

# INSTRUMENTS AND RISKS IN ISLAMIC FINANCIAL INSTITUTIONS

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## Abstract

*The nature of specific risks facing Islamic Financial Institutions (IFIs) together with the virtually unlimited number of ways available to them to provide funds through the use of combinations of the permissible Islamic modes of financing, profit and loss sharing (PLS) modes of financing and non-PLS, raises a host of issues among others in risk management. This paper presents and explains the different types of risks arising from Musharakah, Mudharabah, Murabahah, Salam, Istisna and Ijarah Islamic products. Further, it highlights how financial institutions that provide such Islamic financial contracts are exposed to several corresponding underlying risks, as well as how these risks are managed.*

## Introduction

Islamic Finance is developing at a remarkable pace. Studies by Moody (Moody's Report, April 2006) and the General Council for Islamic Banks and Financial Institutions (GCIBAFI, 2005) stated that the number of Islamic Financial Institutions (IFIs) was expanding worldwide. The studies reported that there are more than 200 IFIs with a total combined asset in excess of US\$200 billion, growing at 10-15 percent a year. They are concentrated in the Middle East and South East Asia (with Bahrain and Malaysia being the biggest hubs), but also appear in Europe and the United States.

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The Islamic financial services industry includes an increasingly diverse range of institutions, such as commercial and investments banks, mutual insurance and investment companies. Banks, however, remain as the core of the financial services in many Islamic countries. In 2006 the Islamic banking assets in Malaysia represented RM113.5 billion (US\$30.9 billion) which constituted 11.8 percent of total assets in the Malaysian banking sector (Khan and Bhatti, 2008), with the Islamic money market channeling about RM30 billion-RM40 billion monthly.

The growth of the industry and its potential impact have raised public policy issues, particularly on IFIs' risk management practices as Islamic finance generates mixed perceptions on the risks it introduces. Apart from the exposure to the risks that are faced by conventional banks, Islamic banks face additional risks as a result of the *Shari'ah*-compliant (Islamic law) nature of the business. Merton (1995) raised concerns on IFIs' inherent risks and their possible spillover on the rest of the financial system. Thus, it is becoming increasingly imperative that Islamic financial institutions put in place risk management systems that address the unique characteristics of the industry.

Further, the recent US sub-prime mortgage crises which evolved into a global financial crisis have revealed that failure of the risk management practices together with low interest rates, excessive leveraging and credit growth were the fundamental factors that ignited the crisis (Roubini, 2008; Mirakhor and Krichene, 2009). Among other things, Federal Reserve Chairman Ben S. Bernanke concluded that "capital adequacy, effective liquidity planning, and strong risk management are essential for safe and sound banking; the crisis revealed serious deficiencies on the part of some financial institutions in one or more areas" (Bernanke, 2009). Even though the crisis had a limited impact on IFIs, it did not emerge totally unscathed and there is no reason for complacency. Thus, the crisis provided the necessary impetus for IFIs to evaluate their own risk management practices within the global financial architecture.

The risk management systems will have the capability not only to address compliance and regulatory requirements, but also to help IFIs in creating value to their stakeholders and investors by efficient management of their on and off balance sheet risks. Efficient risk management is absolutely important as risks may be a threat to IFIs' survival and success.

This paper identifies IFIs' risks and considers several risk management systems that may help to deal with them. Section 2 presents a brief description of the key features of Islamic Finance together with the more common Islamic savings and investment contracts to set the stage for a discussion of the risk and regulatory issues pertaining to contracts in Section 3. Finally the last section concludes on the challenges lying ahead in the development of a cutting-edge Islamic risk management system, which will help IFIs regularly monitor and assess the risk sensitivity of its investment portfolio and caters to a *Shari'ah*-compliant financial regime (regulatory compliance requirements) effectively.

## **Key Features of Islamic Finance and Islamic Financing Instruments**

Islamic products include *Sukuks* or Islamic bonds, *Takaful* or Islamic insurance, equity funds, hedge funds, assets and wealth management, risk and liquidity management, real estate and corporate finance. The basis of Islamic Finance denounces usury, termed as *Riba* (which is the lending of money at exorbitant rates) but it does not stop just there. The concept is more accurately of money that has no intrinsic value – it is only a measure of value, and since money has no value itself, there should be no charge for its use. Therefore, Islamic Finance is said to be **asset based** as opposed to **currency based**, whereby an investment is structured on exchange or ownership of assets, and money is simply the payment mechanism to effect the transaction. The basic framework of an Islamic Financial System is based on the elements of *Shari'ah Islamiyah* (the law of Islam), which governs Islamic societies<sup>1</sup>.

Thus, Islamic finance encourages business and trade activities that generate fair and legitimate profit in which business transactions must be accompanied by an underlying trade and business-related activity. This requires a close link between financial and productive flows which underpin Islamic finance. This is to ensure that funds are being channeled into real finance business activities and will thus entail the appropriate due diligence. This has the effect of insulating the Islamic financial system from the risks associated with excessive financial leveraging and speculative activities.

As such, IFIs have to meet the following criteria in order to be *Shari'ah* compliant:

- ✓ Prohibition of interest rate or usury (RIBA)
- ✓ Transactions should be backed by tangible assets
- ✓ Earnings based on profit and loss sharing. In its purest form, it is equity related
- ✓ Prohibition of activities with elements of *Gharar* (uncertainty): excessive speculation is prohibited. It is meant to avoid exploitation
- ✓ Prohibition to invest in certain sectors (*haram* items) such as alcohol, gambling, weapons/defence, adult entertainment, pig related industry and conventional financial services
- ✓ Ethical investments

In summary, Islamic finance is mainly based on the absence of *Riba* (interest) in the transaction, avoidance of *Gharar* (uncertainty) in contractual terms, payment of *Zakah* (almsgiving) for the needy and poor, and avoidance of *Haram* (forbidden) activities such as gambling-like features (*Maysir*). Due to the prohibition of interest, IFIs (including Islamic banks or conventional banks with windows for Islamic products) cannot have fixed interest debt instruments. The Islamic financial system instead proposes equity participation and risk sharing on the part of the entrepreneur (*Mudarib*) who contributes his business expertise and investors (*Rabbul-Mal*) who bring in money. This requirement must be clearly defined at the onset, and serves as an additional in-built mechanism that promotes the adoption of sound risk management practices by IFIs. In particular, these

features demand the exercise of appropriate due diligence and higher standards of disclosure and transparency to be observed by the IFIs, which in turn enforces market discipline and minimises informational asymmetries.

Figure 1 provides an overview of some widely used IFIs contracts, which are commonly used to provide *Shari'ah* compliant products for savings, trade and investment. Like conventional financial institutions, IFIs also offer a range of financial services and products. These are consumer financing, trade related financing and investment type of modes of financing. Such modes of financing take the form of cost plus sales (*Murabahah*), credit sales (*Bai Bithaman Ajil*), lease (*Ijarah*), partnerships (*Mudharabah* and *Musharakah*) and some forward contracts (*Bai Salam* and *Istisna*). In addition, there is zero interest loans for poor farmers and needy students referred to as benevolent loan (*Al-Qard-Al-Hasan*).

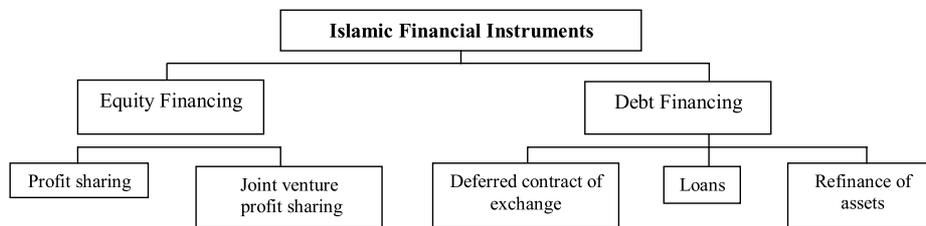


Figure 1 Islamic Financial Instrument

- *Mudharabah* • *Musharakah* • *Murabahah* • *Al Qard Hasan* • *Bai Al Inah*
- *Al-Bai Bithaman Ajil*
- *Al-Ijarah*
- *Al-Istisna*
- *Bai Salam*

## Equity Financing Instruments: Profit Sharing Contracts

### ***Mudharabah* (trustee profit and loss sharing)**

*Mudharabah* is a form of partnership in which the investor (*Rabbul-mal*) provides 100 percent of the capital required for a project, while the entrepreneur (*Mudarib*) manages the investment by using his/her expertise. Profits from the investment are distributed based on pre-agreed profit sharing ratio, but losses are borne by the provider of the funds with the exception of genuine cases of negligence by the *Mudarib*.

### ***Musharakah* (partnership or joint venture)**

*Musharakah* is similar to the *Mudharabah* contract, but it is different in that all parties involved in a partnership contribute some of their own equity capital towards the investment. Profits are shared between partners on a pre-agreed ratio, but losses are shared in the exact proportion to the capital invested by the party.

## **Debt Financing Instruments**

### ***Murabahah* (Cost plus sales)**

This type of *Shari'ah* (Islamic law) compliant contract is one of the most widely used modes of financing by IFIs. This instrument is used for financing consumer durables, real estate and in the industry for purchasing raw materials, machinery or equipment. However, it is most commonly and popularly used in short-term trade financing, including the financing of letters of credit. One can think of a *Murabahah* facility to be akin to consumer loans, lines of credit and working capital facilities provided by conventional banks.

*Murabahah* refers to the sale of goods at a price which includes a profit margin as agreed by both parties. What makes the *Murabahah* transaction Islamically legitimate in *Fiqh* is that the bank acquires the asset for resale at a profit, so that a commodity is sold for money and the operation is not a mere exchange of money for money<sup>2</sup>. Unlike those of a conventional bank which simply lends money to the client to buy goods, the Islamic bank takes responsibility for the goods before they are safely delivered to the client. In this case, the bank assumes certain risks if there is a sudden fall in price between the date of purchase and resale. As such, the mark-up is in the nature of a profit charged in a trade transaction with attended risks attached.

### ***Al-Bai Bithaman Ajil* (Financing the acquisition of assets through deferred installment sales)**

*Bithaman Ajil* is a deferred installment sale whereby the entrepreneur capitalises his/her profit up front in the sale of the property to the customer who in turn is required to pay a fixed sum until the tenure ends. Theoretically, in the contract of *Bithaman Ajil*, the entrepreneur sells the house to the customer at a mark-up price, whose content consists of the cost price plus a profit margin the entrepreneur wants to make over a specified financing period of, for example, 20 years.

### ***Al-Ijarah* (Leasing)**

*Ijarah* is a contract under which the lessee leases equipment, building or other facilities to a client, at an agreed rental fee(s) or charge(s), as agreed by both parties.

### ***Al-Istisna* (Commissioned manufacturer)**

In *Istisna*, one party buys the goods and the other party undertakes to manufacture them, according to agreed specifications. This undertaking of production includes any process of manufacturing, construction, assembling and packaging. It is also an instrument of pre-shipment financing and it is a contract where the deal can be referred to something not in existence at the time of concluding the contract.

### ***Bai Salam* (Advanced purchase)**

Opposite of *Murabahah*, *Bai Salam* is a purchase contract with deferred delivery of goods for full forward payment. The seller undertakes to supply some specific goods to the buyer at a future date in exchange for an advanced price fully paid at the time of contract. It is necessary that the quality of the commodity intended to be purchased is

fully specified leaving no ambiguity that could lead to a dispute. The object of this sale is goods and cannot be gold, silver, or currencies based on these metals.

***Al-Qard-al-Hasan (Benevolent loan)***

IFIs provide such a facility on a limited scale to poorer sections of the society such as needy students or small rural farmers. Such loans would have negative net present values (NPV) for the financial institutions.

***Bai-Inah (Sale and Buy-back agreement)***

*Bai-Inah* is a financing facility whereby the financier buys an asset from the customer on the spot basis. The price paid by the financier constitutes the disbursement under the facility. Subsequently, the asset is sold to the customer on a deferred-payment basis and the price is payable in installments.

The next section outlines the risks associated with various Islamic modes of financing discussed above and ways IFIs manage these corresponding underlying risks.

## **Identifying Risks**

As discussed in the previous section, the range of Islamic financial products has diversified to include variable rate-based and equity-based mechanisms as well as hedging instruments. In fact, Islamic financial products have evolved from the basic consumer or retail products into a full range of product offerings (e.g. retail, corporate, project financing and long-term bond instruments) under various Islamic contracts (*Mudharabah, Musharakah, Murabahah, Salam, Ijarah, Istisna* and *Sukuk*). While financial innovation brings improvements and benefits to market participants, there is a possibility that these products may result in multiplicity of risks, as depicted in Figure 2. The risks are more aligned on the basis of contract types as a result of the special structuring of the contracts in IFIs. The types of risks specific to IFIs include: (a) credit risk (b) market risk (c) liquidity risk (d) operational risk (e) legal & *Shari'ah* risk and (f) displacement risk. The Islamic Financial Services Board (IFSB, 2005) recognises six major types of risks: credit risk, equity investment risk, market risk, liquidity risk, rate of return risk, and operational risk. Table 1 lists a summary of the respective risks found in IFIs.

Sundararajam and Errico (2002) provide several reasons why IFIs can be riskier than conventional financial institutions:

- ↓ the specific nature of risk faced by IFIs and the virtually unlimited number of ways to finance a project using either PLS or non-PLS contract
- ↓ the *Shari'ah* rulings can create a large variety of contracts. PLS contracts can fundamentally increase the risks as they are difficult to monitor
- ↓ the lack of standardisation due to the availability of a large number of ways to finance

- ↓ underdeveloped inter-bank money market and government securities based on PLS contract
- ↓ liquidity management problem in the absence of a short-term money market for Islamic finance

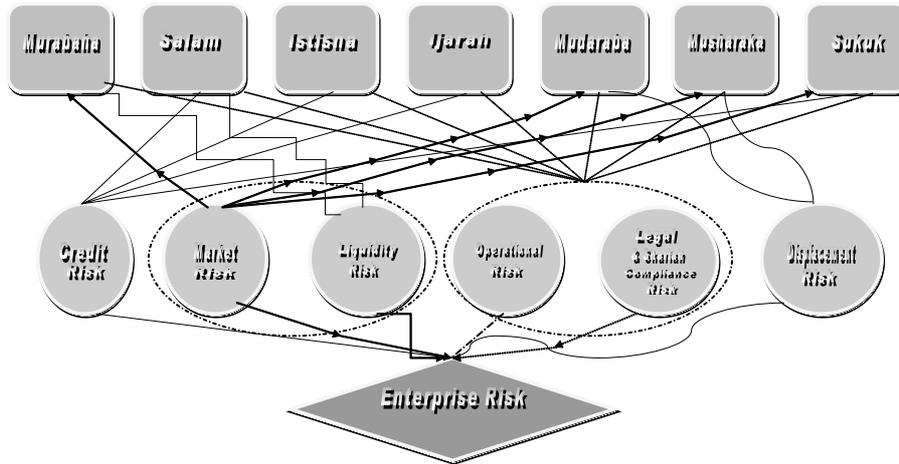


Figure 2 Risks In Islamic Financial Institutions

Table 1: Identification of Risks in Islamic financial services

Type of risk	Coverage
Credit risk	Attributed to delayed, deferred, and default in payment by counterparties. Covers profit-sharing contract ( <i>Mudharabah</i> and <i>Musharakah</i> ), receivables and lease ( <i>Murabahah</i> , <i>Diminishing Musharakah</i> , and <i>Ijarah</i> ), and working capital financing ( <i>Salam</i> , <i>Istisna</i> , and <i>Mudharabah</i> ).
Market risk	Attributed to adverse movement in interest rates, commodity prices, and foreign exchange rates. Covers commodity risk existing in <i>Murabahah</i> and <i>Ijarah</i> contracts.
Equity risk	Attributed to adverse changes in market value (and liquidity) of equity held for investment purposes. Covers all equity instruments ( <i>Mudharabah</i> and <i>Musharakah</i> ).
Liquidity risk	Attributed to adverse cash flow in situations arising mainly out of changing market risk exposures, credit risk exposures, and operational risk exposures.
Rate of return risk	Attributed to changes in account holder’s expectations of the return on investments. Also related to fluctuations in returns due to changes in underlying factors of the contract.
Operational risk	Attributed to the inadequacy of failed processes, people and systems. Also includes risks arising from <i>Shari’ah</i> and non-compliance.
Legal risk	Attributed to the inadequate legal framework, conflict of conventional and Islamic laws, and conflict between <i>Shari’ah</i> rulings and legal decisions.

(Source: Akkizidis and Khandelwal, 2008, page 39)

Investment contracts, *Musharakah* and *Mudharabah*, expose the institutions to all four major risks namely, credit, operational, market and liquidity during different time periods of the contract. For example, when IFIs provide funds through their PLS facilities especially in *Mudharabah* contract, there is no recognisable default on the part of the entrepreneur (*mudharib*) until the PLS contract expires. IFIs have no legal means to control the entrepreneur who manages the business. When an investment project fails to deliver what is expected, the IFIs face liquidity and credit risk due to the defaults from the entrepreneur for providing the expected (future) cash flows. IFIs are also exposed to operational risks due to any external or internal event that may arise and cause losses to the actual business. The low profit or loss is shared between parties according to stipulated PLS ratios. *Murabahah* faces mainly credit, operational, and market risk at different stages of the contract. Commodity risk is highly prominent in *Salam* (purchase with deferred delivery) and *Istisna* contracts, although these contracts are also exposed to credit, operational, market and liquidity risks. Non-PLS modes of financing such as *Salam* also expose IFIs to both credit and commodity price risks. This is because IFIs agree to buy the commodity on a future date against the current payment and also hold the commodity until it can be converted to cash. Similar risk is also involved in *Ijarah* (lease) because this contract does not provide IFIs with the ability to transfer substantial risks and rewards to the lessee as leased assets must be carried on the balance sheet of the IFIs for the term of the lease.

As discussed earlier, the different modes of financing give rise to different exposures of risks. Within each mode of financing, the risk exposures are transformed from one type to another. Credit risk exposures in Islamic financing arise in connection with account receivable in *Murabahah* contracts, counterparty risk in *Salam* contracts, account receivable and counterparty risk in *Istisna* contracts and lease payment receivables in *Ijarah* contracts and *sukûk* held to maturity in the banking book (Tafri, 2008).

Among the modes of financing, *qard al-hasan* is considered as the least risky while *mudârabah* as the most risky. *Mudârabah* is riskier than *Mushâarakah* because the capital provider does not have control over the management of the project although it has full responsibility over any financial losses arising from such a finance. In a *Mushâarakah* contract, the capital provider has some control over the business and shares the risk of loss of capital with other parties in the business. Therefore, Khan and Ahmad (2001) affirm that *Murâbahah* shows the least risk, as it is a short-term instrument.

However, within each mode of financing, the risks that it is exposed to cannot be clearly identified in isolation since the risks are interrelated. As mentioned earlier, apart from the risks, which are common to the conventional financial institutions, IFIs are also exposed to risks that are unique to them, such as rate of return risk (sometimes also referred to as benchmark risk or profit rate risk), withdrawal risk, fiduciary and displaced commercial risk, Shari'ah compliance and asset price risk.

In the case of interest rate risk, even though IFIs operate on interest free principles, they are also exposed to interest rate risk as they are exposed to the same economic environment faced by conventional financial institutions. As there is no well developed benchmark

that would facilitate macro and micro-level decision making with regards to the cost of capital and opportunity cost of investments in comparative projects of similar risks, IFIs rely on interest rate based indices such as the London Inter Bank Offer Rate (LIBOR) or the Kuala Lumpur Inter Bank Offer Rate (KLIBOR) to make lending decisions. Since IFIs use the same benchmark such as LIBOR and KLIBOR as that used by conventional banks, they are also therefore exposed to changes in the KLIBOR or LIBOR rates.

## **Managing Risks**

Basel II, which was revised and documented in 2006, serves to improve the risk management practices of internationally active banks. The Basel II Accord is based on three mutually enforcing pillars: Pillar 1 on minimum capital requirements, Pillar 2 on Supervisory review and Pillar 3 on Market discipline. Basel II is primarily for conventional financial institutions and to a large extent it has been argued that the measurement of the risks and the mitigation techniques proposed in Basel II are applicable to the IFIs. Further, the IFSB released the Guiding Principles of Risk Management and Capital Adequacy Standard for Institutions (other than Insurance Institutions) exclusively for Islamic financial services in December 2005 (Akkizidis and Khandelwal, 2008)<sup>3</sup>. The IFSB has released 15 principles covering six major types of risks in IFIs.

Sundararajan and Errico (2002) suggest a regulatory framework based on the risk management techniques established by the Basel Committee and an Islamic finance-tailored prudential framework based on the CAMEL system. CAMEL is an acronym for capital adequacy (C), asset quality (A), management of investment accounts (M), earnings quality (E) and liquidity management (L) of IFIs. This paper reinforces this view by recommending a system known as CAMELS, to include Sensitivity to market risk.

Capital adequacy is measured according to the volume of risk assets. Since IFIs do not have a large portion of their assets in fixed income interest bearing assets, as conventional financial institutions do, they should theoretically budget for a larger capital adequacy ratio and a larger liquidity ratio. As such the Basel Committee stipulated a minimum charge of risk-weighted capital requirements for IFIs, higher than that required for conventional financial institutions<sup>4</sup>. Asset quality is normally measured by the level of a bank's classified assets, as well as overdue and rescheduled assets. The higher the level of classified, overdue and rescheduled assets, the lower the asset quality of IFIs. It would be appropriate to take a practical control to carefully monitor the PLS assets that are estimated to yield a lower or no profit before the expiration of the contracts.

Given the complexity of many IFIs' operations, the monitoring of investment projects, the managing the assets at times, the legal uncertainties relating to the *Shari'ah* litigation system, and the control of risks and validation of contracts play a vital role in the effective management of operational risks. Earnings are considered of high quality if IFIs have not used their own resources to finance the loss of a specific project, for example through *Musharakah*, and provide adequate capital and also the earning trends. Since IFIs have limited opportunity to obtain funds through lender-of-last resort (LOLR)

facilities by central banks, adequacy of liquidity in IFIs should be developed for a more suitable and broader systematic liquidity arrangement<sup>5</sup>. As discussed in the previous sections, IFIs are directly exposed to commodity price risk due to *Ijarah* (lease) contracts, and equity price risk as the nature of IFIs is equity financing through PLS. Thus, sensitivity to market risk is assessed by the degree of adoption to changes in market prices such as commodity prices and equity values.

## **Conclusion**

IFIs have a unique risk profile because of the need to make their products *Shari'ah* compliant. The paper highlighted that the rapid financial innovation and product development in IFIs have made risk management extremely challenging. While financial innovation brings improvements and benefits to market participants, problems arise if new products bring with them unnecessary complications resulting in new risks that are less understood, assessed and controlled. In other words, the risks inherent in these new products were mispriced. In summary the IFIs Risk Profile include the following:

- ✓ Investment and Liquidity Risk (Different range of asset classes)
- ✓ Displacement Risk
- ✓ Legal and *Shari'ah* Risks (Importance of *Shari'ah* Supervisory Board)
- ✓ Operational Risk such as Reputation Risk

Basel II Accord revolutionised the concept of risk management, primarily for conventional banks. The new framework is supposed to result in more accurate assessments of risk by banks. However, it is not easy to apply these models in IFIs. Firstly, IFIs raise much of their funds through *Mudharabah* contract, thus it is not easy to work how much equity a bank has, or who bears the risk. Although IFSB plays a key role in the development of standards for risk management in IFIs, much effort is needed to apply them to IFIs effectively.

Thus, risk management is an ongoing process. Consequently, risk management practices have to be regularly updated to reflect the changes in instruments, markets and business models. Regulators and supervisors should also make sure that IFIs do not engage in activities without having adequate skills and controls.

## **Notes**

- <sup>1</sup> The law of Islam originates from two principal sources: the Quran, the Holy Book of the Muslims and its practices; and the Sunnah, the way of life prescribed as normative in Islam, based on the teachings and practices of Prophet Muhammad (pbuh).
- <sup>2</sup> Fiqh is the Islamic jurisprudence, the science of religious law, which is the interpretation of the Sacred Law, *Shari'ah*
- <sup>3</sup> In November 2002, a group of central banks from Islamic countries established the IFSB in Kuala Lumpur.

- <sup>4</sup> Basel II requires that the minimum capital requirement for banks should not be lower than 8 percent.
- <sup>5</sup> The lack of Shari'ah compatible LORL facilities is associated with the prohibition of interest and thus discount rate.

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