

Risk Management Framework in Islamic Banking: Basel II and III, Challenges and Implications in Islamic Banking

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Abstract

The time to fix the roof is when the sun is shining; risk management has not been uppermost on the Islamic banking sector's agenda in recent years. It is crucial for Islamic banks (IBs) to have comprehensive risk management framework as there is growing realization among IBs that sustainable growth critically depends on the development of a comprehensive risk management framework. Islamic banks should be dusting off their ladders now. If Islamic banks are serious about playing a greater role in the financial system, they will need to get to grips with risks which may not currently be well understood or well managed. In this paper a frame work for Risk management in Islamic Banks will be discussed firstly, then generic risk associated with banks and unique risks exposed to Islamic Banks will be categorized.

The contractual complexity of Islamic banking transactions which gives rise to awkward operational risks, and the uncertainties associated

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with Shari'ah compliance leave them exposed to a few risks including fiduciary and reputational risks which will be briefly reviewed in the paper. Although Basel II standards, do not account for the specific risks related to the nature of Islamic banks' activities however the fundamental tenet of Islamic finance is that of fairness, and Islamic financial institutions at a most basic level are often structured towards fee-based revenues for services rendered and profit- and loss-sharing structures. Thus, in essence, Islamic financial institutions are closer in spirit to asset management companies than to conventional banking institutions, and the impact of their operations on the balance sheet is unique. These particularities highlight the unique characteristics of Islamic banks and raise serious concerns regarding the applicability of the Basel methodology to Islamic banks. Islamic banks' activities differ in substance and in form from conventional banks' operations and they thus face a different risk profile. Then the paper gets grips with Basel II accord and share challenges on adopting Basel II in Islamic Banks.

Keywords: *Islamic Banking, Risk Management, Basel II.*

JEL Classification: *E5, E58, G32.*

1. Introduction

Although Islamic banks and IFIs are precluded from getting involved in the kind of complex credit trading that has paralyzed their conventional competitors ° but that s no reason for complacency. The life is not easy for Islamic banks as well; they have their own blind spots and frailties. Islamic banks tend to have significant concentrations of exposure to local real-estate markets ° much of it in the form of equity-like investments. On one hand Islamic banks are heavily reliant on the loyalty of their depositors and on the other hand they have a preponderance of long-dated assets and a shortage of instruments with which to manage their short-term liquidity needs. The contractual complexity of Islamic banking transactions gives rise to awkward operational risks, and the uncertainties associated with Shari'ah compliance leave them exposed to fiduciary and reputational risk. In recent years understandably, the focus has been on growth and on the struggle to innovate and compete in this increasingly competitive market. Shari'ah-compliant assets worldwide are approaching \$1.2 Trillion and have been growing at more than 10% per year over the past 10 years. There is still huge untapped potential. Standard & Poor s has estimated that the market has a potential size of \$4 trillion. The fact is if Islamic banks are serious about playing a greater role in the financial system, they will need to get to grips with risks which may not currently be well understood or well managed.

2. Risk management Concept in IBs

It is crucial for Islamic banks (IBs) to have comprehensive risk management framework as there is growing realization among IBs that sustainable growth critically depends on the development of a comprehensive risk management framework (Greuning and Iqbal, 2007). The risk management strategy must be integrated with its overall corporate strategies (e.g. Froot and Stein, 1994). In conjunction with the

underlying frameworks, basic risk management process that is generally accepted is the practice of identifying, analyzing, measuring, and defining the desired risk level through risk control and risk transfer. BCBS¹ (2001) defines financial risk management as a sequence of four processes: 1- the identification of events into one or more broad categories of market, credit, operational and other risks into specific sub-categories; 2- the assessment of risks using data and risk model; 3- the monitoring and reporting of the risk assessments on a timely basis; and 4- the control of these risks by senior management. BCBS (2006), on risk management processes, requires supervisors to be satisfied that the banks and their banking groups have in place a comprehensive risk management process. This would include the Board and senior management to identify, evaluate, monitor and control or mitigate all material risks and to assess their overall capital adequacy in relation to their risk profile. In addition, as suggested by Al-Tamimi (2002), in managing risk, commercial banks can follow comprehensive risk management process which includes eight steps: exposure identification; data gathering and risk quantification; management objectives; product and control guidelines; risk management evaluation; strategy development; implementation; and performance evaluation (e.g. Baldoni, 1998; and Harrington and Niehaus, 1999).

A comprehensive explanation of risk management in Islamic banking are made by Akkizidis and Khandelwal (2008) covering the aspect of risk management issues in Islamic financial contracts, Basel II, Basel III and Islamic Financial Services Board (IFSB) for Islamic financial risk, and examining the credit, market and operational risk management for IBs. They also explain the unique mixes or risk for each financial contracts in IBs. Greuning and Iqbal (2007) discuss the three major modification of theoretical balance sheet of an Islamic bank that has implications on the overall riskiness of the banking environment. Apart

1- Basel Committee of Banking Supervision

from that, the contractual role of various stakeholders in relation to risk is also highlighted.

3. IFSB Guidelines on Risk Management of Islamic Banks

According to IFSB, the primary aim of releasing its risk management standard stems from the recognition that although certain issues are of equal concern to all financial institutions (IFSB, 2005) some risks are localized to IBs and as such, these principles serve to complement the BCBS guidelines in order to cater the specificities of IBs (IFSB, 2005). In addressing the various forms of risk that IBs are exposed to, the guiding principles set forth the methodologies required in order to balance concerns between both the internationally agreed standards of the BCBS and Shari'ah compliance issues that are fundamental to the operation of these specialized institutions. The IFSB (2005) guiding principles of risk management as basis for risk management process are shown in the following table:

Table (1) The IFSB Guidelines on Risk Management

Risk	Principle	Guideline
General Requirement	Principle 1.0	IIFS shall have a comprehensive risk management and reporting process in place.
Credit Risk	Principle 2.1	IIFS shall have a strategy for financing, recognizing the potential credit exposures at various stages of the agreement in place .
	Principle 2.2	IIFS shall carry out due diligence review.
	Principle 2.3	IIFS shall have in place an appropriate methodology for measuring and reporting the credit risk exposures.
	Principle 2.4	IIFS shall have in place Shari'ah-compliant credit risk mitigatin techniques.
Equity Investment	Principle 3.1	IIFS shall have appropriate strategies, risk management, and reporting processes in respect to the risk characteristics of equity

Risk	Principle	Guideline
Risk		instruments in place.
	Principle 3.2	IIFS shall ensure that their valuation methodologies are appropriate and consistent.
	Principle 3.3	IIFS shall define and establish the exit strategies in respect of their equity investment activities.
Market Risk	Principle 4.1	IIFS shall have in place appropriate framework for market risk management.
Liquidity Risk	Principle 5.1	IIFS shall have in place a liquid management framework.
	Principle 5.2	IIFS shall assume liquidity risk commensurate with their ability to have sufficient recourse to Shari'ah-compliant funds.
Rate of Return Risk	Principle 6.1	IIFS shall establish a comprehensive risk management and reporting process to assess the potential impact of market factors affecting rate of return on assets.
	Principle 6.2	IIFS shall have in place an appropriate framework for managing displaced commercial risk.
Operational Risk	Principle 7.1	IIFS shall have in place adequate systems and controls.
	Principle 7.2	IIFS shall have in place appropriate mechanisms to safeguard the interests of all fund providers.

Note: IIFS ° Institutions (other than Insurance Institutions) offering only Islamic Financial Service.

Source: IFSB (2005).

4. Conceptual Model

There are many conceptual studies that show the important aspects of risk management process that firms need to have in order to practice risk management (e.g. Tchankova 2002; Kromschroder and Luck, 1998; Luck 1998; Fuser et al, 1999; Barton et al 2002; Pausenberger and Nassauer, 2005). Some empirical findings (e.g. Al-Tamimi and Al-

Mazrooei, 2007) show positive relationships between risk management practices and the various aspects of risk management process, and some findings (e.g. Boston Consulting Group, 2001; Al-Tamimi, 2002; KPMG, 2003; Parrenas, 2005; Al-Tamimi and Al-Mazrooei, 2007) show the important aspect of risk management practices by various financial institutions. In the context of Islamic banking, studies made on theoretical side of risk and risk management in Islamic banking (e.g. Iqbal and Mirarkor, 2007; Akkizidis and Khandelwal, 2007; Grais and Kulathunga, 2007; Haron and Hin Hock, 2007; Greuning and Iqbal, 2007; Sundararajan, 2007; Archer and Haron, 2007) explain the framework and the aspect of risk management process, and some empirical evidence (e.g. Khan and Ahmed, 2001; Noraini, 2005) examine the perception and level of risk management practices by IBs.

There is a relationship between risk management practices and the four aspects of risk management process i.e. 1- understanding risk and risk management; 2-risk identification; 3-risk analysis and assessment; and 4- risk monitoring as in the following figure. By making reference to the model adopted by Al-Tamimi and Al-Mazrooei (2007), the function of risk management practices is as follows:

$$\text{RMP} = f(\text{URM}, \text{RI}, \text{RAA}, \text{RM})$$

Where:

RMP= Risk Management Practices

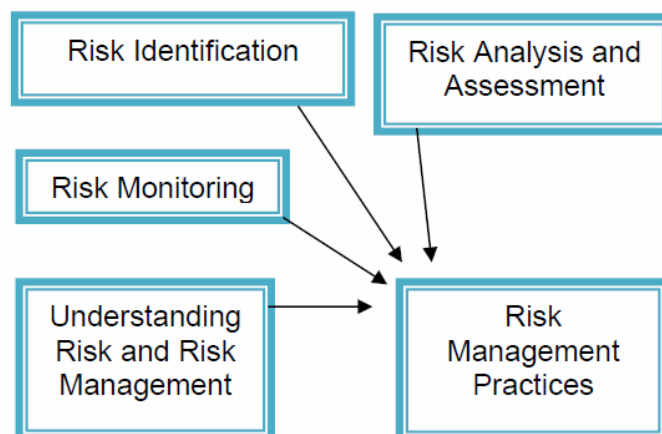
URM= Understanding Risk and Risk Management

RI= Risk Identification

RAA= Risk Analysis and Assessment

RM= Risk Monitoring

Figure (1)



5. Conceptual Framework

The conceptual framework suggests there is a positive relationship between risk management practices and the aspect of risk management process. Secondly, it suggests the category of risk management processes that influence most of the practice of risk management to be examined.

Risk Identification

There are few conceptual studies on risk identification of financial institutions (e. g. Kromschroder and Luck, 1998; Luck 1998; Pausenberger and Nassauer, 2000; Tchankova, 2002; Barton et al. 2002) and few empirical studies that include risk identification of banks (e.g. Al-Tamimi, 2002; Al-Tamimi and Al-Mazrooei, 2007). Risk identification is the first stage of risk management (Tchankova, 2002) and a very important step in risk management (Al-Tamimi and Al-Mazrooei, 2007). The first task of the risk management is to classify the corporate risks according to their different types (Pausenberger and Nassauer, 2000). The first step in organizing the implementation of the risk management function is to establish the crucial observation areas inside and outside the corporation (Kromschroder and Luck, 1998). Then, the departments and the employees must be assigned with

responsibilities to identify specific risks. For instance, interest rate risks or foreign exchange risks are the main domain of the financial department. It is important to ensure that the risk management function is established throughout the whole corporation; i.e. apart from parent company, the subsidiaries too have to identify risks, analyze risks and so on.

In relation to commercial banks practice of risk management, Al-Tamimi (2002) found that the UAE commercial banks were mainly facing credit risk. The study also found that inspection by branch managers and financial statement analysis are the main methods used in risk identification. The main techniques used in risk management are establishing standards, credit score, credit worthiness analysis, risk rating and collateral. The study by Al-Tamimi and Al-Mazrooei (2007) was conducted on banks risk management of UAE national and foreign banks. Their findings reveal that the three most important types of risks encountered by UAE commercial banks are foreign exchange risk, followed by credit risk, and then operating risk.

In the case of Islamic banks, studies made especially on risk identification and risk mitigation include the work of Haron and Hin Hock (2007) on market and credit risk, and Archer and Haron (2007) specifically on operational risk. Haron and Hin Hock (2007) explain the inherent risk i.e. credit and market risk exposures in IBs. Also, they illustrate the notion of displaced commercial risk that is important in IBs. They conclude that certain risks may be considered as being inherent in the operations of both Islamic and conventional banks. Although the risk exposures of IBs differ and may be more complex than conventional financial institution, the principles of credit and market risk management are applicable to both. In addition, the IFSB standards on capital adequacy and risk management guiding principles mark the first steps in an ongoing process of developing prudential standards and filling regulatory gaps in the field of Islamic finance.

Apart from those two risks, Archer and Haron (2007) show that IBs are exposed to a number of operational risks that are different from those faced by conventional banks. They argue that the complexities of a number of their products, as well as their relative novelty in the contemporary financial services market, combined with the fiduciary obligations of Islamic bank when it acts as a Mudarib, imply that for IBs operational risk is very important consideration. Because of that, the IFSB has taken the position while Investment Account Holders (IAHs) may be considered in the absence of misconduct and negligence by the Islamic bank to bear credit and market risks of assets in their funds have been invested by the bank, the latter must be considered as being exposed to the operational risk arising from its management of those funds.

Empirical studies made by Khan and Ahmad (2001) found that IBs face some risks arising from profit-sharing investment deposits. Here, the bankers considered these unique risks more serious than conventional risks faced by financial institutions. Also, the surveys show that the Islamic bankers judge profit sharing mode of financing (i.e. diminishing Musharakah, Musharakah and Mudarabah), and product-deferred sale (i.e. Salam and Istisna) are riskier than Murabaha and Ijarah. The results of survey of risk perception in different modes of financing shows that risk level is considered elevated and are shown in following Table. The high perception of risks may be an indication of the low degree of active risk management due to the absence of risk control through internal processes and control, especially in the case of operational risk (Iqbal and Mirarkhor, 2007). Also, Noraini (2005) indicates that credit risk in Islamic banks perceived to be the most important risk.

Table (2) Risk perception: Risks in different modes of financing (scale 1-5)

Instrument	Credit	Mark-up	Liquidity	Operational
Murabahah	2.56	2.87	2.67	2.93
Mudarabah	3.25	3.00	2.46	3.08
Musharakah	3.69	3.40	2.92	3.18
Ijarah	2.64	3.92	3.10	2.90
Istisna	3.13	3.57	3.00	3.29
Bay al-Salam	3.20	3.50	3.20	3.25
Diminishing Musharakah	3.33	3.40	3.33	3.40

Source: Khan and Ahmed (2001).

Risk Analysis and Assessment

In the context of Islamic banking, few conceptual studies (e.g. Sundararajan, 2007; Jackson- Moore, 2007) discuss the risk measurement aspects particularly on the unique risk. A comprehensive risk measurement and mitigation methods for various risk arising from Islamic financing activities and from the nature of profit and loss sharing (PLS) in the source of funds especially investment account holders (IAHs) are explained by Sundararajan (2007). He concludes that the application of modern approaches to risk measurement, particularly for credit and overall banking risks is important for IBs. Also, he suggests that the need to adopt new measurement approaches is particularly critical for IBs because of the role IAHs play, the unique mix of risks in Islamic finance contracts. However, Noraini (2005) indicates that IBs are perceived not to use the latest risk measurement techniques and Shari ah

compliant risk mitigation techniques due to different Shari ah interpretation of these techniques. Also, appropriate measurement of credit and equity risks in various Islamic finance facilities can benefit from systematic data collection efforts, including establishing credit and equity registry. Jackson-Moore (2007) suggest that banks need to start collecting data, and there can be significant advantages in pooling information and using common definitions, standards, and methodologies for operational risk which is argued can lead to significant losses in all financial institutions.

Risk Monitoring

Effective risk management requires a reporting and reviewing structure to ensure that risks are effectively identified and assessed and that appropriate controls and responses are in place (IRM, AIRMIC and ALARM; 2002) . Risk monitoring can be used to make sure that risk management practices are in line and proper risk monitoring also helps bank management to discover mistake at early stage (Al-Tamimi and Al-Mazrooei, 2007). Monitoring is the last step in the corporate risk management process (Pausenberger and Nassauer, 2005). According to them, control has to be established at different levels. The control by the management board will not be enough to ensure the effective functioning of the risk monitoring system, because the management board members do not have time on their hands to exercise extensive control. Hence, the management board will install an independent unit to complete the task of internal supervision. This task is the responsibility of the internal audit. Also, the supervisory board is obliged to control the risk management process. The supervisory board is supported by the auditor. If the auditor discovers a defect, he will have to inform the supervisory board and the management board. Finally, the shareholders of the corporation can use their rights to demand information in order to judge the efficiency of the risk management system. The director s report

enables the shareholders to assess the status of the corporation knowledgeably and thoroughly.

Distinct Features of Risk Management in Islamic Banking

We will explain Basel accord regarding Islamic banks later in this paper. Besides the usual capital adequacy ratios proposed under BASEL, followed both by conventional and Islamic banks, there are some distinct features of risk management under Islamic Banking. These distinct characteristics of risk management in Islamic banks are discussed below.

Islamic banks provide financing which is backed by assets. Islamic banks cannot deal in documents. All financing provided by Islamic banks results in the creation of assets i.e. capital formation. Islamic financing due to the asset backed nature results in productive economic activities; hence, it does not result in inflation. Furthermore, the underlying asset collateralizes the loan transaction provided by Islamic banks.

Islamic banks need to comply with conventional regulatory standards as well as Shari'ah standards. Shari'ah compliance is strictly followed under Islamic banks. This dual check covers the legal risk as there is a double check on money laundering and other fraudulent activities. Shari'ah compliance is ensured by the Shari'ah Supervisory Board, which comprises of influential scholars. The referent power of these scholars is utilized for further endorsing the system in the eyes of general public and increasing acceptance of Islamic banking among masses. Shari'ah compliance also ensures Corporate Social Responsibility (CSR) and ethical compliance. Islamic banks do not conduct business with tobacco, alcohol and other harmful toxic producing companies. This mechanism has given Islamic banking the name of 'ethical banking' in Europe. Clean borrowing is not allowed in Islamic banking. Islamic banks provide financing only to create assets. Therefore, Islamic banks do not offer credit cards, personal loans and running finance/ overdraft. On the downside, Islamic banks by restricting

themselves to asset-backed financing cannot provide need-based loans, short-term financing for overhead expenses or financing for debt swap.

6. Risk Specificities of Islamic Financial Institutions

Islamic banks activities differ in substance and in form from conventional banks operations and they thus face a different risk profile. Basel II identified three types of risk exposures for conventional banks: credit risk, market risk and operational risk. The following table draws a comparative risk profile for conventional and Islamic banks.

Table (3) Risk profile of conventional vs. Islamic banks

Conventional Bank	Islamic Bank
1. Credit Risk	1. Credit Risk
2. Market Risk:	2. Market Risk:
Equity Risk	Equity Risk
Commodity Risk	Commodity Risk
Interest Rate Risk	Rate of Return Risk
Foreign Exchange Risk	Foreign Exchange Risk
3. Operational Risk	3. Operational Risk
-	4. Price Risk
-	5. Fiduciary Risk Displaced
-	6. Commercial Risk

Credit risk is the default payment risk and risk weights are assigned based on the counterparty risk. Market risk results from the risk of losses in on- and off-balance sheet positions arising from movements in market prices. It applies to the portfolio of financial instruments held by the bank and is composed of four elements: interest rate risk (further divided into specific and general market risk), equity position risk, foreign exchange risk and commodity risk. Finally, operational risk represents the risk of loss resulting from inadequate internal processes. Early

attempts by scholars to cater the specificities and characteristics of Shari'ah-compliant products and services identified at least four different types of risks that are not accounted for under Basel II. We categorize here the generic risk associated with banks operation in general and unique risk Islamic Banks should be dealt with.

6.1. Generic Risks for Banks

The generic risks for banks could be categorized as following:

Table (4) Generic Risks for Banks

Types of Risk	Definition
Credit Risk	The potential that a counterparty fails to meet its obligations in accordance with agreed terms and conditions of credit-related contract
Market Risk	The potential impact of adverse price movements such as benchmark rates, foreign exchange rates, equity prices on the economic value of an asset
Liquidity Risk	The potential loss arising from the Bank's inability either to meet its obligations or to fund increases in assets as they fall due without incurring unacceptable costs or losses
Operational Risk	The potential loss resulting from inadequate or failed internal processes, people and system or external events

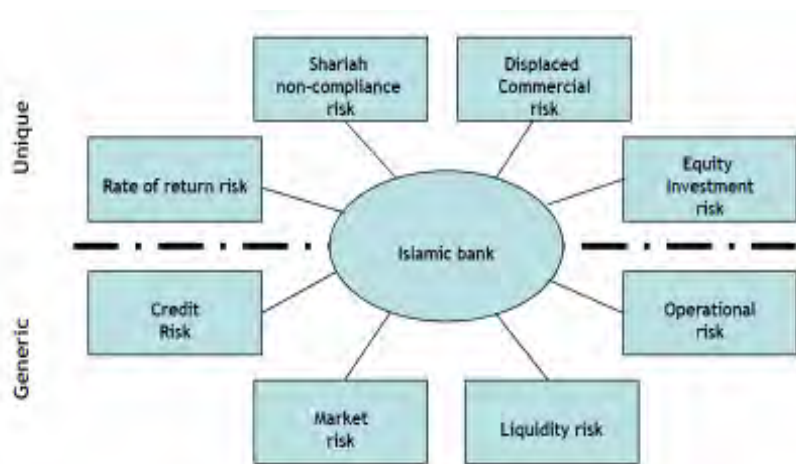
However Islamic banks are exposed to some unique risks:

6.2. Unique Risks for Islamic Banks

Table (5) Unique Risks for Islamic Banks

Types Of Risk	Definition
Shari'ah non Compliance Risk	Risk arises from the failure to comply with the Shari'ah rules and principles
Rate of Return Risk	The potential impact on the returns caused by unexpected change in the rate of returns
Displaced Commercial Risk	The risk that the bank may confront commercial pressure to pay returns that exceed the rate that has been earned on its assets financed by investment account holders. The bank foregoes part or its entire share of profit in order to retain its fund providers and dissuade them from withdrawing their funds.
Equity Investment Risk	The risk arising from entering into a partnership for the purpose of undertaking or participating in a particular financing or general business activity as described in the contract, and in which the provider of finance shares in the business risk. This risk is relevant under Mudharabah and Musharakah contracts.

Figure (2)



As credit risk, market risk and operational risk are among the most important and common risks which Islamic banks and conventional banks face them, some policy guidelines to mitigate them are briefly reviewed in following tables.

Table (6) Credit Risk

Policy	Guidelines
Credit Risk Policy ° The policy addresses the broad credit management framework that covers the objective, strategy, structure and credit processes in order to establish the best practices in the management of credit risk that are in line with the regulatory requirements	<ol style="list-style-type: none"> 1.Pricing Matrix Guidelines 2. Acceptance Letter offer Guideline 3. Negative List Guideline 4. Collaterals Guideline 5. Valuation Guideline 6. Discretionary Power Guideline 7. Sovereign Risk Guideline 8. Consumer Grading Guideline 9. Sectoral Guideline 10. Watch list Guideline 11. Financing Process Guideline 12. Credit Recovery Guideline 13.Guidelines on Risk Adjusted Pricing for Corporate & Commercial

Table (7) Market Risk

Policy	Guideline
<p>Market Risk Policy ° Describes the Risk Policy and Analytics, Asset and Liability Management (ALM) and Middle Office functions of the Market Risk Department</p> <p>Trading Book Policy - Addresses market risk factors which include but not limited to profit rate or rate of return, foreign exchange, equity and commodity risks inherent in the Bank s trading and banking books</p>	<ol style="list-style-type: none"> 1. Market risk limit Guideline 2. Hedging Guideline 3. Market-to-Market Guideline 4. Rate Reasonability Check Guideline 5. Value-at-Risk (VaR) Guideline 6. Asset and Liability Management Guideline 7. Market Risk Manual & Procedures

Table (8) Operational Risk

Policy	Guideline
Operational Risk Policy ° The policy provides the effective and efficient operational risk management throughout the Bank through its strategies in terms of organization structure, process, risk tolerance, risk measurement and analytic model management information system	<ol style="list-style-type: none"> 1. Operational Risk Management Guideline 2. Management Awareness and Self-Assessment (MASA) Reporting Guideline 3. Fraud Handling and Reporting Guideline 4. Takaful/Insurance Guideline 5. Key Risk Indicators (KRIs) Guideline 6. Outsourcing Guideline 7. Operational Risk Management Process for Information Security Management System 8. Customer Complaint Guideline 9. BRCP

Table (9) Shari'ah Compliance Risk

Policy	Guideline
Shari'ah Compliance Risk Management Policy ° The policy provides the Shari'ah requirements applicable throughout the Bank in its activities, products and services in compliance with the Shari'ah principles, provisions of the Islamic Banking Act 1983 and Bank Negara Malaysia's rules and regulations.	<ol style="list-style-type: none"> 1. Wadiah contract guideline 2. Ijarah and Ijarah Muntahiah Bit Tamlik Guideline 3. Murabahah and MPO Contract Guideline 4. Mudharabah (financing) Contract Guideline 5. Musharakah (financing) Contract Guideline 6. Handling and Reporting of Shari'ah Non Compliances Guideline 7. Mudharabah (Deposit) Contract Guideline 8. Musharakah Mutanaqisah Contract Guideline 9. Dhamanah/ Kafalah Contract Guideline 10. Wakalah Contract Guideline 11. Tawarruq Contract Guideline

7. Capital Adequacy and Basel II

The Basel Committee on Banking Supervision first drafted the Basel Capital Accord in 1988. The accord focused primarily on creating a framework for measuring credit risk, and setting minimum capital standards in order to safeguard banks against a loss or default. The committee's overarching ambition was to encourage the convergence of national banking regulators globally towards common approaches and standards. With later revisions of the accord, the Basel Committee anticipated the risk issues faced by large global banks. However, one thing which it did not foresee was the increasing globalization of Islamic finance, which in 1988 was largely confined to a handful of Middle Eastern countries. Although the Islamic finance industry still represents only a small percentage of total banking assets, it is growing at a rate of more than 15 per cent per year, and Islamic banks have established themselves as forerunners in such major financial hubs such as London, Malaysia and Singapore.

8. Basel II

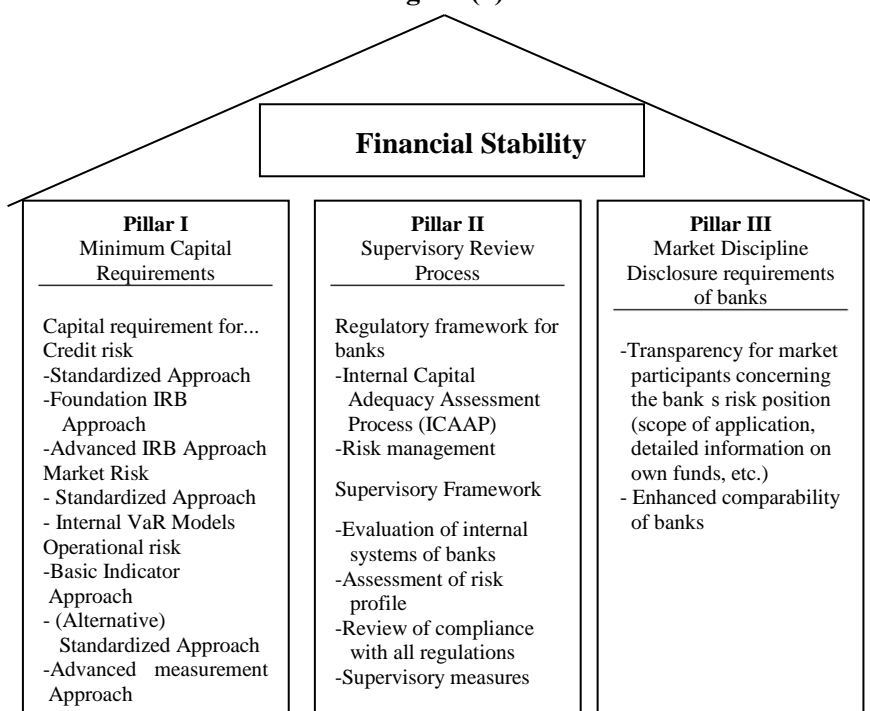
Basel II marks a move away from formulaic regulatory capital calculations to a more risk- and principles-based three-pillared approach to capital management.

The first pillar of minimum capital levels includes operational Risk, along with more familiar credit and other financial risks (e.g. liquidity risk).

The second pillar is a supervisory review process that seeks to encourage improvements in risk management by linking regulatory capital requirements to the firm's internal capital adequacy assessment (ICAAP) and the soundness of its internal control structures.

This is augmented by the market discipline of a third disclosure pillar.

Figure (3)



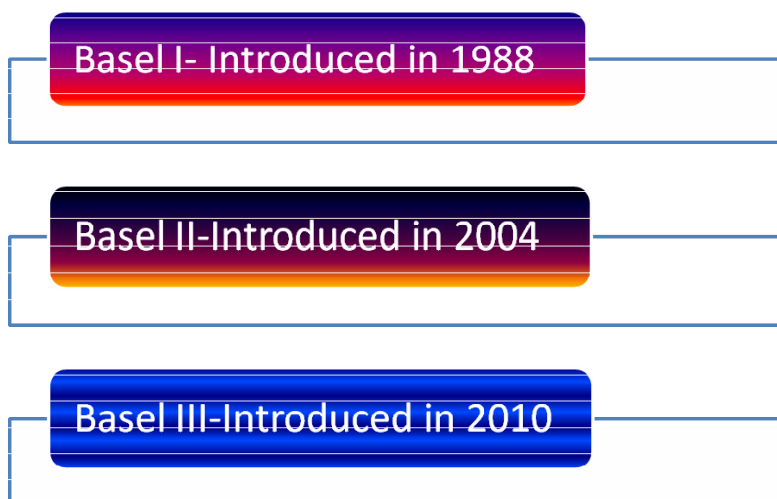
9. Basel III

The Group of Governors and Heads of Supervision, the oversight body of the Basel Committee on Banking Supervision, announced a substantial strengthening of existing capital requirements and fully endorsed the agreements it reached on 26 July 2010. These capital reforms, together with the introduction of a global liquidity standard, deliver on the core of the global financial reform agenda and were presented to the Seoul G20 Leaders summit in November 2010. The Committee s package of reforms will increase the minimum common equity requirement from 2% to 4.5%. In addition, banks will be required to hold a capital conservation buffer of 2.5% to withstand future periods of stress bringing the total common equity requirements to 7%. This reinforces the stronger definition of capital agreed by Governors and Heads of Supervision in July and the higher capital requirements for

trading, derivative, and securitization activities to be introduced at the end of 2011. Islamic banks are among the best capitalized banks in the world, and historically comply with inflexible standards of capitalization. For capital requirements, Islamic Banks already exceed norms set by the Bank for International Settlements (BIS) as part of the Basel III accord. Islamic banks already have stricter capital requirements than what are proposed in Basel III. With the Islamic banks being amongst the best capitalized on a global scale, they are on the safe side compared to their European or US counterparts. Tier 1 and total capital requirements currently stand at 8 per cent and 12 per cent, respectively, which are already higher than the target 2019 ratios set by Basel III.

10. The Basel System

Figure (4)

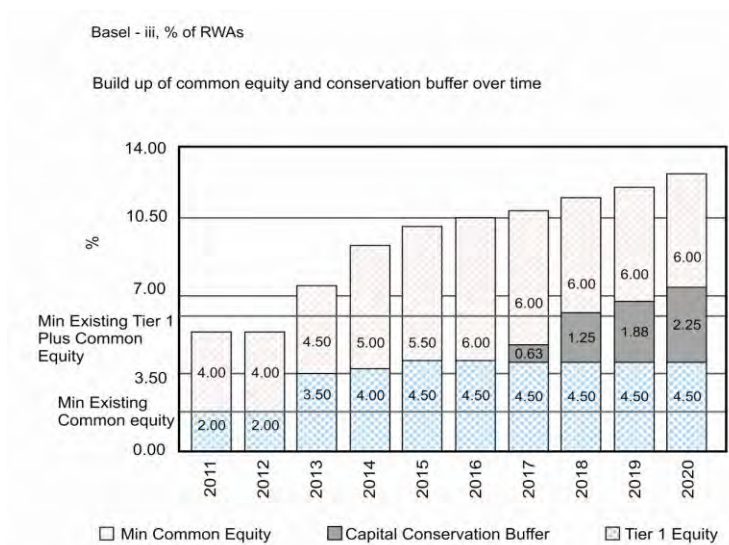


The second Basel accords - the Basel II - was introduced in June 2004, in order to create an international standard for banking regulators to use when creating regulations on the amount of capital needed to be

put aside by banks to guard against the types of financial and operational risks commonly faced by these institutions. Advocates of Basel II believe that such an international standard can help to protect the international financial system from the types of problems which might arise should a major bank or a series of banks collapse. Basel II attempted to accomplish this with the theory that setting up risk and capital management requirements should be designed to ensure that a bank holds capital reserves appropriate to the risks the bank exposes itself to, through its lending and investment practices. Generally speaking, these rules mean that the greater risk to which the bank is exposed, the greater the amount of capital the bank needs to hold, in order to safeguard its solvency and overall economic stability (Wikipedia). Basel III was fully endorsed on the 26th July 2010. These capital reforms, together with the introduction of a global liquidity standard, speak to the core of the global financial reform agenda, and were presented to the Seoul G20 Leaders summit in November of the same year.

Basel-III, % of RWAs (1)

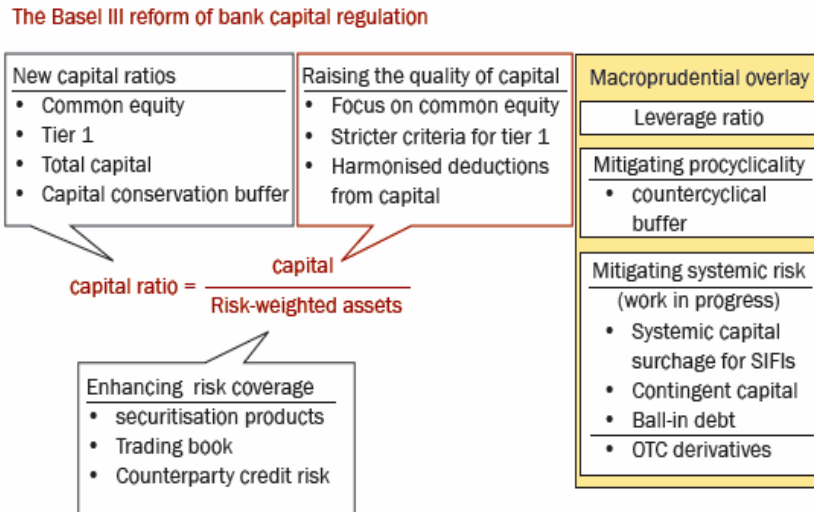
Figure (5) Build up of Common Equity and Conservation Buffer Over Time



Source: Basel Risk Management Information Risk Weighted Assets.

Above figure shows the buildup of common equity and conservation following the Basel III system, and exhibits potential growth by the year 2020.

Figure (6) The Basel III Reform of Banks Capital Regulation



The above figure shows how the system implements the capital ratio over the risk-weighted assets when enhancing risk coverage of security products, trading and counterparty credit risk. Islamic banks have scope to further collaborate with the system to improve transparency and capital liquidity. These are two sectors of the Islamic finance industry which need to be improved in order to further progress in the competitive market.

The majority of Islamic banks in Malaysia already maintain capital levels well above the current regulatory minimum, BNM says, and the liquidity coverage ratio (LCR) under Basel III is conceptually similar to the liquidity framework adopted by Malaysian Islamic banks. However, the board says, the LCR will require Islamic banks to hold more liquid assets for wholesale funding than they are required to under the existing liquidity framework .

11. Capital Adequacy Methodology for Islamic Banks

Unlike depositors of conventional banks, the contractual agreement between Islamic banks and investment account holders is based on the concept of sharing profit and loss, which makes investment account holders a unique class of quasi-liability holders: they are neither depositors nor equity holders. Although they are not part of the bank's capital, they are expected to absorb all losses on the investments made through their funds, unless there is evidence of negligence or misconduct on the part of the bank. The nature of intermediation and liabilities has serious implications for the determination of adequate capital for Islamic banks (Grais and Kulathunga 2007):

Deposits taken on the basis of profit- and loss-sharing agreements should not be subject to any capital requirements other than to cover liability for negligence and misconduct and winding-down expenses.

Investments funded by current accounts carry commercial banking risks and should be subject to adequate risk weights and capital allocation.

Restricted investment accounts on the liabilities side form a collection of heterogeneous investment funds resembling a fund of funds; therefore, financial institutions holding such funds should be subject to the same capital requirements as are applicable to fund managers.

The presence of displaced commercial risk and the practice of income smoothing have indirect implications for the Islamic bank's capital adequacy, which a regulator may take into account when determining the CAR.

Islamic banks acting as intermediary can face a moral hazard issue. Since, as agent, the bank is not liable for losses but shares the profits with the investment account holder, it may have an incentive to maximize the investments funded by the account holder and to attract more account holders than it has the capacity to handle. This can lead to

investment decisions that are riskier than the investment account holder is willing to accept. Such incentive misalignment may lead to higher displaced commercial risk, which necessitates higher capital requirements.

Capital requirement standards have been developed for Islamic banks adapting conventional Basel approaches. In December 2006, the Islamic Financial Services Board issued a capital adequacy standard based on the Basel II standardized approach, with a similar approach to risk weights. While the modes of intermediation, financial instruments, and risks may differ between Islamic and conventional financial institutions, the general approach is applicable to both types of financial intermediaries. A better-circumscribed economic capital can allow Islamic banks to manage their resources more efficiently, while providing comfort to their stakeholders. A major difference between Islamic banks and conventional banks relates to investment account deposits.

For Islamic banks, the expected losses would be borne by the income, and so the risk capital needed to meet unexpected losses may be less for Islamic banks than for conventional banks. Theoretically, Islamic banks accept investment deposits that are risk sharing contracts. The Islamic financial intermediary, as an agent (mudarib), would share profits with the depositor, but the depositor would bear losses that are the outcome of market conditions, but not of a mudarib's misconduct. Hence the risk-sharing feature of investment account deposits would reduce the overall risks for Islamic banks in principle. Under the circumstances, and going back to the murabahah contract, an Islamic bank would be expected to conduct business in such a way as to deal with expected losses, pricing its products and accumulating provisions accordingly. The Islamic bank would identify economic capital to deal with unexpected losses that are due primarily to misconduct. Unanticipated adverse events that are beyond the reasonable anticipation of the bank would not be cushioned, as profit-sharing investment account

depositors would share the losses attributable to the assets (or the proportion of assets) financed by their funds.

12. Adopting Basel II Standards in Islamic Banks

The Basel II accord aims to establish market discipline, with the main emphasis on risk-based capital adequacy. According to Basel II, some selected international banks will be allowed to use their own internal risk management systems. Other banks will continue to use standardized risk management systems with enhanced rating systems. Adoption of external rating facilities and guidance for supervisory bodies in relation to external ratings are major components of the risk management process within the Basel II accord. However, the risks associated with specialized Islamic products and their unique nature, Islamic banks face a challenge in adopting international standards. It may be taken into consideration that some of the risk models may expose Islamic banks to other risks that are not apparent for conventional banks. The methods that are developed for conventional banks should be amended and tailor-made for Islamic banks and such procedures may require extensive input in terms of data availability.

Because of the unique nature of their financial instruments, Islamic banks should keep profit and loss sharing accounts off the balance sheet. Conventional banks cannot do the same for time deposits. Such accounting treatment would expose Islamic banks to capital adequacy risk. Adoption Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) standards provides a resolution for the issue by requiring Islamic banks to keep all deposits on the balance sheet, without differentiating between current accounts and profit and loss sharing accounts. The International Accounting Standards (IAS) does not have any accounting procedure to overcome this obstacle. In countries where compliance with IAS is mandatory without any room for AAOIFI standards, there may be Islamic banks with profit and loss sharing accounts that are off the balance sheet. Besides risk-based capital

adequacy, Basel II also emphasizes risk management techniques, internal controls and external audits. While capital adequacy definitions are not changed with the new accord, new approaches are described for weighting assets: the standardized approach, the internal ratings-based approach and the model-based approach.

12-1. Standardized Approach

Islamic banks are categorized as medium to small firms. Therefore, they may be required to comply with the standardized approach to classify and measure risk exposure for capital adequacy. Currently, the majority of the Islamic banks assess their credit risk by applying the standardized approach, in which capital weighing is based on ratings from external rating agencies such as Standard and Poor's, Fitch Ratings or Moody's. As Islamic banks move to more advanced approaches, they face the challenge of a lack of data from historical default cases. Quality data must be available to estimate the probability of default and loss given default.

Islamic banks definitely need a pooled data system at the multinational level that would require a relaxation of some confidentiality rules imposed by associated regional banks.

Clarification from the Islamic Financial Services Board on the nature of Islamic banking products and the associated risks under Basel II have helped in identifying proper risk mitigation strategies for Islamic banking. Risk mitigants, including collateral, guarantees and derivative products, are recognized within the standardized approach with a wider range. The effects of specific risk mitigants on overall risk measurement are defined in the accord, but this definition is not extended to Islamic financial instruments. Transactions such as murabahah and ijarah are structured similarly to conventional transactions.

The definition of collateral for partnerships such as mudarabah and musharakah are very troublesome for Basel II. At first look, these partnerships may require collateral neither for expected profits nor

against principal investments. If a bank establishes a musharakah transaction, how could it be possible to ask for collateral and from whom would the collateral be collected? Is it legal in terms of Shari'ah to collateralize investments of musharakah or mudarabah partnerships? If little collateral is asked against managerial misconduct or none taken in, the transaction will be recorded as an equity partnership with no collateral. Thus, under Basel II, collateral should be applied to equity participation and assets of the equity should be considered either as a deduction from the risk or as collateral for the outstanding risk.

The treatment of derivative products has also been expanded to include more products. Although there are no Islamic financial instruments defined as derivative products for Basel II purposes, parallel salam may be used to hedge against risks arising from salam contracts. Parallel salam contracts may not be derivative products, but the application of salam is very much in line with the intent of derivatives. In terms of credit definitions, however, Basel II will treat the two salam transactions as two separate deals and double the risk. If parallel salams are to be included within the Basel II expanded derivative treatment, banks would match two contracts and deduct the amount of parallel salam from the original salam contract. The resulting reduced risk exposure is similar to that of credit derivatives that conventional banks utilize to hedge their credit risk.

The range of guarantors as collateral has been expanded to include certain companies with acceptable levels of external credit ratings. Islamic banks will benefit from such expansion in terms of credit extended to the real economy. As long as Islamic banks do not include fixed income securities to their credit portfolio, their percentage of loans within total assets should reflect this tendency.

Special risk treatment for retail exposures is included within the standardized approach. The risk weights are reduced for most retail exposures. Credits extended to small and medium enterprises that meet the required criteria are included within this special treatment. Islamic

banks will benefit from reduced risk weights, because the available Islamic financial instruments make it possible for Islamic banks to work extensively with small and medium enterprises. Some of the Islamic financial instruments especially designed for this purpose include istisna, salam and mudarabah.

Any special treatment in terms of reduced risk weights will benefit Islamic banks in two ways. First, it will allow Islamic banks to offer better conditions to customers. Second, Islamic banks will be encouraged to work more with small and medium enterprises and utilize more related products. This may result in product shift from dominant murabahah transactions within the credit portfolio to more equity-related products.

12.2. Internal Ratings-Based Approach

Banks internal risk measurement systems are utilized for measuring credit risk. Risk weights and capital charges are generated by banks with the guidance of Basel II and regulatory bodies.

The risk-weight calculations are derived from risk management techniques. The internal ratings based (IRB) approach uses four quantitative areas of data:

- Probability of default (PD) is the probability that a borrower will default within a time period.
- Loss given default (LGD) is the percentage of the risk exposure that will be loss in case of default.
- Exposure at default (EAD) is the amount of risk exposure at the time of default.
- Maturity (M) is the days left for the risk exposure to end.

The capital requirement for specific risk exposure will be a function (∆) of PD, LGD, EAD and M. With the IRB approach, banks are permitted to alter the risk weight formula for small and medium enterprise borrowers. Such an alternative will be especially useful for Islamic banks, considering the relatively larger risk exposure of small and medium enterprises. The advanced risk weight formula will allow

for true reflection of risk in terms of small and medium size enterprise and annual sales figures.

The disadvantage of categorizing all small and medium enterprises into one single category is that the differences between small and medium enterprises are overlooked. With the IRB system, such differences are reflected directly in risk measurements and therefore in calculation of capital. Allowing the bank to distinguish the risk weight will also allow for true risk estimation in terms of risks associated with Islamic financial instruments. It has always been a problem to distinguish the differences in risks between small and medium enterprises financing by conventional banks versus financing by Islamic banks. Risk weights that are based on past experiences of Islamic banks will enable a better risk definition in terms of small and medium enterprises and related credit products.

The IRB approach also provides extended coverage for risk mitigation techniques, including collateral and risk derivatives. Considering the absence of risk derivatives for Islamic banks, their treatment is not applicable, except to say that conventional banks gain advantage over Islamic banks.

On the other hand, regarding collateral, extended treatment will benefit Islamic banks a great deal. Perhaps Islamic banks will benefit more than conventional banks, as long as a different set of methods will be allowed by the supervisory bodies. It will be very important to have the cooperation of regulatory bodies to develop a set of risk measurement methods for Islamic banks that may prove to be much different than the methods for conventional banks. Since the IRB approach includes many aspects of risk measurement to be conducted by banks themselves, the same should be applicable to Islamic banks as well. Islamic banks, together with Islamic banking standardization authorities such as the AAOIFI and the Islamic Financial Services board (IFSB), should provide the necessary foundation to establish an IRB approach for Islamic banks.

In terms of retail exposures, the IRB approach includes an expanded treatment. These credits are categorized under three headings:

1. Collateralized by residential mortgages.
2. Qualifying revolving retail exposures.
3. Other retail exposures.

Different products of Islamic banks have different collateral structures. For instance, murabahah transactions may have residential mortgages that could be classified according to the first category. In terms of qualifying revolving retail exposures, Islamic banks cannot have revolving credits according to Shari'ah. Although some credit restructuring may be permitted, and in fact encouraged, if customers face payment problems, these should not be considered as revolving credits. The third category includes many credit types that are convenient for Islamic banks. For instance, project financing is categorized as specialized lending under other retail exposures.

Islamic banks may list instruments as specialized lending, including salam and istisna. While classification of such risk is still troublesome, Islamic banks should take the lead to describe risks associated with such credit relationships and establish a risk weight foundation. Equity participation is also handled differently under the IRB approach. Islamic financial instruments such as mudarabah and musharakah benefit from such special treatment. There are two different methods described for handling equity participation: 1. Banks can provide their own default probabilities for equity participations; and 2. Banks can estimate the market value decrease of the equity participation. In either case, Islamic banks can take advantage of special treatment.

In fact, the IRB approach to equity participation may encourage Islamic banks to utilize more mudarabah and musharakah transactions. But in order to obtain supervisory approval to apply the IRB approach, Islamic banks will have to overcome obstacles in terms of size and risk management.

12.3. Model-Based Approach

Under this system, credit risk is measured in terms of risk portfolios, with utilization of specialized models. Through utilization of pre-defined risk models with computerized systems, banks aim to implement standardized risk measurement procedures. Basel II aims to establish comparable risk measurement techniques between banks. However, banks need necessary infrastructure and model descriptions for a variety of risks. To generate a standardized risk measurement system, Islamic banks will require extensive resources and enough experience in various types of risks to draw upon. In fact, a standardized Islamic banking risk measurement model would be a great achievement.

13. Challenges in Adopting Capital Adequacy Models to Islamic Banks

It is not easy to apply this model to Islamic banks. First, because Islamic banks can raise much of their funds through mudharaba accounts, it is not easy to work out how much equity a bank has, nor who bears the risk – the account-holders or the bank itself. Many Islamic banks have argued that the funds raised in this way should be seen as a form of equity because of the loss-bearing contracts on which they are based. However, the banks' sensitivity to liquidity risk means that most would accept losses themselves rather than pass them on to their customers.

The second obstacle is the fact that Islamic banks' risk profile may not be well reflected by the Basel II taxonomy – market, credit and operational risks are all measured according to the specific rules of Pillar I, but other risks which are important to Islamic banks, such as liquidity risk, concentration risk and fiduciary risk, are all approached more subjectively under Pillar II. Here, banks are required to articulate their approach to capital management and its allocation across businesses and risk types, subject to a regulatory review of the approach's effectiveness – which in turn will determine the supervisory approach taken. As things stand, there is broad consensus on the part of Islamic bank regulators on

how these risks should be assessed for capital adequacy purposes. The Islamic Financial Standards Board (IFSB) has developed a framework based on Basel II which provides the industry with a strong platform for the development of new national regulatory capital frameworks. Still, most national regulators will find this challenging to some degree. The banks themselves will find it hard to produce robust numbers, particularly for Pillar II risks. Even more traditional risk types, like market and credit, come with thorny issues for the Islamic bank. Both require a wealth of historical data which the still-young Islamic sector simply does not have. As an example, banks that want to use the more advanced approaches to credit risk in Basel II have to be able to calculate a default probability for each of its counterparties. These calculations are based on years of data for other counterparties. In the absence of this kind of data, Islamic banks have been known to turn to conventional bank data as a proxy ° but Islamic financial products do not have the same definition of default as a conventional product, making it difficult to apply this proxy information. These issues could be even more acute for conventional banks that also offer Islamic banking, because their capital requirements will be set by a non-Islamic regulator which might not fully understand the complexities involved.

As noted above, national regulators are working to build on the Basel II guidance issued by the IFSB. Most are still assessing their implementation options. In theory, those options ought to be fairly limited ° Basel II is supposed to be a uniform global regulatory standard which provides a level playing field for all banks within the framework, regardless of where they are domiciled. In practice, the credit crisis seems likely to produce so much regulatory change that regulatory capital standards may be in a state of flux for some years to come. It is not inconceivable that ° rather than being forced to play follow-the-leader ° regulators of Islamic banks could now help to set the agenda.

However, before Islamic banks get closer to adopting the more advanced features of Basel II, they need to ensure that a few major obstacles are overcome. Using advanced approaches for calculating and handling risk is currently difficult in some of the Islamic banks operating in the Middle East and Asian countries due to shortage of data. For example, detailed historical default data is required to calculate the probability of default and the potential loss given the estimates of default. However, this data is not easily available in most of the Islamic countries.

National Commercial Bank, Al-Rajhi Bank and a few other banks are working towards creating a national data pooling system for handling credit risk. Bahrain, Malaysia, Qatar and the UAE have developed national databases and banks in the Middle Eastern countries are working on collecting their own historical data.

Much more needs to be done to develop globally competitive databases for the Islamic banking sector. Furthermore, in order to combine data at a multinational level, the central banks of the Islamic countries need to give their banks the freedom to disclose information. This would require the cooperation of the central banks of all Islamic countries. Corporations of Islamic countries should adopt a similar policy of disclosing data on their exposures. The idea of using a proxy database to start with is being worked upon to ensure that Islamic banks at least start using more advanced Basel II reporting and compliance. Islamic banking presents unique risks to the financial system. This is because of the profit and loss sharing method of financing and particular contractual features of Islamic financial products.

The profit and loss sharing shifts the risks in the institution to investment depositors to some extent. It also makes Islamic banks vulnerable to a range of risks, including those risks that are normally carried by equity investors because of the following features:

- The profit and loss sharing mechanism is very complex. It requires greater auditing of projects to guarantee proper governance and suitable valuation.
- Profit and loss sharing cannot be made dependent on collateral or guarantees to decrease credit risk.
- Product standardization becomes more complex because of the multiplicity of potential financing methods, increased operational risk, and legal uncertainty in interpreting contracts.

Because of the absence of Shari'ah-compliant instruments such as treasury bills, it is difficult to manage asset and liability mismatches and hence, liquidity risks are significant.

Commodity inventories on Islamic bank balance sheets increase price and operational risks. Furthermore, due to contracts of Islamic banks with deferred delivery of products, considerable additional price risks arise.

In order to address the unique risks of Islamic banking, adequate capital and reserves are required. This also requires control of risks in an appropriate disclosure regime. Since information asymmetries are widely present in Islamic banking, there is a strong need for better rules and practices for accounting, governance, disclosure and auditing. Furthermore, there is a need for the development of an infrastructure that facilitates liquidity management. Islamic financial institutions face a major challenge in analyzing the risk characteristics of Islamic financial products and understanding how to treat these products under Basel II. Islamic banking bodies are working towards clarifying these issues.

14. Challenges of the Basel III System in Islamic Finance

Despite the fact that Islamic finance holds global appeal in its provision of Shari'ah-compliant financial services for both Muslims and non-Muslims, the Basel III has so far often failed to make a distinction between conventional and Islamic finance. This is unsurprising, given

that historically the members of the Basel committee have largely been comprised of the governors of central banks and prudential supervisors from non-Muslim countries. Emphasis has been placed on a greater collaboration between the Basel committee and Islamic standard and regulatory bodies such as the Islamic Financial Services Board (IFSB). The UK's Financial Services Authority, Howard Davies said in a statement that, "It is hard to imagine, given the scale of Islamic finance today, that another capital accord can be developed without taking account of the particular needs of Islamic banks, as the Basel II accord was" (GIF Magazine).

In order to overcome the challenges when collaborating with the Islamic Financial board, the Basel committee issued a risk management and capital adequacy guidance notes for commodity Murahaba transactions. The Secretary of the Islamic Financial Board, Rifaat Ahmed Abdul Karim, had reportedly stated that the board would seek approval to amend capital adequacy standards as per Basel III requirements, with the aim of encouraging a level playing field between Islamic financial institutions and conventional banks. Even so, Hussain maintains, the prudential requirements of Basel III could prove an unnecessary restriction on the growth of Islamic finance. Others take a more sanguine view, pointing out that some aspects of Basel III already play to the strengths of Islamic banks in certain countries, such as Malaysia. BNM says that the Basel III capital proposals emphasize the role of common equity - ordinary shares and reserves - as the strongest form of capital, a practice which the bank says is in line with those of Malaysian Islamic banks. The Central Bank of Malaysia estimated in June 2010 that more than 80 per cent of the total capital of Malaysian Islamic banks was in the form of common equity.

The majority of Islamic banks in Malaysia already maintain capital levels well above the current regulatory minimum, BNM says, and the liquidity coverage ratio (LCR) under Basel III is conceptually similar to the liquidity framework adopted by Malaysian Islamic banks. However,

the board says, the LCR will require Islamic banks to hold more liquid assets for wholesale funding than they are required to under the existing liquidity framework. "Typically, Islamic banks are deemed to be well capitalized compared to their conventional banking counterparts," says Ramakrishnan of Oracle. He says that Islamic banks should look into the specific areas of liquidity risk management and stress testing espoused by the Basel III directive, and incorporate these into their own risk management and capital adequacy standards (A. Hussein). There has been a push for Islamic banks to further support the Basel III standards in order to improve their transparency and capital adequacy.

Shari'ah-compliant banks aspire to align their regulations with Basel III reforms, claimed the Secretary General of the Islamic Financial Services Board (IFSB), an association for regulators within Muslim countries. It seems that Islamic Financial Services Board has gained approval from its council in December 2010 to commence amendments of the regulations according to Basel III. The process is expected to be completed around 2013. "We are revising the standard of capital adequacy to look into the need for more capital, and to investigate the form which that additional capital takes, said Abdel Karim. He shared an opinion that this move will provide the Islamic financial services industry with a level playing field on which to compete with conventional banks. Over 60 senior bankers from 30 leading Bahraini financial institutions met to receive a briefing on the new financial banking principles of Basel III. "Bankers are asking us about the relevance of Basel III in Bahrain, how the new rules will impact local banks' capital position and what the implications are for risk management, finance or financial systems," said Kohut, Head of Risk at KPMG Bahrain.

"The typical headline elements of Basel III regarding the new capital requirements, which are most relevant for European or American banks, appear to be of limited impact for local banks.

"However, there are still a number of less talked-about items, as well as some important indirect or second order effects of Basel III which regional banks should consider," he said.

He added "Aside from the obvious need to improve capital and liquidity management, regional banks will need to consider, more than ever before, the question of whether their strategic, business and product specific decisions take sufficient account of the inherent uncertainties and opportunities caused by the increasing dynamic complexities of the financial markets."

Islamic banks are governed by the regulatory body of the respective countries, and compliance with IFSB's guidelines is voluntary.

The Kuala Lumpur-based IFSB, whose members include various central banks, the International Monetary Fund (IMF), and lenders such as Kuwait Finance House and Sharjah Islamic Bank, is one of two standard-setting bodies which issue guidelines on the Islamic banking, capital markets and insurance sectors.

The other is the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) in Bahrain, which issues guidelines on accounting standards and Islamic bond structures.

Abdel Karim said that the IFSB's liquidity management corporation will provide a substitute for commodity Murabaha money market instruments, and help lenders manage their liquidity positions, by issuing short-term Islamic finance instruments.

This will hopefully give depth to the capital market, he said.

Liquidity management hasn't been addressed in a sufficiently concrete way. This is the first time that we have seen a number of regulatory authorities cooperating to address the issue.

The provision of liquidity management tools is one of the key challenges to the emerging Islamic finance industry, with Islamic banks handicapped due to their limited product range. Due to the limited availability of highly rated Sukuk issues, Islamic banks often end up placing the reserve liquidity which central bank require them to maintain

with international conventional banks through commodity Murabaha (GIF Online).

15. Early Capital Adequacy Framework Proposals for Islamic Banks (the AAOIFI Proposal)

In 1999, AAOIFI issued the Statement on the Purpose and Calculation of the Capital Adequacy Ratio for Islamic Banks . This was the first initiative towards developing a tangible framework that properly addresses the risks faced by Islamic banks. The document proposed a method for calculating the CAR for Islamic banks. Much of the suggested methodology is based on Basel II standards, with the key difference relating to the liabilities side of Islamic banks balance sheet. It is common knowledge that the sources of funds of Islamic banks differ from those of conventional banks. The following table summarizes the different sources of funds that appear on the balance sheet of both types of institutions and their implication on the CAR. When evaluating Islamic banks CAR according to Equation (1), the calculation of capital is not really problematic as there are neither preferred shares nor subordinated debt, meaning that Islamic banks capital is only made up of Tier 1 share capital and reserves. According to following table, Islamic banks fund their financing and investing activities through three types of accounts in addition to shareholders equity: current accounts, saving accounts and unrestricted investment accounts.

Table (10) Source of funds for Islamic and conventional banks

Islamic bank	Conventional bank
Current Accounts Savings Accounts Unrestricted Investment Accounts (UIA) Equity: Share Capital + Reserves- Tier 1 Donated Land Reserve (No Preferred Shares or Subordinated Debt allowed): Tier 2 No Tier 3	Current Accounts Saving Accounts Time Deposits, Certificate of Deposits Equity: Share Capital + Reserves-Tier 1 Cumulative Preferred Shares + Subordinated Debt-Tier 2 Tier 3 portion of subordinated debt available only for market risk

Similar to conventional banking, current and saving accounts are guaranteed of full payment upon customer request. In contrast, investment account holders require less protection, as their funds are held on a profit-and-loss sharing (PLS) basis and they agree to bear the risks associated with investing these funds. Investment accounts are of two types: restricted and unrestricted. Funds collected under restricted investment accounts represent fiduciary services because depositors make all investment decisions and the Islamic bank simply collects a fee for playing the role of agent. As those funds are invested according to clients directives and are not at the discretion of the banks, they cannot be part of a bank's source of funds. In this context, the AAOIFI recommends that restricted investment accounts be included as off-balance sheet items. The implication is that such investment funds will not be included in the calculation of CAR. On the other hand, unrestricted investment accounts should be included in the balance sheet of Islamic banks and have to be considered in the CAR. As mentioned previously, the foremost particularity of Islamic banks' liabilities is that unrestricted investment account holders agree to share in the profit and

loss with the bank. This implies that such funds cannot be guaranteed by assigning them 100 per cent weight in calculating the CAR, or else this will be contrary to the Shari'ah principle of participation. The purpose of the AAOIFI document on capital adequacy is to address this issue and to determine appropriate risk weights to unrestricted investments. In conventional banking, shareholders assume all risks arising from financing activities. If a bank's CAR is below requirement (8 percent), shareholders must increase equity capital. In contrast, in Islamic banks, although unrestricted investment account holders share risks with bank shareholders, their funds cannot be considered as equity. The rationale is that investment depositors can withdraw their funds upon maturity and reduce the sources of funds available to the bank, but the equity base remains unchanged when shareholders withdraw their funds by selling their shares to other investors. Another reason that explains why unrestricted investment accounts cannot be classified under equity or Tier 1 capital is that such account bearers have no voting rights. To sum, unrestricted investment accounts lie in between deposits and equity, and they should be properly acknowledged for capital adequacy purposes. In the proposed risk-sharing scheme of AAOIFI, investment account holders share part of the risk with shareholders, and the CAR for an Islamic bank is calculated as:

$$CAR = \frac{\text{Total Capital}}{RWA_{k\&CA} + 50\%(RWA_{ULA})} \quad (1)$$

where $RWA_{k\&CA}$ represents the average risk weighted assets financed by the bank's capital and depositors' current accounts, and RWA_{ULA} represents the average risk-weighted assets financed by the unrestricted depositors' investment accounts.

16. The IFSB Proposal

An important step towards the development of the Islamic finance industry was carried out on 3rd November, 2002, with the foundation of the Islamic Financial Services Board (IFSB) headquartered in Kuala Lumpur. The decision to establish such a body was taken by a group of governors, senior officials of central banks and monetary authorities of several Islamic countries, supported by the Islamic Development Bank, the AAOIFI and the International Monetary Fund. The general objective of the IFSB is promoting, spreading and harmonizing best practices in the regulation and supervision of the Islamic financial services industry. The IFSB serves as an international standard setting body of regulatory and supervisory agencies that have an interest in ensuring the reliability and stability of the Islamic financial services industry. It is specifically concerned with the standardization of Shari'ah committee rulings on Islamic banking practices. The IFSB also aims at standardizing the approach in identifying risks in Shari'ah-compliant products and services and in assigning risk weights that meet internationally acceptable prudential standards. Like the AAOIFI proposal, the IFSB capital adequacy framework serves to complement the Basel Committee on Banking Supervision's guidelines in order to cater to the specificities of Islamic financial institutions. While the AAOIFI focuses on the sources of funds of an Islamic bank, the IFSB, however, goes a step further by considering the uses of funds and assigning appropriate risk weights to each asset item. The major contribution of the IFSB is to acknowledge that the uses of funds for Islamic banks, which are by nature Shari'ah compliant, differ from the typical asset side of the balance sheet for a conventional bank. The IFSB frame of work aims at:

- Identifying the specific structure and contents of the Shari'ah-compliant products and services offered by Islamic banks not considered under Basel II or by the AAOIFI.

- Standardizing Shari'ah-compliant products and services by assigning risk weights to those that meet internationally acceptable prudential standards.
- Setting a common structure for the assessment of Islamic financial institutions capital adequacy requirements.

Included is market risk not only in the trading book but also in the banking book of Islamic banks due to the nature of the banks assets such as Murabaha, Ijara, Salam, Musharaka and Mudaraba.

In December 2005, the IFSB issued the Capital Adequacy Standard for Institutions (Other than Insurance Institutions) offering only Islamic Financial Services . The recent standard takes into consideration the specificity of investment account holders who share part of the risk with shareholders as follows:

$$CAR = \frac{\text{Tier1} + \text{Tier2}}{\left[\begin{array}{l} \text{RWA}_{(\text{Credit risk} + \text{Market risk} + \text{Operational risk})} \\ - \text{RWA funded by PSIA}_{(\text{Credit risk} + \text{Market risk})} \end{array} \right]}$$

where RWA (Credit risk + Market risk + Operational risk) include those financed by both restricted and unrestricted Profit Sharing Investment Accounts (PSIA). The capital account of PSIA is not guaranteed by the Islamic financial institution and any losses arising from investments or assets financed by PSIA are to be borne by the Investment Account Holders, and thus do not command a regulatory capital requirement. This implies that assets funded by either unrestricted or restricted PSIA should be excluded from the calculation of the denominator of the capital ratio.

17. Risk Mitigation in Islamic Banking

In the following lines, risk mitigation in Islamic banking with respect to twelve types of risks, including Reputation Risk, Exchange Risk, Price Risk, Displaced commercial risk, Concentration Risk, Default Risk, Liquidity Risk and Religious Risk, Fiduciary risk will be discussed.

Exchange Risk

Exchange risk stems from the unavailability of currency options and currency swaps in Islamic banks.

Price Risk

Market risk is the most important risk that the goods will not be sold or sold at prices which may not cover costs. This risk is only borne by the seller when the goods are 'held for trade'. In 'Murabiha' and 'Diminishing Musharika', operational risk is not taken by the bank. 'Destruction of property' is the only risk taken which is very remote. It is covered through insurance, the cost of which is added in the in-transfer pricing. If the tenancy and sale contract were not made dependent, the bank would have taken market risk which the bank avoids by making both contracts dependent and locking the price at the outset. Similarly, delivery risk is borne by the exporter as he does not get the payment until he supplies goods 'in order'.

Concentration Risk

Islamic banks practically provide financing using Ijara and Murabiha. Most of the financing provided in international trade to commercial enterprises is by way of Murabiha. But the product has minimum risk as compared to Modariba and Musharika, which are more akin to equity financing than debt financing.

Default Risk

Since clean borrowing is not possible in Islamic banking, Islamic financing is asset backed and adequately collateralized. Furthermore,

title of ownership rests with the bank in Ijara and Murabiha until the actual sale transaction is made. Therefore, an Islamic bank can foreclose the asset in case of default.

Displaced Commercial Risk

Islamic banks typically obtain the majority of their funds from mudharaba and wakala investment accounts and, at first glance, this arrangement appears to provide the institution with a significant buffer against loss.

During good times, account holders can expect significantly higher returns than those offered to conventional bank depositors, because Islamic banks often use the investment accounts to fund riskier assets. Contractually, however, customers accept a lower rate of return if the bank's assets underperform, and are also expected to help absorb losses. Islamic banks do their best to protect customers by building up two types of reserve – one (the profit equalization reserve) to help ensure they can pay the anticipated profits to customers, and a second to be used to help offset severe losses. In practice, even when a bank's reserves are exhausted, it may be unwilling to cut its customers' returns, fearing that they would take their business to a competitor (hence the term "displaced commercial risk" is used). Banks are even more reluctant to use customer money to cover losses. The entirely rational fear is that disappointed customers would withdraw the rest of their funds in a run on the bank. So, mudharaba and wakala funds may only provide a buffer in theory. Some regulators, such as the Central Bank of Bahrain (CBB), recognize this risk and have told banks that they need to hold capital against some portion of the assets in which their mudharaba and wakala accounts are invested. Under the CBB capital rules for Islamic banks, 30% of the risk-weighted assets of investment accounts are to be included in the denominator for capital computations.

Real Estate Risk

Real estate risk concentrations are common among Islamic banks ° their geographic reach tends to be limited, as do the type of assets they are able to accept. Hedging is mostly out of bounds, and risk transfer via securitization may be difficult to achieve.

In particular, there is growing nervousness about the extent to which Islamic banks are exposed to the real estate sector, through musharaka and istisna contracts. The construction boom in the six Persian Gulf Cooperation Council countries means that it is not uncommon to find Islamic banks which have half of their assets linked to real estate.

Unlike conventional banks, real estate exposure for Islamic banks does not come in the form of a loan. Instead, the exposure typically takes the form of a profit-sharing contract ° the Islamic bank puts its own money at risk in the form, effectively, of an equity stake. It may not have the same kind of direct management involvement that a private equity firm would insist upon and, as such, the bank s exposure depends on both the skill and honesty of its partner.

On the face of it, Islamic bank real estate portfolios seem like a potent mixture of high risk and awkward moral hazard ° and some central banks have been concerned enough to launch studies of their domestic institutions exposure. It is certainly an area which needs greater scrutiny ° in fact, because the real-estate assets which banks are financing continue to be owned by their clients, much Islamic bank exposure to real estate risk may not appear on the sector s balance sheets.

Operational Risk

Islamic banking products can involve a number of separate contracts, giving rise to additional legal risks. Each step takes time and involves a fresh contractual agreement, magnifying the scope for disagreements and complications. For example, in the case of a murabaha transaction, the bank has to buy an item and then sell it under different payment

terms ° each step takes time and involves a fresh contractual agreement, magnifying the scope for disagreements and complications. In an istisna transaction ° for example, when financing a construction project ° the bank assumes the role of the contractor but has to sub-contract the actual building work out to a third party. If the builder fails to perform or defaults, it is the bank which bears much of the legal risk.

Islamic banks also have to face thorny operational risks associated with the administration of their business ° paperwork and book-keeping, in other words. In principle, these risks are no different to those faced by conventional banks. In practice, they are made more taxing by the contractual complexity of Shari'ah compliant transactions: there are more contracts to manage and more risk of documents being mislaid; the wrong contract could be used, or the wrong terms applied. Tying all of this paperwork into a coherent system which allows banks to reconcile their accounts, and aggregate and report their risks, is also more difficult. It is not impossible, of course ° but it requires a watchful eye and drains more time and energy.

Liquidity Risk

Islamic banks are so sensitive to displaced commercial risk because they have restricted access to the short-term funding options used by conventional banks. General regulations compliance combined with Shari'ah compliance result in slight intermediation inefficiency in Islamic banks.

It is partly due to the fact that most of them are new entrants and are in the process of converting their equity base into productive revenue generating assets. Since Islamic Banks cannot trade in T-bills, they are given a special permission from S&P to invest the portion of the deposits which the conventional banks use to meet statutory liquidity requirements in equity markets.

Generally, Shari'ah scholars insist that all transactions must be linked to a tangible, underlying asset ° which rules out purely financial contracts

like repos and certificates of deposit. As a result, there is a big, unpopulated gap between cash and long-term bonds. The predominance of asset-based financing and specialized lending products found on the typical Islamic bank balance sheet serves to lengthen the liquidity gaps because exits from these transactions are not always agreed in advance. Malaysia is a notable exception, where Shari'ah scholars come from the Shafi'i school of Sunni Islam and allow some money market transactions – for example, Malaysian scholars view a repo contract as a promise to buy back sold Shari'ah-compliant securities, making such transactions permissible. Other countries have attempted to launch their own repo markets, while still meeting the requirements of their own Shari'ah scholars. Bahrain has been trying for a number of years to get a local Islamic repo market off the ground, as has Saudi Arabia. Both face tougher compliance obstacles because one of the most influential opinions on Islamic finance in the Middle East is provided by the Shari'ah board of the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), which is made up of representatives from a wide range of countries and therefore tends to reach consensus opinions that are tougher than those which might be available in a single jurisdiction. Until Islamic banks are able to make use of short-term funding markets offering money at a variety of tenors, they will remain vulnerable to a bank run scenario – and would arguably prove less resilient than conventional banks which have suffered liquidity squeezes over the past year. A related problem is the danger of asset/liability mismatches. Conventional banks have a huge variety of floating-rate assets with which to offset their floating rate liabilities. As a result, when interest rates change, they are less exposed to differences between the amount they pay and the amount they receive. They also have a host of derivatives which can be used to manage the risk away. Islamic banks have fewer options. Their liabilities pay a rate which is adjusted to a more or-less mirror floating rate benchmark, but their assets may have fixed rate. If a gap opens up between the two, it is a lot harder for Islamic

banks to manage it because, for most Shari'ah scholars, derivative transactions are not halal.

Fiduciary and Reputation Risk

Shari'ah compliance is all-important to an Islamic bank and to its customers. In theory, the bank's Shari'ah board should ensure that all of its products and transactions are compliant – at least, that is certainly the customers' expectation. But interpretations of Shari'ah vary from one school of thought to another and from one scholar to the next. More to the point, Islamic banks will occasionally find themselves in a position in which a commercial opportunity falls foul of a Shari'ah board's fatwa, and may then seek to address the scholars' concerns by tweaking or restructuring the deal. Sometimes the judgments turn on very subtle distinctions. Through seeking to get business done, banks may find themselves sailing closer to the wind than is advisable and it's conceivable that a bank may at some point have its adherence to Shari'ah questioned – an event which could inflict devastating reputational damage, thanks to the sensitivity that Islamic banks have to customer behavior and liquidity risk. Alternatively, a class of product may run into the same problems – as happened with one of the Islamic banking industry's biggest success stories, the market for sukuk.

This market saw issuance of over \$35 billion globally in 2007 but stalled temporarily after questions were raised about Shari'ah compliance at the end of that year. Many of the sukuk behind the market's recent growth have been linked to underlying *ijarah*, *mudharaba* and *musharaka* transactions. In the case of an *ijarah* sukuk, a company or sovereign entity seeking finance would transfer an asset into a special-purpose vehicle (SPV). The SPV, by issuing certificates, raises funds which are used to buy the asset from the company, thereby providing the company with the finance it needs. Investors are paid by renting the asset back to the company, generating a stream of lease income which is paid to the

certificate holders. At the end of the transaction, the company buys back the asset, paying off the SPV. Unlike a conventional securitization, the risk associated with the transaction does not stem from the performance of the asset in question, but from the ability of the company to buy back the asset ° it is, in essence, a counterparty risk.

18. Conclusion

This paper started by observing that if Islamic banks aspire to a more significant role in the financial system they will need to demonstrate to customers and conventional bank counterparties alike that they appreciate their risks and know how to manage them. That s true ° but it can t be done by cutting and pasting risk management concepts and practices from conventional banks.

There is no exemplar for Islamic banks to follow. Risk practices within the conventional banking system are currently under intense scrutiny ° no one should be rushing to emulate those practices until the lessons of the crisis have been thoroughly digested. More pertinently, many of the risks discussed in this paper are either particular to Islamic banks or have some special feature thanks to the unique nature of Islamic finance.

The sector needs to focus on strong management, robust governance and also transparency, which has the potential to address a number of Islamic banks most pressing exposures. The issues of displaced commercial risk, real estate concentration and fiduciary risk all arise, to some extent, from the complex nature of Islamic banking relationships and products, and the tensions between Shari'ah-compliant form and substance.

Islamic banks could also be helped by consistency of Shari'ah interpretation. Uniformity would enable banks to act more confidently and seize opportunities more quickly. This may seem a distant prospect given the divergent Shari'ah judgments that currently exist, but the benefits could be considerable ° and the arguments in favor of standardization can be expected to grow.

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