CHAPTER 11

Risk Management

Government Support

Historically Islamic banking and finance (IBF) has encountered five main challenges:

(i) Weak enabling infrastructure;
(ii) Lack of innovative products and liquidity management tools;
(iii) Low level of penetration;
(iv) Transparency in disclosures; and
(v) Standardization in the products and services.

To address all these issues one needs the political will. IBF provides a sufficient range of products and flexibility which can easily meet the requirements of modern banking.

Any State that wishes to eradicate riba from the economy can adopt the IBF model in most of its operations.

For the development of a true Islamic money and capital market a government needs to provide a strong regulatory framework through proper legislation with the provision of sovereign Shari'a compliant liquidity management instruments. Proper liquidity management instruments, awareness, training and education of the masses can further deepen Islamic financial markets.

Risk Management

Generally risk is known as the likelihood of loss or a situation where there are chances that the desired results will not be achieved. But we must not confuse "risk" with "ambiguity" and "uncertainty". Risk is different as it is based on some probability of an occurrence of a certain event, which can be calculated. Ambiguity and uncertainty, on the other hand, are based on lack of knowledge or information and are not calculable. Moreover, individuals behave differently in situations of ambiguity and uncertainty whereas in the presence of quantifiable risks, individuals' behaviour is more or less the same. Therefore, we must be sure that the situation we are planning to manage is not ambiguity or uncertainty.

Risk management can be defined as a process of managing the risk associated with a business. Risk management is a discipline that can adequately capture and manage all major risks to which a financial institution is exposed. The risk management framework in a financial institution broadly includes the following segments:

(i) Board and senior management's oversight.
(ii) Organization's structure.
(iii) Internal controls.
(iv) Risk management process.

Risk management is a concept that is not only accepted by Islam but is required to perform the tasks needed to achieve goals and objectives in this world and the hereafter. This is evident from the Quran and sayings of the Prophet Muhammad that encourage mankind to use his/her rational faculties (aql). Islam is not against risk management; it is against the extremity on either side, i.e. not taking risk for fear of making loss only or taking excessive risk by indulging in gambling or speculation (maysir). What Islam promotes is the act of taking calculated risks with the expectation to make gains.

> "In a Hadith, which is frequently used by the proponents of takaful, Amer bin Ummiyah asked the Prophet Muhammad, should I leave my camel untied and trust in God? The Prophet responded, "tie your camel first then put your trust in God".

Effective risk management improves planning processes, reduces the likelihood of potential cost surprises and prepares the organization for challenging and undesirable events. Risk management is very effective in improving resource allocation, efficiency and general performance by developing a positive organization culture where people and departments understand their purpose, role and direction. Risk management helps in designing a clear process of decision making, transparency and accountability. As a whole risk management is about exploiting the opportunities for profit by avoiding the downside and adding value to a company with the best use of available resources.

Despite the above benefits, a risk manager must keep in mind that managing risks is not a perfect science, and neither can it identify business opportunities. However, it is helpful in predicting losses and identifying the most parlous scenarios for a given event. Risk management can recommend how to change the risk profile of an organization.

The risk management process in any organization includes the following steps:

- Risk Identification and Evaluation.
- Risk Measurement.
- Risk Mitigation and Control.
- Risk Review and Monitoring.
- Risk Communication and MIS.

Risk Identification and Evaluation

In order to manage risks, a risk manager must identify and evaluate the risks by establishing the context of the organization. A risk manager should establish whether the risk is internal or external. Identification of risk is necessary to evaluate as to what could happen, how it could happen and why could it happen. Risk can be hidden in the existing as well as the future businesses of a financial institution; for example, risks inherent in a financial institution include [a] credit [b] market [c] liquidity [d] operations [e] regulatory and legal.

The Islamic financial institution (IFI) is exposed to the same risks to which a conventional financial institution is exposed. But a key difference between Islamic and conventional financial products is the Shari'a compliance requirement for the former. In fact Shari'a compliance is the principle reason for the existence of IFIs. The major risks of conventional financial institutions and their relevance to the IFIs are discussed hereunder.

Credit Risk

Credit risk is a risk of default by the counterparty. In cases where financing or funding is involved, there is always settlement risk and the chance forcounterparty default. It means that the counterparty may not be able to honour his commitment on the due date, or at all. Credit risk exists in all modes of Islamic financing, however, the probability and intensity of credit risk differs according to the product. For instance, in the arrangement of ijara, credit risk normally exists where payment is delayed or there is complete cessation of rent. The IFI does have the option to recover its assets from the customer in the case of default, but the probability of total loss of the asset cannot be ruled out.

Under the arrangements of musharaka and mudaraba the credit risk is comparatively higher as compared to the other modes of investment. But in musharaka ventures where there are no sleeping partners, credit risk is considered to be lower than the mudaraba arrangement.

Credit risk is higher in those murabaha transactions where the IFI has not obtained any collateral or guarantee. Credit risk under the arrangement of istisna is higher as products are delivered in the future. However, credit risk in istisna as compared to the salam transaction is lower due to payment on a staggered basis.

Market Risk

Market risk is the effect of changes in the prices of assets traded in the markets. The objective of market risk management is to manage and control market risk exposures within acceptable parameters while optimizing the return. Market risk affects the IFI through the following channels: [i]equity investment, [ii] commodity price, [iii] rate of return, or [iv]exchange rate.

- **Equity Investment Risk** Equity Investment is of two types: [a] Investment in publically traded shares, and [b] direct investment in the business or venture under the arrangement of mudaraba or musharaka. Both have common equity investment risks like rate of return and liquidity risk, etc. However, direct investment into ventures does not provide easy exit mechanisms in case of need whereas investment in publically traded shares provides easy exit through stock exchanges. This has its own risks such as changes in the market value of the share price due to various market forces and economic conditions of the country.

- **Asset or Commodity Price Risk** There is a possibility that the goods are sold at a price which may not cover its costs, or the goods are not sold at all. The risk is prominent in ijara, murabaha, salam and istisna due to possible fluctuations in the price of commodities.

- **Rate of Return Risk** This is the risk of not receiving the expected return on certain transactions due to economic conditions or changes in the pricing benchmark. Deteriorating economic conditions may squeeze expected profits of musharaka and mudaraba ventures. Any adverse change in pricing benchmark rates can reduce the spread and increase the costs for the IFI if the liabilities have not been booked on the same pricing bench mark.

- **Breach of Promise by the Customer** Refusal of a customer after promising to buy the product will compel the IFI to dispose it to some other buyer or in the open market.

- **Exchange Rate Risk** Exchange rate risk refers to the adverse impact on the local currency due to change in the exchange rate of foreign currencies. Where the IFI is involved in foreign trade transactions, and it has taken foreign currency positions, then it will be exposed to exchange rate risk.

Liquidity Risk

Liquidity risk arises when the IFI is unable to meet its financial obligations once they fall due or fails to fund an asset as and when required thereby incurring unjustified costs and losses. It includes the risk of liquidating assets in a timely manner and at reasonable prices. The IFI faces liquidity risk due to incorrect forecasts and judgment on its cash flows, unanticipated change in cost of capital, abnormal behaviour of financial markets, and breakdown of the payment system. Liquidity risk is involved in all those cases where credit risk is involved.

Credit defaults and unpredictable rates of return, specifically under mudaraba and musharaka, may add to the liquidity problems of the IFI. Under ijara, diminishing musharaka and all modes of mudaraba, liquidity risk of the IFI is related to delay or default in payment of installments by the customers. The IFI can suffer greater liquidity risk if it has invested in illiquid and non-tradable assets for the customer.

Operational Risk

Operational risk is the risk that arises from human error or deficiencies in information systems, technology, infrastructure, internal process or controls, fraud, damage to physical assets, negative publicity about business practices, and high withdrawal of deposits, inventory or commodities mismanagement. Lack of innovation, infrastructure and technology may also give rise to operational risks.

Operational risks are also connected to the legal enforceability of the contracts. It is present if certain clauses are unclear and it is difficult to fix liability. In such cases a dispute can arise which may lead to court cases against the IFI or the customer.

Operational risk arises if transactions are not completed. If a large transaction, failure to complete could affect overall operations of the IFI. Under ijara contracts operational risk is higher because the asset is possessed and used by the lessee whereas the major damage and repair are borne by the IFI. Negligent use of the asset may cause operational loss to the IFI but the magnitude can be different depending on the size of the transaction. Moreover, in contracts, where the maintenance cost of an ijara asset exceeds the amount of rental income and adds continuous losses to the IFI, this may also end up with the termination of the contract.

Regulatory and Legal risk

Regulatory and legal risk is the risk of adverse change in the regulatory framework. It also arises due to failure of the organization to comply with the legal and regulatory framework prescribed by the various agencies of the government, specifically the regulator authority. Any serious violation of the regulatory and legal framework may lead to the wind up of the IFI.

Shari'a Non-Compliance Risk

Shari'a non-compliance is an additional risk specific to IFIs. It can impact the overall reputation of the IFI, and if managed poorly, can result in the loss of customers, business, and result in regulatory actions. Shari'a non-compliance can injure the profitability of the IFI as no IFI is allowed to incorporate income derived from Shari'a non-compliant activities. Shari'a non-compliance by mudarabas operating in Pakistan is a criminal offense. Shari'a non-compliance risk exists in all types of Islamic financial products and there is a reputational risk involved if products do not adhere to the Shari'a.

Every Islamic financial product has its own unique risk profile. Each risk discussed above is present in products but to varying degrees. Moreover, it is not necessary that a risk occur in isolation. It may attract the other risks as well. For example, a credit risk may expose the IFI to liquidity risk. Likewise market risk can attract credit and liquidity risks, and so on. A risk manager must be aware that risks affecting the IFI may not occur in isolation and that the risks are always inter-connected.

Risks Related to Islamic Financial Products

Besides the common risks affecting Islamic financial products like credit, liquidity, operational and Shari'a non-compliance, there are some specific risks. For better understanding of risks associated with IFIs we must understand the structure of the products being offered by IFIs. Here is a brief review of Islamic financial products and risks attached to them.

Ijara and the Risks

Ijara refers to a Shari'a compliant lease. It is a contract whereby the owner of an asset transfers the usufruct of the asset to another person for an agreed period and consideration. It involves the following risks:

- Supplier's Default Risk: Choosing a bad supplier would result in credit, operational liquidity and reputational risk to the IFI. The delay on part of the supplier would cause delay in supply of asset to the customer, delayed execution of the ijara agreement and an opportunity cost to the IFI. Excessive delay or default of the supplier can result in business and reputational loss to the IFI.

- Asset Price Risk due to Breach of Promise by the Customer. Counterparty and market risks are intrinsic to murabaha and ijara, where the customer does not honour his promise to acquire the product after acquisition by the IFI. In such cases the IFI faces credit risk in case of a non-tradable asset, and market risk on forced sale of tradable items.

- Risk of Loss During Intervening Period: After acquisition of a product or commodity for the purpose of murabaha or ijara, the IFI is exposed to operational risk (namely, damage, spoilage, theft, etc.) and additional carrying cost till the delivery of the goods to the customer.

- Impairment Risk: Impairment is depletion in the carrying value of an asset. Under the ijara agreement the customer is under no obligation to buy the asset at the end of the ijara period, hence the IFI may face asset price risk due to unexpected depletion in the salvage value of the asset.

Mudaraba/Musharaka and the Risks

Mudaraba is a special type of partnership between two parties, where one partner, the rabb-ul-mal, provides the capital to the party with the skill to manage, the mudarib, to run the business on agreed terms and conditions. On the other hand, musharaka is a partnership in which all the partners can manage and share the profit or loss of a joint venture on agreed terms and conditions. The risk profile of both contracts is more or less the same. Credit, liquidity, equity investment and rate of return risks are prominent. The risks involved in both arrangements include:

- Adverse Selection of Partner: Selection of a partner is a very important task in the musharaka arrangement. Moral hazards and incapacity of the partner may lead the IFI into financial distress and losses.

- Absence of Collateral or Guarantee: As both are types of partnership collateral or guarantee is not mandatory, which makes the investment riskier for the rabb-ul-mal.

- Incapacity of Partner (Mudarib): Under the mudaraba arrangement, putting money in such a venture where the mudarib is incompetent to run the business may turn the investment of the IFI into losses.

- Misuse of Funds: Use of funds for the purposes other than the agreed business can attract credit risk.

Diminishing Musharaka and the Risks

Diminishing musharaka originated from the musharaka model. Under diminishing musharaka, the IFI enters into joint ownership of an asset with one or more customers and allows the customer(s) to buy the ownership rights of the IFI in installments or a lump sum. The IFI receives its share of the profit or rent on the portion of its investment. Due to its structure, diminishing musharaka inherits the risks of musharaka and ijara and is a comparatively low risk product compared to musharaka due to its structure and guaranteed return.

Murabaha/Musawama and the Risks

Murabaha and Musawama are simply sale transactions, with the difference being cost disclosure. In the former, cost is disclosed. A financial institution, on request of a customer, buys the product to sell to the customer on deferred payment basis and on profit. The IFI is exposed to the following risks under murabaha and musawama arrangements:

- Supplier's Default Risk: Supplier's default risk under murabaha and musawama are more or less the same as discussed under ijara.

- Asset Price Risk due to Breach of Promise by the Customer.

- Risk of Loss during the Intervening Period.

Salam and the Risks

In a salam contract, one party buys future produce, at agreed terms, with immediate payment of the agreed price to the producer. The salam contract is commonly executed on agricultural products. It inherits the following risks:

- Product Quality Risk: The produce may not be of the required quality.

- Natural Calamities: If the salam is on agricultural produce, it is always exposed to the risk of natural calamities, catastrophes, etc., due to which delivery risks are expected to be more than normal in salam.

- Abnormal Price Fluctuations: Leading to Breach of Contract by the Producer After signing a salam contract, abnormal price hikes may work as a disincentive in fulfilling the contractual obligations by the customer. In case of an unexpected hike in price the customer may find it beneficial to default in delivery of the produce to the IFI, and prefer to sell the produce independently in order exploit the abnormal increase in price.

Istisna and the Risks

Istisna is similar to a salam contract in which one party orders another to manufacture and provide an asset, the description of which, delivery date, price and payment dates are all set in the contract. It is embedded with the following risks:

- Manufacturer's Default Risk: This is Similar to the supplier's default risk discussed above.

- Risk of Quality and Specification: The buyer is exposed to quality risk where the manufacturer or contractor fails to supply the goods or construct the project according to the requisite quality and specification.

Risk Measurement

After identification of the risks, the next step is risk measurement in order to determine their impact on operations, profitability and capital of the IFI. Until the risks are assessed and measured, it will not be possible to control them. Accurate and timely measurement of

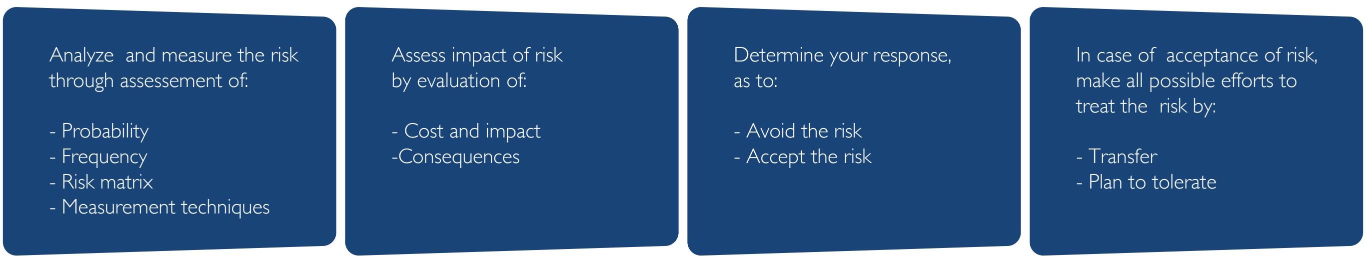

Figure 1: Risk Management Process

Table 1: Basic Principles of Risk Management

1- Risk Management Policies: Every type of risk can be minimized with sound and well-defined policies, proceedures and strategies. The IFI should have in place comprehensive risk management policies, reporting processes, appropriate board and senior management oversight to identify, measure, monitor report and control relevant categories of risks.

2- Shari'a Compliance: Shari'a compliance should be given prime importance, and the IFI should take appropriate steps to comply with Shari'a rules and principles and to ensure the adequacy of relevant risk reporting to its board and regulatory authority.

Appointment of Shari'a Advisor or Board: The IFI should appoint an independent Shari'a advisor or board to ensure compliance with Shari'a rules and principles.

Qualified Management: To conduct business in accordance with Shari'a principles and to ensure Shari'a compliance, the IFI should hire the services of professionals who have sufficient education and training in the area of Islamic finance. The regulatory authority should ensure that at least one member of the board of directors has sufficient knowledge and expertise of Islamic finance and the Shari'a.

3- Operational Risk Management: Operational risk may be both internal and external as it may cause loss resulting from inadequate or failed internal processes, people and systems or from external events, etc. The Basel Committee has recommended some best practices in the area of operational risk, which are:

a) Board approval.
b) Independent internal audit.
c) Management implementation through policies, procedures etc.
d) Contingency and continuity planning.
e) Disclosure.

4- Due Diligence: Credit or counterparty risk needs special attention of the IFI when establishing a relationship. The IFI should carry out a due diligence review of the counterparties before establishing a relationship. Financing facilities and counterparty relations must be considered on the basis of integrity, repute, capacity, capital employed, collateral and legal capacity of the customer. The IFI can reduce its credit risk by extending the facilities on the basis of Five Cs (i.e. Character, Capacity, Capital, Collateral and Covenants) of lending.

To minimize the equity investment risks, the IFI should conduct in-depth analysis of the economic conditions of the country, sector and investee company. The investment decision should be based on reliable market information, credit rating of the issuer or issue, reputation of the management and future prospects of the investee company or the venture. IFIs should avoid investing in such industries, sectors and scripts which are uneconomical, dying or remain highly volatile during the last six months.

5- Internal and External Rating Methods: The IFI should use internal or external rating methods to minimize counterparty risk. This can help achieve a number of purposes, at the time of disbursement as well as subsequent review, like section of credit, quantum of exposure, period and pricing of the facility, etc. The IFI should also rely on its internal rating for establishing business relations.

6- Collateral, Pledge (Rahn) and Guarantee: The IFI should ensure that sufficient collateral or security either in the form of mortgage, hypothecation or pledge, has been obtained before granting facilities to its customers. In addition to the collateral, guarantees supplement the security in improving the quality of credit. Commercial guarantees and personal guarantees of high net worth individuals are extremely important tools to control credit risk.

7- Credit Administration: IFIs should establish a specialized and separate credit administration department to minimize the legal risk and timely follow up and close contact with the customer to save the defaults.

8- Stress Testing: For equity investment, the IFI should ensure that their valuation methodologies are appropriate and consistent, and should assess the potential impact of their methods on profit calculations and allocations. To be more prudent the IFI should conduct stress testing of their investment portfolio in order to assess the impact at various stress levels.

9- Locking the price at the outset: In case of ijara and murabaha, the IFI can mitigate the price risk by locking the prices with the supplier and the customer at the outset.

10- Use of similar benchmark for assets and liabilities: The IFI can mitigate its rate of return risk by using similar pricing benchmarks for its liabilities and asset.

11- Use of Contingency Funding Plan (CFP): The IFI should put in place a Shari'a compliant liquidity management framework to minimize the liquidity risk by maintaining adequate liquidity to meet its obligations by having access to liquidity through, sponsors, creditors, fixed asset realizations and arrangements such as sale and lease-back. The IFI can use CFP to ensure that:

a) A reasonable amount of liquid assets are maintained.
b) Measurement and projection of funding requirements during various scenarios,
c) Access to funding sources.

12- Diversification of Portfolio: The IFI should avoid concentration of risk by allocating sector limits for investments and facilities. The portfolio should be diversified with the objective that if the IFI has multiple assets in its portfolio and where one is not doing well, it has the others that are outperforming so as to reduce the overall volatility of the portfolio.

13- Limit Setting: The IFI should prescribe limits for taking exposure on a single script, customer, group and supplier, remaining within the limits prescribed by the regulatory authority.

14- Undertaking to Make the Loss Good: In cases, like ijara, murabaha and musawama, where there is a doubt that the customer will not honour his promise to deliver or take the delivery or possession of the assets, acquired for him, an unconditional undertaking to make the loss good, in case of forced sale or disposal of the asset, should be obtained from the customer to bind him to honour his promise.

15- Advance Deposits (Hamish Jiddiya): To minimize the chances of breach of promise by the customer, the IFI should obtain a certain percentage of the cost of the commodity as advance payment, up-front payment or commitment fee at the time of promise.

16- Appointment of Agent: To avoid the loss of the intervening period, in the cases of murabaha, musawama and ijara, the IFI can eliminate the risk by appointing the customer as an agent for the IFI to buy the asset directly from the supplier.

17- Promise to Share the Profit beyond Certain Limits: In cases of salam and istisna if there is a doubt that in case of abnormal increase in prices, the producer can prefer default to get the benefit of an abnormal increase in price. The IFI can minimize the risk with a condition that a certain level of price fluctuation will be acceptable, but beyond that point the gaining party shall compensate the other party.

18- Penalty (al-Jazāa): A penalty is allowed by the Shari'a scholars to be made part of the agreement in order to deter the customers from any potential payment default or late payment. However, such penalty shall be donated as charity without making it a part of the income of the IFI.

19- Use of Funds: In case of equity investment on musharaka and mudaraba basis the IFI should ensure that the partners are using the funds for the purpose of its business.

20- Takaful of Properties and Assets: To minimize the risk, IFIs should arrange takaful for every type of its properties and assets. Takaful is another good source of transferring the risk of loss by fire, theft, marine accident, shipment failures, earthquake, riots, terrorism, etc.

risk is essential for an effective risk management system. A true assessment of risk gives a clear view of the IFI's affairs and helps in deciding future action plans. Figure 1 identifies steps that can help the IFI assess, evaluate and measure any of its risk.

The IFI is required to undertake some form of internal evaluation and rating of their assets and customers. There are different models available in the market to measure, evaluate and assess the risk weights. However, a financial institution can measure different risks by using various techniques, tools prescribed under BASEL, including but not limited to internal risk rating, value at risk (VaR), gap analysis, duration analysis, scenario analysis, capital assets pricing models, maturity ladders, SWOT analysis or any of the available models or techniques. However, the management should ensure that the opted model measures the true risk profile of the IFI to the maximum extent.

Risk Mitigation and Control

For management of risk, the IFI should follow the following basic principles of risk management prescribed by financial sector regulators, the Islamic Financial Services Board (IFSB) and the Bank for International Settlements (BIS) in their various publications. Some of the principles are given in Table 1.

Risk Review and Monitoring

Continuous monitoring and review are vital for an effective risk management system. The primary purpose of monitoring and review is to ensure compliance and provide important feedback with regard to assurance over the efficiency and effectiveness of controls. It enables the IFI to analyze and learn lessons from successes and failures.

A committee or department, independent from the risk taking units, should be established to provide assistance in risk monitoring and review to ensure that:

- All risks are properly monitored and reviewed on periodical basis.
- Periodical review of the rating assigned to every obligor is conducted.
- The results of such review are properly documented and reported directly to the Board or management etc.
- Provision for the new risks or changes in already identified risks is made so that the change can be appropriately addressed.

Risk Communication and MIS

Communication, consultation and regular feedback must take place at all steps in the risk management process. The effectiveness of the IFI's risk measurement process is highly dependent on the quality of management information systems (MIS). Therefore, it should have a MIS in place, capable to raise early warning signals and to ensure that exposures approaching risk limits are brought to the attention of senior management.

Since risk management is imperative in strengthening the regulatory and supervisory oversight and risk profile of the IFI, the implementation of an effective risk management framework will help management to achieve the objectives of safe and sound business in conformity with standardized business norms.

We have not comprehensively tackled the full extent of risk management as every type of financial service has its own risk profile which needs a different approach according to context and needs. However, broadly speaking, the framework discussed can be used with minor alterations.