management: Some Islamic banks use deposit side management policy in opening of the new investment deposits. Unless the deposits are employed in profit generating opportunities the banks would be unable to pay any returns to their depositors. Therefore, to avoid the risk of low returns to depositors the banks first line up promises from the intending entrepreneurs for *murabaha* and other types of finance and then advertise for opening new investment deposits suitable for those investment opportunities. Such liability management policies are easier than asset management policies for small banks.

2. Choice of Mode of Finance: Another method used by the banks to reduce their liquidity risk is their choice of mode of finance. *Murabaha* is chosen overwhelmingly by the banks even though it is not resell-able (liquidate-able) before maturity, it lends itself to any fixing of maturity at the time of contract. This is a feature which is not possible in *mudharabah* or *musharakah* contracts where accrual of profit to the bank is tied with the timing of the project cycle. Further, the secondary liquidity risk that results from credit risk associated with *murabaha* are curtailed by the banks by requiring marketable collateral from the entrepreneurs.

3. Mixing of Deposits: Many banks mix their current (or demand) deposits with investment deposits in their use of funds. Current deposits are loan form depositors to the bank therefore no return is required to be paid on them by the banks.<sup>14</sup> While investment deposits earn return by way of *mudharabah* contract between the bank and investment depositors. So far, the current deposits are easy to come in the name of Islam and they constitute a big portion of total deposits in most of the Islamic banks. These

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<sup>14</sup> Some banks pay a return on current deposits in cash, kind, or premium service by treating the deposits under *wadea* contract. Some other banks treat current accounts as *amanah*. Both these treatments are problematic. As no gains can be promised in the former contract while in the later contract bank cannot use funds or if it does with the permission of depositor, it is not liable for any loss.

deposits are also very stable against changes in the rates of return elsewhere in the market.

This practice of mixing the current and the investment deposits have provided Islamic banks with a cushion of liquidity as well as an earnings opportunity which they freely utilize. This practice has allowed the banks to hide their losses if it occurs and have availed them the advantage to take away profit when it occurs. Good practice of liquidity risk management should be transparent and should not result in distorting the actual performance of the banks.

4. Establishment of Reserves: This is another practice of Islamic banks for (i) insuring against liquidity risk that may stem from deposit outflow triggered by higher returns available elsewhere in Islamic or conventional banks, (ii) for insuring against losses due to default that can give rise to liquidity shortages if not provisioned for.

Such provisioning have deep implications for Islamic banking, therefore we would like to discuss it in some details.

Standard 11 of Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) covers the recommendations concerning provisions and reserves of Islamic banks. A field study conducted by AAOIFI before formulation of Standard 11 revealed large variation in practices pertaining to provisions and reserves among the Islamic banks. Shihadeh (2003) has summarized them as follows:

- “Some Islamic banks deduct a specific percentage from the mudaraba income as provision, while other Islamic banks deduct provision from their own mudarib share by charging it in their expenses, after the allocation of profits between the mudarib and the unrestricted investment account holders. A third set of Islamic banks deduct the provision entirely from the income of investment account holders.”
- “Some Islamic banks use the terms ‘reserves’ and ‘provisions’ interchangeably. They set aside specific amounts from their own profits and/or the profits of investment account holders for specific purposes and call these amounts ‘provision’.”
- “Many Islamic banks form only one type of provision while others form two types, namely specific provision and general provision.”

- “Some Islamic banks present the provisions as liabilities in the statement of financial position, while others present provisions as an asset valuation item (contra-asset).”
- “Most Islamic banks do not disclose the methods they use to form provisions. Other Islamic banks do not give adequate disclosure on the changes that occur in the balance of provisions.” [Shihadeh (2003), p.5].

The AAOIFI Standard 11 tries to harmonize the practices across banks. It does not apply to shareholders equity and also not to the depreciation provision which represents adjustment to the book value of assets. It defines provisions as setting aside certain amount from income as expenses to revalue “receivables, financing and investment assets”, when collecting these amounts is doubtful, or when their value have been depreciated. It defines two types of provisions:

- (i) Specific Provision which is the amount set aside to reflect devaluation of a certain asset i.e., write it down to its current cash equivalent value.
- (ii) General Provision which is the amount set aside to reflect a potential loss that may occur of current unidentifiable risks in relation to Total of Assets “Receivables and Investment and Financing”.

Similarly, it defines reserves as assets “formed when the bank deems prudently necessary, after taking the consent of holders of investment accounts. These reserves are considered as part of shareholders’ equity and/or the rights of investment account holders, according to the relevant case. When the balance exceeds the prudent excess, the amount shall be credited to relevant party’s income”.<sup>15</sup> Two types of reserves are recommended:

- (i) Profit Equalization Reserve, “which is deducted from murabaha income before allocating the share of mudarib for the purpose of maintaining a certain level of return on investments for investment accounts, as well as for increasing equity value.”
- (ii) Investment Risk Reserve, “which is deducted from income of investment accounts, after deducting mudarib share, to cater against any future losses for investment account holders.”

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<sup>15</sup> This is to abide by the Basel Accord that defines a ceiling on provisions as part of tier-2 capital and that the tier-2 capital cannot exceed tier-1 capital.

These features in provisioning are more sophisticated than the provisioning used by other conventional banks in that it not only accounts for current specific and general losses but goes a step further in taking a forward looking approach to account for expected losses. This is closer to what is termed in the current regulatory literature as 'dynamic provisioning'. Fundamental principle in dynamic provisioning is to set aside provisions against outstanding loans in each accounting period taking into consideration long-run expected loss. Focus on expected rather than actual losses helps the bank to smooth out the effect of actual loan losses on bank's profit. As stated by Mann and Michael (2002) p.130, under this approach "bank's income would no longer be measured net of actual losses, but net of contributions to the expected loss provision. Actual losses would be set against the expected loss provisions, including expected loss provisions accumulated in past years. However, if a bank made a loss that was greater than the accumulated dynamic provision, then it would probably be appropriate for the excess to feed through directly into the profit and loss account."

While the Provisioning, Profit Equalization Reserve, and Investment Risk Reserve control for the liquidity risk of the bank these features also introduce a number of problems of their own for Islamic banking.

**First**, there is fiqh issue that justice requires giving the due share to its rightful owners. The profit belongs to all current shareholders and investment account holders but the reserves retained out of it will benefit future stakeholders who may be different from the existing ones.

**Second**, even if this problem is solved by obtaining a pre-permission of these stakeholders for such transfers, there are economic issues as well. It breaks the link between performance of the bank and its reflection in profits hence makes the accounting statements less transparent. Hence profits stop serving as a market signal for depositors and the market discipline feature that is supposed to be an important feature of Islamic banking is lost.

**Third**, in extreme cases it also opens up the possibility to manipulate the expected loss estimates and adjust the reserves to hide losses and bad performance of the bank.

**Fourth**, the transfer of shareholders' portion of profit to investment account holders' profit introduces what AAOIFI termed as 'displaced commercial risk' for the shareholders.

**Fifth**, the big advantage of Islamic banking, frequently mentioned in the theoretical literature, of endogenous tying of the asset and liability sides of the bank is lost.

To circumvent these problems certain features can be introduced such as (i) requiring the provisions and reserves to be made by a well defined, consistent and transparent method; (ii) improve corporate governance so that manipulation is minimized; (iii) regulatory authorities should require the banks to reveal ex-ante estimates and ex-post actual losses to help them gauge the reliability of expected loss estimates; (iv) the balance sheet and income statements should explicitly state the current position of profit equalization reserve and investment risk reserves as well as the changes that has taken place in them during the accounting period. This will bring back the transparency of the banking business to its customers, depositors and shareholders.

In general these reserves are aimed to support the bank against withdrawal risk coming from commercial pressures hence they support the liquidity in indirect manner. The resources tied in these reserves may not be sufficient to cater for the liquidity needs of the bank at time of emergency.

5. Deposit Insurance: Although deposits under *mudharaba* contract are supposed to earn returns only through investments that are capital uncertain, investment deposits in some jurisdictions are protected by the governments or central banks. This reduces the likelihood of bank-runs and hence the liquidity risk of the banks but at cost of introducing moral hazard and violation of *mudharaba* principle. There are however some private insurance measures too taken by the banks themselves. For example, Jordan Islamic bank runs a mutual insurance fund for debtors of the bank since 1994.<sup>16</sup> Under this scheme debtors of the bank participate in the fund to compensate all or part of the loss which any of them may incur due to death of the owner or insolvency of the business. In this way guaranteeing their re-payment obligation to the bank.

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<sup>16</sup> Shihadeh (2003) p.10.



6. Mutual Interbank Deposits and Loans: There is no well organized inter-bank market for Islamic banks because there are issues in designing of suitable short-term instruments and small number of Islamic banks in individual countries. In some jurisdictions Islamic banks form mutual inter-bank reciprocal loan agreements. These schemes work on zero net use of this facility by each bank. They or they work on the basis of short-term *mudharaba* funds that entitle fund supplier a portion of profit in the fund receiving bank. At the international institutional level there has been some progress in the form of coming into being of Liquidity Management Centre in Bahrain that will allow the member banks to manage their idiosyncratic liquidity risks. The concept of Time Multiple Counter Loans (TMCL) may be of use here.

7. Salam Sukuk: Bahrain Monetary Agency has issued a series of *salam sukuk*s particularly to broaden the depth and liquidity of the market.<sup>17</sup> They have a maturity of 91 days and Aluminium has been chosen as the underlying asset of the *salam* contract. The structure is as follows: The Government of Bahrain sells a specified amount of aluminium, on deferred delivery basis, to the buyer [Islamic bank(s)] in exchange for advance payment. At the same time the Islamic bank(s) appoints the Government of Bahrain as an agent to market the quantity of aluminium at the time of delivery through its channels of distribution. This is same as commodity *murabaha* but institutional arrangements are such that the counter party is a sovereign thus reducing the credit risk for the bank and saves cost as compared to ordinary commodity *murabaha*. However, these *salam sukuk* are not trade-able instruments. Thus liquidity risk management opportunity is limited to buy and hold strategy.

8. Institutional Ijarah Sukuk: This has been new development. With the floatation of *ijarah* based trade-able certificates by the governments of Bahrain and Malaysia as well as by Islamic Development Bank the Islamic banks have found an instrument to hold liquid assets that can simultaneously earn them some return and trade-able in the secondary market. This reduces the liquidity risk faced by the Islamic banks by lowering their cost of holding liquid assets. However, so far the tendency of the Islamic banks is to buy and hold to maturity. Hence the secondary market is not very active yet.

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<sup>17</sup> Information on *salam sukuk* is from Abdul Majid (2003)

## Further Needs and Development of Infrastructure Institutions

The issue of liquidity risk and its management for Islamic banks is a pressing issue since quite a while. Optimal solution to it requires development of infrastructure institutions to provide support and cheaper choices to the industry. In this regard a step forward is the establishment of International Islamic Financial Market (IIFM). It is an independent, non-profit international organization with the objective to develop an active international financial market based on *shari'a* rules and principles. One of the chief missions of the IIFM is to facilitate international secondary market trading of Islamic financial instruments by providing independent *shari'a* enhancement and issuing guidelines for issuance of new products. This should considerably enhance cross-border acceptance of Islamic financial instruments and strengthening cooperation among Muslim countries. The IIFM is headquartered in Bahrain, and started its operations in April, 2002. In collaboration with Labuan International Financial Exchange (LFX) and the Bahrain Stock Exchange (BSE) it was able to arrange the secondary listing of the Malaysian Government USD600 million *Sukuk Al-Ijarah* on the BSE in September 2003. These secondary listings on BSE, are expected to bring about reciprocal secondary listing of Bahraini *Sukuk* on the LFX.

A related development is the formation of Liquidity Management Centre (LMC) in Bahrain, which is an implementation arm of IIFM. It seeks to develop an active secondary market for short-term *shari'a* compliant treasury products. One of the purpose of this initiative is to solve the excess liquidity problem of Islamic banks. At present the Islamic banks are using costly methods of liquidity management including short term commodity *mudarabah* and other such practices. The LMC is expected to facilitate the creation of an inter-bank money market that will allow Islamic Financial Services Institutions ("IFSI") to effectively manage their asset liability mismatch. Allowing Islamic banks to take positions as providers of funds and users of funds, with LMC as market maker.

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