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Mapping the Risks and Risk Management Practices in Islamic Banking

By

Wael Kamal Eid

This thesis is submitted to fulfil the requirements for the award of the Degree of PhD at Durham University

**School of Government and International Affairs
Durham University**

September 2011

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In the Name of Allah, the Most Compassionate and the Most Merciful

Abstract
Mapping the Risks and Risk Management Practices in Islamic Banking
Wael Kamal Eid

Although risk management in Islamic banking is one of the major as well as controversial issues of the sector, it is still an under-researched area of study. A lot of uncertainties still exist in risk management in Islamic banking, for which the answers are not yet necessarily clear, but which will play a part in shaping the industry's future. Effective risk management in Islamic banking, thus, deserves priority attention: unless the industry develops its own genuine risk management architecture, it cannot achieve the dynamism that provides the viability needed for a more resilient financial system than the failing Wall Street model. Therefore, the study of risk management issues of the Islamic banking industry is an important but complex area.

This study, hence, explores and analyses risk management practices in the Islamic banking industry through the perceptions of participants who were drawn from the banking and finance industry. The research maps out the opinions and attitudes towards risk and locates the practices of the industry related to risk management. This study provides an up-to-date overview of current market practices, issues, and trends in risk management for Islamic banks. It focuses on practical applications and discusses a wide range of unique risks facing Islamic banks from the perspective of different range of practitioners.

To fulfil the aims of the research study, first, the present thesis analyses a number of issues concerning the subject using secondary data. Second, the unique risks facing Islamic banks and the perceptions of banking professionals regarding these risks are surveyed through a questionnaire. The final survey sample comprised 72 surveys from 18 countries. The data were analysed using various statistical analysis techniques ranging from simple frequency distribution analysis to the more advanced analyses such as non-parametric statistical analysis, factor analysis, and MANOVA multivariate analysis of variance. Third, semi-structured interviews were subsequently conducted with 33 leading Islamic banking professionals from 9 countries in order to develop an in-depth understanding of the underlying issues. Focused coding technique is used to analyse and sort the findings.

In general, the findings from this study identified weaknesses and vulnerabilities among Islamic banks in the area of risk management and governance. Risk management, monitoring, reporting, and mitigation need to be enhanced across the entire industry. The study has also shown that the majority of respondents consider liquidity, asset-liability management, and concentration risks as the top risks facing Islamic banks. In addition, regional risk perceptions were crystallized by conducting inferential statistical analysis. The findings also show that, although Islamic banks have shown resilience, they are not immune to financial shocks. The study asserts that the root drivers of the prevailing financial system have to be challenged and replaced by a more transparent and ethical alternative, for which Islamic finance is a serious yet underdeveloped option. The real issue in Islamic banking is the excessive reliance on form at the expense of substance.

It should also be noted that the findings of the study have policy-making implications which could benefit regulators, policy makers, *Shari'ah* scholars, practitioners, academia, and institutional stakeholders. Furthermore, this study has filled a gap in the literature by empirically exploring risk management issues from an Islamic banking perspective.

DECLARATION

I hereby declare that no portion of the work that appears in this study has been used in support of an application for another degree or qualification of this or any other University or institution of learning.

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LIST OF ABBREVIATIONS

AAOIFI	Accounting and Auditing Organisation for Islamic Financial Institutions
ALM	Asset Liability Management
AMA	Advanced Measurement Approach
CAR	Capital Adequacy Ratio
CDOs	Collateralised Debt Obligations
CDS	Credit Default Swaps
CEO	Chief executive Officer
CIBAFI	(General) Council for Islamic Banks and Financial Institutions
DB	Deutsche Bank
DIB	Dubai Islamic Bank
EAD	Exposure at Default
FSA	Financial Services Authority
GCC	Gulf Co-operation Council
IAH	Investment Account Holders
IBB	Islamic Bank of Britain Plc.
IBF	Islamic Banking and Finance
ICCS	Islamic Cross Currency Swap
ICMA	International Capital Market Association
IDB	Islamic Development Bank
IFIs	Islamic Financial Institutions
IFRS	International Financial Reporting Standards
IFS	Islamic Financial Services
IFSB	Islamic Financial Services Board
IIFM	International Islamic Financial Markets
IILM	International Islamic Liquidity Management Corporation
IIMM	Islamic Interbank Money Market
IINCEIF	International Centre for Education in Islamic Finance
IIRA	Islamic International Rating Agency

IMA	Internal Model Approach
IMF	International Monetary Fund
IPRS	Islamic Profit Rate Swap
IRB	Internal Rating Based Approach
IRTI	Islamic Research and Training Institute
ISDA	International Swaps and Derivatives Association
LGD	Loss Given Default
LMC	Liquidity Management Centre
PCA	Principle Component Analysis
PD	Probability of Default
PER	Profit Equalisation Reserve
PLS	Profit and Loss Sharing
PPFs	Principal Protected Funds
PSIA	Profit-Sharing Investment Accounts
RAROC	Risk-adjusted Return on Capital
REITs	Real Estate Investment Trusts
RWAs	Risk Weighted Assets
SIVs	Special Investment Vehicles

GLOSSARY OF ARABIC TERMS USED IN ISLAMIC FINANCE

adl: a trusted and honourable person, selected by both parties to a transaction. Somewhat analogous to a trustee.

amana/amanah: literally means reliability, trustworthiness, loyalty and honesty, and is an important value of Islamic society in mutual dealings. It also refers to deposits in trust, sometimes on a contractual basis.

bai/bay: contract of sale, sale and purchase.

bai al-salam: advance payment for goods. While normally the goods need to exist before a sale can be completed, in this case the goods are defined (such as quantity, quality, workmanship) and the date of delivery fixed. Usually applied in the agricultural sector where money is advanced for inputs to receive a share in the crop.

fatwa (pl. fatawa): an authoritative legal opinion based on the *Shari'ah*.

fiqh: practical Islamic jurisprudence. Can be regarded as the jurists' understanding of the *Shari'ah*.

gharar: uncertainty in a contract or sale in which the goods may or may not be available or exist (e.g. the bird in the air or the fish in the water). Also, ambiguity in the consideration or terms of a contract – as such, the contract would not be valid.

hadith: the narrative record of the sayings, doings and implicit approval or disapproval of the Prophet (Peace be upon him).

halal: permissible, allowed, lawful. In Islam, there are activities, professions, contracts and transactions that are explicitly prohibited (*haram*) by the *Qur'an* or the *Sunnah*. Barring these, all others are *halal*. An activity may be economically sound but may not be allowed in Islamic society if it is not permitted by the *Shari'ah*.

Hanifite laws: an Islamic school of law founded by Iman Abu Hanifa. Followers of this school are known as *Hanafis*.

haram: unlawful, forbidden (see *halal*). Describes activities, professions, contracts, and transactions that are explicitly prohibited by the *Qur'an* or the *Sunnah*.

hawala: bill of exchange, promissory note, cheque or draft. A debtor passes on the responsibility of payment of his debt to a third party who owes the former a debt. Thus, the responsibility of payment is ultimately shifted to a third party. *Hawala* is used in

developing countries as a mechanism for settling international transactions by book transfers.

ijarah/ijara: lease, hire or transfer of ownership of a service for a specified period for an agreed lawful consideration. This is an arrangement under which an Islamic bank leases equipment, a building or other facility to a client for an agreed rental fee.

ijarah wa iqtina/ijarah muntahla bittamleek: a leasing contract used by Islamic financial institutions that includes a promise by the lessor to transfer the ownership of the leased property to the lessee, either at the end of the lease or by stages during the term of the contract.

ijtihad: literally effort, exertion, industry, diligence. As a legal term, it means the effort of a qualified Islamic jurist to interpret or reinterpret sources of Islamic law in cases where no clear directives exist.

istisna'a/istisna: a contract of sale of specified goods to be manufactured with an obligation on the manufacturer to deliver them on completion. It is a condition in *istisna* that the seller provides either the raw material or the cost of manufacturing the goods.

maisir/maysir: the forbidden act of gambling or playing games of chance with the intention of making an easy or unearned profit.

mudaraba/mudarabah: a form of contract in which one party (the *rab-al-maal*) brings capital and the other (the *mudarib*) personal effort. The proportionate share in profit is determined by mutual consent, but the loss, if any, is borne by the owner of the capital, unless the loss has been caused by negligence or violation of the terms of the contract by the *mudarib*. A *mudaraba* is typically conducted between an Islamic financial institution or fund as *mudarib* and investment account holders as providers of funds.

mudarib: the managing partner or entrepreneur in a *mudaraba* contract (see above).

murabaha: a contract of sale with an agreed profit mark-up on the cost. There are two types of *murabaha* sale: in the first type, the Islamic bank purchases the goods and makes them available for sale without any prior promise from a customer to purchase them, and this is termed a normal or spot *murabaha*; the second type involves a promise from a customer to purchase the item from the bank, and this is called *murabaha* to the purchase order. In this latter case, there is a pre-agreed selling price that includes the pre-agreed

profit mark-up. Normally, it involves the bank granting the customer a *murabaha* credit facility with deferred payment terms, but this is not an essential element.

musharaka/musharakah: an agreement under which the Islamic bank provides funds that are mingled with the funds of the business enterprise and possibly others. All providers of capital are entitled to participate in management, but are not necessarily obliged to do so. The profit is distributed among the partners in a pre-determined manner, but the losses, if any, are borne by the partners in proportion to their capital contribution. It is not permitted to stipulate otherwise.

qard al hasana/qard hassan: a virtuous loan in which there is no interest or mark-up. The borrower must return the principal sum in the future without any increase.

rab-al-maal: the investor or owner of capital in a *mudaraba* contract (see above).

rahn: a mortgage or pledge.

riba: interest. Sometimes equated with usury, but its meaning is broader. The literal meaning is an excess or increase, and its prohibition is meant to distinguish between an unlawful exchange in which there is a clear advantage to one party in contrast to a mutually beneficial and lawful exchange.

riba al-fadi riba al-buyu: a sale transaction in which a commodity is exchanged for the same commodity but unequal in amount or quality, or the excess over what is justified by the counter-value in an exchange/business transaction.

Salam/Salaam: a contract for the purchase of a commodity for deferred delivery in exchange for immediate payment.

Shari'a/Shariah/Shari'ah: in legal terms, the law as extracted from the sources of law (the *Qur'an* and the *Sunnah*). However, *Shari'ah* rules do not always function as rules of law as they incorporate obligations, duties and moral considerations that serve to foster obedience to the Almighty.

Sukuk: participation securities, coupons, investment certificates.

Sunnah: the way of the Prophet Mohammed including his sayings, deeds, approvals and disapprovals as preserved in the *hadith* literature. It is the second source of revelation after the *Qur'an*.

takaful: a *Shari'ah*-compliant system of insurance based on the principle of mutual support. The company's role is limited to managing the operations and investing the contributions.

tawarruq: literally monetisation. The term is used to describe a mode of financing, similar to a *murabaha* transaction, where the commodity sold is not required by the borrower but is bought on deferred terms and then sold to a third party for a lower amount of cash, so becoming "monetised".

ummah: the community or nation. Used to refer to the worldwide community of Muslims.

wakala: agency, an agency contract that generally includes in its terms a fee for the agent.

zakah/zakat: a tax that is prescribed by Islam on all persons having wealth above an exemption limit at a rate fixed by the *Shari'ah*. Its objective is to collect a portion of the wealth of the well-to-do and distribute it to the needy. The way it is distributed is set out in the *Qur'an*. It may be collected by the state, but otherwise it is down to each individual to distribute the *zakat*.

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CHAPTER 1

INTRODUCTION

1.1 RESEARCH BACKGROUND AND MOTIVATION

“Risk knows no religion”

Michael Ainley

Head of Wholesale Banking, FSA (2007)

Was Michael Ainley right when he assumed that risk management is similar across different cultures and religions, in this case Islamic and conventional banks? Are Islamic banks just like any other bank that provides financial services, and hence have similar risk management requirements?

The subject of risk management in Islamic banking has many facets. On the surface, the frequently repeated story that Islamic banks are more resilient than conventional ones is attractive in a world torn by a financial tsunami. Unfortunately, at least in the current form in which Islamic banking is practiced, this is not entirely true. The assumption at one point early in the crisis was that the Islamic market would be entirely unaffected and would sail through the crunch, and people thought that the financial crisis would be the lift-off platform for Islamic banks. On the contrary, the crisis exposed a number of areas in Islamic banking that needed to be dealt with.

This study examines different aspects of risk management issues in Islamic banking. At the heart of this paper is the question of whether Islamic banks are more or less risky than their conventional peers. A review of the existing literature does not provide a clear-cut answer to this question. The majority of the relevant literature provides conflicting views using theoretical arguments rather than a formal empirical analysis. This is clearly an empirical question, the answer to which requires feedback from the market place. The study, thus, attempts to fill this gap in the empirical literature on risk management in Islamic banking through a survey-based questionnaire and in-depth interviews.

The difficulties afflicting conventional financial markets since mid-2007 have led to more attention being paid to Islamic alternatives. While the modern Islamic finance industry is still young, it has been growing rapidly for several years, largely on the back of an oil-fuelled economic boom in the Middle East. Much demand came from non-Islamic investors who were simply attracted by good investment opportunities. With awareness of the industry rising, Islamic banks have expanded their operations, especially in the core markets of the Middle East and South Asia, but also in newer markets with substantial Muslim populations, including Sub-Saharan Africa and parts of Europe.

At the same time, risk management is receiving increased attention everywhere due to the financial crisis, and risk management products and methods for Islamic banking and finance are certainly a hot issue. The market turmoil of the past few years has triggered a wide-ranging reassessment of the global financial system and a need to understand the causes that led to a financial crisis of a severity not seen since the Great Depression. One of the main areas of attention has been the failure of many financial institutions to manage their risks adequately. In most cases, the industry debate has focused on pure risk management failures, particularly the shortcomings of risk models in measuring risks accurately, without addressing the broader issue of how risk is managed at the highest macro-economic levels and how the whole financial system is based on greed and lack of morality. Since then the credit crunch has afforded advocates of Islamic finance an opportunity to emphasize *Shari'ah* principles relating to debt and risk, while finding a receptive audience beyond the Muslim world. For Islamic financiers, highly complex structured products such as subprime and toxic assets were seen as unacceptable because they were so far removed from their underlying assets.

There appears to be great potential for further growth in Islamic banking, which is still at a relatively early stage. However, there are also a number of challenges associated with developing a new industry with a different approach to risk management. It is notable that although Islamic banks were unscathed by the subprime crisis, many have since suffered from the negative effects of the broader recession, including a collapse in property prices

in Dubai, where many Gulf Islamic banks had substantial exposure. The first *sukuk* defaults occurred in 2009 from two Gulf-based corporate institutions: Kuwait's Investment Dar and Saudi Arabia's Saad Group; others followed shortly after.

This research provides an up-to-date overview of current market practices, issues, and trends in risk management for Islamic banks. It focuses on practical applications and discusses a wide range of unique risks faced by Islamic banks from the perspective of different range of practitioners. The paper asserts that the weaknesses of many financial firms in managing their risks have to be looked at in a comprehensive fashion. The root drivers of the prevailing financial system have to be challenged and replaced by a more transparent and ethical alternative.

This research combines conceptual frameworks with 'hands-on' practical perceptions about risk management in Islamic banking in a pioneer research that *Shari'ah* scholars, policy makers, practitioners, academia and researchers may find relevant and motivating to conduct more research in this vital but under researched area. Although a few *Shari'ah* opinions are included in the paper, religious and *Shari'ah* discussions are beyond the scope of this research.

1.2 SYSTEMIC IMPORTANCE OF ISLAMIC BANKING AND FINANCE

Islamic finance is the fastest growing sector in the financial industry at present. Launched to reconcile the financial with the theological needs of a global community of 1.5 billion Muslims, Islamic finance today offers a broad and sophisticated range of products and services. Double-digit growth rates for *Shari'ah*-compliant assets over the past decade have naturally driven Islamic financiers to look beyond historical boundaries to explore new territories, both within and outside the Muslim world.

The increasing international interest in Islamic finance is a reflection of the success that this industry has achieved during its short history. Moreover, *Shari'ah* principles which place emphasis on providing economic added-value to stakeholders and aim to create equivalence in benefits and costs, free from harmful speculation, are gaining more attention and better understanding globally. Several Western supervisory bodies are

incorporating amendments to their supervisory and regulatory legislation to allow for Islamic institutions and *Shari'ah*-compliant products, which will reinforce the role of Islamic finance globally. Nowadays, in European, American, and most Western markets, financial institutions are offering more products and services to cater for Islamic finance. Moreover, a great number of financial institutions in GCC countries and Asia are managing funds of over USD 300 billion and are encouraged by their markets to provide Islamic financial services (Moody's, 2011a).

Islamic banking, being the main sub-sector within Islamic finance industry, has been pioneering this exponential growth. According to Moody's (2011a), the total assets held by Islamic banks globally amounted to more than USD 1 trillion by the end of 2010. While Islamic banks have been hit by the economic downturn, they have been considerably less affected than most conventional banks. This is mainly because, unlike conventional banks, the Islamic banks have not been exposed to losses from investment in toxic assets, nor have they been highly dependent on wholesale funds. Furthermore, Islamic instruments are highly useful alternative investments for the diversification of portfolios, as they have low correlation to other market segments, allow the selective underweighting of particular sectors, and seem to be relatively independent even from market turbulences like the subprime crisis. As a consequence, the increasing standardisation for derivatives and *sukuk*, as well as the growing liquidity and organisation of the Islamic capital market, offer many opportunities to innovative investors.

With such a background, it is obvious that Islamic banks have come a long way. The future of these institutions, however, will depend on how they cope with the rapidly changing financial world. With globalization and the information technology revolution, scopes of different financial institutions have expanded beyond national jurisdictions, particularly for investment and wholesale banks. As a result, the financial sector in particular has become more dynamic, competitive, and complex. There has been an unprecedented development in computing, mathematical finance, and innovation of risk management techniques. Moreover, the financial crisis is likely to challenge the global risk management foundations. All these developments are expected to magnify the

challenges that Islamic financial institutions face, particularly as more well-established conventional institutions have begun to provide Islamic financial products. Islamic financial institutions need to equip themselves with the up-to-date management skills and operational systems to cope with this environment. One major factor that will determine the survival and growth of the industry is how well these institutions manage the risks generated in providing Islamic financial services.

The last three decades have witnessed a shift of focus on the development of Islamic banking. The original issue in the sixties and seventies of developing an interest-free financial system is no more the primary objective for Islamic bankers. The current core issue is to develop an Islamic financial industry which does not suffer from the weaknesses of the conventional banking system, particularly after the current credit crisis. Thus, the focus has shifted to risk management and mitigation, financial engineering, innovation, and providing common standards in Islamic finance.

Banking, in all its forms, contains risks that pose a challenge to all stakeholders. Islamic banks, like their conventional counterparts, are financial institutions which provide services to depositors and investors on the one hand and offer financing to companies, the public sector, and individuals on the other. They are, therefore, subject to many risks that are similar to those confronted by conventional banks. There is a growing concern that the risk management practices of Islamic banking are not keeping pace with the global financial market. The rapid growth of Islamic banking on all fronts calls for proactive responses to risk management issues. In addition, *Shari'ah*-compliant banks have their own unique set of risks that differ from those borne by conventional banks. In principle, there is a range of activities through which Islamic banks can work in different ways that enable them to provide funds. These activities are adapted to meet the *Shari'ah* principles that govern Islamic banking, the most important of which is the principle of risk sharing.

Managing risk especially in the current perilous times is nothing but an easy task. The events of mid-September 2008 challenged financial institutions' preconceived ideas of how to view risk. Until 15 September 2008, few bankers would have thought a systematically important and highly rated financial institution such as Lehman Brothers

could have failed, let alone failed as quickly as it did. However, risk management in Islamic banking is a hot issue as little is yet understood in many aspects, where IFIS are facing significant challenges when measuring and managing risks. Effective risk management in Islamic banking, therefore, deserves priority attention because the future of Islamic banks will highly depend on how they will manage their unique set of risks. So far, Islamic banking has been free-riding on financial theories and instruments developed within the context of the conventional debt- and interest-based system. Unless the Islamic banking industry develops its own genuine risk management architecture, it cannot achieve the dynamism of the Islamic finance system that provides the security and viability needed for a more resilient financial system than the debunked Wall Street model.

1.3 RESEARCH AIMS, OBJECTIVES, AND QUESTIONS

This research attempts to fill the gap in the empirical literature on risk management in Islamic banking. It recognises upfront that Islamic banking offers its own unique approach to risk management. Following a structured approach, first the research aim and objectives were identified and then research questions were developed within the context of the broader objectives.

The aim of this research is to explore and analyse the risk and risk management practices in the Islamic banking industry through the perceptions and opinions of participants drawn from the banking and finance industry. In doing so, this research maps out the attitudes towards risk in the Islamic banking and finance industry and locates perceptions of the various stakeholders on risk management related practices in the industry.

In fulfilling the identified research aim, the following specific objectives are developed:

- (i) to ascertain the fundamental principles underlying risk management in Islamic banking and the unique risks facing the IFIs;
- (ii) to investigate the effect of different control variables like region, country, respondent's position, nature of FI, nature of operations, and accounting standards on the participants' perception of the nature of risks, risk measurement, and risk

management and mitigation approaches of IFIs in comparison to those of conventional banks and with reference to the market conditions in which IFIs operate;

- (iii) to evaluate the applicability of IFSB Standards and Guidelines with respect to risk management and capital adequacy, and how they could operate in a Basel II (and potentially Basel III) era;
- (iv) to investigate the real roots of the recent crisis with a view to draw some lessons for IFIs;
- (v) to examine the dichotomy between the theory and practice of Islamic banking; and
- (vi) to explore the next chapter for risk management in Islamic banking.

The following specific research questions are developed to address and investigate the broader research objectives:

- (i) What are the top risks facing IFIs?
- (ii) What is the risk appetite associated with each Islamic finance contract?
- (iii) Does risk management in Islamic banking differ from conventional banking?
- (iv) Are Islamic banks more or less risky than their conventional peers?
- (v) Are Basel II (& potentially Basel III) standards suitable for Islamic banking?
- (vi) What are the appropriate capital requirement levels for IFIs?
- (vii) Is Islamic banking actually more resilient than conventional banking?
- (viii) Could the recent crisis have occurred under an Islamic banking system?
- (ix) How developed and significant is hedging to Islamic banking?

(x) Is there divergence between the current practice and moral principles of Islamic banking?

(xi) How does the future look for Islamic banking? What strategies should IFIs follow?

In answering the research questions, the impact of various categories of respondents and their profile indicators on risk perception are also investigated.

1.4 RESEARCH HYPOTHESES

Based on the dichotomy that exists between the theory and practice in analyzing risk management in Islamic banking, this research aims to explore and study the opinions and risk perceptions of various groups of Islamic banking professionals with the aim of answering the identified research questions.

The following research hypotheses were formulated to determine the parameters of the research questions:

(i) The main risks facing Islamic banks are reputational risk, *Shari'ah* non-compliance risk, asset-liability management risk, liquidity risk, and concentration risk.

(ii) Islamic bankers prefer mark-up based contracts and shy away from profit sharing contracts.

(iii) Profit-sharing contracts are perceived as more risky than mark-up based contracts.

(iv) There is no substantial difference between risk management in Islamic banking and conventional banking.

(v) Capital requirements levels should be lower in IFIs than in conventional banks.

(vi) Basel II was drafted with conventional banking very much in mind. IFIs should follow their own standards, *e.g.* IFSB Principles on capital adequacy.

(vii) Islamic banking is more resilient to economic shocks than conventional banking but not recession proof.

(viii) Not many Islamic banks use the more technically advanced risk measurement and reporting techniques.

(ix) The use of risk measurement techniques is less advanced among Islamic banks than among their conventional peers.

(x) Islamic banks use a number of risk mitigation tools that are intended to be *Shari'ah*-compliant and that are less advanced from those utilised by conventional banks.

(xi) Most IFIs abandoned conservative risk management *Shari'ah* principles in favour of copying conventional structures.

(xii) There is strong potential for Islamic banking provided that it goes back to its roots.

(xiii) Perceptions of Islamic and conventional bankers differ significantly, as Islamic bankers are more biased towards their business model, and vice versa.

The above hypotheses are further broken down into more refined sub-hypotheses for testing purposes later in this research; these are presented in the research methodology chapter (Chapter 6).

1.5 SIGNIFICANCE OF THE STUDY

This paper has a particular significance as it attempts to provide a complete overview of risk management in Islamic banking. This makes it a valuable source for both conventional and Islamic investors, as well as for IFI, researchers, consultants, and policy-makers who are faced with an increasing complexity of Islamic instruments. Risk management is getting more attention all over the world due to the subprime crisis, and for most IFIs, risk management presents specific challenges.

The existing body of knowledge demonstrates that research on risk management in Islamic banking is still scarce. Globally there has been a significant increase in the literature on risk management over the past decade, especially during the past two years.

This has emerged largely because of a combination of developments: first, there has been greater reflection on risk mitigation and management in the wake of frequent episodes of financial crises; second, financial diversification and product innovation have brought new dimensions and types of risks to the forefront; third, the endeavours of the financial community to develop and innovate financial architecture have resulted in different types of risk facing financial institutions. Cross-segment mergers, acquisitions, and financial consolidation have blurred the risk of various segments in the industry. However, these developments have revolved around the conventional banking system, benefiting incrementally from the financial engineering and innovation of esoteric products and structures. While Islamic banking has grown substantively in the last few years, appreciation of its risk architecture and profile is still evolving (Greuning and Iqbal, 2008).

Reflecting the increased role of Islamic finance, the literature on Islamic banking has also grown in the last decade. There is now a considerable amount of research on the topic of Islamic banking and finance; nevertheless there are still large gaps in the coverage of topics related to risk management. A large part of the literature focuses on Islamic finance contracts, structures, roots of Islamic finance, comparisons of the instruments used in Islamic and conventional banking, and the regulatory and supervisory challenges related to Islamic banking. This is expected because the initial focus of the whole Islamic finance industry was to create awareness of perception of Islamic finance and its basic concepts among a *riba*-dominated financial world. Nevertheless, the last few years have witnessed a shift of focus in the literature on Islamic banking towards more specialised areas like capital markets, mergers and acquisitions, asset management, *sukuk*, structuring and product development, innovation, and standardisation. There is, however, relatively little research conducted on the risk management and capital requirements for Islamic banking; this includes studies by Haron and Hin Hock (2007), Iqbal and Mirarkor (2007), Akkizidis and Khandelwal (2007), Grais and Kulathunga (2007), Greuning and Iqbal (2007), Mahlkecht, M. (2009), and Sundararajan (2007), and others as explored in Chapter 3.

Given the lack of sufficient research about risk management in Islamic banking, there is even less empirical research available in this vital area. A limited number of papers discuss risks in Islamic financial institutions, but they do so in academic terms instead of pragmatic analysis of data. On the other hand, empirical papers on Islamic banks focus on issues related to efficiency and financial stability, such as Yudistira (2004), Moktar *et al.*, (2006), Heiko and Cihak (2008). But risk management in Islamic banking has not been thoroughly analysed in an empirical fashion, with the exception of only a handful of sources like the profound work done by Khan and Ahmed (2001), Noraini *et al.* (2009), and Mahlkecht (2009).

In addition, the previous studies on risk management in Islamic banking only highlight the issues without offering any feasible solutions. Therefore this paper is considered as distinct and departs from previous studies by offering practical and feasible recommendations to improve risk management architectures within Islamic banking. Moreover, this study provides a larger sample size within the wider populations in the Islamic banking industry, and includes a very well diversified sample of respondents (geographically, by background, nature of activities of their organisations, as well as other control variables) in order to enable the researcher to obtain better findings by conducting significance tests on the differences between various groups. The survey findings are further enhanced by in-depth interviews with senior Islamic banking professionals, which allow more room for interviewees to express their views in a less formal and more open way than in the structured questionnaire. The interview sample is also well diversified.

Finally, while a few scholars have researched the practical implementation of risk management in Islamic banking, this paper is the first of its kind to do so after the recent credit crisis. The dissertation extracts empirical evidence from the perceptions of Islamic banking professionals and from the current crisis to substantiate the research process and the findings of the research.

1.6 OVERVIEW OF THE RESEARCH METHODOLOGY

In responding to the research questions outlined above, this paper undertakes a combination of two research methods: firstly, a comprehensive review of the existing literature and theory, and secondly an empirical study to elicit the opinions and perceptions in responding to the theory which is discussed in the literature. Both quantitative and qualitative data analyses are used for this part.

In the first part of the research, the theoretical framework of this study was constructed through the literature review, which is presented in a series of chapters. The main literature sources were journals, conference proceedings, books, reports, theses, and bank regulators' papers. Due to the fact that literature on risk management in Islamic banking is scant, information and quotations from interviews are used in the literature review to substantiate the argument. This may not be according to convention; however, this strategy helped to provide a better understanding by combining primary and secondary material on the subject matter together.

The second part of the thesis is concerned with an empirical study, which investigates the respondents' perceptions towards risk management issues in Islamic banking. A survey technique using questionnaires is used in this context to obtain primary data from the target sample of bankers, financiers, and *Shari'ah* scholars. The data was analysed using SPSS statistical software. In addition, semi-structured interviews are used to substantiate and compare the questionnaire findings. The detailed description of the research process is presented in Chapter 6.

1.7 OVERVIEW OF THE RESEARCH

This study consists of two major sections, namely background and empirical work. The first five chapters are the foundational chapters for the next five chapters, which form the empirical part of the thesis.

Following this brief introduction, the thesis continues with the remaining ten chapters, which are closely interrelated. There is unavoidably some overlapping of discussion and cross-referencing. The overview of Chapters 2 to 11 is as follows:

Chapter 2 (Principles of Islamic Banking and Finance) is the first chapter that reviews the existing literature, text and other relevant reference materials. In order to understand the risks that Islamic financial institutions face, this chapter first briefly discusses the nature of these institutions with the objective of providing an introduction to Islamic banking and its instruments, which it is not intended to provide a detailed description of how Islamic financial products are structured. This chapter is divided into three sections: the first explains the basic tenets of Islamic finance and the most commonly used terms and contracts, the second discusses the important financial instruments available and the market size, and the third looks at the international standardisation bodies.

Chapter 3 (Risk Management in Islamic Banks: A Theoretical Perspective) commences with an overview of risk management in general. After defining and identifying different risks, specific issues related to risk management and mitigation in Islamic banking are discussed. Risks are classified into two main categories: risks which Islamic banks have in common with traditional banks as financial intermediaries, and risks which are unique to Islamic banks due to their compliance with the *Shari'ah* principles. The risk characteristics of Islamic products and the complexities of some of these are rigorously examined. This chapter is based on both academic desk research and practical views from the open interviews conducted.

As for **Chapter 4 (Capital Adequacy for Islamic Banks: A Survey)**, realizing the significance of capital in today's Basel-dominated era, a designated chapter is allocated to analysing capital adequacy for Islamic banks. This chapter examines the need for capital and provides the rational and historical background of the Basel I, II and III frameworks. It then highlights the detailed analysis of credit, market, and operational risks that has been given by the Basel II Accord. Proposed amendments to the Accord after the current crisis and the proposed Basel III standards are discussed. The chapter then examines the applicability of the three Pillars of Basel II to Islamic banking. The chapter also signifies the link between the role of social responsibility of Islamic finance and market disclosure. This chapter further identifies the key role the Islamic Financial Services Board (IFSB)

plays in the development of standards for risk management in the Islamic financial industry.

Chapter 5 focuses on **Islamic Banking and the Financial Crisis**. In theory, Islamic banks are more resilient to economic shocks than conventional banks. Sadly, close mimicry of western products in the pursuit of easy profits caused Islamic banking to divert from the basic principles laid down more than 1400 years ago. Hence, Islamic banks are currently feeling the effects of the recession despite their limited exposure to higher risk financial products. The current crisis acts as a wake-up call; if Islamic banks learn the right lessons, they could bounce back strongly. This chapter combines evidence from the current crisis with the principles discussed in the previous chapters to prove that the Islamic financial system, specifically with its different approach to risk, can act as panacea for economic woes.

Chapter 6 (Research Framework and Methodology) discusses the research strategy and methodology adopted for the data collection process. It presents in great detail the recommended research procedures by making reference to the various research methodology textbooks on the appropriate research process and technique to be used. The rationale and justifications for each of the tools and techniques used throughout this study are also presented. In addition, the chapter also presents more closely the refined research sub-hypothesis which is to be tested in the analysis chapter.

Chapter 7 (Profiling Perspectives on Risk Dimensions in Islamic Finance: Descriptive Questionnaire Data Analysis) takes the research to the market place by analysing data and presenting the results from a survey on risk management issues in Islamic financial institutions. It includes a demographic profile analysis and also the core variables for the research. The purpose of this chapter is to give an overview analysis of the findings from the survey. The descriptive analysis benefited from a frequency analysis, which also includes the frequency percentage, mean, and standard deviations value for each of the variables; this provides the readers with the grounding knowledge of the overall results.

Chapter 8 (Analysing Perceptions on Risk and Risk Management Dimensions and Issues Inferential Statistical Analysis) presents further analysis of the views and risk perceptions of respondents using inferential statistical tools such as Kruskal-Wallis test, factor analysis, MANOVA multivariate analysis of variance, and Chi-square tests. The results of the analysis are discussed, interpreted and justified in great detail. The aim is to explore the results in as much detail as possible from the data in order to respond to the research questions.

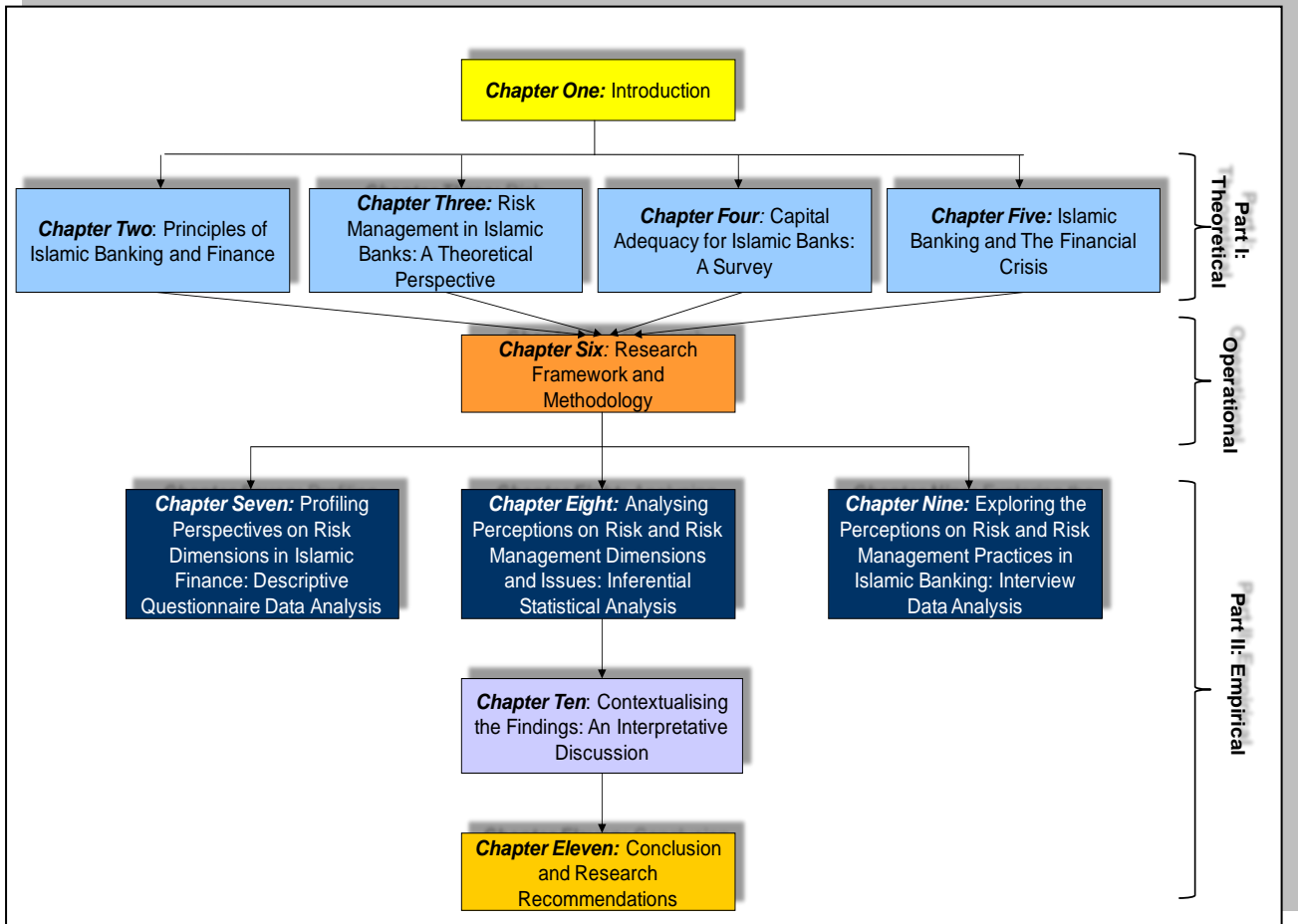
Chapter 9 (Exploring the Perceptions on Risk and Risk Management Practices in Islamic Banking: Interview Data Analysis) is an analysis of the semi-structured interviews conducted with a number of Islamic banking professionals from banking institutions, consulting and law firms, academia, and rating agencies. Focused coding technique is used to analyse and sort the findings. This chapter represents the findings of the qualitative analysis.

Chapter 10 (Contextualising the Findings: An Interpretative Discussion) presents the overall discussion of the findings in chapters 7, 8, and 9 by responding to each of the research hypotheses. The chapter provides an in-depth discussion of each of the hypotheses, and also makes cross-references to the theory and findings of previous studies in order to link all the pertinent main findings in this study together. The outcome of this chapter helps to derive the overall conclusions of the study.

Being the last chapter, **Chapter 11 (Conclusion and Research Recommendations)** presents a summary of the major findings, recommendations, limitations, and offers suggestions for future research.

To give a visual dimension to the structure of this research, Figure 1.1 provides an overall picture of the structure of the study:

Figure 1.1: Contents and Structure of the Thesis



CHAPTER 2

PRINCIPLES OF ISLAMIC BANKING AND FINANCE

2.1 INTRODUCTION

Until the global credit crunch hit the capital and financial markets in the middle of 2008, Islamic finance had enjoyed uninterrupted growth since the start of the decade to become an industry with about USD 1 trillion in assets (Moody's, 2011a). In terms of the size of the world's finance industry as a whole though, this is still very small, with less than a 1% share; but with nearly 25% of the world's population being Muslim, it is obvious that the potential for growth is enormous (Eedle, 2009). The global potential market for Islamic finance is conservatively estimated at USD 4 trillion, whereas the actual size of the market is USD 1 trillion, or a market share of 25%, which means that there is still around 75% of the market to capture (Moody's, 2011a).

Despite being presented as a new phenomenon, Islamic finance has been practiced since the Middle Ages. It has risen in prominence over the last 30 years. This is largely due to the growing financial resources of oil producing countries where Islam is the main religion, an increase in wealth and financial sophistication, and an increasing demand for financial services. In recent times, the emerging Islamic banking sector has achieved acceptance in the western world where there is an increasing interest in ethical finance, and funds managed by Islamic institutions continue to grow.

In order to understand the risks that Islamic banks face, this chapter first discusses the nature of Islamic banking. It also provides a brief introduction to Islamic banking and its basic contracts, defines default in Islamic finance, and distinguishes the elements of an Islamic bank's risk profile that need to be evaluated differently as compared to conventional banking. As an initial foundational chapter, it paves the way to the following chapters analysing risk management in Islamic banking. This chapter, however,

is not designed to provide a detailed history of the origins and evolution of the industry, nor an in-depth analysis of how Islamic financial products are structured.

2.2 HISTORICAL BACKGROUND OF ISLAMIC BANKING AND FINANCE

In western and central Europe, modern financial institutions in both banking and insurance started to evolve during the 17th century, notably in Britain, prompted, as a response to the development of capitalism, and in part due to the development of mathematical techniques in finance. The industrial revolution in the late 18th and early 19th centuries provided the basis for their further growth. With the dissolution of the Ottoman Empire, Britain and France established settlements in a number of Arab countries that had formerly been part of it, and western-style financial institutions were introduced. In the absence of Islamic financial institutions, those in need of financial services in these countries turned to the western-style or conventional banks and insurance companies, without paying too much attention to their non-compliance with *Shari'ah* rules and principles. In the case of savings, an alternative was simply to hold them in the form of cash (AbdelKarim and Archer, 2005).

This institutionally passive financial behaviour began to change in the 1950s and 1960s after these countries achieved political independence, which also brought the development of Muslim identity to the agenda. In fact, the initiation of modern Islamic finance dates back to 1962 with the establishment of *Tabung Haji* in Malaysia, and the *Mit Ghamr* bank in Egypt in 1963 (Iqbal and Molyneux, 2005). However, the institutionalization of Islamic banking was not achieved until the 1970s, when a global network of Islamic banks started to emerge.

In the post-independence period, changes took place in the political climate of most Muslim nations and many Arab oil-exporting countries which experienced a tremendous economic growth following the 1973 sharp rise in oil prices. Most of the earnings from the sale of crude oil were surplus to the immediate needs of these countries, leading to an increase in the circulated currency and commercial activity. This increased wealth gave

rise to a major need for financial intermediation for investment of the petro-dollars, mainly outside the Middle Eastern and Muslim countries, which had limited capacity to absorb such a volume of investment. The situation constituted a major impetus for the development of Islamic banking institutions (AbdelKarim and Archer, 2005). This coincided with the growth in Muslim identity construction which emerged from religious passion in several Muslim countries, calling for reform and for a return to basic Islamic principles. Recent examples of such a Muslim identity search through various Islamic movements include Egypt, Iran, Syria, Sudan, Algeria, Jordan, and Palestine. In line with the Muslim identity search, the substantial Muslim populations increasingly sought to direct their financial surpluses and businesses into *Shari'ah*-compliant or Islamic banks and financial institutions (Lewis and Algaoud, 2001). Thus, although the principles of Islamic finance have had its roots in the Holy *Qur'an* for the last 1400 years, modern Islamic banking only emerged in the 1970s.

Islamic banking grew rapidly throughout the 1990s, and during the past few years there have been significant developments in the world of Islamic banking and finance (IBF). As a result, the industry has evolved from a regional business into one of global scale. As part of this process, Islamic and Western financial institutions (such as HSBC, BNP-Paribas, Citibank, Standard Chartered Bank, *etc.*) have focused their attention on the growing customer demand for *Shari'ah*-compliant financing, investments, and insurance products. It is a fact that international banks and other service providers are aware of the significant liquidity available in the Middle East. The choice of *Shari'ah*-compliant investments has also broadened and includes structured products, mutual funds, direct investments in initial public offerings, leasing and real estate projects, discretionary portfolios, and alternative investment strategies like hedge funds, private equity, venture capital and Islamic insurance (*Takaful*). Development in consumer financing has been unprecedented as well, and consumer financing products today include Islamic mortgages, credit cards, car finance, personal loans, and lease finance.

Islamic banking, today, is viewed as one of the fastest growing segments of the Islamic financial industry. It has experienced double-digit growth, spurred by the licensing of

new banks, largely in local markets, the establishment of Islamic windows and subsidiaries by major international banks, and partial or full conversion of conventional banks into Islamic banks. Table 2.1 summarizes the considerable progress that has been made in almost all aspects of Islamic finance over the past three decades.

Table 2.1: Modern History of Developments in Islamic Finance

Time Period	Development
Pre-1950s	Barclays Bank opens its Cairo branch to process financial transactions related to construction of the Suez Canal in the 1890s. Islamic scholars challenge the operations of the bank, criticizing it for charging interest. This criticism spreads to other Arab regions and to the Indian subcontinent, where there is a sizable Muslim community. The majority of <i>Shari'ah</i> scholars declare that interest in all its forms amounts to the prohibited element of <i>riba</i> .
1950s – 60s	Initial theoretical work in Islamic economics begins. By 1953, Islamic economists offer the first description of an interest-free bank based on either two-tier <i>mudarabah</i> or <i>wakala</i> . <i>Mitghamr</i> Bank in Egypt and Pilgrimage Fund in Malaysia start operations.
1970s	The first Islamic commercial bank, Dubai Islamic Bank, opens in 1974. The Islamic Development Bank (IDB) is established in 1975. The accumulation of oil revenues and petrodollars increases the demand for <i>Shari'ah</i> -compliant products.
1980s	The Islamic Research and Training Institute is established by the IDB in 1981. Banking systems are converted to an interest-free banking system in the Islamic Republic of Iran, Pakistan, and Sudan. Increased demand attracts Western intermediation and institutions. Countries like Bahrain and Malaysia promote Islamic banking parallel to the conventional banking system.
1990s	Attention is paid to the need for accounting standards and a regulatory framework. A self-regulating agency, the Accounting and Auditing Organization of Islamic Financial Institutions, is established in Bahrain. Islamic insurance (<i>Takaful</i>) is introduced. Islamic equity funds are established. The Dow Jones Islamic Index and the FTSE Index of <i>Shari'ah</i> -compatible stock are developed.
2000 – the present	The Islamic Financial Services Board is established to deal with regulatory supervisory and corporate governance issues of the Islamic financial industry. <i>Sukuk</i> are launched. Islamic mortgages are offered in the United States and United Kingdom.

Source: Greuning and Iqbal (2008: 13)

With the internationalization of Islamic finance, further progress was made in developing capital markets. The pace of product innovation has increased, and Islamic banking is currently the fastest growing segment of the credit market in Muslim countries. Recently IFIs have started moving towards equity funds, *sukuk* funds, advanced treasury services, balance sheet management, and innovative asset management.

Of notice is the recent rash of new Islamic bank start-ups, even during the current market turbulence. In fact, there are many reasons why new IFIs have been mushrooming across the board as provided by Moody's (2009a):

- (i) Microeconomic theory informs that a booming and profitable market naturally attracts new entrants because excess demand needs to meet by additional supply; the Islamic finance market is driven by demand;
- (ii) Financing needs in the retail sector are far from being optimally served by the banking industry, especially in the Arab countries of the Muslim universe: retail banking in the Middle East was discovered in the 1990s and there is still a lot to do, especially in the mortgage sub-sector, where IFIs can offer attractive solutions;
- (iii) Governments have been very supportive of the Islamic financial industry, mainly for two reasons: one is symbolic and consists of sponsoring one or more institutions to show some form of state proselytism, and the other is purely economic, as IFIs are a powerful means to fund large infrastructure needs. Asset-backed, infrastructure, and project finance is naturally in line with the principle of Islamic finance, just like mortgage lending.

As part of the developments, conventional banks that have been offering *Shari'ah*-compliant products for years through Islamic windows in Asia, especially in Malaysia, are now establishing specialised Islamic subsidiaries. This provides more visibility and clarity to the whole banking market, while contributing to the doubtless success of Islamic finance in the country, following more than two decades of government support to such an alternative financial model now controlling more than 15% of the country's banking assets (Moody's 2009a).

2.3 SIZE OF THE INDUSTRY

One of the most visible gaps in the infrastructure of the Islamic financial services industry is the limited availability of systematic and reliable statistical information (IFSB, 2007). Most resources like Standard & Poor's (2010a), Bloomberg, and Oliver Wyman (2009) agreed that Islamic finance represents 1% of global assets. These resources suggest that half of the 1.4 billion Muslims worldwide would opt for Islamic finance if given a competitive alternative to conventional services indicating economies of scope and scale for the development of Islamic finance industry.

According to Moody's (2011a), the Islamic finance market has been growing at over 30% annually since 2000 and is set for continued strong growth. At the end of 2010, Islamic finance totalled USD 1 trillion in assets and USD 53 billion in revenues, and is expected to double over the next five years. The opportunity is commanding attention beyond Islamic incumbents, as witnessed by the spurt in Islamic start-ups and conventional players opening Islamic windows. Due to such impressive developments, interest in Islamic finance has spread beyond Muslim countries, and leading financial centres like London have been pushing to position themselves as major Islamic finance hubs.

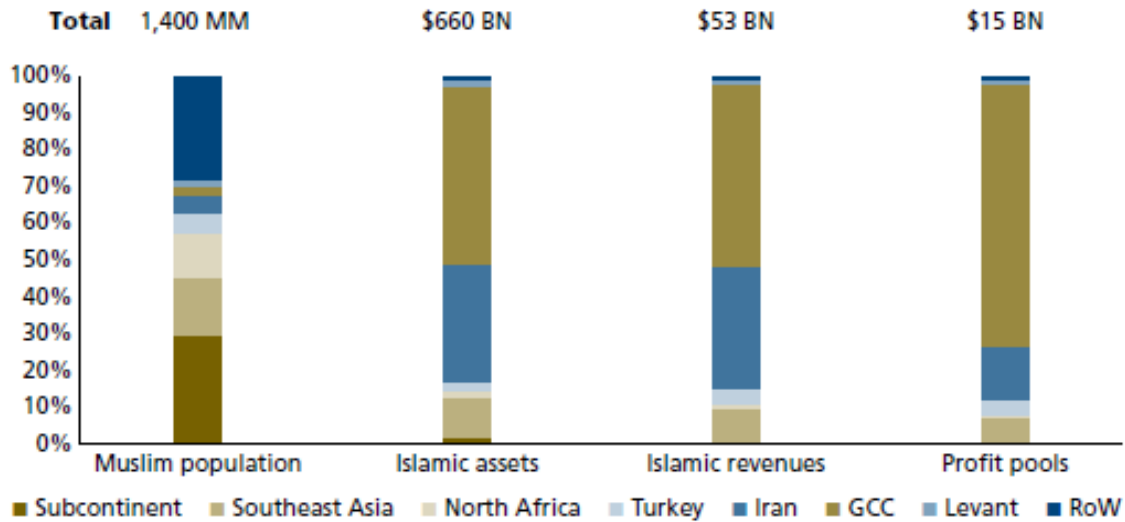
In recent years, the growth of Islamic banking assets has outstripped that of conventional banking assets, even given the rapid system-wide asset growth. According to Standard & Poor's (2009), conventional banking assets nearly tripled between 2003 and 2008, while Islamic banking assets have been multiplied by seven, albeit starting from a much lower base. Demand for Islamic banking products has increased not only from retail customers, deemed the most interested in *Shari'ah*-compliant products, but also from private sector corporate and government-related entities. At the same time, financial innovation has contributed to facilitating the supply of financial products and services, from retail products, like housing or car financing programs, to more sophisticated products like *sukuk* or mutual funds. On the supply side, some banks have opted to be converted from conventional to Islamic banking, either through a full transformation or following a business diversification strategy. In fact, the most dynamic growth in Islamic banking

comes from conventional banks. It appears that they have enlarged or transformed their product suite to attract new customers or avoid losing existing ones. In addition, several governments of non-Muslim countries, in particular the UK, have announced plans to issue *sukuk* in the past, but issues have yet to materialize.

That said, 2012 is expected to be a difficult year for the Islamic finance industry. The sort of asset growth witnessed prior to the financial crisis in 2007 and even in 2008, of around 25%, will not be repeated during the coming few years. Experts expect that during 2012 and 2013 the industry will grow by only 10%-15% (Moody's, 2011a). As part of this slow-down, liquidity ratios of Islamic banks are deteriorating, because banks are using their own excess liquidity accumulated in the past to fund their incremental business volumes. The developments demonstrate that funding is becoming increasingly costly; retail depositors are more cautious and savvy corporate depositors are asking for better returns to compensate for their perception of mounting credit risk. On the other side of the balance sheet, defaults of corporate and retail borrowers are expected to rise sharply, which will trigger more conservative credit policies, lower credit volumes, and more provisioning charges. Asset classes like real estate, *sukuk*, equity, and private equity are expected to under-perform relative to historical returns.

As Figure 2.1 shows, the GCC and Iran are the largest markets for IBF. They account for 80% of global Islamic finance assets but only comprise 6% of the global Muslim population. Southeast Asia and the Indian subcontinent (India, Pakistan, Bangladesh, Bhutan, Nepal) are also major markets, while North Africa has a big potential to grow. In addition, as depicted by Table 2.2, IFSB (2007) estimates the total size of the Islamic finance industry based on various Islamic finance sub-sectors, each of which indicates rather large growth potential.

Figure 2.1: Muslim Population, Islamic Finance Assets, Revenues, and Profit Pool Breakdown by Region



Source: Oliver Wyman (2009: 5)

Table 2.2: Potential Size of the Islamic Finance Industry

(A): Estimated Size of IFSI Segments (2005)		(B): Projected Size of IFSI		
		Years	Annual growth rate: 10%	Annual Growth rate: 15%
	Billion\$		Billion\$	Billion\$
Islamic banks (assets)	250.0	2005 (Base: assumed)	700	700
Islamic banking windows (assets)	200.0	2006	770	805
Modaraba Companies, Pakistan (assets)	0.3	2007	847	926
Other non-banking FI (assets)	4.0	2008	932	1065
<i>Sukuk</i> (outstanding)	18.0	2009	1025	1224
Malaysian Domestic Islamic Bonds	17.0	2010	1127	1408
Islamic Funds (total size)	11.0	2011	1240	1619
Shari'ah-Compatible Stocks	300.0	2012	1364	1862
<i>Takaful</i> (gross premium written)	5.0	2013	1501	2141
		2014	1651	2463
		2015	1816	2832

Source: IFSB (2007: 10)

2.4 PRINCIPLES OF ISLAMIC BANKING AND FINANCE

After providing a general introduction on the developments and trends in Islamic finance industry, it is essential to present the foundational principles of IBF. These principles can be summarized by five core rules, three being prohibition-related principles and two being positive measures (KPMG, 2006):

(i) The prohibition of interest (*riba*)

No financial transaction should be based on the payment or receipt of interest; hence, fixed return is prohibited in the Islamic tradition. Therefore, profit from indebtedness or the trading of debts is seen to be unethical. Instead, the investor and investee should share in the risks and profits generated from a venture, an asset or a project.

(ii) The prohibition of uncertainty (*gharar*)

Uncertainty in terms of a financial contract is considered unlawful, but not risk *per se*. Consequently, speculation (*maysir*) is forbidden. Therefore, financial derivatives are usually not permissible under *Shari'ah*-compliant finance despite the possible application for risk mitigation or risk transfer.

(iii) The prohibition of unlawful (*haram*) assets

No financial transaction should be directed towards economic and financial sectors considered unlawful according to the *Shari'ah*, such as the arms dealing, tobacco or gambling industries, as well as all enterprises for which financial leverage (indebtedness) would be deemed excessive (including conventional banks).

(iv) The Profit-and-Loss Sharing (PLS) obligation

The original concept of Islamic financing is in favour of equity participation. Parties to equity-based financial contracts should share in the risks and rewards derived from such financing or investment transactions. PLS converts the relationship from borrower and lender to partners.

(v) **The asset-backing obligation**

Any financial transaction should be based on a tangible, identifiable underlying asset. Thus, Islamic teaching encourages financing economic activity through asset-based mechanisms as opposed to the financialisation of the economy.

2.5 BASIC ISLAMIC FINANCING CONTRACTS

Based on the identified principles in the previous section, over the many years a number of financial contracts have been developed and used within the Muslim societies as *Shari'ah*-compliant contracts. However, in recent years, with the financial developments in IBF, new products have also been engineered. Figure 2.2, hence, presents a brief overview of main Islamic financial instruments, while it is not the intention of this section to explain those contracts in details but rather to briefly explain the basic foundations.

Figure 2.2: Overview of Islamic Financial Instruments

Debt-Based Contracts	Fee-Based Contracts	Participatory Contracts
Customer undertakes a debt obligation to the bank backed by an asset <i>e.g.</i> <i>Murabahah</i> <i>Salam</i> <i>Istisna'a</i>	Bank charges a fixed fee in exchange for a service provided to the customer <i>e.g.</i> <i>Wakala</i> <i>Ijara</i>	Bank and customer co-invest in a partnership agreement <i>e.g.</i> <i>Mudarabah</i> <i>Musharakah</i> <i>Diminishing Mushraka</i>

Source: Oliver Wyman (2009)

Most contracts in Islamic banking are primarily based on (or are a combination of) the instruments identified in Figure 2.2.:

2.5.1 *Murabahah*

According to *murabahah* contracts, one party (the seller) purchases commodities from a supplier and sells the commodities to the other (the buyer) at an agreed mark-up price. The profit generated by the on-sale is derived as a profit resulting from a sale and is not

treated as interest. Accordingly, buyers requiring cash will immediately sell the commodities in the market to generate cash. *Murabahah* is also commonly known as ‘cost-plus financing’ or ‘mark-up’.

The term *Murabahah* contracts refers to a cost-plus transaction in which a bank purchases a tangible asset required by a customer, and then re-sells it to the customer at a pre-determined profit. It involves three parties: the purchaser/importer, the seller/exporter, and the financier. The Islamic financier provides finance by purchasing the desired commodity from a third party and reselling it to the purchaser at a predetermined higher price (mark-up), payable in installments (Sundararajan and Errico, 2002). The key is that the financier must have a title to the goods at some point in the transaction.

To date, commodity *murabahah* has been the backbone of IBF; it is a vital product in Islamic finance, and it has been intensively used by Islamic financial institutions for money market transactions, investment, and retail activities. While no accurate figures exist about commodity *murabahah* volumes, industry experts estimate that at least USD 3 billion worth of commodities are traded daily off exchange of the LME (OTC Contacts). This figure is likely to increase with the mounting interest in Islamic finance (Moore, 2009).

Commodity *murabahah* has been heavily used as a mechanism for cash generation; some refer to the transaction as ‘*tawarruq*’, which lexically means ‘generating cash’ in Arabic. However, this is not the purpose *murabahah* was initially designed for. *Shari’ah* scholars are not pleased with this practice (pure *tawarruq*). They are pushing more towards genuine *murabahah* through which the bank buys the actual commodity (being a car, furniture, appliances, *etc.*) and resells it back to the customer at a cost plus margin (Consumer Finance).

2.5.2 *Mudarabah* (profit-sharing agreement)

Mudarabah as an Islamic finance instrument is arranged between a bank (acting as a silent partner) and one or more entrepreneurs. The bank provides the entrepreneur with the funding for a specific commercial activity. However, the entrepreneur does not contribute any funding himself, but contributes management expertise. The entrepreneur earns an agreed portion of the profits ('management fee' or '*mudarib* fee'). In turn, the financial institution is guaranteed a percentage of the profits (agreed upon beforehand) and assumes all of the risk in terms of financial loss. This is accompanied by considerable risk, and therefore the financial institution involved performs careful risk and credit analysis. On the whole, *mudarabah* transactions account for less than 10% of world-wide Islamic banking operations; it is similar to a Western-style limited partnership, with one party contributing capital while the other runs the business, and profit is distributed based on a negotiated percentage of ownership. Many banks use *mudarabah* to mobilize funds through savings and investment accounts (Usmani, 2002).

2.5.3 *Musharakah* (equity participation)

Musharakah as an essential IBF instrument involves a partnership between the bank and the entrepreneur: both contribute to the capital of the enterprise. An equity financing arrangement is widely regarded as the purest form of Islamic financing, where partners contribute capital to a project and share in both its risks and rewards. In a *musharakah* contract, a formal contract is normally in place, outlining the obligations and rights of both parties: profits can be allocated in any pre-agreed ratio, and losses are borne in proportion to the capital of each partner (Sundararajan and Errico, 2002). *Musharakah* conforms to the principle of profit and loss sharing and it is suitable for long-term project financing; hence it is considered to be the purest form of Islamic finance.

2.5.4 *Ijarah and Ijarah wa-Iqtinah*

Ijarah and *ijarah wa-iqtinah* are Islamic leasing concepts similar to western operating and financial leases. *Ijarah* is similar to a conventional operating lease whereby an Islamic bank (lessor) leases the asset to a client (lessee) for agreed upon payments and period of time, but with no option of ownership for the lessee. The lessor takes the responsibility of maintaining and insuring the asset.

Ijarah wa-Iqtinah, on the other hand, is comparable to financial/capital lease where the lessee has the option of owning the asset at the termination of the lease (Akkizidis and Khandelwal, 2007). The conditions governing both types of leasing are that assets must have a long secure productive life, and lease payments must be agreed on in advance to avoid any speculation. The price of the purchase of the asset at the end of the contract period cannot be predetermined, and can only be determined when the lease contract is terminated.

Under Islamic leasing the lessee should start making lease payments only after the leased asset has actually been delivered. If that asset were destroyed, the lessee would cease making payments to the lessor, a contrary practice to most western lease financing.

2.5.5 *Istisna'a*

Istisna'a as a concept offers a number of future structuring possibilities used mostly to finance long-term large-scale facilities. It is basically a contractual agreement whereby a party undertakes to produce a specific thing according to certain agreed-upon specifications at a determined price and for a fixed date of delivery. This undertaking of production includes any process of manufacturing, construction, assembling, or packaging. In *istisna'a*, the work is not conditioned to be accomplished by the undertaking party and this work or part of it can be done by others under his control and responsibility. The price may be paid in advance or in installments, according to the preference of the parties (Iqbal and Llewellyn, 2002). *Istisna'a* is thus a certain form of a

futures market which enables an entrepreneur to sell his output to the bank at a pre-determined price. It is a profit-mark-up contract similar to a *murabahah*; however, the *istisna'a* deal can be referred to something not in existence at the time of signing the contract, while *murabahah* is an order to buy commodities which are in existence in hand or possible to be found in the market.

2.5.6 Wakala

Wakala is a financial relationship between principal and agent. The contract of *wakala* means designating a person or legal entity to act on one's behalf or as one's representative. It has been a common practice to appoint an agent (*wakil*) to facilitate the trade operations.

A *wakala* contract gives a power of attorney or an agency assignment to financial intermediary to perform a certain task. On the surface, there does not appear to be much difference between a *mudarabah* and a *wakala* contract, since both are principal-agent contracts. However, the main difference is that in case of *mudarabah*, the *mudarib* has full control and freedom to utilize funds according to his professional knowledge, as opposed to the case of *wakala* where the *wakil* does not have similar freedom (Siddiqi, 1983). A *wakil* acts only as a representative to execute a particular task according to the instructions given. Recently, more banks have been using *wakala* for money market transactions to replace the commodity *murabahah*, which involve more complications and raise *Shari'ah* concerns when used for generating cash (*tawarruq*) as previously discussed. An Islamic bank can accept or place *wakala*, whereas a conventional bank can only use *wakala* placements to deposit with an Islamic counterparty.

2.5.7 Bai' Salam

Salam is also known as 'forward sale'. It was originally allowed to meet the needs of small farmers who needed money during the harvesting period to meet expenses. In this transaction the bank pays the seller in advance the full-agreed price of a specified quality

and quantity of a commodity that the latter promises to deliver in the future. The price has to be paid all in advance.

This form of finance is similar to forward purchase, and it has been applied in the case of agricultural products as their seasonality signifies the need for such finance. It should be noted that *salam* exposes banks to market risk, especially fluctuations in the commodity prices. To avoid this, modern bankers are using the '*parallel salam*', where a bank enters into two simultaneous agreements for the same future date, one as a buyer and the other as a seller; this takes care of commodity price fluctuations to a certain extent, but still requires managing the risks from the non-delivery of the commodity on the due date (Usmani, 2002).

2.5.8. Other Islamic Financial Products

Other than the main Islamic finance contracts discussed above, there are several variants of different instruments available in the market. Some of the popular ones are briefly described below. However, *sukuk* as a financial instrument is discussed in detailed in the following section.

(i) Hibah

Hibah is a form of gift used to repay account holders in an Islamic bank. Current accounts and savings account holders in an Islamic bank do not get any interest, however, at the end of the year the bank, at its discretion, banks can give some *hibah* as a part of its compensation to the account holders (Iqbal and Mirakhor, 2007).

(ii) Musawama

Musawama is very similar to *murabahah*, except that the seller does not need to disclose his cost of goods (Moody's, 2009a).

(iii) Qard Hassan

Qard hassan is a loan on a goodwill basis which is totally free of any extra cost. The debtor is required to return only the principal borrowed amount, although he may return anything extra, whatever he feels appropriate. This is a true *riba*-free loan (Usmani, 2002).

(iv) Wadiah

In the case of *wadiah*, the bank works as the trustee for funds of customers. However, the bank does not guarantee any interest but can give some *hibah*, which can compensate the customers (Iqbal and Mirakhor, 2007).

2.6 SUKUK: A STEP TOWARDS SECURITIZATION

As an extensively used financial instrument in the recent years, *sukuk* is not a contract on its own, but rather it is a product based on one or more Islamic finance contracts that was introduced in order to address the asset/liability dichotomy in Islamic banking. Prior to 2000, this particular market was virtually non-existent, but in the past few years it has experienced tremendous growth as highlighted in section 2.6.3.

2.6.1. What is Sukuk?

Sukuk is an Arabic term meaning ‘certificate’. In financial sense, *sukuk* may be understood as a *Shari’ah*-compliant ‘bond’. In its simplest form *sukuk* represents ownership of an asset or its usufruct. The claim embodied in *sukuk* is not simply a claim to cash flow but an ownership claim. This also differentiates *sukuk* from conventional bonds as the latter proceed over interest bearing securities, whereas *sukuk* are basically investment certificates consisting of ownership claims in a pool of assets (Dar Al Istithmar, 2006).

Sukuk (plural of word *sak*) were extensively used by Muslims in the Middle Ages as papers representing financial obligations originating from trade and other commercial

activities. However, the present structures of *sukuk* are different from the *sukuk* originally used and are akin to the conventional concept of securitization, a process in which ownership of the underlying assets is transferred to a large number of investors through certificates representing proportionate value of the relevant assets (Askari *et al.*, 2009).

2.6.2. Types of *Sukuk*

Sukuk can be of many types (fourteen eligible *sukuk* types have been identified by the Accounting and Auditing Organisation for Islamic Financial Institutions (AAOIFI)), depending upon the type of Islamic modes of financing and trades used in its structuring (Standard & Poor's, 2010a). However, the most common category in the market is *ijara sukuk*, which are backed by leases and often guaranteed by sovereign or regional governments. Because of the predominance of *ijara sukuk*, these transactions are commonly viewed as the *de facto* benchmarks in the Islamic marketplace. *Ijara sukuk* are structured around a specific asset, such as a building, property, or infrastructure facility. The asset itself is sold to a special-purpose entity that then issues the *sukuk* to fund the asset's purchase price. The special-purpose entity then leases the asset and receives periodic lease payments. At maturity, or in the event of dissolution, the special-purpose entity sells the asset back to the original seller at a predetermined price that includes any outstanding amounts still owed under the terms of the *ijara sukuk* (Standard & Poor's, 2010a).

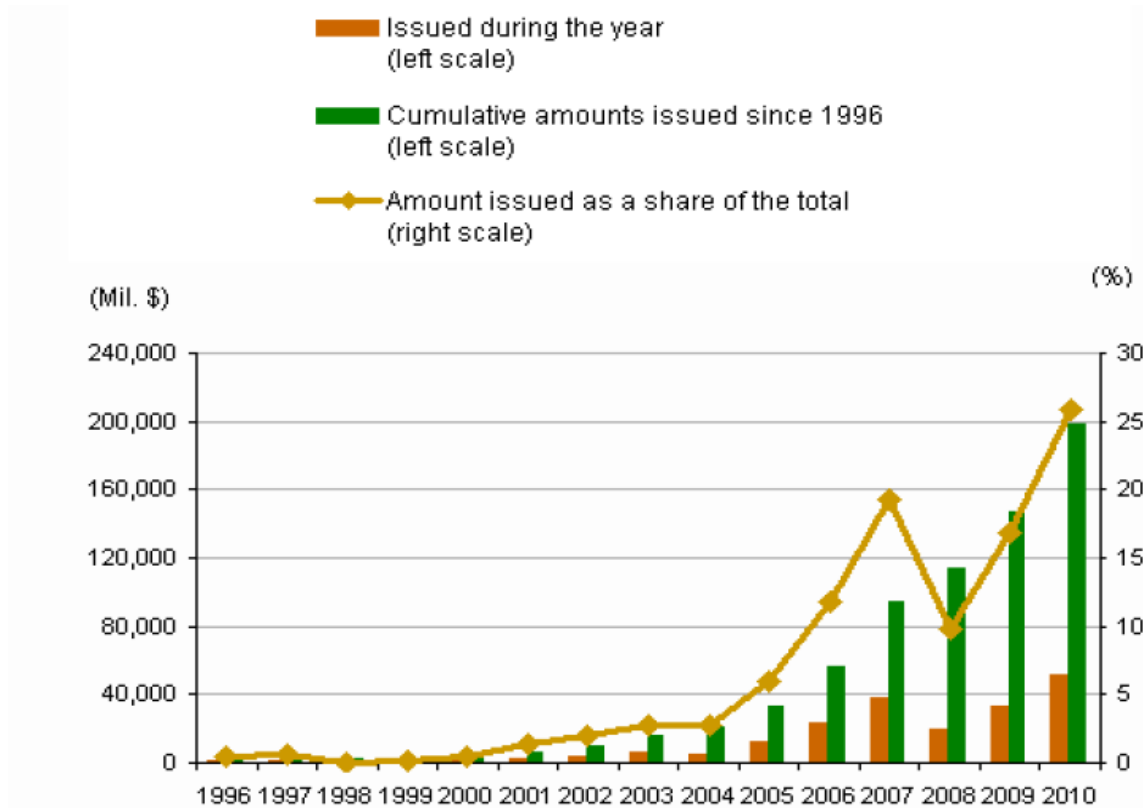
2.6.3. Developments in the *Sukuk* market

Sukuk growth has been a factor in local debt capital market, which was also virtually non-existent before 2000. Taking advantage of *sukuk* was a much-needed solution to the problem of increasing the Islamic banks' funding variety. *Sukuk* allow Islamic banks to allocate excessive funds to alternative classes of instruments; it has, thus, helped them to move away from conventional strategies related to equity and property alone. Similarly, *sukuk* varieties have been used by Islamic banks as tools in their investment portfolios to hedge against their more volatile credit exposures.

After two turbulent years, Standard & Poor's (2011) believes the *sukuk* market is back on track. Issuance reached a record high of USD 51.2 billion in 2010, including those issued and matured that same year. This represents about 26% of the cumulative amount of issuances since 1996 and bests the previous peak in 2007 by 34%. By mid-February 2011, even those 2010 levels were being given a run for their money, with more than USD 16 billion of *sukuk* already issued since the beginning of the year. In 2011, it is expected that the depth and breadth of *sukuk* issuance will continue to hinge on the extent of the global economic recovery. This is notably crucial for the return of corporate *sukuk* issuers, including financial institutions, which fell from an average of about 65% over 2001-2007 to a mere 12% of issuance in 2010. In geographic terms, the regional economic slowdown since mid-2008 has curtailed the financing needs of Gulf issuers. In doing so, it has re-centred the *sukuk* market growth on its historical engine and mainstay, Malaysia, which accounted for 78% of *sukuk* in 2010. Asian markets are expected to remain buoyant at least over the medium term (Standard & Poor's, 2011). Meanwhile, the GCC region is anticipated to catch up, and start to play a larger and more sustainable role in the market, particularly with the region's need to fund the huge pipeline of government projects and long-term events, such as the 2022 World Cup in Qatar. Figure 2.3 depicts the developments and trends in the *sukuk* issuance over the years.

Standard & Poor's (2011) do not foresee that non-Muslim countries will change the shape of the market over the medium term. During the crisis, Western investors showed a marked interest in *sukuk*, partly because their average yield has been slightly higher than that available on a 'plain vanilla' conventional comparable instrument, owing to their structured nature and lower liquidity. However, it is believed that this trend will slow down once rates begin to rise, which will increase the average yield of conventional bonds.

Figure 2.3: Global *Sukuk* Issuance 1996-2010



Source: Standard & Poor's (2011)

In addition, Moody's (2011a) expect that the complex web of socioeconomic, political, and religious issues in many of these non-Muslim countries is holding back any swift uptake of *sukuk*. Instead, it is argued that the market's future lies with countries whose economies have been less affected by the crisis, namely the GCC and South East Asia. The broader global demand for *sukuk* still depends on increasing their liquidity and standardizing *Shari'ah* interpretation. The developments, however, indicate that the market needs leaders to provide vision and direction, to take the domestic and compartmentalized initiatives of various countries toward clear international and standardized market principles (Standard & Poor's, 2011).

The market is yet to witness the first convincing and sizable *sukuk* issuance from a European or non-Muslim Asian country since the debut of the five-year €100 million German State of Saxony Anhalt *sukuk* in 2004. The UK, which has been the most likely, active, and vocal candidate since its announcement in 2007 of a planned sterling-denominated *sukuk*, backtracked in January 2011, citing its lack of value for money. The South Korean government, meanwhile, failed in December 2010 to pass an amendment that would remove the tax disadvantage of *sukuk* compared with conventional bonds, but it will try again in the near future. The effect of these international setbacks to the *sukuk* may reverberate to other prospective issuers. Most of these non-Muslim countries have announced their intention to enter the *sukuk* market for opportunistic reasons, such as to tap the much-coveted liquidity available in the GCC countries or Asia, but it remains doubtful that they would do this at any cost (Standard & Poor's, 2011).

Furthermore, one of the interviewees in this research, Qaedi (2010), explains that the market is now moving toward listed instruments, both in international markets and in local markets such as Dubai, Malaysia, or Saudi Arabia. The majority of *sukuk* to date have been issued in the form of over the counter instruments that investment bankers developed to fit the specific needs of issuers, and then privately placed to meet the needs of investors. Listing *sukuk* on organized markets is important for the liquidity of the instrument itself, and also makes it easier for investors to manage, both in terms of liquidity and price discovery.

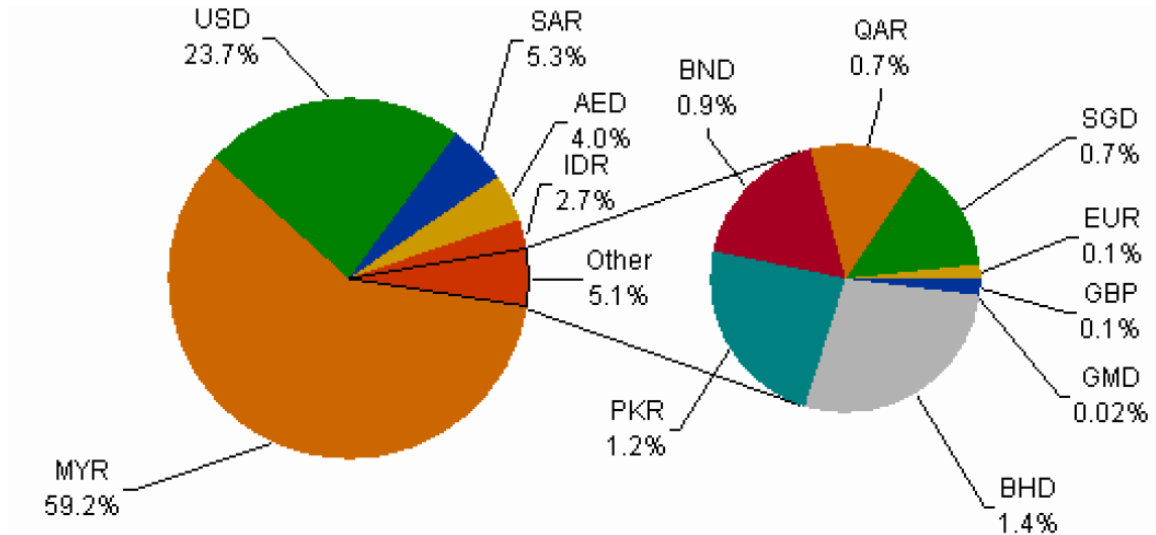
The main uncertainty within *sukuk* lies in current market conditions. The default of some *sukuk* has raised questions about this relatively young market. These *sukuk* were issued by East Cameron Partners (ECP), The Investment Dar (TID) and Saad Group. *Sukuk* issued by Nakheel PJSC avoided default thanks to a last-minute support package (Moody's, 2010b). Once investors have a clearer view of the possible outcome of the two recent defaults, the *sukuk* market is likely to grow more strongly, perhaps after making some adjustments reflecting lessons learned. Beyond 2010, a major impediment to the emergence of an integrated, global *sukuk* market remains, with lack of standardization, especially regarding *Shari'ah* compliance and the legal environment.

Abdul-Ghani (2009) explains that despite enormous success, the *sukuk* market is not as deep or liquid as a regular bond market. Regardless of growing demand fuelled by banks, corporations and governments in the GCC region, there is a shortage of supply. Additionally, the *sukuk* market is still stagnant: holders keep their bonds to maturity and there is relatively little secondary market trading. The ability to trade their bond portfolios gives banks the flexibility to adjust their asset/liability management process to their liking and to hedge themselves against sudden movements in asset prices by matching durations on both sides.

So far, IBF institutions have preferred an originate-and-hold business model due to the lack of a secondary market for loans and *sukuk*; however, in the longer term, IBFs with limited capital resources might be more inclined to adopt an originate-and-distribute business approach, provided disintermediation picks up, market depth and liquidity improves, and growth in Islamic assets continues unabated.

As depicted by Figure 2.4, the Malaysian ringgit (MYR) has been the currency of choice every year since the inception of the market, with ringgit-denominated *sukuk* representing about 59% of total issuance over the period from 1996 to 2010 or more than twice the U.S. dollar-denominated ones. Malaysia has notably funded infrastructure projects with ringgit-denominated *sukuk*, since Islamic investors tend to prefer asset-backed projects. But ringgit-denominated issuance is not limited to Malaysian issuers. The National Bank of Abu Dhabi issued the equivalent of a combined \$325 million in the Malaysian currency in June and December 2010 to tap a deeper *sukuk* market (Standard & Poor's, 2011). U.S. dollar-denominated *sukuk* made up only about 8% of *sukuk* issued in 2010. This is not expected to change significantly by the end of 2011. Any pickup in dollar-denominated issuances would likely follow a pickup in the GCC region, which has most of its currencies fully or partially pegged to the U.S. dollar.

Figure 2.4: Global *Sukuk* Issuance by Currency 1996-2010



AED - United Arab Emirates dirham, BHD – Bahraini dinar, BND – Bruneian dollar, EUR – euro, GBP – British pound, GMD – Gambian dalasi, IDR – Indonesian rupiah, MYR – Malaysian ringgit, PKR – Pakistan rupee, QAR – Qatari riyal, SAR – Saudi Arabian riyal, SGD – Singapore dollar, USD – U.S. dollar

Source: Standard & Poor’s (2011)

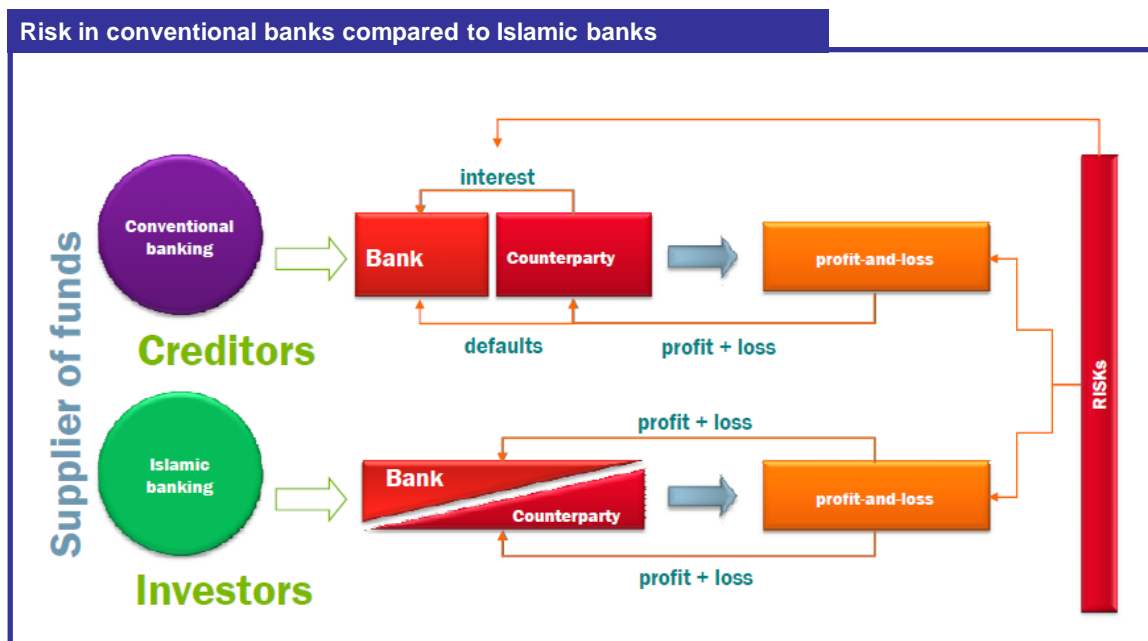
While *mudarabah*, *musharakah* and *ijara* are widely applied, the actual legal structure behind the *sukuk* risk characteristics can vary significantly, even within a single ‘type’. According to Zawya (2011), *ijara* and *murabahah* structures accounted for about three-quarters of total *sukuk* issued in 2010, and this trend is expected to continue for the next few years. The remainder was in the form of *istithmar*, *wakala*, *musharakah*, and *salam* structures. Thus, until there is some broad consensual standardization in *sukuk*, investors will need to look at each structure individually to understand the cash flow, risk and return profile, irrespective of the type of *sukuk* structure used.

Due to the availability of a large variety of *sukuk* structures in the market, detailed discussion of the *sukuk* is beyond the scope of this research and hence has not been dealt with. Chapter 3 looks at *sukuk* from a risk management perspective, while Chapter 5 discusses a new phenomenon in *sukuk*: default.

2.7. ISLAMIC BANKING vs. CONVENTIONAL BANKING

The previous sections aimed to provide information regarding the foundational principles and salient futures of IBF as well as the developments and trends in the IBF sector. As has been mentioned, the overarching principle of Islamic banking is that all forms of interest are prohibited. The Islamic financial model works on the basis of risk sharing (Mirakhor and Zaidi, 2007), as explained by Khandelwal (FRSGlobal, 2009): “because interest is prohibited under *Shari’ah* law, suppliers of funds become investors instead of creditors. The provider of financial capital and the entrepreneur share business risk in return for shares of the profits, and this has an impact on risk management”. However, using profit-sharing modes in Islamic banks changes the nature of risks these institutions’ face as shown in Figure 2.5.

Figure 2.5: Risks in Conventional Banks vs. Islamic Banks



Source: Modified version of FRSGlobal (2009)

Islamic finance is based on the concept of profit- and risk-sharing and avoidance of the concept of interest. This means that the finance provider is not automatically entitled to payment in full of principal and periodic distributions, but that risk needs to be taken by

the finance provider, along with the borrower. This contrasts with the conventional/western concept of lending, which results in a number of considerations that need to be taken into account when assessing the risk profile of an Islamic bank.

Table 2.3 - Differences between Islamic Finance and Conventional Finance

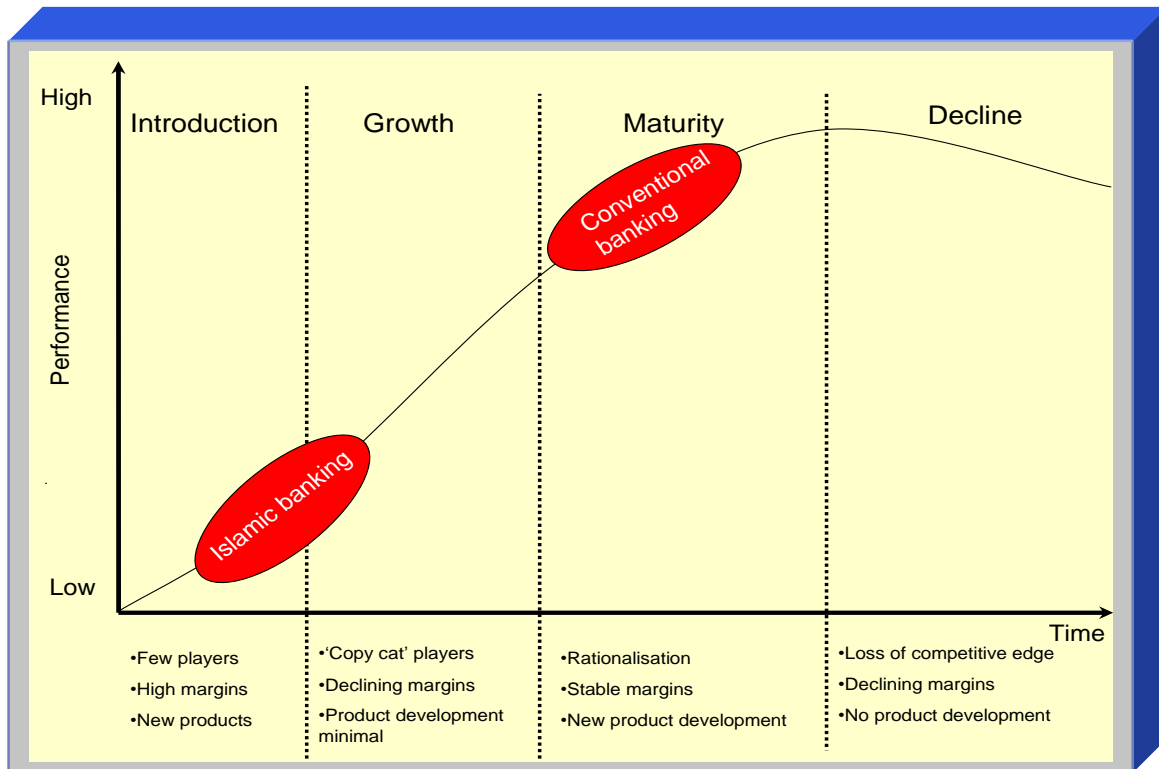
Conventional finance	Islamic finance
Primarily based on interest rate	Interest is prohibited
Facilitate financial activities	Facilitate social, economic, and financial activities
Structured and formalized	Unstructured and still informal in many ways
Stress on financial efficiency	Stress on social, ethical, and financial efficiency
Restricted moral dimension	Strong moral dimension
Highly systematized in terms of risk management, accounting, and other standards	Standards for risk management, accounting and other activities are still developing
Existing set of legislations to deal with legal issues	Legal support still in development with several legal areas under doubt
Highly developed banking and financial product market	Developing banking and financial product market
Existence of conventional money market	Non-existence of significant Islamic money market
Availability of inter-bank funds	Non-availability of inter-bank funds
Strong and developed secondary market for securities	Non-existing secondary market for securities
Existence of short-term money market	Non-existence of short-term money market

Source: Akkizidis and Khandelwal (2007:3)

It is also critical to develop an understanding of the spectrum of the risk and return profiles of different Islamic financial instruments. Often the Islamic financial system is equated with an all equity-based system, which ignores the fact that the system also has several other types of contracts, which are not based on profit-and-loss sharing. Contracts such as sales, trade financing, and leasing constitute a large portion of the system, but these contracts are not based on equity (Iqbal and Mirakhor, 2007). The existence of such non-equity based instruments has an important implication; these instruments have a risk/return profile that is very similar to a conventional fixed-income security.

In addition, Islamic banking, despite having been in existence in its modern form for over three decades, is still in many respects an infant industry, as depicted in Figure 2.6. Islamic banks are striving to build their reputation by exploiting ‘blind spots’ in the market and by trying to develop competitive advantage. They are in serious rivalry for customers’ loyalty and face high level of uncertainty. Conventional banking, on the other hand, is in its maturity stage. The market is dominated by powerful players, and entrepreneurial actions continue but are greatly deemphasized.

Figure 2.6: Development Stages of Islamic Banking



As discussed, the core principles of Islamic finance, especially the PLS characteristic have unique risk management implication. In conventional banking, if the payment of outstanding commitments is not timely and is not in accordance with the terms and conditions of the obligations then default has occurred. However, in Islamic banking, if PLS obligations were in fact to absorb losses, this would not in itself be viewed, at least

in theory, as a default event, as investors have contractually agreed to share in losses (Chowdhury, 2010).

It should be noted that Chapter 3 explores these risk management implications in detail.

2.8. INSTITUTIONAL DEVELOPMENTS IN THE ISLAMIC BANKING AND FINANCE INDUSTRY

The private sector has been much more active than the public sector in the growth of Islamic finance, as development in Islamic finance is mainly due to the economic liberalization and hence the private sector. However, a number of governments, such as those of Bahrain and Malaysia, have made serious efforts to establish financial centres for IFIs. An institutional infrastructure to support the development of the financial sector, hence, is slowly emerging with the collaboration between the private and public sector. Such developments include institutions to deal with accounting and regulatory standards, corporate governance, credit ratings, and capital markets. These efforts to develop institutions are also supported by several stakeholders such as the International Monetary Fund (IMF), central banks of leading Muslim countries, international standard-setting bodies, and financial centres (Askari *et al.*, 2009). These institutions are depicted in Table 2.4 with their functional roles.

Table 2.4: Key Institutions in the Islamic Financial Industry

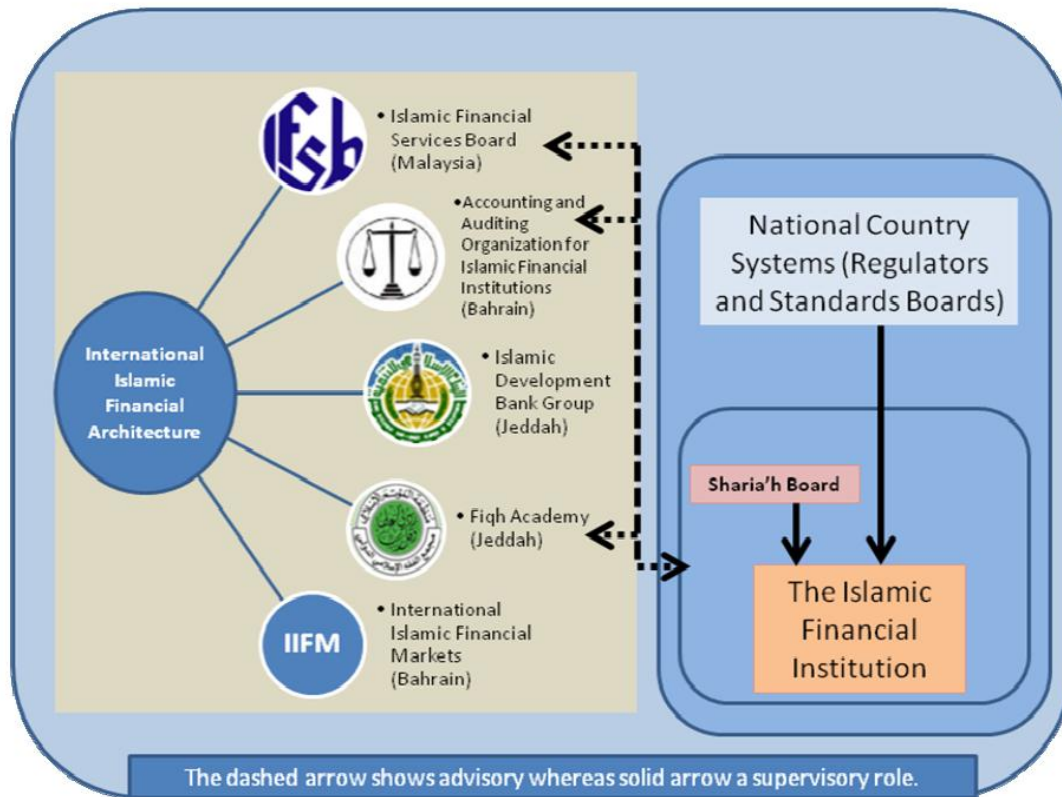
<i>Acronym</i>	<i>Organization</i>	<i>Function</i>
IDB	Islamic Development Bank Member/ sister organizations: ICD – Islamic Corporation for the development of the Private Sector ICIEC – Islamic Corporation for the Insurance of Investment and Export Credit; Islamic insurance company, providing insurance products for investments and export credits. IRTI – Islamic Research and Training Institute; Research and training arm ITFC – International Islamic Trade Finance Corporation Solidarity Fund – To reduce poverty in OIC countries ARCIFI – Arbitration and Reconciliation Centre for Islamic financial Institutions	Development institution formed in 1975 to promote Islamic finance and economic development
AAOIFI	Accounting & Auditing Organisation for Islamic Financial Institutions	Accounting and <i>Shari'ah</i> standard setting body
IFSB	Islamic Financial Services Board	Standard-setting institution to ensure best practices and help member countries with regulating Islamic financial institutions
IIFM	International Islamic Financial Markets	Trade association to promote capital markets
IIRA	Islamic International Rating Agency	Rating agency
LMC	Liquidity Management Centre	Institution to provide liquidity enhancement to the financial system
CIBAFI	General Council of Islamic Banks and Financial Institutions	Trade association of Islamic banks to enhance member institutions' ability to better service customers around the world through transparent banking practices

Source: Askari et al. (2009:39)

Al-Ghamrawy (2010), one of the interviewees for this research, however stated that “there are several fine organizations dedicated to the promotion of Islamic finance across various jurisdictions. The problem is that they do not well-co-ordinate with each other.”

Figure 2.7 lays out the institutional developments in IBF. The degree of maturity of Islamic institutions is much lower compared to conventional system. However, driven by industry research and inspired by international linkages, these institutions are continuously evolving.

Figure 2.7: Institutional Developments in Islamic Finance



Source: BLME (2009)

Notes: The dashed arrow depicts advisory roles, the solid arrow depicts supervisory roles.

The main institutions in the institutionalization of IBF are explained in brief as follows:

(i) Islamic Development Bank (IDB)

The Islamic Development Bank was established in 1975 as a regional development institution to promote economic development in Muslim countries through Islamic finance. Since its creation, the IDB has established several sister institutions to develop

private sector insurance facilities and trade and export financing. Additionally, the IDB has played a key role in developing institutional infrastructure to promote Islamic financial systems. Some notable contributions of Islamic Development Bank are institutions to enhance the regulatory framework and standardization of the Islamic banking industry, such as: the AAOIFI; the IFSB, the General Council of Islamic Banks and Financial Institutions (GCIBFI); the International Islamic Financial Market (IIFM); the Islamic International Rating Agency (IIRA); the Liquidity Management Center (LMC); and the International Islamic Center for Reconciliation and Commercial Arbitration (IICRCA) (Askari *et al.*, 2009).

(ii) Islamic Research and Training Institute (IRTI)

The IRTI, the research arm of IDB, was established in 1981 to undertake research, training, and knowledge generation activities in Islamic finance. The IRTI has become a centre of knowledge dissemination by developing a rich resource centre for research through collection of in-house research papers, seminar proceedings, lectures, translations, journals, and articles (Askari *et al.*, 2009).

(iii) Accounting & Auditing Organization for Islamic Financial Institutions (AAOIFI)

In 1991 the AAOIFI was established in Bahrain as a self-regulation agency for the industry to tackle the problem of *Shari'ah* compliance and gaps in applying conventional financial reporting standards to Islamic banks. The AAOIFI's membership consists of about 97 institutions spanning over 24 countries, and it has issued around 50 standards on accounting, auditing, governance, ethical, and *Shari'ah* standards. The AAOIFI's *Shari'ah* board is paving the way towards *Shari'ah* harmonization of banking practices throughout the world. The banking supervisors in a number of countries, such as Bahrain, Jordan and Sudan, require Islamic banks to comply with the AAOIFI standards or, as in the case of Qatar and Saudi Arabia, are specifying these standards as guidelines (Greuning and Iqbal, 2008).

(iv) Islamic Financial Services Board (IFSB)

The AAOIFI was successful in defining the accounting and *Shari'ah* standards, while the IFSB was officially inaugurated in November 2002 in Kuala Lumpur, Malaysia, with the help of the IMF to address systemic stability and various regulatory issues relating to Islamic financial services industry. As of June 2011, the 195 members of the IFSB included 49 regulatory and supervisory authorities as well as IMF, World Bank, BIS, IDB, Asian Development Bank, and the Islamic Corporation for the Development of Private Sector, Saudi Arabia, and 138 market players and professional firms operating in 39 jurisdictions (IFSB, 2011). The government of Malaysia has enacted the IFSB Act 2002, which gives the IFSB the immunities and privileges usually granted to international organizations and diplomatic missions (Greuning and Iqbal, 2008). The primary objective of the IFSB is to develop uniform regulatory and transparency standards to address characteristics specific to IFIs, keeping in mind the national financial environment, international standards, core principles, and good practices. The IFSB made significant contributions in the areas of corporate governance, risk management, and regulation. The IFSB issued a number of guiding principles of risk management, capital adequacy, corporate governance, and transparency in Islamic banking and finance. Archer and Abdul Karim (2007) highlight that in spite of the high quality of these standards, they have been adopted in only a handful of countries, which are listed and depicted in Table 2.5.

(v) General Council of Islamic Banks and Financial Institutions (CIBAFI)

Formed in 2001, CIBAFI is a non-profit organisation based in Manama, Bahrain, which provides information and services to the Islamic Financial Services Industry. The CIBFI focuses on media and awareness, information and research, and strategic planning in relation to IBF industry (IFSB, 2007).

Table 2.5: IFSB Standards

<i>Publication</i>	<i>Year</i>
<u>Published Standards:</u>	
<i>IFSB-1: Guiding Principles of Risk Management for Institutions (other than Insurance Institutions) offering only Islamic Financial Services (IIFS)</i>	December 2005
<i>IFSB-2: Capital Adequacy Standard for Institutions (other than Insurance Institutions) offering only Islamic Financial Services (IIFS)</i>	December 2005
<i>IFSB-3: Guiding Principles on Corporate Governance for Institutions Offering Only Islamic Financial Services (Excluding Islamic Insurance (Takaful) Institutions and Islamic Mutual Funds)</i>	December 2006
<i>IFSB-4: Disclosures to Promote Transparency and Market Discipline for Institutions offering Islamic Financial Services (excluding Islamic Insurance (Takaful) Institutions and Islamic Mutual Funds)</i>	December 2007
<i>IFSB-5: Guidance on Key Elements in the Supervisory Review Process of Institutions offering Islamic Financial Services (excluding Islamic Insurance (Takaful) Institutions and Islamic Mutual Funds)</i>	December 2007
<i>GN-1: Guidance Note In Connection with the Capital Adequacy Standard: Recognition of Ratings by External Credit Assessment Institutions (ECAIs) on Shari'ah-Compliant Financial Instruments</i>	March 2008
<i>IFSB-6: Guiding Principles on Governance for Islamic Collective Investment Schemes</i>	January 2009
<i>IFSB-7: Capital Adequacy Requirements for Sukuk, Securitisations and Real Estate investment</i>	January 2009
<i>IFSB-8: Guiding Principles on Governance for Takaful (Islamic Insurance) Undertakings</i>	December 2009
<i>IFSB-9: Guiding Principles on Conduct of Business</i>	December 2009
<i>IFSB-10: Guiding Principles On Shari'ah Governance Systems For Institutions Offering Islamic Financial Services</i>	December 2009
<i>IFSB-11: Standard on Solvency Requirements for Takaful (Islamic Insurance) Undertakings</i>	December 2010
<u>Other Documents:</u>	
<i>Issues in Regulation and Supervision of Takaful (Islamic Insurance) by IFSB and International Association of Insurance Supervisors</i>	August 2006
<i>Islamic Financial Services Industry Development: Ten-Year Framework and Strategies</i>	May 2007
<i>Compilation Guide on Prudential and Structural Islamic Finance Indicators: Guidance on the Compilation and Dissemination of Prudential and Structural Islamic Finance Indicators for Banking and Near-Banking institutions offering Islamic financial services</i>	November 2007
<i>TN-1: Technical Note on Issues in Strengthening Liquidity Management of Institutions Offering Islamic Financial Services: The Development of Islamic Money Markets</i>	March 2008
<i>Source: IFSB website http://www.ifsb.org Access Date: 14 June 2011</i>	

(vi) Liquidity Management Centre (LMC)

The LMC was founded in 2002 in Bahrain to facilitate the investment of surplus funds of Islamic financial institutions into financial instruments structured in accordance with *Shari'ah* principles. The key objective of the LMC is to facilitate the creation of an interbank money market that will allow Islamic financial institutions to more effectively manage their asset/liability mismatch through participation as both investors and borrowers (Mahlknecht, 2009). In addition, the centre attracts assets from governments, financial institutions, and corporates in both the private and public sectors in many countries. The assets are securitized into readily transferable securities or structured into other innovative investment instruments (Greuning and Iqbal, 2008). The equal shareholders include Bahrain Islamic Bank, Dubai Islamic Bank, Islamic Development Bank, and Kuwait Finance House.

(vii) International Islamic Financial Market (IIFM)

The Bahrain-based IIFM was created in 2002 as cooperation between various supervisory authorities of Islamic countries. The major objectives of the IIFM are (a) to address the liquidity problem by expanding the maturity structure of instruments, and (b) help in the creation of secondary market activity with designated market makers where such instruments can be actively traded. The IIFM focuses on standardization and harmonization within the industry. Its primary focus is on the advancement and unification of Islamic financial documents, structures, and contracts (Wilson, 2009). It signed a Memorandum of Understanding with the International Capital Market Association (ICMA) to develop master repurchase (repo) agreement to help central banks manage liquidity in the *sukuk* market, and with the International Swaps and Derivatives Association (ISDA) to develop a *Tahawwut* (Hedging) Master Agreement (Mahlknecht, 2009). In October 2008, IIFM marked a milestone with the launch of the first-ever universal Master Agreement in Islamic finance: the Master Agreements for Treasury Placement (MATP), which is to cater for global commodity *murabahah* trades, is a perfect example of how standardization can take place (IIFM, 2009).

(viii) Islamic International Rating Agency (IIRA)

The IIRA aims to assist in the development of regional financial markets by providing an assessment of the risk profiles of entities and instruments that can be used for investment decisions. The organization has a board of directors and *Shari'ah* boards as well as an independent rating committee. The IIRA also provides a unique service for rating the quality of the *Shari'ah* compliance of a financial institution (Askari *et al.*, 2009).

(ix) International Islamic Liquidity Management Corporation (IILM)

Finally, October 2010 saw the signing and launch of the IILM, the latest trans-national body to serve the global Islamic finance industry. The ultimate aim of the IILM is to enhance international integration of the Islamic money market and capital markets and to better equip them to face any liquidity crises.

2.9. CONCLUSION

This chapter provided an overview of the Islamic financial principles. The development of Islamic banking and finance was introduced and the market size was explored. Additionally, major differences between conventional and Islamic banking were also presented. Islamic banks, similar to their conventional counterparts, act as financial intermediaries, transforming the characteristics of the financial inflows they capture, as part of their funding strategies, into *Shari'ah*-compliant placement, financing and investment instruments. However, asset classes managed by IFIs may sometimes differ from those of conventional banks, not so much in their economic substance, but more in their financial form (Iqbal and Mirakhor, 2007).

Financial contracts in Islamic finance are not archetypal. They have special relationships between the contracting parties, which sometimes changes during the different stages of the contract. The origin, intensity, and the spread of risks are unique for IFIs, mainly because of the participatory risk relationship by the investor.

It should be noted that using PLS principle to reward depositors is a unique feature of Islamic banks. This feature, along with the different modes of financing and the *Shari'ah*-compliant set of business activities, change the nature of risks that Islamic banks face. Hence, risk management for Islamic banks is far more of a complex issue when compared to conventional banking.

CHAPTER 3

RISK MANAGEMENT IN ISLAMIC BANKS: A THEORETICAL PERSPECTIVE

“The fact that people are full of greed, fear, or folly is predictable. The sequence is not predictable”.

Warren Buffett

3.1 INTRODUCTION

It has been argued by proponents of Islamic finance that most Islamic banking products are less risky than conventional banking products because they are based on real assets. These advocates strongly argue that Islamic banks are recession-proof and are more resilient to economic shocks than their conventional peers. On the other hand, opponents of Islamic finance believe that most of the conventional risks are also present in Islamic banking in addition to further risks that are quite specific to the Islamic structure. They strongly argue that Islamic banking is more risky and less developed than the western Wall Street banking model. Who is right? Where does the truth reside?

These are challenging questions, the answer to which requires careful examination of the associated risks within Islamic finance in general as well as other areas of Islamic operations and the macro environment that could have an impact on the risk culture, risk tolerance, and risk management of Islamic banks. A review of the existing literature does not provide a clear answer to these grey areas in Islamic banking, as the existing body of knowledge is still limited.

Risk management is at the heart of banks' financial intermediation process, and has assumed utmost importance amid the current recession, which has witnessed the worst complexity and volatility in financial markets in living memory. Basel II and widespread write-downs have highlighted the importance of sufficient capital adequacy and, more importantly, set a framework for improving the overall risk management architecture in

banks. Appropriate risk management has become a differentiating factor in building competitive advantages for financial institutions. Today, regulators, creditors and rating agencies place great emphasis on risk management frameworks and corporate governance, particularly in fast-growing emerging markets where such factors tend to attract lower scores than in more mature economic and business environments.

IFIs are no exception. Similarly to conventional banks, they face many challenges in adequately defining, identifying, measuring, selecting, pricing, and mitigating risks across business lines and asset classes. Unfortunately, risk management is an ignored area of research in Islamic finance. Therefore, a number of challenges are still being confronted in this field. These challenges stem from different sources. First, a number of risk management techniques are not available to Islamic financial institutions due to *Shari'ah* compliance requirements. Islamic alternatives to several hedging and risk mitigation techniques that are widely used in conventional banking have not yet been explored. Second, there are a number of *Shari'ah* positions which affect the risk management processes directly. Some of these are lack of effective means to deal with wilful default, prohibition of sale of debt, and prohibition of currency forwards and futures, and others. Third, lack of standardization of Islamic financial contracts is also an important source of the challenges in this regard.

The majority of the risks faced by conventional financial institutions (such as credit risk, market risk, operational risk, liquidity risk, macroeconomic risk, *etc.*) are also faced by Islamic banks. However, the magnitudes of some of these risks are different for Islamic banks due to their unique business model. In addition, IFIs face further risks that stem from the different characteristics of the assets and the liabilities, balance sheet structure, and their compliance with *Shari'ah* principles. Furthermore, the profit-sharing feature of Islamic banking introduces some additional risks. For example, paying the investment deposits a share of the bank's profits introduces withdrawal risk, fiduciary risk, and displaced commercial risk. In addition, the various Islamic modes of finance have their own unique risk characteristics. Thus, the nature of some risks that IFIs face is different from their conventional counterparts.

In Islamic finance, the importance of risk management is clearly acknowledged. While conventional finance, with its roots in neo-classical economic theory, has developed instruments to identify and trade risks, in Islam risk cannot be sold in any matter. Risk management in Islamic finance, therefore, is built on the foundation that risk must be shared between parties as opposed to being assumed by one party or the other.

Realizing the significance of risk management, the Islamic Finance Services Board (IFSB) issued a comprehensive standards document on risk management in December 2005: *IFSB-1: Guiding Principles of Risk Management for Institutions (other than Insurance Institutions) offering only Islamic Financial Services (IFS)*. This complements the Basel Committee on Banking Supervision (BCBS) standards to address the specificity of Islamic products. Islamic banks' balance-sheet structures indicate that there is a great diversity of classifications on both the asset and liability side. Such variety affects the ease of comparison both between differing Islamic institutions and between Islamic institutions and their conventional peers, making it difficult to apply just one appropriate risk management approach. Therefore, the IFSB has prudently adopted a principles-based approach. The IFSB standard lists 15 guiding principles for risk management in IFIs. There is a general requirement followed by those covering credit, equity investment, market, liquidity, rate-of-return and operational risks (IFSB, 2005a). Overall, the main differences between these principles and those appropriate for a conventional bank relate to five key areas:

- (i) The range of asset classes found in Islamic banks;
- (ii) The relatively weak position of investment account holders;
- (iii) The importance of the *Shari'ah* supervisory board and the bank's ability to provide the board with adequate information as well as abide by its rulings;
- (iv) Rate-of-return risk; and
- (v) New operational risks

Notwithstanding the IFSB's endeavour to provide the Islamic banking industry with a set of guidelines towards best-practice risk management, a number of additional risk issues at IFIs deserve further examination as detailed in this chapter.

The aim of this chapter is to define what differentiates IFIs in terms of their risk profiles, and to highlight the potential implications that such differences may have on the IFIs' financial strength, risk identification, management, and mitigation. Thus, this chapter maps the risk structure in IFIs but it also discusses the risk management strategies developed and utilised by IFIs.

This chapter attempts to answer the long-debated question of whether Islamic banking is less or more risky than conventional banking. In doing so it reviews the existing literature about risks in Islamic banking with reference to the risks in conventional banking. The theoretical literature review is intermingled within the discussion about each risk type. It commences by researching risks that are common among Islamic and conventional banks, and asserts that Islamic banks face similar risk with different degrees. It then explores other risk areas which are unique to Islamic banks due to their unique business model and contracts. Furthermore, specific issues related to risk management and mitigation in Islamic banking are also discussed. The last section draws some conclusions.

3.2 RISK MANAGEMENT – BASIC CONCEPTS AND TECHNIQUES

3.2.1 What is Risk Management?

Risk is generally the possibility of an unplanned event that, if allowed to develop, could adversely affect all or part the institution's business, leading to loss of revenue, failure to meet key strategic goals or objectives, reduced company reputation, or missed opportunities to increase or improve any of these. Risk can be defined as the variability or volatility of unexpected outcomes. It is usually measured by the standard deviation of historic outcomes (Das, 2006).

Risk Management is the term applied to the process adopted by the business for identifying, analysing, evaluating, treating, monitoring, and communicating risks associated with all the activities of the business in a way that will enable the institution to minimise its losses, maximise opportunities, and achieve its stated strategic objectives (Jorion and Khoury, 1996). The risk management process is a comprehensive system that includes creating an appropriate risk management environment, maintaining an efficient risk measurement, mitigating and monitoring process, and establishing an adequate internal control arrangement (Khan and Ahmed, 2001).

Risk management is a continuous and vigilant process; it is an activity more than an action. The goal of an effective risk management system is not only to avoid losses, but also to ensure that the bank achieves its targeted financial results with a high degree of reliability and consistency. Taking risks is an integral part of any financial business. Risk arises when there is a possibility of more than one outcome and the ultimate outcome is unknown (Schroeck, 2002). Though all businesses face uncertainty, financial institutions face some special kinds of risks, given their nature of activities.

Risk management, in a broad sense, is not only a discipline for specialised professionals, but permeates every activity of a financial institution. It starts with a clear definition of the chosen risk tolerance for the bank at all levels of the organisation, and includes management actions aimed at ensuring that its risk profile remains within the agreed risk tolerance. In addition, it is not limited to a narrow consideration of the risks undertaken by the institution, but evaluates these in the context of the external environment and how this can affect the bank. The recent financial crisis, with the near collapse of the financial system in September-October 2008, provides a striking example of what can happen when risk is poorly managed, as is shown in Chapter 5.

Since all financial entities are directly or indirectly inter-woven and interlinked, they create a complicated web of uncertainties which makes up the mass of the financial risk. Risk in a banking context arises from any transaction or business decision that contains

uncertainty related to the result. Because virtually every bank transaction is associated with some level of uncertainty, nearly every transaction contributes to the overall risk of a bank (Schroeck, 2002). Risks are part of financial intermediation; undertaking a business transaction or an investment decision involves some degree of risk taking regarding the future performance or outcome of the activity. The survival and success of a financial organisation depends on the efficiency with which it can manage its risks. According to Engel (2010) (Head of Risk Management at the European Islamic Investment Bank and one of the interviewees), “banks are in the risk business, they got to take risks. Once money has gone out of the door, the bank has taken a whole array of risks ... The most insidious and dangerous risk is zero risk. This arises when a risk manager always says ‘no’ and comes up with many reasons not to do a deal.”

3.2.2 History of Risk Management

The appreciation of risk was the important building block in the development of modern financial systems. In the twentieth century, the economist Irving Fisher was the first to appreciate the importance of risk in the functioning of financial markets (Bessis, 1999). In the 1930s a number of renowned economists, most notably John Maynard Keynes, saw the importance of risk in the selection of portfolios. However, in their analysis the role of risk was largely limited to affecting expected gains and speculative and hedging activities. This strain of analysis led to results covering the relationship of futures prices and expected spot prices, the impact of risk on assessing the value of future streams of income, and eventually to the development of the portfolio theory (Askari *et al.*, 2009).

However, risk management as an independent topic is a fairly new field; although financial institutions have been always exposed to risks, the formal study of managing risk started in the second half of the last century. Markowitz’s (1959) decisive paper initiated the risk-return trade-off discussion; it first indicated that portfolio selection was a problem of maximizing its expected return and minimizing the risks. A higher than expected return of a portfolio (measured by the mean) can result only from taking more risks. Thus, investors’ problem was to find the optimal risk-return combination. His

analysis also points out the systematic and unsystematic components of risk. While the unsystematic component, known as the idiosyncratic risk, can be mitigated by diversification of assets, the systematic component has to be borne by the investor. Markowitz's approach, however, faced operational problems when a large number of assets are involved (Khan and Ahmed, 2001).

Sharpe's Capital Asset Pricing Model (CAPM) introduced the concepts of systematic and residual risks in 1964 (Stremme, 2005). Advances in this model include Single-Factor Models of Risk that estimates the beta of an asset. While residual (firm specific) risk can be diversified, beta measures the sensitivity of the portfolio to business cycles (an aggregate index). The dependence of CAPM on a single index to explain the risks inherent in assets is too simplistic. Arbitrage Pricing Theory proposed by Ross in 1976 suggests that multiple factors affect the expected return of an asset. The implication of the Multiple Factor Model is that the total risk is the sum of the various factor-related risks and residual risk. According to Stremme (2005), the CAPM paved the way to more advanced capital structuring models like the Weighted Average Cost of Capital (WACC), Modigliani and Miller Theorem on optimal capital structure in 1959 and 1963, Myers' Trade-off Theory (1977), Black-Scholes-Merton option pricing, the Efficient Market Hypothesis, and the renowned Pecking Order Theory which was granted the Nobel Prize in Economics in 2001.

Modern risk management frameworks and processes started developing over the past three decades. Traditionally, risk management was engrained in the management practices. Like Islamic finance, risk management has come a long way during its short history. "If you mentioned the title Risk Manager twenty five years ago, people would laugh at you... Bankers only realised credit risk, all other risks including corporate governance, liquidity, money laundering, and even market risk were merely responsibilities of senior management and Board members" adds Lowe (2010), Head of Risk Management at Qatar Islamic Bank (UK) and one of the interviewees for this research. It was only when financial products started becoming complicated that risk management has evolved as an independent integrated framework. The development of

derivatives, pricing models, portfolios, and sophisticated international financial trading required independent risk management teams and advanced models to identify, measure, monitor and control different risks.

It was in the mid-1990s, when JP Morgan started developing VAR models, that risk management started gaining prominence among banking executives. Gradually risk management started shifting to the hands of mathematicians and physics scientists who developed sophisticated models that tempted management to take decisions based on statistical modelling rather than credit fundamentals. During the past two decades, there has been an unprecedented development in the mathematical and quantitative treatment of financial variables with critical implications for banks. An important impact of this development has been on decomposing risk through financial engineering and product development, which have made risk management a serious scientific process. These innovations have led to significant cost reductions for most financial institutions. However, at the same time, additional uncertainties have been created, which could have serious consequences for risk management (IFSB, 2007). For example, executives at UBS and Merrill Lynch in some instances took decisions that relied on models that they did not fully understand. However, this wave is coming to an end and there will be a shift in power again to the basics, together with the help of mathematical models. It is a fact, however, that realising a fine balance remains a key challenge.

3.2.3 Systemic Importance of Risk Management

Over the last few decades, risk management has gained prominence in the global banking industry. The significant changes to the banking business have changed the nature of risks faced by financial institutions. Whereas two decades ago, a financial institution was primarily faced with credit and market risk only, today's financial institution is exposed to a whole array of new risks, and this list is expanding. Risk management is today at the heart of banks' financial intermediation process, and plays a major role in determining a bank's rating and financial strength.

It should be noted that the current risks can become tomorrow's potential losses unless they are managed efficiently. However, most risks cannot be eliminated, they can be managed. The element of risk also brings opportunities, and to gain from these opportunities, the risk should be managed properly. For a bank, some of the risks can turn into losses and may even cause liquidation. A risk is in many cases hidden before it is visible as a loss. Risk and return are usually correlated: the higher the risk, the higher the return. A bank with a conservative approach may not fully utilise its funds and thus have a higher cost of capital, whereas a bank with high risk appetite can over lend, thereby increasing the chances of a failure. Currently, pricing loans is largely based on risk. A risky loan which is under-priced may prove to be a drag on profitability, whereas a sound loan which is over-priced may shy away good customers.

In the financial world, therefore, risk and return are two sides of the same coin. It is easy to lend and to obtain attractive returns from risky borrowers. The price to pay is a risk that is higher than the prudent bank's risk. The prudent bank limits risk and, therefore, both future losses and expected revenues, by restricting business volume and screening out risky borrowers. The prudent bank avoids losses but it might suffer from lower market share and lower revenues. However, after a while, the risk-taker might find out that higher losses materialise and obtain an end performance lower than the prudent lender. Who performs best? Unless assigning some measure of risk to income, it is impossible to compare policies driven by different risk appetites. Comparing performances without risk adjustment is akin to comparing apples and oranges. The rationale of risk adjustment is in making comparable different performances attached to different risk levels (PWC, 2008).

Sundararajan (2007) provides four reasons for the importance of the application of modern approaches to risk measurement and management in Islamic banking:

- (i) To properly recognize the unique mix of risks in Islamic finance contracts;
- (ii) To ensure proper pricing of Islamic finance facilities, including returns to Investment Account Holders (IAHs);

- (iii) To manage and control various types of risks; and
- (iv) To ensure adequacy of capital and its effective allocation, according to the risk profile of the Islamic bank.

It is important to state that risk management is one of the critical factors in providing better returns to shareholders, as it is an important source of value creation in banks (Schroeck, 2002). Risk management is also a necessity for stability of the overall financial system.

3.2.4 Risk Management vs Risk Measurement

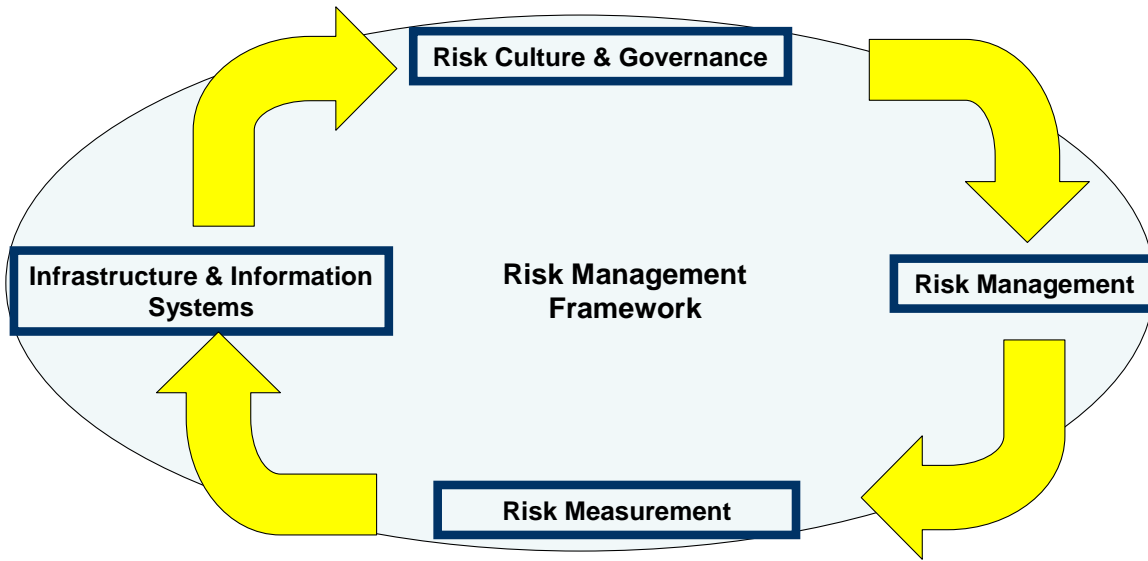
There is a difference between risk measurement and risk management. While risk measurement deals with quantification of risk exposures, risk management refers to “the overall process that a financial institution follows to define a business strategy, to identify the risks to which it is exposed, to quantify those risks, and to understand and control the nature of risks it faces” (Khan and Ahmed, 2001). As the definitions identifies, risk management is strictly linked to risk measurement; it is difficult to manage risk if the risk measurements are not robust (McKenzie, 2007).

3.2.5 Risk Management Framework

There are several risk management structures available worldwide, as has been explained in different studies; however, the most commonly used framework in today’s modern world is based on 4 key domains: (i) risk culture and governance, (ii) risk management, (iii) risk measurement, and (iv) infrastructure and information systems (EIIB, 2010b).

These four pillars of risk management should not each be considered in isolation. Rather, the dynamic interaction between them is at the core of risk management itself as illustrated in Figure 3.1, and they are discussed in detail in this section as follows:

Figure 3.1: Risk Management Framework



3.2.5.1. Risk Culture and Governance

A strong risk culture and tone from the top management are vital for effective risk management. The board of directors and the executive committee are responsible for choosing the appropriate level of risk appetite for the bank and for ensuring that its risk profile remains within the bank's risk tolerance. The board of directors is key to providing effective checks and balances to a bank's management and ensuring that compensation policies are designed to avoid excessive risk-taking (McKenzie, 2007). At the same time, concrete support from senior management and the board is essential to ensuring that the risk function has the necessary authority, is appropriately staffed, and has the required infrastructure to measure and analyse risk in a timely manner.

As discussed in the available body of knowledge, culture, strategy, and competitive position all influence risk appetite. Different banks will have different tolerances for different risks. A bank's risk appetite for credit risk in consumer lending might be quite different from its appetite for market risk in its investment banking operation. A major benefit of defining risk appetite is that it helps to ensure that the risk culture is made explicit (PWC, 2008).

The headwind that Chief Risk Officers and risk management staff typically faced, in particular in booming times, was effectively summarised by the Bank for International Settlements (BIS) in its 79th Annual Report. The BIS (2009) noted that:

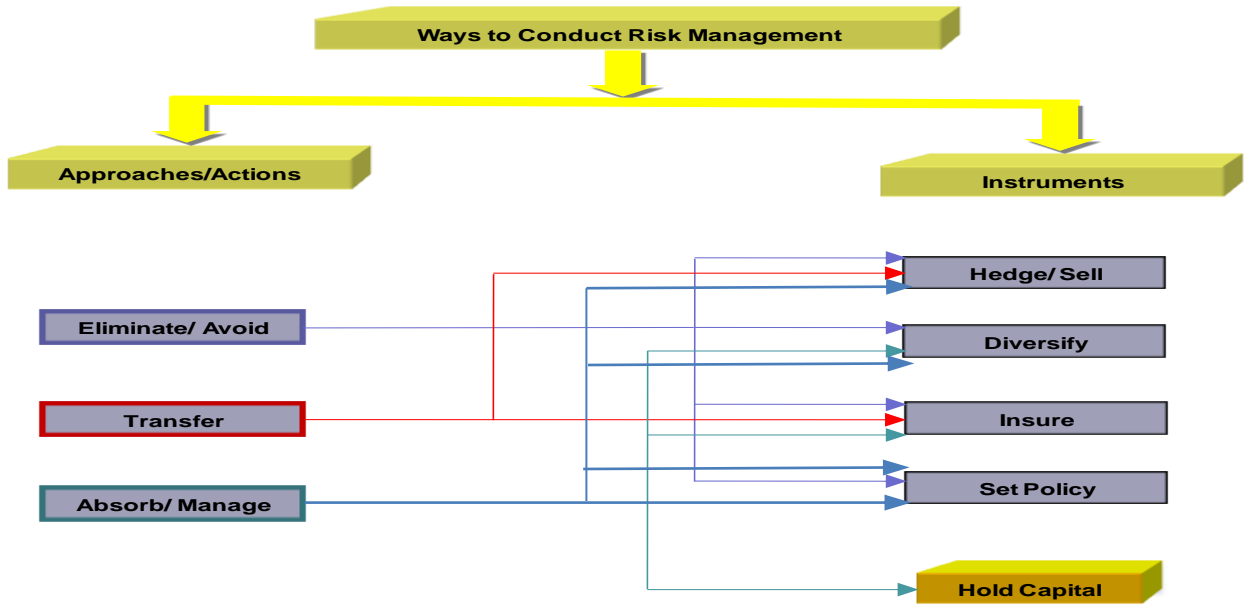
“Without support from top management, it did not matter much what the chief risk officer said or to whom he or she said it. The structural problem was compounded by the behavioural response to a risk officer whose job is to tell people to limit or stop what they are doing. If what they are doing is profitable, it is going to be difficult to get managers and directors to listen.”

Engel (2010), one of the interviewees for this research, adds, “I keep reminding everyone at my bank to ‘Think Capital, Think Risk’; everybody has got to engage in the risk culture if you want to implement a successful risk management framework.”

3.2.5.2. Risk Management

Once the risk tolerance for the financial institution has been agreed, this has to be translated into a coherent risk limit system for different types of risks as well as the different business activities of the bank. In addition, risk mitigation will be needed to ensure that the risk profile of specific portfolios or activities does not exceed the allocated limit – hence the link between Risk Governance and Risk Management. Figure 3.2 illustrates that a sound risk management process requires appropriate linkage between approaches and actions that enable eliminating, transferring or managing risk, and instruments that facilitate the hedging and diversifying of those risks that the organisation can't manage.

Figure 3.2 – Ways to Conduct Risk Management



Source: Schroeck (2002:79)

3.2.5.3. Risk Measurement

Risk cannot be managed without being measured. The crisis has made apparent that further work is required to enable banks to measure their risks with some degree of accuracy, particularly in relation to complex financial instruments, as well as to capture the interrelationship across different types of risk. In measuring and managing risk, the adoption of multiple risk measures is necessary to prevent important dimensions of risk being overlooked. For example, statistical measures, such as Value at Risk (VaR) need to be complemented by stress testing analysis. The results of models can be a valuable input into the decision-making process of a bank, but they cannot replace judgment. Lowe (2010) asserts that models and formulas should support a sound fundamental analysis, but never replace it.

3.2.5.4. Infrastructure and Information Systems

A robust risk infrastructure and good data quality are the essential elements for a bank to be able to measure in an accurate and timely manner the risks that it is taking. It is also a key element for effective risk reporting, which, as discussed above, is essential for the board of directors and the executives to make informed decisions (EIIB, 2010b). So, the risk Infrastructure and Information systems pillar links to Risk Culture and Governance. Consequently, with this process the circle is closed.

3.3 RISK MANAGEMENT AND THE CREDIT CRUNCH

Since 2008, the financial crisis has uncovered significant deficiencies in the way in which financial institutions manage risk. It has become clear that risk management has lacked the necessary authority to exert an appropriate influence over profit centres. The tools used to manage risk have also been found deficient, from stress testing and scenario analysis to the reliance on external rating agencies.

While it is too early to count the ultimate survivors, or reach conclusions about whether (or to what extent) risk management may have contributed to some banks' ability to endure stress, it is noted that effective or ineffective risk management is often cited as the root of success or failure. However, as the dust starts to settle from the financial crisis, a consensus around what needs to be fixed is starting to form. Consequently, many western institutions are subjecting their risk management policies and processes to a significant overhaul, and are investigating a wide range of tools and techniques to give them a better overall picture of risk.

While efforts to upgrade risk management techniques are commendable, there is a more fundamental point to address around the risk culture of the organisation. It has become apparent that, during the boom, the concerns of risk managers were all too often swept aside in the quest for profit and competitive advantage. As the banking industry seeks to rebuild itself, the balance of power needs to shift back towards risk management. Armed

with appropriate authority, clear visibility into lines of business, and the ear of senior executives, risk management will become an integral part of any future recovery (Economist Intelligence Unit, 2009).

3.4 CLASSIFYING OF RISKS

There are several ways in which risks are classified. One way is to distinguish between business risk and financial risks. Business risk arises from the nature of a firm's business; it relates to factors affecting the product market. Financial risk arises from possible losses in financial markets due to movements in financial variables (Jorion and Khoury, 1996).

Khan and Ahmed (2001) present another way of decomposing risk between systematic and unsystematic components. While systematic risk is associated with the overall market or the economy, unsystematic risk is linked to a specific asset or firm. While the asset-specific unsystematic risk can be mitigated in a large diversified portfolio, the systematic risk is non-diversifiable. Parts of systematic risk, however, can be reduced through risk mitigation and transferring techniques.

While Santomero (1997) classifies risks faced by financial institutions into three types (risks that can be eliminated, those that can be transferred to others, and risks that can be managed by the institution), financial intermediaries would avoid certain risks by simple business practices and will not take up activities that impose risks upon them. Risk avoidance techniques would include the standardization of all business-related activities and processes, construction of diversified portfolio, and implementation of an incentive-compatible scheme with accountability of actions. Some risk that banks face can be reduced or eliminated by transferring or selling these in well-defined markets. Risk transferring techniques include use of derivatives for hedging, selling or buying of financial claims, changing borrowing terms, etc. Iqbal and Llewellyn (2002) differentiate between two types of risks: 'Uncontrollable risk' or chance, over which the bank, as the decision maker, has no control whatsoever, and 'Controllable' or responsive risk, which can be controlled and affected by the bank.

Nonetheless, as previously discussed, most risks cannot be eliminated or transferred and must be absorbed by the financial institution, either due to the complexity of the risk and difficulty to separate it from asset, or because the risk is accepted by the financial institutions as being central to their business. These risks are accepted because the banks are specialized in dealing with them and get rewarded for it accordingly.

Akkizidis and Khandelwal (2007) group risks into three major categories: financial, business, and operational risks. Financial risk will generally include credit, market, and liquidity risks. Business risk is a combination of management risk and strategic risk. Operational risk can arise due to people, process, systems, as well as several other factors. Some of the other relevant risks for the financial industry can be commodity risk, country and political risk, reputational risk, legal risk, concentration risk, regulatory risk, and systemic risk related to interconnected unfavourable events across the industry.

Greuning and Iqbal (2008) classify risks into four major categories as depicted by Table 3.1. Financial risks are subject to complex interdependencies that may significantly increase a bank's overall risk profile. For example, a bank engaged in foreign currency business is normally exposed to currency risk, but it is also exposed to credit, liquidity, and re-pricing risks if it carries open positions or mismatches in its forward book. Operational risks are related to a bank's organization and functioning, including technologies, compliance with bank policies and procedures, and measures against mismanagement and fraud. Business risks are associated with a bank's business environment, including macroeconomic and policy concerns, legal and regulatory factors, and the financial sector's infrastructure, such as payment systems and auditing professions. Event risks include all types of exogenous risks that, if they were to materialise, would jeopardise a bank's operations or undermine its financial condition.

Table 3.1: Banking Risk Exposures

<i>Financial risks</i>	<i>Operational risks</i>	<i>Business risks</i>	<i>Event risks</i>
Balance sheet structure	Internal fraud	Macro policy	Political
Income statement structure and profitability	External fraud	Financial infrastructure	Contagion
Capital adequacy	Employment practices and workplace safety	Legal infrastructure	Banking crisis
Credit	Clients, products and business services	Legal liability	Other exogenous risks
Liquidity	Damage to physical assets	Regulatory compliance	
Market	Business disruption and system failures (technology risk)	Reputational and fiduciary	
Interest rate	Execution, delivery, and management	Country risks	

Source: Greuning and Iqbal (2008: 65)

Iqbal and Mirakhor (2007) divide the risk profile of a financial institution into four groups: financial, business, treasury, and governance risks. They define financial risk as the exposures that result in a direct financial loss to the assets or the liabilities of a bank, including credit, market and equity risks. Business risks are associated with a bank's business environment, including macroeconomic and policy concerns, legal and regulatory factors, and the overall banking sector infrastructure such as payment systems and the auditing profession. Treasury risks include risks arising from the management of the financial resources of the financial institution in terms of cash management, equity management, liquidity management and finally, assets and liabilities management (ALM). Finally, governance risk refers to the risk arising from a failure in governing the institution, negligence in conducting business and meeting contractual obligations, and from a weak internal and external institutional environment including legal risk, whereby a bank is unable to enforce its contracts.

It is important to note another dimension of risk which is the interaction and mutation of risks. Usually risks combine with each other, creating a new risk. For example, the risk on investments consists of credit risk, market risk, as well as an element of operational risk. A change on the value of the investment is a market risk, downgrading of the investment by rating agency will involve credit risk, whereas an error in documenting the guarantees will be classified as operational risk. Similarly, the inability to manage market risk can be considered as operational risk rather than a pure market risk. To what extent this needs to be allocated using market risk methodology and operational risk methodology is complicated to determine. While allocating capital to manage risks, this merging of risks can cause duplicate allocations and thus increase the capital allocation (Akkizidis and Khandelwal, 2007). This is a grey area of risk management requiring further probing.

For the purpose of this research, risks will be classified into two main categories: risks which Islamic banks have in common with traditional banks and risks which are unique to Islamic banks due to their compliance with the *Shari'ah*. Although Islamic banks share many of the same types of risk as their conventional counterparts, they find these risks complex and difficult to mitigate for various reasons. First, unlike conventional banks, given the trading-based instruments and equity financing, there are significant market risks along with credit risk in the banking book of Islamic banks. Second, risks intermingle and change from one type to another at different stages of a transaction. For example, during the transaction period of a *salam* contract, the bank is exposed to credit risk, and at the conclusion of the contract it is exposed to commodity price risk. Third, Islamic banks are constrained in using some of the risk mitigation instruments that their conventional counterparts use, as these are not yet generally allowed under *Shari'ah* principles. Finally, the PLS modes in Islamic banks changes the nature of risks these institutions face.

3.5 COMMON RISKS AMONG ISLAMIC AND CONVENTIONAL BANKS

The majority of the risks faced by conventional financial institutions such as credit risk, market risk, liquidity risk, operational risk, *etc.* are also faced by the IFIs. However, the magnitudes of some of these risks are different for Islamic banks due to their unique business model and its compliance with the *Shari'ah* principles. Thus, the nature of some risks that IFIs face is different from their conventional counterparts. Special attention must be paid to the contractual role of Islamic banks because the relationship between parties during the lifetime of the contract gives Islamic finance a different orientation towards risk. Even when risk management techniques in conventional finance are applicable to Islamic products, the implementation of risk management, especially in hedging market, price, FX, and commodity risks, is problematic.

The following sections present an introduction to particular risk areas:

3.5.1 Credit Risk

Credit risk is generally defined as the risk of loss arising from default or failure to perform (EIIB, 2010b). It is also referred to as 'default risk', which is one of the earliest recognized risks in the financial industry. Traditionally, a large part of a bank's profit came from the lending businesses, and the majority of bank losses were also related to this aspect of risk management; hence the focus was primarily on credit risk.

Banks have always monitored and mitigated credit risk actively, through a number of mechanisms such as country limits, counterparty limits, large exposure limits, diversification, covenants, delegations, internal and external ratings, watch lists, *etc.* However, credit risk assessment remained judgmental because it cannot be precisely calculated ahead of time since the likelihood of default is highly uncertain and thus difficult to predict accurately. Credit applications, referred to as credit scoring models, play an important role in combining qualitative and quantitative risk aspects of clients including, but not limited to, operating experience, management expertise, asset quality,

leverage and liquidity ratios, earnings, debt service, *etc.* (Akkizidis and Khandelwal, 2007).

3.5.1.1. Credit risk in Islamic banks

The IFSB Principles of Credit Risk can help to develop an understanding on the nature of credit risks in Islamic banks, as in Box 3.1.

Box 3.1: IFSB Principles of Credit Risk Management

Principle 2.1: IIFS shall have in place a strategy for financing, using various instruments in compliance with *Shari`ah*, whereby it recognises the potential credit exposures that may arise at different stages of the various financing agreements.

Principle 2.2: IIFS shall carry out a due diligence review in respect of counterparties prior to deciding on the choice of an appropriate Islamic financing instrument.

Principle 2.3: IIFS shall have in place appropriate methodologies for measuring and reporting the credit Risk exposures arising under each Islamic financing instrument.

Principle 2.4: IIFS shall have in place *Shari`ah*-compliant credit risk mitigating techniques appropriate for each Islamic financing instrument.

Source: IFSB (2005a)

The unique characteristics of the financial instruments offered by Islamic banks result in the following special credit risks:

(i) First access to collateral but foreclosure is difficult

One of the five key pillars of modern Islamic finance is the obligation to back any transaction by a tangible, identifiable, underlying asset. This means that IFIs – at least in theory – back their transactions with collateral. Consequently, collateral coverage is usually higher for IFIs than for conventional banks. In short, IFIs naturally have a high level of collateralisation on their credit portfolios, and thus are in a position to somewhat reduce their economic, if not regulatory, exposures at default.

Contrary to conventional banks, whose customers are not always obliged to disclose the purpose of their borrowings, Islamic banks finance the acquisition of identifiable assets of

which they have legal ownership, in most cases until maturity and final repayment. This is notably the case for *ijarah* and diminishing *musharakah* operations, in which the bank acquires the asset and leases it to the customer, with ownership transfer taking place only at maturity. The bank, as the legal owner of the asset, is therefore in a favourable position to foreclose on this asset (in the case of a default), and sell it on a secondary market (Moody's (2008a)).

In practice, however, collateral foreclosure can be much more difficult, especially for residential real estate. Given the take-off in residential real estate lending in GCC countries, this question of foreclosure is set to become critical. Although an Islamic bank is in theory in a position to evict a customer from a property and resell it in the case of a default on the loan backed by the property, this would be unlikely to happen in practice, owing to its 'social responsibility'. According to Chowdhury (2010), one of the interviewees for this research, there are, however, instances when such a decision may be taken by a bank and authorized by its *Shari'ah* board – notably when specific conditions were set out and agreed upon before the conclusion of the transaction. In such cases, foreclosure may be easier than for conventional banks, as the property belongs to the Islamic bank. As a matter of fact, this type of structuring is sometimes used by conventional banks, as it is a strong way of reducing the problem of foreclosure.

In addition, there are other problems with posting collaterals as securities, especially in developing countries, where most Islamic banks operate, or in declining times like the current recession. Typical problems include illiquidity of the collateral or inability of the bank to sell it, difficulties in determining the fair market value on a periodic basis, and legal obstacles in taking possession of the collateral. Diminishing *musharakah* contracts are increasingly used as a financing mechanism for *Shari'ah*-compliant home purchase, particularly in Dubai (Moody's, 2008b).

However, when the financing is based on other *Shari'ah* -compliant schemes where the property is not registered in the bank's name, the IFI will find itself in the same position as its conventional peers.

(ii) *Murabahah* is the most predominantly used Islamic financial contract. Based on similarity in risk characteristics of the contract with the risk characteristics of interest-based contracts, *murabahah* is approved to be an acceptable mode of finance in a number of regulatory jurisdictions. However, such a standardized contract may not be acceptable to all *fiqh* scholars. Moreover, as the contract stands at present, there is a lack of complete uniformity in *fiqh* viewpoints. The different viewpoints can be a source of counterparty risks as a result of the atmosphere of an ineffective litigation (Khan and Ahmed, 2001). The main point in this regard stems from the fact that financial *murabahah* is a contemporary contract which has been designed by combining a number of different contracts. There is a complete consensus among all *fiqh* scholars that this new contract has been approved as a form of deferred trading. The condition of its validity is based on the fact that the bank must buy (become owner) and afterwards transfer the ownership right to the client. The order placed by the client is not a sale contract but merely a promise to buy. According to the OIC *Fiqh* Academy Resolution, a promise can be binding on one party only. OIC *Fiqh* Academy, AAOIFI, and most Islamic banks treat the promise to buy as binding on the client. Some other scholars, however, are of the opinion that the promise is not binding on the client; the client, even after putting an order and paying the commitment fee, can rescind from the contract. The most important counterparty risk specific to *murabahah* arises due to this unsettled nature of the contract (Iqbal and Mirakhor, 2007).

(iii) In the case of *mudarabah* investments, where the Islamic bank enters into the *mudarabah* contract as *rab al-mal* (principal) with an external *mudarib* (agent), the Islamic bank is exposed to an enhanced credit risk on the amounts advanced to the *mudarib* in addition to the typical principal-agent problems. The nature of the *mudarabah* contract is such that it does not give the bank appropriate rights to monitor the *mudarib* or to participate in management of the project, which makes it difficult to assess and manage credit risk. The bank is not in a position to know or decide how the activities of the *mudarib* can be monitored accurately, especially if losses are claimed. This risk is

especially present in markets where information asymmetry is high and transparency in financial disclosure by the *mudarib* is low (Greuning and Iqbal, 2008).

(iv) In *bay' al-salam* contracts, the bank is exposed to the risk of failure to supply goods on time, or supply the wrong quality of goods as contractually specified. Such failures could result in a delay or default in payment, and hence to financial losses to the Islamic bank. *Salam* is an agricultural-based contract and hence the counterparty risks may be due to factors beyond the normal credit quality of the client. The credit quality of the client may be very good but the supply may not come as contractually agreed due to natural calamities. Since agriculture is exposed to catastrophic risks, the counterparty risks are expected to be above-average in *bay' al-salam* (Iqbal and Mirakhor, 2007).

(v) The counterparty risks under *istisna'a* contracts are similar to the risks faced by Islamic banks under *bay' al-salam* contracts. However, the object of *istisna'a* is more in the control of the counterparty and less exposed to natural calamities as compared to the object of *salam*. Therefore, it can be expected that the counterparty risk of the subcontractor of *istisna'a* although substantially high, is lesser severe as compared to that of the *salam* (Akkizidis and Khandelwal, 2007). In addition, under the *istisna'a* agreement IFIs are deemed to remain the beneficial owners of financed assets until the borrower pays back the final instalment. In the case where the borrower defaults before maturity, the IFI is entitled to dispose of the financed assets, which are generally illiquid because they are specific to the nature of the plant, the industry or the enterprise to which the IFI's funds were initially allocated. In the case of default, the IFI – more than any conventional bank – becomes a merchant, behaving in the field of commerce rather than in that of pure financial intermediation. This puts additional pressure on IFIs to equip themselves with the correct technical and professional expertise for both credit assessment and the management of underlying asset valuation, trading and liquidity, should loan foreclosure and collateral realisation occur (Mahlknecht, 2009).

(vi) Credit risk management for Islamic banks is further complicated by additional externalities. For example, in the case of default by counterparty, Islamic banks are

prohibited from charging any accrued interest or imposing any penalty, except in the case of deliberate procrastination (Greuning and Iqbal, 2008). Clients may take advantage by delaying payment, knowing that the Islamic bank will not charge a penalty or require extra payments. During the delay, the bank's capital is stuck in a non-productive activity. To mitigate this risk, Islamic banks tend to charge defaulted customers (who prove to be in negligence) a penalty for late payments, which the banks donate to charity and do not include in their income. This helps to prevent potential similar situations.

(vii) Islamic banks have less sophisticated credit risk management practices, mostly because of the lack of databases and insufficient track record. Conventional banks use these tools to reduce their credit risk, a luxury not yet available to Islamic banks. For example, the calculation of Probability of Default (PD), Loss Given Default (LGD), Expected losses (EL), Exposure at Default (EAD), and Credit VaR do not generally exist in Islamic banking. There are endeavours by Moody's and Standard & Poor's to develop such models for Islamic banks, or to adjust some of the existing models like CreditEdge, RiskCalc, and Risk Tracker to accommodate Islamic banking. These models are still work in progress and are faced by huge difficulties stemming from the fact that there are limited systematic data available in the Islamic banking world so far.

3.5.2 Concentration Risk

Islamic banks tend to have a concentration base of assets and/or deposits; they face high concentration by name and sector, as well as high geographical concentration. The limited scope of eligible asset classes for IFIs increases concentration in investment portfolios, which tends to be mitigated by a lower appetite for speculative transactions. Since Islam forbids *gharar* and speculation, IFIs are naturally crowded out from the high-risk/high-return leveraged and/or structured investment asset classes. As such instruments tend to be, in one form or another, based either on interest (*riba*) or derivatives (not commonly allowed by *Shari'ah* supervisory boards, although Islamic 'equivalents' are appearing), their technical eligibility is in most cases difficult to justify. IFIs thus limit the scope of their investment strategies to 'plain vanilla' asset classes such as stocks,

sukuk and real estate, notwithstanding their cash reserves in the form of short-term international *murabahahs* for liquidity purposes. A limited range of permissible asset allocations leads to concentration risks in IFIs' investment portfolios, by asset class, sector, and usually also by name. This led some IFIs to bear severe losses during the current recession. For example, IFIs that invested heavily in stock markets were exposed to swings in equity prices. Some opportunistic investments made by IFIs over the past four years in order to benefit from the boom in GCC stock markets, have been severely affected by the correction that took place in 2006 followed by the credit crisis which started in summer 2007 (Thun, 2010). Moreover, IFIs are usually significantly exposed to the real estate sector, as it is compliant with *Shari'ah* principles. Some Islamic banks in the GCC have significant exposure to this sector (directly or indirectly through collateral or *sukuk*), which magnifies the market risk especially during bearish market conditions.

Because most Islamic financial transactions have an underlying asset at their centre, Islamic banks tend to own more physical assets than conventional banks, and “what is a better asset than real estate?”, wonders Marx (2010), one of the interviewees for this research.

There has been a build-up of these assets during a benign period of credit risk and rising asset values,; a time when the market has seen ample liquidity (Moore, 2009). The recent straitened times that is impacting on markets around the globe have still to be felt in many of the countries where Islamic banks operate, Dubai was a clear example. The particular concentrations seen in Islamic banks and the similarity of many of their operations are causes for concern.

In addition, the immaturity of securitisation in the industry means that this financial technology has not been widely used to remove such excess concentrations from the balance sheet, although 2007 did see the first few transactions of commercial property loans and residential *ijarah* mortgages. In particular, *sukuk* are scarce and constitute an illiquid market where investors tend to stick to a buy-and-hold approach rather than move towards more active bond trading (Moody's, 2011a).

Moreover, concentration risks arise from the banks' limited geographic reach, as most IFIs are domestic players and only few have material operations outside their home country. One interesting exception is Al Baraka Banking Group, which has a material presence in more than a dozen jurisdictions across the Muslim world that brings a good amount of de-correlation between the Group's sub-portfolios.

Islamic banks also suffer from concentration on the liability side, leading to poor Asset Liability Management (ALM) as discussed in Section 3.5.5. At present, IFIs rely heavily on maintaining good relationships with depositors. However, these relationships can be tested during times of distress or changing market conditions, when depositors tend to change loyalties and shift to large financial institutions which they perceive to be safer. By diversifying their base of depositors, Islamic banks could reduce their exposure to displacement or withdrawal risks. According to Askari *et al.* (2009), with the changing face of banking and the introduction of internet-based banking, achieving a high degree of geographic diversity on the liabilities side is conceivable and should be encouraged.

Concentration and potentially volatility in the credit quality of portfolios have made it necessary for IFIs to maintain strong capitalisation despite rapid growth. This has in turn put pressure on dividend payouts, and sometimes also on shareholders to inject fresh capital.

3.5.3 Market Risk

Market risk is generally defined as the risk of loss arising from changes in market prices and profit rates, which will result in a change in earnings or fair value of a financial obligation resulting in a capital gain or loss upon realisation of the asset (EIIB, 2010d). The losses can be in on- and off-balance sheet positions arising from adverse movements in market prices, *i.e.* fluctuations in yields and profit rates (rate of return risk), foreign exchange rates (FX risk), equity and commodity prices (price risk). The price volatility of most assets held in investment and trading portfolios is often significant. Volatility

prevails even in mature markets, although it is much higher in emerging or illiquid markets.

Market risk was recognised in the late eighties, after the increasing importance of stock markets, when banks started investing heavily in securities (Davis, 2009a). Market risk is difficult to measure due to diversified portfolios, since it will consist of several markets, currencies, indexes, and instruments. The larger the diversification of the portfolio, the more difficult it is to accurately estimate market risks due to the correlation between risks.

3.5.3.1. Market risk management

By its very nature, market risk requires constant management attention and adequate analysis. Although there are several ways to measure and manage market risks, which vary among banks, most banks have limits and triggers for portfolios, individual transactions, sectors, and even for traders. Banks also use marking to market, stop-loss provisions, gap analysis, back testing, and stress testing for their daily risk management of banking and trading books. Stress testing is gaining more popularity to help predict expected losses.

Factor sensitivities and VaR can be used for marked-to-market trading. VaR is the most well-known methodology to quantify and value market risk in a systematic fashion. It is one of the newer risk management tools that indicates how much a firm can lose or make with a certain probability in a given time horizon. VaR summarizes financial risk inherent in portfolios into a simple number. It is the value of potential losses that will not be exceeded in more than a given fraction of possible events over the given time horizon. This fraction, expressed as a percentage, is called the 'tolerance level'. For example, stating that VaR is 100 at the tolerance level of 5% means that the chances that futures losses exceed 100 over a one day period are equal to 5% (Bessis, 1999). Though VaR is used to measure market risk in general, it incorporates many other risks like foreign currency, commodities, and equities. In fact, VaR applies to all levels of risk

management, including credit risk, although it is often associated with market risk only (Bessis, 1999). It has many variations and can be estimated in different ways like the Monte Carlo approach, the Parametric approach, and the Historical approach. However, VaR models possess some latent weaknesses arising from the fact that they are tailor-made models. As a risk indicator, VaR works best for smaller positions in liquid markets. In the most recent crisis (like many in the past), the biggest losses occurred when several firms built up concentrations, sometimes unbeknownst to their managers and often unknown to each other. Then, when liquidity evaporated, firms were stuck with big positions or were forced to liquidate at the same time, exacerbating the trend in falling values. In either case, increases in observed market volatility caused the VaR attributed to remaining positions to rise. Thus, VaR has also been criticized for being a pro-cyclical risk measure. The use of other measures to supplement VaR, such as Expected Shortfall (the average of all the hypothetical losses beyond daily VaR), can help provide better market risk management (Moody's, 2009c). Therefore, data inputs should be carefully assessed before the appropriate model is applied. In addition, the conventional market is full of complex derivative products for hedging the positions to manage market risk.

3.5.3.2. Market risk in Islamic banks

IFSB Principle, as in Box 3.2, introduces the risk management strategy in market risk.

Box 3.2: IFSB Principle of Market Risk Management

Principle 4.1: IIFS shall have in place an appropriate framework for market risk management (including reporting) in respect of all assets held, including those that do not have a ready market and/or are exposed to high price volatility.

Source: IFSB (2005a)

Market risk in the Islamic financial markets inherently exists within the lifetime of the Islamic contracts. The management of market risks is made more difficult for Islamic

banks due to the limited number of risk management tools/instruments available to them. For example, it is difficult for an IFI to use hedging instruments, such as derivatives, as they are generally forbidden. On a positive note, the prohibition of *gharar* usually tempers the risk profile of Islamic banks simply by limiting the size of their trading operations. Market risk for IFIs can be divided into six categories as follows:

3.5.3.2.1. Rate of return risk (profit rate risk)

IFSB Principles, as in Box 3.3, introduce the risk management strategy for rate of return risk.

Box 3.3: IFSB Principles of Rate of Return Risk Management

Principle 6.1: IIFS shall establish a comprehensive risk management and reporting process to assess the potential impacts of market factors affecting rates of return on assets in comparison with the expected rates of return for investment account holders (IAH).

Principle 6.2: IIFS shall have in place an appropriate framework for managing displaced commercial risk, where applicable.

Source: IFSB (2005a)

Islamic banks are not exposed to an ‘interest-rate risks’, as interest is not compliant with the *Shari’ah*. However, they face potentially even more complex rate of return risks and benchmark risks. Lee (2008) explains that Islamic banks do not operate in a closed economy; if interest rates rise sharply in relation to mark-up rates, deposits will flow from Islamic banks into conventional banks and vice versa.

This results from a mismatch between the yield earned on the bank’s assets and that served on its liabilities. Controlling margin rates is at the heart of IFIs’ ALM. The management of interest-rate risk is one of the fundamental tasks of conventional banks’ ALM committees. Similarly, IFIs face the same issue of identifying, measuring, and controlling the risk exposure stemming from the expected cash inflows and outflows of assets and liabilities according to their economic maturities. Like conventional banks,

IFIs have both a portfolio yielding fixed income over the duration of contracts and a portfolio generating floating rates of profit.

However, unlike conventional banks, the charge attached to funding costs is supposed to be a function of asset yields, as per the core principle of profit sharing underlying Islamic banking and finance, which is at the heart of Profit-Sharing Investment Accounts (PSIAs). Should there be no smoothing of returns to PSIA holders, those IFIs that resort materially to PSIAs for funding would in theory be less profitable than conventional banks when the interest-or profit-rate cycle is at its peak, because when conventional banks would face a predetermined cost of funds, IFIs would on the contrary be in a position to share more returns with PSIA-holders (Thun, 2010).

The opposite scenario would also be true: when the interest- or profit-rate cycle trends down towards its trough, IFIs would buffer the decline by distributing less profit to PSIA-holders, whereas conventional banks would have to absorb the same cost of funds at a time when net asset yields had shrunk, therefore reducing more substantially their margins. If PSIA principles are applied, a lower income on outstanding loans and participations goes hand in hand with lower payments to depositors and the bank's solvency is not endangered (Visser, 2009). In practice, however, the losses of Islamic banks are not shared with PSIAs holders and often a minimum yield on deposits is 'implicitly' guaranteed. As a result, the potential benefits of the PLS finance cannot be realised. There is often an implicit promise of some minimal return on deposits, or a *de facto* guarantee of non-negative returns (Turen, 1995).

Another difference between Islamic and conventional banks is their respective capacity to use derivatives to hedge their loan books against adverse interest-/profit-rate scenarios. IFIs have a natural preference for short-term exposures or contractual credit terms that would allow for quick re-pricing schemes, such as *ijarah* or diminishing *musharakah*, which typically re-price every quarter, behaving like floating profit-rate loans. These mechanisms make it less necessary for Islamic banks to resort to (expensive) profit-rate swaps for hedging purposes. Only less than a handful of IFIs to date have had access to

such hedging instruments because of *Shari'ah* reasons and because so far these instruments are still very scarce, illiquid, based on over-the-counter arrangements, and thus still quite costly (Askari *et al.*, 2009).

In the longer term, IFIs are expected to be increasingly exposed to project finance and mortgage lending, two of the most likely and powerful engines for the future momentum of Gulf banking markets. In both lines of business, an IFI's capacity to supply long-term fixed-rate financing would be viewed as a key competitive advantage. From a balance-sheet-management perspective, the IFI's corresponding capacity to manage the derived profit-rate risk would be critical, particularly under Basel II's Pillar 2.

In some cases, IFIs can employ nascent *Shari'ah* -compliant hedging techniques. Dubai Islamic Bank and Deutsche Bank AG have stated that they have established the first ever *Shari'ah*-compliant profit rate collar (Ayub, 2007). For less sophisticated IFIs, the matching of floating and fixed yields can be used as a natural way to cover these risks. An *ijara* portfolio – with a floating margin or re-pricing characteristics – could be used to reduce an IFI's exposure to margin risk resulting from the use of PSIAs as a funding source. As IFIs usually benefit from a large portion of unremunerated deposits, as is the case for Saudi Arabia-based Al Rajhi Bank, this can also be a good mitigating factor for margin-related risks.

The core opportunity comes from developing products to manage profit rate risks and FX risks using fixed-floating profit swaps and currency swaps. Profit rate swaps rely mostly on the double *murabahah* approach, referred to as the 'Dual *Murabahah*' agreement (Marx, 2010). Although straight-forward FX contracts are not permissible, there are several alternative solutions, which all have their respective challenges, like: Back-to-back *qard al-hasan*, Dual Commodity *murabahah* contracts, *waad*, *arboun*, and others as discussed under section 3.9.

3.5.3.2.2. *Equity investment risk*

IFSB Principles, as in Box 3.4, introduce the risk management strategy for equity investment risk management.

Box 3.4: IFSB Principles of Rate of Equity Investment Risk Management

Principle 3.1: IIFS shall have in place appropriate strategies, risk management and reporting processes in respect of the risk characteristics of equity investments, including *Muḍārabah* and *Mushārah* investments.

Principle 3.2: IIFS shall ensure that their valuation methodologies are appropriate and consistent, and shall assess the potential impacts of their methods on profit calculations and allocations. The methods shall be mutually agreed between the IIFS and the *Muḍārib* and/or *Mushārah* partners.

Principle 3.3: IIFS shall define and establish the exit strategies in respect of their equity investment activities, including extension and redemption conditions for *Muḍārabah* and *Mushārah* investments, subject to the approval of the institution's *Sharī'ah* Board.

Source: IFSB (2005a)

Most banks, whether conventional or Islamic, deal in quoted and non-quoted equities all over the world. Typical examples of equity investments are holdings of shares in the stock market, private equity investments, syndications, management buyouts, *etc.* However, due to the nature of Islamic finance contracts particularly, the *musharakah* and *mudarabah* contracts, may result in specific equity risks to IFIs. This is mainly because one of their main characteristics lies in the sharing, between the IFIs and the partner, of profit and loss that is driven by the share in the investment's equity (Graiss and Kulathunga, 2007). Therefore, the degree of risk under those contracts is relatively higher than in other investments.

Mudarabah can expose the IFI to moral hazards and to principal-agent problems when the bank enters as *rab al-mal* and the *mudarib* is the agent. While the bank bears all the losses in case of negative outcome, it cannot oblige the *mudarib* to take appropriate action or exert the required level of effort needed to generate the expected level returns. Such situations might be exploited by the *mudarib* (Greuning and Iqbal, 2008).

This moral hazard problem would be reduced in *musharakah*, where the capital of the partner is always at stake. Furthermore, the bank as an equity partner would minimize the problem of information asymmetry, as it would have the right to participate in management of the project in which it is investing. However, the *musharakah* asset class has an associated cost in the form of adverse selection and therefore requires extensive due diligence in terms of screening, information gathering, and enhanced monitoring afterwards. Each *musharakah* contract requires careful analysis and negotiation of profit-and-loss sharing arrangements, leading to higher costs of intermediation.

In addition, equity investments may not generate steady income, and capital gain might be the only source of return. The unscheduled nature of cash flows makes it difficult to forecast and manage them.

As a result of the additional equity problems associated with both types of contracts, IFIs in practice tend to allocate limited funds to these asset classes. This implies an increased reliance on asset-backed securities, which limits the choice of investments and ultimately might hamper the bank's ability to manage risks and diversify its portfolio (Greuning and Iqbal, 2008). A few IFIs also tend to build portfolios of participations in the capital of a set of financial and industrial companies held for strategic purposes; usually, *mudarabah* contracts are used, as is the case for *Shari'ah*-compliant investment and/or private equity firms such as Arcapita Bank and Gulf Finance House in Bahrain.

3.5.3.2.3. Mark-up risk

Islamic banks are exposed to mark-up risk, as the mark-up rate used in *murabahah* or other trade-financing contracts are fixed for the duration of the contract, while the general 'market mark-up rate' used in the financial market may rise or fall over that time period (FRSGlobal, 2009). This means that the prevailing market mark-up rate may rise beyond the rate the bank has locked into a contract, making the bank unable to benefit from higher rates. Very often the mark-up rate (or benchmark rate) will be an international

once such as London Inter-bank Offered Rate (LIBOR), which gives rise also to a so called ‘benchmark risk’.

3.5.3.2.4. Benchmark risk

It is the risk of loss due to a change in the margin between domestic rates of return and the benchmark rates of return, which may not be linked closely to domestic returns. For instance, Islamic products issued in Malaysia can be linked to the Kuala Lumpur Interbank Offered Rate (KLibor), the national variant of LIBOR, but this is certainly not the case for all countries and contracts (Mahlknecht, 2009). In the absence of an Islamic benchmark or reference rate, a questionable, but common practice has been to use the LIBOR as a proxy which aligns their market risk closely with the movement in LIBOR rates.

According to an interview with Yaccubi (2010), the practice of using LIBOR as the reference benchmark was originally considered an exception allowed by the *Shari’ah* scholars under the law of necessity. This exception has become a general rule and the practice is so prevailing that most practitioners do not even question it. Yet, using LIBOR as a benchmark has its proponents and opponents.

The proponents of the practice argue that it is simply a reference point of the current capital market indicating the opportunity cost of capital, which should not be different in global markets where Islamic and conventional banking coexist (Askari *et al.*, 2009). If the opportunity cost of capital is not the same, arbitrage opportunities will arise. They also argue that using a non-*Shari’ah*-compliant reference point does not invalidate a *Shari’ah*-compliant transaction, as the index is just used as a reference. Moreover, an Islamic benchmark is not expected in the near term. According to the *Shari’ah* scholar, Aznan Hasan, “A dual system which has both Islamic and conventional benchmark financing rates could throw markets into disarray ... People will arbitrage. Once they see conventional financing is much better, they will go for conventional. Once they see

Islamic is much better, they will go for Islamic. In that situation, it will give a big turbulence to a country. The subject has to be treated very delicately” (Y-Sing, 2009).

On the other hand, the opponents of this practice argue that in an Islamic economic system, the rate of return on a financial asset should be derived from the rate of return in the real sector and using LIBOR, as a benchmark does precisely the opposite and thus violates the foundation of an Islamic financial system (Askari *et al.*, 2009).

3.5.3.2.5. Currency risk

Currency risk is of a ‘speculative’ nature and could result in a gain or loss depending on the direction of exchange rate shifts and whether a bank is net long or net short in the foreign currency. For example, in the case of a net long position in the foreign currency, domestic currency depreciation will result in a net gain for a bank, and a currency appreciation will produce a loss, and vice versa, explains Fochler (2010), who was interviewed for this research.

As for conventional banks, IFIs’ exposure to foreign exchange risk can be harmful. While conventional banks can easily hedge themselves through swaps or other hedging instruments, these are generally forbidden in Islamic finance, making the situation more challenging for IFIs. However, most Islamic banks are active in the GCC, where local currencies are pegged either to the U.S. dollar or to a basket of international currencies, reducing tremendously their volatility. In the longer run, GCC economies might converge towards a single regional currency, the anchor of which might not be the U.S. dollar or the euro, but potentially a wider mix of internationally recognised currencies. This would in turn allow for some discrepancy between the reporting currency of GCC-based IFIs and the various cash flows they generate from multiples geographies. This will become even more obvious as IFIs such as Kuwait Finance House, Al Rajhi Bank, and Qatar Islamic Bank are expanding abroad in a more ordered and ambitious manner, sometimes in other emerging markets including the relatively volatile economies of Pakistan, Turkey, Sudan, and even Yemen. These jurisdictions are increasingly the key to the

future growth of IFIs as they have far larger Muslim populations and are comparatively underbanked (Standard & Poor's, 2010b).

3.5.3.2.6. Commodity and price risks

In the case of *salam* contracts, IFIs are exposed to commodity price volatility during the period between delivery of the commodity and its sale at the prevailing market price. This risk is similar to the market risk of a forward contract if it is not hedged properly. In order to hedge its position, an Islamic bank may enter into a parallel (off-setting) *bay' al-salam* contract (Greuning and Iqbal, 2008). Similarly, when the *istisna'a* contract is used, the delivery of the commodity is at a specific time in the future, where its price may differ from the set one.

In addition, *salam* contracts are neither exchange traded nor these are traded over the counter. Thus, all the *salam* contracts end up in physical deliveries and ownership of commodities. These commodities require inventories exposing the IFI to storage costs and other related price risk. Such costs and risks are unique to Islamic banks (Greuning and Iqbal, 2008).

In *murabahah* contracts, the bank is financing the contract on a certain profit added to the initial commodity price. The difference between the agreed and the future market price of the commodity is the actual exposure of the corresponding risk that banks take, at least in theory. In practice, the bank takes the commodity risk for a few seconds as it purchased and sells the commodities to commodity brokers – like Dawnay Day, Richmond, Aston commodities, and others, who involve into a purchase undertaking with the bank. This practice, referred to as *tawarruq*, has been under criticism from many *Shari'ah* scholars. It was approved initially as an interim solution until IFIs move to genuine commodity *murabahah*, but it seems that several banks took advantage from this interim approval and prefer to stick to *tawarruq* as it bears minimal commodity risks to the bank.

In addition, in the case of an operating *ijarah*, the IFI is exposed to market risk in case of a fall in the residual value of the leased asset at the maturity of the lease term (Ahmed and Khan, 2007).

Finally, IFIs have been investing heavily in the *sukuk* market. However, given that the secondary market for *sukuk* is very limited, the prices of such instruments are highly distorted. Thus IFIs holding such securities are exposed to volatility in yield, unless they hold the *sukuk* until maturity.

3.5.3.3. Managing market risk for IFIs

In order to manage market risk, first Islamic banks must be able to measure it accurately. To date, there is not a single Islamic banking system that is capable of measuring market risk properly (Marx, 2010). “I am confident Islamic banks will get there, it is a matter of time. One has to remember that conventional banking has mega banks that are capable of spending millions on developing sophisticated systems, something that Islamic banking is missing, given its relative nascent state” adds Bhat , one of the interviewees from InfracsoftTech, a specialized IT company for developing technology solutions and systems for Islamic banks. His interview was not included in the final sample, however.

In the absence of *Shari’ah*-compliant hedging tools and liquid secondary markets, managing market risk is more expensive in Islamic banking than it is in conventional banking. Marx (2010), one of the interviewees for this research, adds “for example to carry a profit rate swap in the Islamic banking market, I have to pay around 30 bps higher than what this would usually cost in the conventional market. This is because very few banks have the capability, systems, and credit lines available to write Islamic profit rate swaps and they exploit this position”.

Most advanced market risk management tools like VaR, and simulation models require huge trading volumes, long history of price changes, and volatility in order to be able to perform back-testing and stress-testing. This is simply unavailable for Islamic banking

given its relatively new state and the limited market liquidity. VaR does not work well for illiquid markets with high concentrations; unfortunately this is the current state of most Islamic banking operators. In addition, issuers in Islamic finance tend to have a relatively small number of issues with short term maturities. Furthermore, there tends to be a wide gap between the bid/offer spreads on Islamic instruments due to limited liquidity. All these factors indirectly distort the applicability of conventional market risk management tools in Islamic banking. “Islamic banking is not mature enough to apply existing conventional market risk mitigation and hedging techniques. It needs to develop its own set of risk management tools” adds Qaedi (2010), one of the interviewees for this research.

In the absence of sophisticated tools, Islamic banks tend to use traditional risk management techniques to manage their market risk. Simple stress testing, marking to market, stop-loss provisions, position limits, duration methodologies, scenario analysis, price sensitivity, and profit rate analysis are the most commonly used practices, mainly carried out using spreadsheets rather than sophisticated IT systems. “Very simple models, but currently adequate given the complexity of Islamic banking” comments Lowe (2010), one of the interviewees for this research.

3.5.4 Liquidity Risk

Liquidity is necessary for banks to compensate for expected and unexpected balance sheet fluctuations and to provide funds for growth. It represents a bank’s ability to accommodate the redemption of deposits and other liabilities and to cover the demand for funding in the loan and investment portfolio (Iqbal and Mirakhor, 2007). Liquidity needs usually are determined by the construction of a maturity ladder that comprises expected cash inflows and outflows over a series of specific time bands; liquidity management is related to a net funding requirement.

Liquidity risk results when the bank’s ability to match the maturity of assets and liabilities is impaired. In other words, the risk arises due to insufficient liquidity for

normal operating requirements reducing the bank's ability to meet its liabilities when they fall due. This risk may result from either difficulties in obtaining cash at reasonable cost from borrowings (funding risk) or sale of assets (asset liquidity risk). While funding risk can be controlled by proper planning of cash-flow needs and seeking newer sources of funds to finance cash shortfalls, the asset liquidity risk can be mitigated by diversification of assets and setting limits of certain illiquid products (Khan and Ahmed, 2001).

The market turmoil that began in mid-2007 has highlighted the crucial importance of market liquidity to the banking sector. The contraction of liquidity in certain structured product and interbank markets, as well as an increased probability of off-balance sheet commitments coming onto banks' balance sheets, led to severe funding liquidity strains for some banks and central bank intervention in some cases. These events emphasised the interrelationship between funding, liquidity and credit risks, and the fact that liquidity is a key determinant of the soundness of the banking sector (BCBS, 2008). Financial innovation and global market developments have transformed the nature of liquidity risk in recent years. The funding of some banks has shifted towards a greater reliance on the capital markets, which are potentially a more volatile source of funding than traditional retail deposits. In addition, the growth and product range of the securitisation market has broadened as the originate-to-distribute business model has become more widespread. Northern Rock is a classical example of a bank that was brought down due to lack of liquidity rather than any credit or solvency risk. The bank simply borrowed for the short term from the capital markets and lent for long-term to residential mortgages.

Inspired by international drive from the Basel Committee on Banking Supervision (BCBS) and the Committee of European Banking Supervisors on liquidity management, regulators around the globe have been working on introducing a series of new rules outlining features of new liquidity regime which proposes much higher levels of stress testing and stricter liquidity management approaches. Basel III is the most obvious example.

3.5.4.1. Liquidity risk in Islamic banks

IFSB Principles, as in Box 3.5, introduce the risk management strategy for liquidity risk management.

Box 3.5: IFSB Principles of Liquidity Risk Management

Principle 5.1: IIFS shall have in place a liquidity management framework (including reporting) taking into account separately and on an overall basis their liquidity exposures in respect of each category of current accounts, unrestricted and restricted investment accounts.

Principle 5.2: IIFS shall assume liquidity risk commensurate with their ability to have sufficient recourse to *Sharī'ah*-compliant funds to mitigate such risk.

Source: IFSB (2005a)

Islamic banks have traditionally held high levels of cash/liquid assets, ideally to safeguard the interests of their depositors, investors and shareholders against credit upheavals and liquidity crunch. This reduces liquidity risks in an economic downturn. In addition, from a leverage perspective, IFIs' operational models are built upon conservative fundamental values that discourage the use of disproportionate levels of debt to finance assets, as well as speculative and doubtful investments, which have inhibited the industry in terms of its use of leverage. As a result, IFIs' funding portfolios are highly concentrated in a few liquid assets and are deficient in terms of a securitised asset base (IFSB, 2008a).

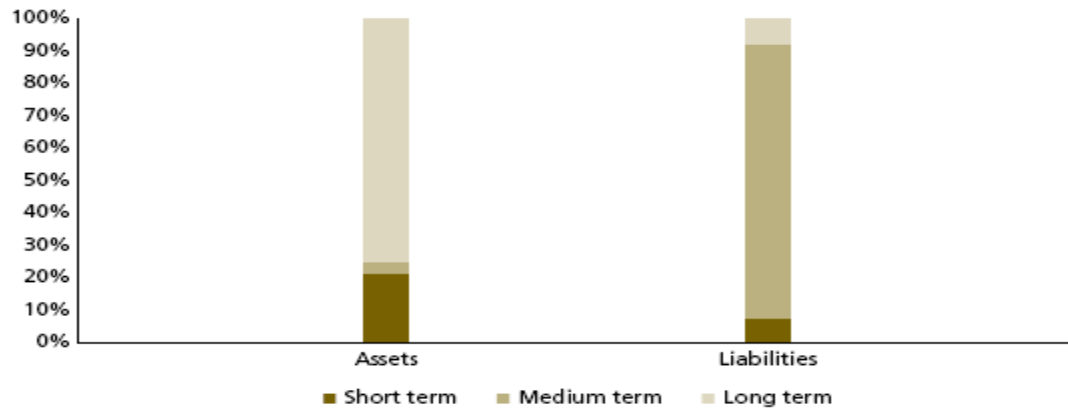
At the same time, underutilised surplus liquidity on most IFIs books has led to weak asset-liability management, which translates into liquidity risk. This risk arises from the scarcity of medium- and long-term funds to reduce the gap between assets and liabilities. The analysis in Figure 3.3 categorises the assets and liabilities of a sample of 20 leading Islamic banks into short term, medium term, and long term. IFIs use short and medium term liabilities to finance long term assets. Currently, IFIs are highly dependent on short-term funds to manage their longer-tenure liabilities. This issue has become even more crucial in today's capital market environment because the frequency of asset write-downs

is on the rise. In the wake of global financial developments, liquidity has become one of the most critical risks for IFIs for the following reasons:

- (i) Limited availability of *Shari'ah*-compliant liquidity management instruments because most instruments used for liquidity management purposes are interest-based and *Shari'ah* does not allow the sale of debt, other than at its face value. Thus, to raise funds by selling debt-based assets is not an option for IFIs.
- (ii) Shallow secondary market exists to enable IFIs to manage their liquidity (Qaedi, 2010);
- (iii) Absence of lender of last resort (central bank) which is vital for meeting the bank's need for short-term cash flow;
- (iv) Wide maturity mismatches between assets and liabilities as funding is still dominated by short-term customer deposits, whereas credit portfolios (namely in the retail, mortgage, and project finance segments) tend to witness longer tenors and duration (Moody's, 2009c);
- (v) Certain characteristics of some Islamic finance instruments give rise to liquidity risks. For instance, liquidity becomes a problem given the cancellation risks in *murabahah* or the inability to trade *murabahah* or *salam* contracts (Alvi, 2009a).

Figure 3.3: Breakdown Analysis of Leading Islamic Banks' Balance Sheets

Leading Islamic banks' balance sheet breakdown 2007



Sample of 20 leading Islamic banks

Note: Asset/liability tenure defined as follows: Short term – 0 to 3 months; Medium term – 3+ months to 2 years; Long term – 2+ years and beyond

Source: Zawya and Oliver Wyman Analysis (2009)

Despite the efforts of the Central Bank of Bahrain (CBB) and others to provide a range of liquid instruments in which Islamic banks can place their surplus cash, there is still a great shortage of liquid instruments, which means IFIs tend to have more non-earning assets on their books. Typically, Islamic banks would place their excess cash reserves into short-term interbank *murabahahs*, at a cost compared to conventional banks. Indeed, short-term *murabahahs* resemble money market interbank placements, but as *murabahah* contracts make it necessary for commodity brokers to be involved, costs for managing liquidity might be high. As a consequence, IFIs are truly – and often more visibly – subject to the constant trade-off between profitability and liquidity in a binary way (Moody's, 2009c).

Contrary to conventional banks, which benefit from a range of asset classes displaying different characteristics in terms of liquidity and profitability, IFIs at this stage of the development of the Islamic financial industry barely have an alternative – profitable but highly illiquid asset classes (such as credit exposures and *sukuk*); or highly liquid short-term *murabahahs* with international investment-grade banks, but at a cost. Even before the present crisis, liquidity on the secondary *sukuk* markets was quite limited. The fact that most *sukuk* investors have always adopted a buy-and-hold strategy only exacerbates

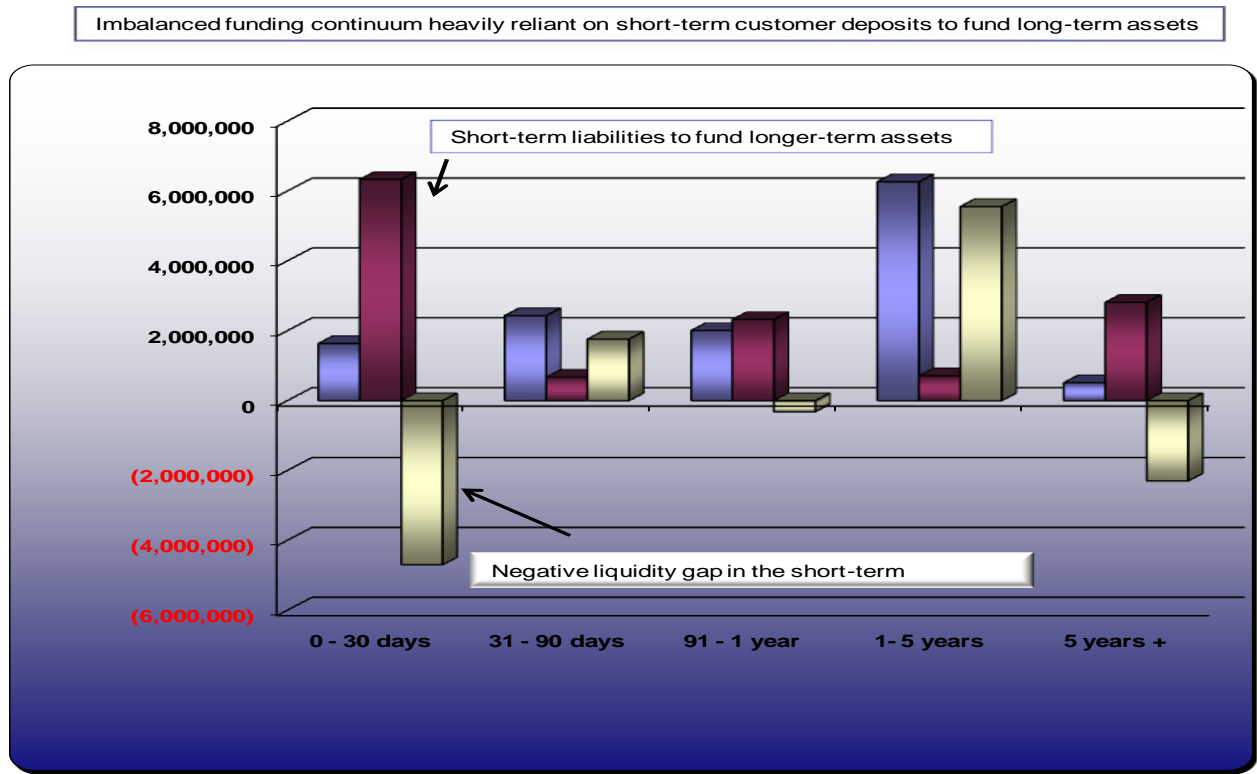
the normal problems associated with a relatively new market. Critically in the current environment, such a situation could also continue to slow the efforts of central banks to boost *sukuk* liquidity.

The assets side of the balance sheet will typically show investments in securities, leased assets and real estate. It will also show equity investments in joint ventures or capital ventures and sales receivables, and also inventories of assets held for sale. Most of these assets are illiquid and it is unlikely that any could be sold in a short space of time.

Fortunately, yields on Islamic assets in many markets are still sufficient for the cost of managing liquidity, because ‘borrowers’ are often willing to pay a premium for the Islamic nature of the banking relationship they build with the IFI. In the future, however, as the industry matures, margins might come under pressure and the trade-off between liquidity and profitability might lead to an increase in IFIs’ risk appetite, provided that instruments for liquidity management purposes are not designed for the benefit of IFIs (Moody’s, 2009c).

Figure 3.4 extracted from a typical credit application for an anonymous counterparty at the European Islamic Investment Bank illustrates a typical liquidity structure of many Islamic banks with an imbalanced funding continuum heavily reliant on short-term customer deposits. IFIs normally have high volume of assets, which are generally of longer term than most deposits. Islamic banks have to manage this funding gap carefully: if there were a liquidity freeze like the one that struck Western banks, the damage among Islamic banks would be greater.

Figure 3.4: Example of Imbalanced Funding Continuum at an Islamic Bank



Source: Extract from a credit application for an anonymous counterparty at the European Islamic Investment Bank (2010)

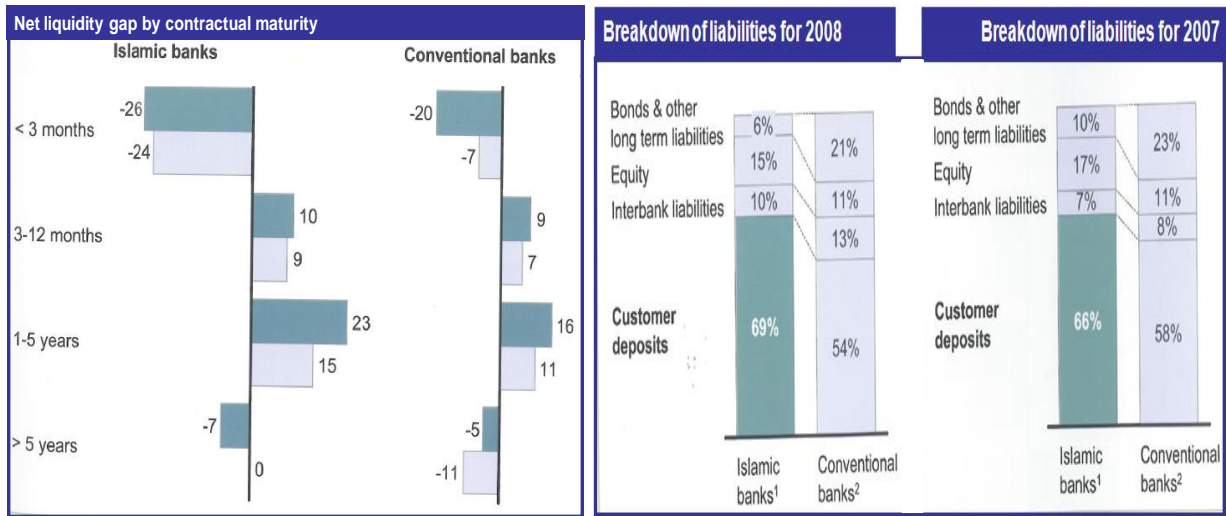
Islamic banks use cash from deposits and short-term liquid assets to finance long-term liabilities. As a result, the liability makeup affects their funding structures differently and reflects an institution’s specific asset-liability management policies. In comparison with conventional banks, asset-backed transactions (depending on the character of the asset) can expose an IFI both as an investor with high credit risk and also as an owner when dealing with long-term assets such as property and/or infrastructure. In order to mitigate this long-term liability-related risk, an IFI should have a vast pool of assets with a maturity range at its disposal to close the asset-liability gap (Lowe, 2010), who was interviewed for this research.

As a result, the Islamic banking industry is faced with a conundrum: its institutions maintain high concentrations in current/short-term liabilities, but, at the same time, they are exposed to highly profitable, but illiquid, long-term assets (e.g. property and

infrastructure, and *sukuk*), and they have limited access to long-term funding solutions. The nature of the Islamic banking model and *Shari'ah*-compliant laws applicable to the available asset classes means that these banks are persistently faced with a swap between liquidity and profitability (Moody's, 2009c).

According to McKinsey&Company (2009), on the liquidity front, as depicted in Figure 3.5, Islamic banks have a more pronounced maturity mismatch than conventional banks. However, Islamic Banks source more funds from deposits.

Figure 3.5: Breakdown Analysis of IFI's Funding Base



Based on a sample of 7 each of the largest conventional and Islamic banks (by assets) in the GCC.

¹ Includes all pure Islamic banks in the UAE, KSA, Kuwait, and Qatar
² Includes all conventional banks in the UAE, KSA, Kuwait, and Qatar

Source: McKinsey&Company (2009)

3.5.4.2. Attempts to reduce liquidity risk for Islamic banks

The above mentioned factors made liquidity risk management far from being an easy task for IFIs, which need to weather possible liquidity shortages in light of unforeseen events. For instance, during the financial crisis in Turkey during 2000-2001, IFIs faced severe liquidity problems and one, Ihlas Finance, collapsed (Standard & Poor's, 2010a). Market participants hope that the greater use of innovative asset classes will complement the

currently variety-starved asset section on the balance sheet and help IFIs deal with liquidity concerns more efficiently. Several developments have taken place with a view to meeting this challenge.

In Saudi Arabia, the Saudi Arabian Monetary Agency (SAMA) has developed an *ad-hoc* instrument called *mutajara*, which behaves like a repurchase agreement, known as ‘repo’ in the banking world. Contractually, it is a term deposit with SAMA or other financial institutions, but 75% of this deposit can be ‘repoed’ at SAMA at any point in time for liquidity purposes. This is notably the case for Al Rajhi Bank, which has an investment portfolio that can be repoed with SAMA (Moody’s, 2009c).

In Bahrain, the CBB is also working on developing a *Shari’ah* -compliant repo scheme. In addition, the LMC was founded in 2002 in Bahrain to facilitate the investment of surplus funds of Islamic financial institutions into financial instruments structured in accordance with *Shari’ah* principles. It also aims to assist the IIFM in the creation of secondary market activity with designated market makers where such instruments can be actively traded. Early in 2009, the IIFM announced that it has plans to co-operate with the International Capital Market Association (ICMA) to develop a repo-type liquidity management tool in order to manage overnight liquidity more efficiently in the future (Mahlknecht, 2009).

Similarly, the Central Bank of Sudan has introduced *Shari’ah* -compatible securities to provide liquidity in the market (Greuning and Iqbal, 2008).

Malaysia had also taken steps to reduce liquidity risk among Islamic banks. The central bank, Bank Negara Malaysia, introduced the Islamic Interbank Money Market (IIMM) in early 1994. The activities of the IIMM include the purchase and sale of Islamic financial instruments among market participants, interbank investment activities through *mudarabah* interbank investment scheme, and a check clearing and settlement system. The Islamic financial instruments that are currently being traded in the market on the basis of *bay’ al-dayn* (sale of debt) are the bankers’ acceptances, Islamic bills, Islamic

mortgage bonds, and Islamic private securities. In addition, IFIs can sell government investment issues to the central bank, as and when required, to meet their liquidity needs. In turn, IFIs can buy *Shari'ah*-compliant investment issues from the central bank (Greuning and Iqbal, 2008).

Whereas the contract of *bay' al-dayn* is commonly accepted and practiced in the Malaysian financial markets, it is not accepted by the majority of *Shari'ah* scholars outside of Malaysia, who maintain that debt can be traded only *at par*. According to one of the interviewees for this research, Kailani (2010), if trade is not *at par*, they feel that the practice opens the door to *riba*.

Mahlknecht (2009) suggests creating a common pool to which all Islamic financial institutions contribute a specific percentage of their deposits in exchange for the right to receive interest-free loans overnight or for up to three days. He adds that an exceptionally promising route would be to integrate the IDB into such structures in order to encourage cross-border participation by Islamic banks.

Finally, the introduction of *sukuk* is a good development that has can provide the foundation for the development of secondary markets. A *sukuk* structured on *murabahah*, *salam*, and *istisn'a* should be held to maturity, while *sukuk* structured on equity basis (*musharakah* and *mudarabah*) or *ijarah sukuk* can be traded on the secondary market (Dar Al Istithmar, 2006). Legislative steps, including the creation of Saudi *sukuk* and bond market under the *Tadawul* (the Saudi stock exchange), are improving the prospects of *sukuk* becoming an attractive liquid instrument. Recent similar reforms in South Korea and Indonesia should also support the longer-term viability of the primary *sukuk* market and the establishment of an active secondary market, which will benefit the longer-term prospects of *sukuk* as an investment instrument amongst issuers and investors alike. According to Standard & Poor's (2009), such developments as timely steps that should both diversify Islamic finance assets and address investor needs, as well as adding depth to the market and enhancing transparency and efficiency amongst market participants.

Sukuk offer a longer term and more stable source of funding. In addition, governments and government-related institutions have made it clear on several occasions that their role on the *sukuk* market would not be limited to that of a benchmark-setter; issuing sovereign and public-sector *sukuk* would also contribute to enhancing the overall liquidity of the market. However, *sukuk* still constitute a very small proportion of the balance sheet despite the recent rapid growth in this funding source. Still illiquid, dominated by local issuances and hardly traded globally, *sukuk* cannot be considered an effective fixed-income instrument for active management of balance sheets and liquidity. According to one of the interviewees for this research, Marx (2010), most repurchase agreements (repos) with bank counterparts or central banks are *riba*-based, so *sukuk* can hardly be used as repo collateral and very seldom serves as the basis for raising emergency liquidity in the event of need.

The gradual introduction of *sukuk* funds will help create a secondary market for *sukuk*, whereby investors, including banks, can price their *sukuk* fairly, enhancing both liquidity and secondary market tradability (Moody's, 2009d).

Market observers have pointed out that the lack of *sukuk* liquidity is still a primary weakness compared with conventional bonds. Another interviewee in this research, Masri (2010), argues that central banks and major international institutions do not accept any of the currently issued *sukuk* for repos because of: (i) lack of secondary market for *sukuk*; (ii) non-convertibility to other currencies; and (iii) most *sukuk* issues are not rated by international rating agencies. The first *sukuk* that is expected to be internationally accepted for repos is the long anticipated *sukuk* to be issued by the UK government. Masri believes that, until a sophisticated repos market is developed for Islamic finance, the liquidity problem will persist. "There are initiatives to develop a *Shari'ah*-compliant repo market but for the time being Islamic banks have only limited scope for getting hold of money in a quick way. The lack of *Shari'ah*-compliant assets and a tendency for Islamic investors to buy and hold their investments have stunted the secondary market", as identified by Qaedi (2010), one of the interviewees for this research.

So far, IFIs have preferred an originate-and-hold business model due to the lack of a secondary market for loans and *sukuk*; however, in the longer term, IFIs with limited capital resources might be more inclined to adopt an originate-and-distribute business approach, provided disintermediation picks up, market depth and liquidity improves, and growth in Islamic assets continues unabated.

The effect of the credit crisis on the *sukuk* market and the emergence of defaults are thoroughly discussed in a subsequent chapter.

Furthermore, Marx (2010), who was interviewed for this research, explains that traditionally Islamic banks have circumvented the lack of an Islamic money market by entering into bilateral commodity trades with western banks that produce a return very close to the equivalent money market instruments. Although this is a valuable source of liquidity, it is an inadequate and fragmented solution to a problem that is perceived to be one of the greatest hindrances to a fully integrated Islamic financial system. One of the aims of the LMC is to provide instruments that have greater *Shari'ah* credibility and are more competitively priced than the commodity *murabahah* transactions currently undertaken in the market.

Because of the lack of adequate *Shari'ah*-compliant money market instruments for liquidity management and the underdevelopment of Islamic money markets, the studies by IFSB in March 2008 provide suggestions for the development of the Islamic money market. Among the suggestions are to design a low-risk Islamic money market and Islamic government financing instruments and to incorporate Islamic government financing instruments as an integral part of the overall public debt and financing programme and foster its development (IFSB 2008a).

Finally, October 2010 saw the signing and launch of the IILM, the latest trans-national body to serve the global Islamic finance industry. The ultimate aim of the IILM is to enhance international integration of the Islamic money market and capital markets and to better equip them to face any liquidity crises. This breakthrough will surely help take

Islamic finance to a higher level of development. It was proposed by the IILM to include only AAA-rated *Shari'ah*-compliant *sukuk* issued by sovereigns, quasi-sovereigns, and a selected number of major corporates. However, critics have suggested that the pool of AAA-rated papers is not sufficient. Governor Zeti, Bank Negara Malaysia stated, “we inject or withdraw liquidity from the system. There are very strict criteria for the eligibility of assets, as it is not the shareholders themselves that would allocate assets. Central banks can nominate entities to donate assets, which can be monetized. They will issue Islamic commercial papers against these assets through special purpose vehicles. They will be the primary dealers and they will create the markets” (IFSB, 2011).

3.5.5 Asset-Liability Management

Asset liability management (ALM) is closely correlated with liquidity risk management. It is simply the practice of managing risks that arise due to mismatches between the assets and liabilities of a bank. ALM is a management tool that involves the raising and use of funds in terms of strategic planning, implementation, and control processes that affect the volume, mix, maturity, profit rate sensitivity, quality, and liquidity of a bank’s assets and liabilities. The primary goal of ALM is to produce a high-quality, stable, large, and growing flow of net interest/profit rate income (Greuning and Iqbal, 2008). This goal is accomplished by achieving the optimum combination and level of assets, liabilities, and financial risk.

3.5.5.1. Funding sources for IFIs

Table 3.2 shows that the limited range of possible funding sources for IFIs leads to concentrated liabilities, imbalanced funding mixes, and stretched capital management strategies. IFIs’ wholesale liabilities tend to be concentrated as they are generally well entrenched in retail banking, which gives them access to a large, and increasing, pool of relatively cheap deposits. When these are not in the form of Profit-Sharing Investment Accounts (PSIAs), Islamic banks benefit from the fact that a portion of Islamic deposits tend to be noninterest bearing. This lowers their cost of funding compared with

conventional banks, increases their margins and improves their profitability. In addition, Islamic depositors tend to display a strong sense of loyalty as they are less rate-sensitive. This results in a longer-term behavioural nature of deposits. However, as in most cases the contractual tenor of those deposits is short-term, the banks remain exposed to maturity / liquidity risk. In other words, in times of crisis the bank may witness substantial withdrawals.

Table 3.2: Simplified Balance Sheet of an IFI

Simplified Balance Sheet of an IFI	
Assets	Liabilities
Cash	Non-remunerated current accounts (<i>qardh hasan</i>)
ST interbank <i>murabaha</i>	ST <i>murabaha</i> , interbank and due to customers
Investment sukuk	LT syndicated <i>murabaha</i>
Other investments (<i>murabaha, musharaka</i>)	Issued sukuk
Credit portfolio	Unrestricted PSIAs
Participants (<i>musharaka</i>)	Profit equalisation reserves (PERs)
Others	Equity

Source: Moody's (2009c)

There are two types of PSIAs: restricted and unrestricted. For unrestricted PSIAs there is no identified asset allocation, while for restricted accounts the bank acts in a fiduciary capacity, with the investor choosing the nature of the investment to be made. In some cases these are accounted for as off-balance-sheet. For these accounts, banks maintain two types of reserves: a profit equalization reserve to smooth returns and investment risk reserves to absorb capital losses. While contractually investors are expected to absorb losses (the bank being only liable if there is negligence or fraud), the reality may be very different. Banks are under pressure to offer competitive returns and repay in full on due date to ensure these assets continue to be funded. PSIAs in general have maturities of 12 months, and the assets financed tend to be fungible (Moody's, 2008a).

Apart from retail accounts, which are in most cases both granular and stable across business cycles, IFIs also resort to wholesale creditors for funding. So far, *sukuk* have not

served as the main term funding source: only a handful of IFIs have issued medium-term *sukuk* so far, or are expected to do so in the near future, such as Sharjah Islamic Bank, Abu Dhabi Islamic Bank, and Al Baraka Banking Group. For asset-backed *sukuk*, an Islamic bank needs to originate enough income-generating contracts, the underlying assets of which are owned by the bank (like in *ijarah* and/or *musharakah*) for the *sukuk* to be possible. However, the majority of *sukuk* issued so far, particularly in the Gulf region, have been asset-based rather than asset-backed, with ‘par value repurchase undertaking’ structures whereby the market value of the underlying assets bears little or no relation to the funding amounts raised, argues Qaedi (2010), one of the interviewees for this research. Also, as these are not true-sale structures, any non-liquid assets can be used. Therefore, IFIs typically raise short to long-term funds from bank and non-bank customers, who tend to be price sensitive, relatively unstable (except those from the public sector) and concentrated as depicted by Table 3.3. Deposit concentration is generally a significant risk factor for IFIs.

Table 3.3: Sources of Funds: Islamic vs. Traditional Banks

ISLAMIC BANKS	TRADITIONAL BANKS
Tier – 1 Capital (equity)	Tier – 1 Capital (equity)
Tier – 2 Capital	Tier – 2 Capital (Subordinated loans)
Current accounts	Current accounts
Saving accounts	Interest-based Saving accounts
Unrestricted Profit Sharing Investment Accounts (PSIAs)	Time & certificates of deposits
Profit equalization reserves (PER)	Reserves
Investment risk reserve (IRR)	

ISLAMIC BANKS	TRADITIONAL BANKS
Current accounts	Current accounts
Banks in both cases use shareholders’ equity to protect these deposits	
Profit sharing investment accounts (PSIA)	Time deposits, certificates of deposits, etc – fixed income liabilities
Shareholders’ equity protects these liabilities only in case of fiduciary risks (theory); Profit Equalization Reserve (PER) & Investment Risk Reserve (IRR)	Shareholders’ equity and subordinated loans protect these liabilities against all risks
Cost of funds: Variable	Cost of funds: Fixed

Source: Khan (2004)

It should be noted that IFIs' funding bands remain imbalanced. Between deposits in their various forms (*qard hasan*, PSIAs, *Murabahah*, etc) and Tier 1 capital, IFIs have so far had access to a limited number of alternative funding sources with different features in terms of priority of claims and thus cost. Only very few subordinated *sukuk* have been issued so far. Malayan Banking Berhad in Malaysia, for example, issued a junior *sukuk* eligible as Tier 2 debt under Bank Negara Malaysia's regulation. According to Marx (2010), who was interviewed for this research, bank securitisation, other Tier 2 instruments, Tier 3 short-term debt to cover the regulatory capital charge of market risk, as well as plain vanilla and innovative hybrid capital notes, are inexistent in the Islamic financial industry. One of the reasons behind such a vacuum in the wide – but often grey – area between deposit and core capital of IFIs lies in the fact that a number of *Shari'ah* supervisory boards have been uncomfortable so far with the concept of differentiating between priorities of claims of various classes of stakeholders in the case of liquidation, adds another interviewee, Chowdhury (2010).

IFIs' capital management strategies, therefore, tend to be stretched. Allocation of economic capital to business units using risk-adjusted return-on-capital methodologies, for example, is barely applied, except in a handful of well-advanced institutions globally. However, even in the conventional universe, the allocation of economic capital to business units is still limited to a relatively small number of institutions that adopt more sophisticated risk management techniques. Therefore, it is not surprising that advanced approaches for economic capital computation have not so far been widely adopted by IFIs in emerging markets. Capital allocation tends to be inefficient at this stage, although this is not disadvantageous to a large extent as: (i) capitalisation ratios are high, and capital is not scarce in the geographies where IFIs are most active (typically in the Gulf region); (ii) asset yields are wide enough to serve record Return on Equity; and (iii) actual yields on equity far exceed shareholders' required rates of return (Moody's, 2008b).

In the longer run, and after the current financial tsunami, competitive pressure and massive losses will drive margins down. In addition, customers will become more

educated about the concepts and principles underlying Islamic banking and finance and will tend to be less willing to accept lower returns on their deposits and switch more naturally to PSIAs, driving IFIs' funding costs up. Finally, capital has become scarcer given the recent losses and bailouts in the banking sector. All of these elements could easily change the nature of the IFIs' profitability equation, with lower net returns directed towards more demanding shareholders. A solution to the conundrum would be to let capitalisation ratios dwindle gradually to protect returns to shareholders while building assets more efficiently above targeted hurdle rates (Visser, 2009). Another option is to look for alternative financing vehicles like hybrid instruments, various classes of PSIAs, and securitization. Although debt obligations can only be traded at face value under *Shari'ah* law, this does not apply to the trading of assets, which opens the potential for the use of securitisation of assets such as leases (Visser, 2009). However, significant legal hurdles need to be overcome before securitisation can become a feasible source of funding for Islamic banks.

As a fact, capital is a very expensive way of funding. Islamic banks, particularly in the GCC, therefore, engage in higher risk/high yield transactions to make up for the expensive funding via capital and consequently keep shareholders satisfied with high returns. Those IFIs forced themselves, unintentionally, up the risk curve instead of diversifying their risks. This makes the balance sheet of Islamic banks quite polarised, with high real estate assets. This led Islamic banks to a high Concentration Risk, on both sides of the balance sheet. A typical balance sheet structure of many Islamic banks displays high exposure to properties on the assets side; and limited funding sources with high reliance on short term liabilities and capital on the other side. A very unfavourable funding continuum that led Islamic banks to a viscous circle of risks: one risk creating the next.

3.5.5.2. ALM in Islamic banking: theory vs. practice

In theory, IFIs should be less exposed to asset-liability mismatch than their conventional counterparts. This comparative advantage is rooted in the 'pass through' nature of Islamic

banks, which act as agents for investors/depositors and pass all profits and losses through to them (Greuning and Iqbal, 2008). In addition, the risk-sharing feature of Islamic finance plays a critical role. Following the theoretical model, any negative shock to an Islamic bank is absorbed by both shareholders and investors/depositors. On the other hand, depositors in the conventional system have a fixed claim on the returns of the bank's assets, irrespective of the bank's profitability on its assets side. In other words, holders of PSIAs in the Islamic system should share in the bank's profits and losses alongside shareholders, and are exposed to the risk of losing all or part of their initial investment. This contractual agreement between the IFI and the PSIA holders should be based on a 'pass through' mechanism in which all profits and losses are passed to the investors. Thus, the problem of asset-liability mismatch should not exist. Some regulators have recognised this and require these assets (generally 50% risk-weighting) to be included in capital adequacy calculations and the reserves as Tier 2 capital (FRSGlobal, 2009). Greuning and Iqbal (2008) argue that this type of financial intermediation contributes to the stability of the financial system. Because of the nature of contracts both on the assets and liabilities sides on the balance sheet, IFIs are often less vulnerable to external shocks and are less susceptible to insolvency. Chapter 5 covers in detail how the Islamic financial system could act as panacea for economic woes if its fundamentals are genuinely applied.

The challenge to Islamic banks is to determine the rights and obligations of PSIA holders vis-à-vis shareholders, especially when various types of *Shari'ah*-compliant deposit accounts are offered, so as to ensure the required disclosures and transparency in the distribution of profits and the sharing of risks (IFSB, 2007).

Lowe (2010), one of the interviewees in this study, explains that from an analytical perspective, PSIAs should not be classified as equity-like liabilities, despite their (theoretical) loss-absorbing characteristics. PSIAs are rather considered as more debt-like liabilities. The rationale behind this treatment of PSIAs as liabilities with no capital benefits is that, from an economic and practical perspective, PSIAs:

- (i) are not permanent capital, as they tend to be very short-dated (with maturities typically below one year);
- (ii) can be withdrawn before maturity, provided that the PSIA holder gives up his or her contractual return to be earned at maturity;
- (iii) have no voting rights; and
- (iv) in practice, are very rarely allowed to absorb losses

However, in practice the challenge is where there is a clear differentiation between PSIA holders and those of equity holders. Can IFIs avoid combining shareholders' and PSIA-holders' funds, as the theory would suggest? The liabilities of Islamic banks may – in common with assets – have very different profiles and need careful management. The biggest issue remains the position of PSIA. Juristically, PSIA are a form of limited term equity rather than debt claims on the bank, and, therefore, losses relating to the assets they fund should not affect the bank's own capital. However, Islamic banks are not immune from runs or panic withdrawals, and PSIA-holders typically have the right to withdraw their funds at short notice, foregoing their share of the profit for the most recent period and also their share of any losses that might have arisen, explains Kailani (2010), who was interviewed for this research.

Visser (2009) strongly opposes PSIA by arguing that they involve a moral hazard problem, as they might give the bank an incentive for risk taking and for operating with very little of their own funds. Depositors will have to take the brunt if investments go sour, just like equity investors in a conventional investment company, only they have no say in the appointment of management. The only thing depositors can do is to shift their funds to other banks, but they may not always have sufficient information to do so in time. He adds that this moral hazard problem was cited as one reason by the Rector of Al-Azhar University in Cairo in his 2002 *fatwa* for declaring interest-bearing banking deposits *halal*. Visser (2009) obviously misses the point that regulators and *Shari'ah* boards will not allow IFIs to misuse PSIAs, and that IFIs put utmost importance on avoiding any jeopardy to their reputation.

Engel (2010), one of the interviewees for this research, adds that unrestricted PSIA funds will generally be combined with those of the bank's shareholders who may have quite different risk appetites, as PSIA-holders are generally looking for a safe investment, similar to deposit account holders in conventional banks. In practice, the treatment of the fund-combining issue is handled differently. Shamil Bank of Bahrain has so far applied a strict distinction, for management account and return computation purposes, between assets financed by shareholders' funds and what the bank calls 'unrestricted investment accounts'. Conversely, Kuwait Finance House – like most IFIs – does not explicitly segregate classes of liabilities and prefers a more flexible and convenient way of computing a total gross return on assets, and then applying both a *musharakah* and *mudarabah* fee to isolate returns to PSIA-holders (Moody's 2008a).

The practice is, therefore, different from the theory, and the means of determining shareholder's share is not always transparent. Notwithstanding such practical differences among IFIs in both combining funding sources and computing returns, 'displaced commercial risk' is always at stake, giving birth to various mechanisms of smoothing returns. Although displaced commercial risk is a unique risk to IFIs, it is discussed in this section because it forms an essential part of ALM for Islamic banks.

3.5.5.3. Displaced commercial risk

Displaced commercial risk is indeed a term reflecting the risk of liquidity suddenly drying up as a consequence of massive withdrawals should the IFI's assets yield returns for PSIA holders lower than expected, or worse, negative rates of profits. It is the transfer of the risk associated with deposits to equity holders. This arises when under commercial pressure banks forgo a part of profit to pay the depositors to prevent withdrawals due to a lower return (AAOIFI, 1999). Displaced commercial risk implies that the bank though may operate in full compliance with the *Shari'ah* requirements, yet may not be able to pay competitive rates of return as compared to its peer group Islamic banks and other competitors. Depositors will again have the incentive to seek withdrawal. To prevent

withdrawal, the shareholders will need to apportion part of their own share in profits or even equity to the PSIA holders.

As demonstrated below, the practice of smoothing investment returns through ‘profit equalisation reserves’, ‘investment risk reserves’, and active management of *mudarib* fees is a very common feature of IFIs to avoid random, business, and confidence-driven liquidity crises. As a matter of fact, a negative return on PSIAs would not constitute a breach of contractual obligations, as PSIAs are supposed to absorb losses other than those triggered by misconduct or negligence, and therefore would not be considered a default. Nevertheless, default might be subsequently triggered by the very tight liquidity conditions the IFI would face in the case of massive runs on deposits. While this is in keeping with the risk-sharing principles encouraged by Islam, it remains to be seen how such account holders would react to losses on their accounts.

Some banking regulators have taken the view that this practice of smoothing returns results in a modification of the legal attributes of the PSIA such that Islamic banks have a ‘constructive obligation’ to continue smoothing returns. This means that the practice of smoothing becomes obligatory, and unrestricted PSIA-holders effectively have the same rights as conventional depositors (Chowdhury, 2010), who was interviewed for this research. Kailani (2010) explained, during the interview for this research, that a typical problem in western countries with highly developed markets is the legal definition of a ‘bank’ as a ‘deposit-taking institution’; deposits having the legal status as debt contracts and being ‘capital certain’, whereas Islamic banks accept deposits as PSIAs which cannot be capital certain as the *Shari’ah* does not permit this.

Unfortunately, insofar as both Islamic banks and their supervisory authorities in some countries consider unrestricted investment accounts to be a product designed to compete with, and to be an acceptable substitute for, conventional deposits, profit smoothing in such an environment may be considered to be an inherent attribute of the product rather than a mean of deliberately avoiding transparency and market discipline, especially if it is combined with in-substance capital certainty (Archer and A. Karim, 2007). This

undermines an important inherent characteristic of risk mitigation within Islamic banking as discussed in Chapter 5.

3.5.5.4. Managing displaced commercial risk efficiently is a dynamic exercise

According to IFSB (2005a), traditionally, there are four lines of defence against displaced commercial risk: investment risk reserves (IRRs) and the bank's *mudarib* fee tend to absorb expected losses; profit equalisation reserves (PERs) are used to cover unexpected losses of manageable magnitude; and, ultimately, shareholders' funds stand against unexpected losses with a higher net impact. Figure 3.6 shows how Islamic banks use these lines of defence to ensure stability.

IRRs are built from periodic provisions for expected, statistical losses, which come as a deduction from the asset portfolio, in the same way that loan-loss reserves are deducted from conventional banks' loan books. IRRs are gradually built from the periodic provision charge equivalent to the expected losses attached to IFIs' investment portfolios, transiting through the IFI's income statement. Should actual losses be in line with IRRs, there is limited likelihood that displaced commercial risk would materialise into a bank run and thus into a liquidity crisis. Indeed, returns to PSIA holders would not be negatively affected. IRRs are generally deducted from income distributable to PSIA holders after the PERs are accounted for, and after the *mudarib* fee is captured by the IFI (IFSB, 2005a).

Reducing *mudarib* fees to protect returns to PSIA-holders remains a management decision. PSIAs are the combination of a *musharakah* contract (whereby PSIA-holders and shareholders bring funds to the banking venture) and a *mudarabah* contract (whereby the IFI's managers allocate PSIA-holders' funds to various asset classes on their behalf). Therefore, the IFI is eligible, under the *mudarabah* contract, for a *mudarib* (management) fee, which typically constitutes 20-40% of asset yields net of PERs. In case asset yields deteriorate beyond levels absorbable by IRRs, the IFI's management team, in line with the board's formal approval, could reduce management fees ex post, which it can do

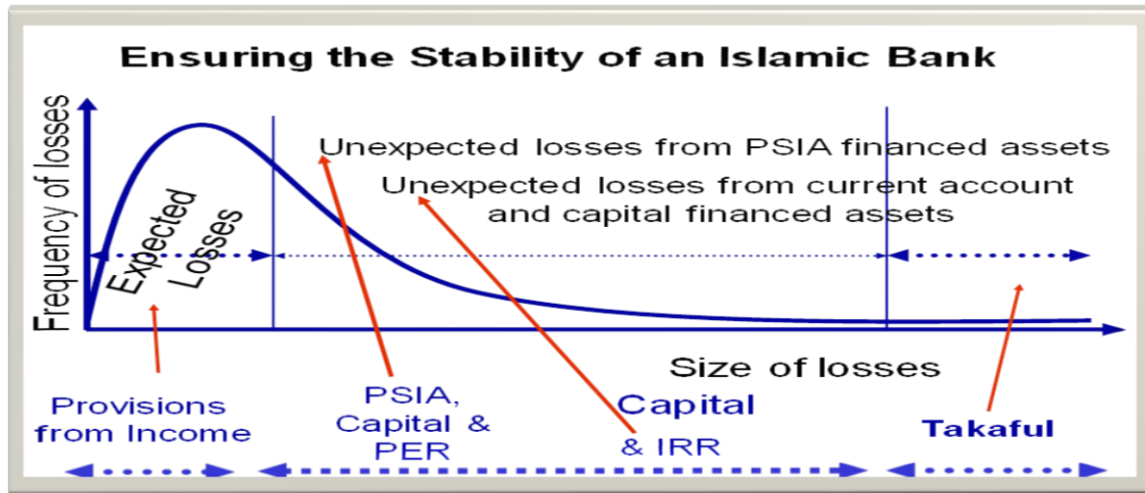
contractually (although unilateral increases of *mudarib* fees are strictly forbidden). This is viewed as a gift of the bank to PSIA-holders to earn their loyalty across the cycle (Chowdhury, 2010), another interviewees for this research. Typically, *mudarib* fee reductions tend to apply when unexpected losses (beyond expected losses handled by IRRs) are manageable one-offs. When exceeding a certain threshold, losses would be covered by PERs (IFSB, 2005a).

PERs, a grey area in the capital continuum, collectively belong to PSIA-holders for smoothing their returns. PERs are accounted for before any computation of the *mudarib* fee or IRRs. PERs are extracted from gross asset yields. Their purpose is to provide an excess return to PSIA-holders in periods where assets have performed worse than expected, and therefore when yields on PSIAs might be lower for a given IFI than for its Islamic and conventional peers. PERs collectively belong to present and future PSIA-holders, although past PSIA-holders (who might not be current or future customers of the IFI) may have contributed to building them (Putz, 2010), one of the interviewees). This is in line with the principle according to which the various stakeholders of an IFI are subject to collective solidarity. PERs being a future claim of PSIA-holders on the bank, they are not part of capital in accounting terms, and thus are not subject to distribution to shareholders (Greuning and Iqbal, 2008). From a regulatory perspective, however, the treatment suggested by the IFSB is very subtle, particularly in western jurisdictions, just like the treatment of PSIAs for the computation of capital adequacy ratios of IFIs under Basel II, which is explained in detail in Chapter 4.

Smith (2010), Senior Analyst-Financial Institutions at Fitch Ratings and one of the interviewees for this research, explains that shareholders' funds constitute the ultimate line of defence against displaced commercial risk. Ultimately, should IRRs, *mudarib* fee cuts and PERs be insufficient to protect depositors from excessive volatility regarding PSIA returns, shareholders can lawfully use their own capital to compensate for possible losses or PSIA-holders' opportunity costs. Shareholders' funds have in the past been used to compensate holders of investment accounts, such as in 1998 for Dubai Islamic Bank

PJSC and in 1990 for Kuwait Finance House. In both cases, PSIA-holders suffered no losses.

Figure 3.6: Managing Displaced Commercial Risk in IFIs



Source: Khan (2004)

Mahlknecht (2009) argues that an extreme example of displaced commercial risk is the International Islamic Bank for Investment and Development in Egypt, which distributed all of its profits to investment account holders and nothing to shareholders from the middle to late 1980s. In 1988 the bank distributed to its depositors an amount exceeding its profits, and the difference appeared in the bank’s accounts a ‘loss carried forward’. The practice of forgoing part or all of the shareholder’s profits may adversely affect the bank’s own capital, which can lead to insolvency in extreme cases.

In short, although in theory there should be no mismatch between assets and liabilities of an Islamic bank, current practices have introduced distortions that expose banks to asset-liability mismatch risk, especially when they have no liquid assets with which they can hedge such risks. Greuning and Iqbal (2008) believe that IFIs should standardize how to deal with displaced commercial risk, and the rights of PSIA holders should be clearly stated and explained to all depositors. They suggest that the profits should be deducted only from long-term depositors, who are more likely to be exposed to such risk, and not from short-term depositors, who are not exposed to it.

3.5.6 Operational Risk

Historically, operational risk has been defined as all risks other than market, credit, and liquidity risk. However, the BCBS (2006) has narrowed this definition within Basel II by stating that operational risk is “The risk of loss resulting from inadequate or failed internal processes, people or systems or from external events.” This definition includes legal risk, but excludes strategic and reputational risk.

Operational risk has been recently recognized and has been gaining prominence among risk-related research. It is now part of the integrated risk management framework of all financial institutions, which typically increases with the scope and size of activities of a bank but can be mitigated by a sophisticated risk management function and systems. The major components of operational risk are people, processes, technology, and external events (usually catastrophic). People’s risk includes human errors, lack of expertise and compliance, and fraud. Process risks include risks related to different aspects of running a business, which may include regular business processes, risk related to new products and services, inadequate controls, *etc.* (Akkizidis and Khandelwal, 2007).

Lowe (2010) argues that operational risks are rather difficult to measure and manage because these risks only become apparent once a problem arises. He stated that risks associated with operational risk could include:

- (i) *Internal fraud.* For example, intentional misreporting of positions, employee theft, and insider trading on an employee’s own account;
- (ii) *External fraud.* For example, robbery, forgery, cheque kiting, and damage from computer hacking;
- (iii) *Employment practices and workplace safety.* For example, workers compensation claims, violation of employee health and safety rules, organised labour activities, discrimination claims, and general liability;

- (iv) *Clients, products and business practices.* For example, fiduciary breaches, misuse of confidential customer information, improper trading activities on the bank's account, money laundering, and sale of unauthorised products;
- (v) *Damage to physical assets.* For example, terrorism, vandalism, earthquakes, fires and floods;
- (vi) *Business disruption and system failures.* For example, hardware and software failures, telecommunication problems, and utility outages; and
- (vii) *Execution, delivery and process management.* For example, data entry errors, collateral management failures, incomplete legal documentation, unapproved access given to client accounts, non-client counterparty mis-performance, and vendor disputes.

The wide range of activities included in operational risks make it difficult to apply a standard model to all organizations and hence there is a lack of universally accepted standard models. Banks often use internal audit ratings, quality self-assessments, operation risk indicators or key Risk Indicators (KRIs) such as volume, turnover, or rate of errors, income and loss volatilities, *etc.*

3.5.6.1. Operational risk in Islamic banks

IFSB Principles, as in Box 3.6, introduce the risk management strategy for operational risk management.

Box 3.6: IFSB Principles of Operational Risk Management

Principle 7.1: IIFS shall have in place adequate systems and controls, including *Sharī`ah* Board/ Advisor, to ensure compliance with *Sharī`ah* rules and principles.

Principle 7.2: IIFS shall have in place appropriate mechanisms to safeguard the interests of all fund providers. Where IAH funds are commingled with the IIFS's own funds, the IIFS shall ensure that the bases for asset, revenue, expense and profit allocations are established, applied and reported in a manner consistent with the IIFS's fiduciary responsibilities.

Source: IFSB (2005a)

Operational risk is considered high on the list of risk exposures for Islamic banks. A survey by Khan and Ahmed (2001) shows that the managers of Islamic banks perceive operational risk as the most critical risk after mark-up risk. The survey found that operational risk is lower in the fixed income contracts of *murabahah* and *ijarah*, and higher in the deferred sales contracts of *salam* and *istisna'a*. The relatively higher rankings of these instruments indicate that banks find them complex and difficult to implement.

An internal control problem cost Dubai Islamic Bank \$50 million in 1998 when a bank official did not conform to the bank's credit terms. This resulted in a one-day run on the bank's deposits to the tune of USD 138 million, representing around 7 percent of the bank's total deposits at that time (Greuning and Iqbal, 2008).

It is argued that operational risks are likely to be significant for IFIs due to their specific contractual features. Moreover, Islamic products are less commoditized and require more tailoring and oversight, and this leads to substantial overheads and higher operational risk. One of the interviewees in this research, Lowe (2010), asserts that a number of small Islamic financial institutions have allowed their businesses to grow rapidly without a proper organisational infrastructure in place. He listed some specific aspects of Islamic banking that could raise the operational risk of Islamic banks:

- (i) Cancellation risks in the nonbinding *murabahah* and *istisna'a* contracts;
- (ii) Failure of the internal control system to detect and manage potential problems in the operational process and back-office;
- (iii) Potential difficulties in enforcing Islamic contracts in a broader legal environment;
- (iv) Need to maintain and manage commodity inventories often in illiquid markets;
- (v) The monitoring of PLS arrangements cannot easily be standardised; and
- (vi) Potential costs and risk of monitoring equity-type contracts and the associated legal risk.

People's risk and the scarcity of qualified human resources is the most striking weakness of the whole industry (Brown *et al.*, 2007). In fact, scarcity of talent might impede, for a while, the growth dynamics of Islamic banks. There is a clear, identifiable and sometimes quantifiable shortage of skilled managers, officers and clerks in the *Shari'ah*-compliant financial universe. Not only is the industry growing fast, triggering pressure on existing staff to absorb growing volumes, but a number of new entrants are also entering the arena: markets like Bahrain, Qatar, Saudi Arabia, the UAE, Malaysia and Singapore, among others, have witnessed the incorporation of a large number of new IFIs announcing authorised capital of unprecedented size. Newcomers must be staffed and newly trained employees are scarce because education, training and experience take time to build exploitable competences (Mahlknecht, 2009). The easiest and most effective way to quickly staff freshly instituted organisations is to acquire them from existing banks, creating visible pressure on the labour market in the entire industry. Risks including management discontinuity, excessive growth of personnel expenses, innovation disincentives and lack of experienced staff might all damage an IFI's capacity to build competitive advantages, and ultimately its market position, reputation, and business model.

On a positive note, several professional qualifications in Islamic finance have been created in different regions over the last few years. This should ease the pressure on the industry in the medium term. It is necessary to create a pool of highly qualified professionals with in-depth knowledge of not only the *Shari'ah* and its objectives, but also Islamic and conventional finance and financial engineering. Directors and senior management of Islamic banks too should be required to attend such courses.

Technology risk is another type of operational risk that is specifically high for Islamic banks. It is associated with the use of software and telecommunications systems that are not tailored specifically to the needs of Islamic banks. Like any other business, Islamic banks require bespoke software; given the nature of business the computer software available in the market for conventional banks may not be appropriate for IFIs. Compliance with *Shari'ah* rules requires management information systems that are scarce

and expensive to develop. The currently available systems are less robust than those in conventional banks; they are either bespoke systems or ones that have been modified to handle Islamic products. There are few systems that have been specifically designed for the use of Islamic banks and are in widespread use (Brown *et al.*, 2007). Santhosh Bhat, one of the interviewees for this research but whose interview was not included in the final sample, stated that “the most critical features of any Islamic banking software is the automation of profit pooling, which is the calculation of weighting and distribution of profit to the depositors according to the *Shari’ah*-compliant distribution method”. The latest systems and technologies, as used in conventional banks, are often not used by Islamic banks.

Documentation risk is higher for Islamic banks than for conventional banks partly as a result of the lack of standardisation in the contracts and also because any deficiencies in the documentation could make the contract unenforceable (Moore, 2009).

In short, given the newness of Islamic banks and their unique business model, operational risk can be acute in these institutions. Therefore, the three methods of measuring operational risk proposed by the Basel II Accord have to be adapted considerably if they were to be applied to Islamic banks. This is explored in details in Chapter 4.

3.6 FURTHER RISK AREAS SPECIFIC TO ISLAMIC BANKS

In addition to the traditional risk that Islamic banks share with their conventional counterparts as financial intermediaries, Islamic banks are also exposed to several risks that are very specific to their business model. Such specific risks are equally important and stem from the nature of their contracts, business environment, competition, and certain prevailing practices.

3.6.1 Displaced Commercial Risk

As discussed in section 3.5.5, Displaced Commercial Risk is a unique risk to Islamic banks that stems from their ALM practices.

3.6.2 *Shari'ah* Non-Compliance Risk

Shari'ah non-compliance risk is related to the structure and functioning of *Shari'ah* boards at the institutional and systemic level. This risk could be of four types which are strongly correlated and linked:

3.6.2.1. Lack of standardization risk

The *Shari'ah* is subject to interpretation, particularly in the field of economic and financial transactions known as the *fiqh al-muaamalat*. Therefore, from one market to another, from one school of thought (*madhab*) to another, and even from one *Shari'ah* scholar to another, the fine line between what is considered lawful at any point in time and what is not considered lawful can be so thin that *fatawa* may differ substantially. This difference in the interpretation of *Shari'ah* rules result in differences in financial reporting, auditing, and accounting treatment. For instance, while some *Shari'ah* scholars consider the terms of a *murabahah* or *istisna'a* contract to be binding on the buyer, others argue that the buyer has the option to decline even after placing an order and paying the commitment fee, explains Al-Ghamrawy (2010), Managing Director at Al Baraka Bank-Egypt and one of the interviewees for this research. Differing attitudes towards hedging techniques such as forwards, futures, and options provide another example of a large divergence of opinions that does not benefit the industry (IFSB, 2007).

These differences can be partly attributed to the presence of the *Shari'ah* board, which governs and guides the banks regarding the conduct of Islamic banking. The *Shari'ah* board interprets various products and situations based on the *Qur'an*, *Sunnah*, and *fiqh* (Islamic jurisprudence). There are four classical schools of Islamic thoughts; namely:

Hanafi, *Maliki*, *Shafi'i*, and *Hanbali*, which have specific presence in different parts of the world and hence the *Shari'ah* ruling differs which can also be found based on them. China and Turkey are more influenced by the *Hanafi*; in a large part of Africa *Maliki* is followed; Indonesia and Malaysia have large followers of the *Shafi'i* school; and *Hanbali* appears to be followed in Saudi Arabia (Akkizidis and Khandelwal, 2007). These four schools represent most commonly accepted rulings of Islamic jurisprudence. The interpretations of *Shari'ah* scholars can be based on one or more schools of thought and hence can have impact on the conduct of the Islamic banking.

Multiple factors are considered before the *Shari'ah* board provides a ruling on a particular case. This multiplicity of methods of financing has been a prime reason for the lack of standardisation of products, processes, and policies. This did not hamper the growth and development of Islamic banking, but has resulted in some confusion among the followers of Islamic banking. This has direct effect on risk management for Islamic banking. Also, due to the multiplicity of interpretations of situations, the progress on the front of developing specific legislations for Islamic banking has been slow. Malaysia, Pakistan, and Bahrain have developed specific legislations dealing with Islamic banking, whereas most of the other countries offering Islamic banking are using conventional banking legislations with some modifications for Islamic banking along with *Shari'ah* rulings (Akkizidis and Khandelwal, 2007).

This variation is not only time-consuming and costly, but it also leads to confusion about what Islamic banking really encompasses and, therefore, hinders its widespread acceptance. It also makes it difficult for regulators – especially in non-Muslim countries – to understand the idea of Islamic banking. Consequently, regulators tend to be restrictive in granting licenses for Islamic banks. The same applies to investors and customers who sometimes find themselves reluctant to invest in Islamic banks because of their confusion about the concept and its specific products.

The curious case of Investment Dar Company ('TID') vs. Blom Development Bank may have some significant implications for the Islamic finance industry. Blom Development

Bank of Lebanon had placed various ‘funds’ with TID of Kuwait, pursuant to a *wakala* arrangement. TID became distressed during the course of 2008/09 with the onset of the credit crunch and announced a restructuring. In May 2009, it defaulted on the profit/coupon of its USD100 million *sukuk* issue, and since then there has been much confusion regarding the status and progress of the restructuring. TID then argued that the previously executed *wakala* arrangements with Blom Development Bank did not actually comply with *Shari’ah* principles; hence, all related agreements should therefore be considered *ultra vires* (or void). The court issued a summary judgment ordering payment of the capital amount but not the anticipated profit required, which necessitated consideration at a full trial (Moody’s, 2010b). Chowdhury (2010), one of the interviewees for this research, hence, states that “It is widely felt that the application of *Shari’ah* compliance as a commercial and defensive legal tool undermines the credibility and ethical ethos that underpins Islamic finance”.

3.6.2.2. *Shari’ah* arbitrage risk

The competitive dynamics of IFIs, together with lack of standardization, could enhance *Shari’ah* arbitrage, itself a component of *Shari’ah*-compliance risk. IFIs compete head on with conventional banks, but they also position themselves as contenders within the Islamic financial industry, sometimes internationally, if not globally. The difference *Shari’ah* interpretations give rise to *Shari’ah* arbitrage, which is the risk of resorting to the most liberal interpretation of financial Islam for business purposes (Visser, 2009). Therefore, Muslim investors and originators might be tempted by *Shari’ah* arbitrage, which is the risk of resorting to the most liberal interpretation of financial Islam for business purposes. *Shari’ah* arbitrage might also lead an IFI to crowd itself out of the market because it would not be considered sufficiently *Shari’ah* compliant by its constituency, the final decision-making body as to *Shari’ah* compliance that is beyond the reach of any fatwa. This could be damaging from a macro-industrial perspective, should the whole Islamic financial industry be overly heterogeneous to the point where fragmentation becomes unavoidable and durable (Yaccubi, 2010).

3.6.2.3. Non-compliance risk

Chowdhury (2010), one of the interviewees for this research, argues that the relationship between an Islamic bank and its customers is not only that of an agent and principal; it is also based on implicit trust that the bank will respect the desires of its customers to comply fully with *Shari'ah*. This relationship is what really distinguishes Islamic banks from their conventional counterparts and it is the sole justification of their existence. If the bank is unable to maintain this trust, by being non-*Shari'ah*-compliant, it risks breaking the confidence of its customers. This could severely damage the creditworthiness of an IFI. For instance, Muslim depositors might withdraw their funds from a bank, triggering a liquidity crisis. Retail customers that are mainly attracted by the Islamic nature of a bank might also stop requesting loans from this institution, triggering a downturn in profitability.

Wilson (2002) argues that what distinguishes IFIs from their conventional counterparts is not only the unique products they have on offer but also the commonality of their client base who all have been attracted to IFIs because they provide products compatible with *Shari'ah*, which the clients themselves respect and believe in. The high level of trust between IFIs and their clients reduces the risks of moral hazard. Therefore, IFIs should ensure transparency in compliance *Shari'ah* and place this issue on the top of its priorities.

3.6.2.4. Shortfall of scholars

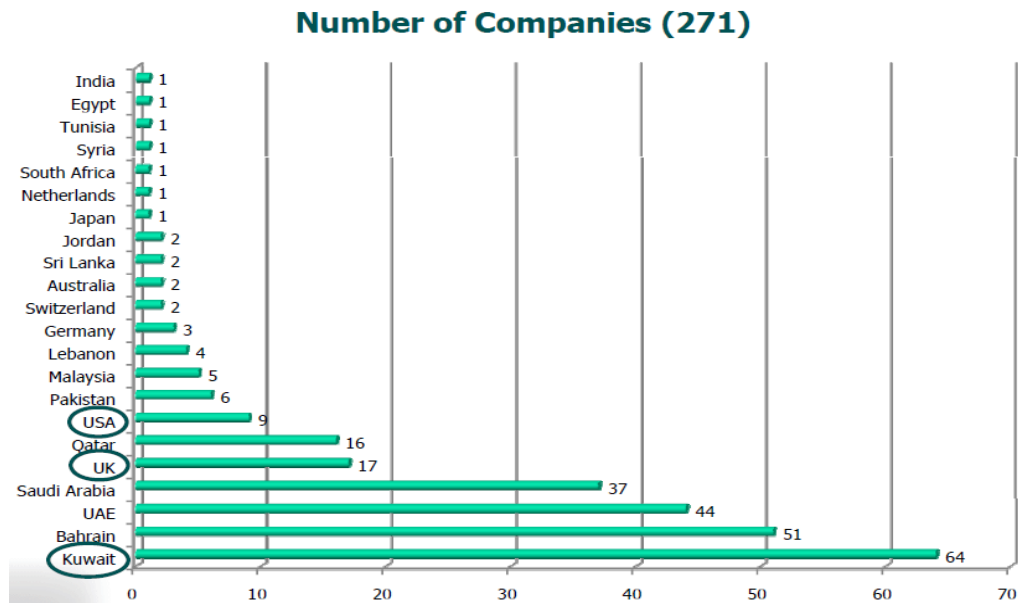
This is an industry-related rather than an organization-specific risk. There are few *Shari'ah* experts on the commercial law and finance law. Most scholars who go on to specialize as academics do so in fields such as theology or history, while those who specialise in practical subjects become experts on the laws of *zakah*, marriage, and divorce, or inheritance (Selvam, 2008). The industry is no longer able to produce qualified scholars at the required rate, particularly due to the long and arduous process involved, which includes learning the fine points of modern capital markets. It could take

up anywhere between 10 to 15 years for a person to be qualified as a *Shari'ah* scholar and sign off on a fatwa due to the training and guidance required to be an established scholar, according to Chowdhury (2010) who was interviewed for this research. He also stated that “There are only a few scholars who combine knowledge of the *Shari'ah* with an understanding of the working of modern finance ... I personally know several scholars who have written advanced academic dissertations on subjects dealing with the classical jurisprudence of commerce and transacting.” However, as Sheikh Yusuf Talal DeLorenzo (cited by Selvam, 2008) states “their knowledge is theoretical, these scholars are of no practical use to modern Islamic finance.”

Another obstacle is mastering the language of communication needed in the financial realm. *Shari'ah* scholars need to be conversant in both Arabic, the language of the *Shari'ah*, and English, the main language of modern finance. “Most scholars are not fluent in English and the Islamic finance industry is dominated in the English language at the moment,” adds Kailani (2010), another interviewee.

Funds@Work (2009), a strategy consultant firm, carried out a research on the landscape of *Shari'ah* scholars. The results, as depicted in Figure 3.7., show that among 271 organisations researched (including banks, mutual funds, insurance companies and private equity funds), there were 180 scholars with 956 positions, which remains an important challenge with various risk implications. If this shortage of *Shari'ah* scholars is not reversed, Islamic finance may not grow as quickly as it could.

Figure 3.7: Shari'ah Scholars' Involvement in Boards and Beyond.



Source: Funds@Work (2009: 4).

It should also be noted that the shortage of skills applies not only at the scholarly level, but also in the wider industry as discussed earlier.

3.6.3. Reputational Risk

“It takes 20 years to build a reputation and five minutes to destroy it”.

Warren Buffet as quoted in Askari *et al.* (2009)

Historically, reputational risk used to be considered a subset of operational risk; however, convincing arguments have been put forth over time to distinguish reputational risk from operational risk and to highlight the sole significance of the former. According to Askari *et al.* (2009), a survey conducted by PricewaterhouseCooper (PwC) in early 2004, showed that of 1,400 CEOs taking part of the study, 35 percent identified reputational risk as either ‘one of the biggest threats’ (10 percent) or ‘a significant threat’ (25 percent) to their business growth prospects. Reputational Risk is the most critical risk for IFIs, because the

total loss caused by reputational damage can well extend beyond the bank's liquidation value and affect the whole industry for generations regionally, internationally, and even globally. Once a bank's reputations has been damaged or tainted, restoring market confidence is extremely challenging. Nevertheless, all Islamic banks in a given market are exposed to such risk. Close collaboration among financial institutions, standardization of contracts and practices, self-examination, investing customer awareness, and establishment of industry associations are some of the steps needed to mitigate reputational risk. "Reputational risk is certainly a major issue for a growing industry like Islamic banking and finance" added Richard Thomas, Managing Director of Global Securities House (Thomas, 2009).

Reputational risk for IFIs and can occur at different levels. First, as a matter of image, loan foreclosure and security realisation, described as a relative strength of Islamic banks, are double-edged swords. Taking into account the expected take-off in mortgage lending especially in the GCC countries, the question of loan foreclosure and collateral seizing may be critical going forward. An IFI can hardly feel comfortable in the case of a Muslim family defaulting on the financial obligation pertaining to its primary residential property. In a number of jurisdictions, such a scenario would immediately trigger legal action leading the (conventional) bank to take full ownership of the collateralized property, at the expense of the borrower, who would be forced to relocate to an alternative, often smaller, home. According to Smith (2010), one of the interviewees for this research, in the context of the Muslim societies where IFIs are most active, it would be quite damaging for the IFI's 'ethical' reputation to leave a Muslim family homeless for the sake of profit, and then sell the seized property post foreclosure on the secondary market, for real estate Islamic finance presents itself as an ethical alternative to conventional banking. Therefore, should mortgage financing pick up in a number of Islamic jurisdiction, reputation risk management would call for a number of mitigating mechanisms like mutual *takaful* attached to housing loans.

Reputational risk can also arise from the fact that Islamic finance is a relatively young industry, and a single failed institution could trigger negative publicity to other banks in

the industry affecting their market share, profitability, and liquidity. For example, Islamic Bank of Britain (IBB) has been suffering since its inception in 2004 from the negative publicity about Islamic banking among British customers caused by the collapse of the Bank of Credit and Commerce International (BCCI) in 1991 and the withdrawal of Al-Baraka Bank from the UK market in 1993¹. It took IBB's management tremendous effort to overcome the damage caused in the trust in Islamic banking in the western world.

More broadly, reputation risk might stem from the misconception that IFIs, through *zakat* and other charitable givings, might be close to violent militant groups. In order to avoid even the perception of such involvement, IFIs, particularly in the aftermath of 11 Sept. 2001, have materially invested in know-your-customers (KYC) and anti-money laundering (AML) systems in order to enhance their processes and procedures for the early detection and reporting of doubtful and fraudulent transactions, sometimes at a heavy cost. For example, in 2006, there was US state enforcement action against Doha Bank's Islamic banking arm in its New York branch relating to insufficient anti-money laundering controls and systems. In April 2009, Doha Bank paid a fine of USD 5 million, which was imposed by two US government agencies: the Financial Crimes Enforcement Network and the Office of the Comptroller of the Currency. The post 9/11 environment necessitates the attention of IFIs to reputational risk due to the increased scrutiny and regulations dealing with them.

Finally, if an Islamic bank is viewed as non-*Shari'ah*-compliant this could break the trust of its retail, corporate, and even money market customers. This could trigger a liquidity crisis as devout Muslim depositors might withdraw their funds.

Askari *et al.* (2009) highlight that, although there has not been a major failure of an Islamic bank in more than 30 years, there have been instances of failures of financial institutions claiming to offer Islamic financial products. For example Ihlas Finans of

¹ Although BCCI – which was incorporated in Luxembourg – was a conventional bank, the fact that it had lots of Muslims on board created the illusion that it was an Islamic bank.

Turkey in early 2001, The Islamic Bank of South Africa in 1997, and Islamic investment companies in Egypt in the 1980s.

3.6.4. Accounting Standards

In a relatively immature and fragmented Islamic banking industry, there is a need to establish an adequate infrastructure, including the setting up of uniform accounting standards. Until recently, IFIs had developed their own standards in cooperation with their domestic regulators. However, this resulted in a lack of comparability between financial statements of different institutions in different countries. The need is now widely recognized to provide users of financial statements with more meaningful, transparent, and comparable information on the financial performance of the reporting entity.

AAOIFI has made some progress in developing a level playing field amongst Islamic banks, preparing a common set of accounting standards and developing consistent auditing standards and banking practices for those institutions, as well as starting to create a benchmark for *Shari'ah* compliance. Accounting standards issued to date reflect the adoption of conventional accounting practice, amended to reflect the nature of Islamic banking and incorporating compliance with *Shari'ah* doctrines (Mahlknecht, 2009).

AAOIFI and IFSB have played pioneering roles in designing key accounting, risk management, auditing, and reporting standards for IFIs; they have complemented these with *Shari'ah* standards for contracts and governance, and have built awareness of major risk and prudential issues in Islamic finance. However, the pace of adoption of standards is slow. Also, considerable challenges remain to upgrade the standards and develop new ones in order to support the rapid innovations in the industry, and to align the accounting and auditing standards more closely with the evolving regulatory standards. AAOIFI and IFSB standards are still under refinement and are not mandatory, and hence are still not used by several IFIs.

Eglinton (2010), Director - Banking and Capital Markets at Ernest & Young and one of the interviewees for this research, adds that consistency is of great importance and significantly different treatments of the same item can and do occur; this makes it difficult and potential confusion arises relating to the treatment of investment accounts. Should these be on- or off-balance-sheet? Are they with or without recourse? Differing treatment of investment accounts can have significant implications for capital adequacy calculations and liquidity requirements. Income recognition (cash or accrual) at inception, receipt or ultimate repayment and expense recognition (deducted from profit apportionment) are also important issues as different treatments can have a significant impact on reported profitability.

Despite AAOIFI's efforts, its standards are not mandatory because of the overriding need to comply with domestic regulatory requirements, with the exception of a handful of countries, such as Bahrain and Sudan, where banking supervisors require Islamic banks to comply with the AAOIFI standards.

Most countries use International Financial Reporting Standards (IFRS) or US GAAP standards for their accounting, or some close local adaptation. These have limitations for good transparency of the operations of Islamic institutions and may lead to very poor disclosure of important aspects of their operations. However, many regulators believe that they need one set of accounting rules to be applied by all banks in their jurisdiction and so they are reluctant to depart from this practice.

AAOIFI has, however, continued working closely with regulators and the International Accounting Standards Committee in order to encourage adoption of its standards. There has been an increasing number of institutions that produce financial statements that conform to both IFRS and AAOIFI standards (Moore, 2009). Eglinton (2010), one of the interviewees for this research adds that "This may be the way to go, especially as AAOIFI has never wanted to reinvent the wheel but has stated that its standards should be used to give more appropriate presentation only when IFRS is not suitable".

3.6.5. Fiduciary Risk

Fiduciary risk is derived directly from the profit-and-loss sharing feature of Islamic finance, and is closely interlinked with Corporate Governance risk. AAOIFI defines fiduciary risk as “being legally liable for a breach of the investment contract either for non-compliance with *Shari’ah* rules or for mismanagement of investors’ funds” (Moore, 2009). As fiduciary agents, IFIs are expected to act in the best interests of investors, depositors, and shareholders. If and when these objectives diverge from the actions of the bank, the bank is exposed to fiduciary risk.

Fiduciary risk can lead to dire consequences. First, it can cause reputational risk, creating panic among depositors, who may rush to withdraw their funds. Second, it may require the IFI to pay a penalty or compensation which may result in a financial loss. Third, it can have a negative impact on the market price of shareholders’ equity. Fourth, it can affect the bank’s cost and access to liquidity. Finally, it may lead to insolvency if the IFI is unable to meet the demands of current investment account holders (Greuning and Iqbal, 2008).

In this context, information disclosure facilitates market discipline and enables different stakeholders to protect their own interests by allowing depositors to withdraw their funds, shareholders to sell their shares, and regulators to take necessary actions in case of mismanagement or misconduct (Greuning and Iqbal, 2008).

In its Exposure Draft on Risk Management, the IFSB gave some examples of how fiduciary risks may arise, which do not appear in the final standard but give a useful indication of the sort of risks that can arise (Moore, 2009):

- (i) A critical aspect of IFIs’ activities relates to the potentially large availability of funds available by current account holders, whereby, as a result of the inappropriate management decision, IFIs may increase disproportionately their investment portfolios’ returns by excessively leveraging these funds without due regard to risks

arising from sudden and unexpectedly high levels of withdrawals from current accounts.

- (ii) Where IFIs manage and invest various funds in longer-term investment projects, investment funds received over a more prolonged period may be commingled inappropriately. For example, if funds provided by more long standing investors are invested in a troubled project, there is a risk that the IFI could use other IAH funds received later on to invest in the same project in the hope that the project may be salvaged. Distortions may arise when the IFI reports an attractive return to longer standing fund providers when they are in fact being paid out of funds paid in by more recent investors.
- (iii) The reinvestment of profits (rather than their distribution to investors) may give rise to unfair advantages to the IFI, which may thereby extend the period of a poorly performing investment. This may unfairly increase the exposure of incoming IAH to losses, which may have already existed prior to their investment.
- (iv) The risk of conflicts of interest exists where poorly performing assets and/or restructured assets of the IFI may be transferred by the IFIs' management from on-balance sheet to off-balance sheet accounts where the restricted IAH would bear the risk of loss. Such misapplications of funds could result in the investment risk being removed from the IFIs' balance sheet but, based on an agency contract, the IFI may earn fees inappropriately on the investment management and would not share in any eventual losses recorded after the transfer.
- (v) When purchasing assets at a very low price, IFIs may 'park' them in a subsidiary or related company and, when the opportunity arises, sell them to the IAH at a higher price.
- (vi) Other internal and operational issues may not be directly related to IAHs' investments but may give rise to exposures to losses for IAH. For example, the risks, derived from such elements as an excessive allocation of expenses and the hiring of less experienced staff, affect the quality of investment performance and oversight.

Moore (2009) argues that these indicate some of the ways in which a less than scrupulous management could manipulate returns to suit their purposes. There appear to be many

ways management might conceal their errors, and lack of transparency means that their actions would be hard to discover.

3.6.6. Corporate Governance Risk

Corporate governance has a particular importance for Islamic banks because of the unique nature of their stakeholders. All banks, as a result of their role in national and local economies and financial systems, have a broader group of stakeholders than other institutions. But in the case of IFIs, the group is even wider as PSIA holders and *Shari'ah* boards must be added (Moore, 2009).

Deposits in conventional banks are, by definition, capital protected. Depositors also often have the comfort of deposit insurance schemes and the comfort that banks can turn to the lender of last resort to fend off any temporary problems. Regulators and supervisors do not want to see depositors lose money as it could have dire consequences for the whole financial system. However, the same protection is not offered to PSIA holders, particularly unrestricted PSIA holders. Here, not only do the account holders have no say in how their money is invested, it is often also co-mingled with the bank's own funds. It is easy to see that situations could arise where there is a conflict of interest between shareholders and PSIA holders, while the management could have a third agenda. This could be in the area of risk appetite or in the share of profits that would be allocated to the different parties. While shareholders can make their wishes heard through the board of directors, PSIA holders have no such voice. Assets can be transferred between unrestricted PSIA holders, shareholders' equity, and other funds; and as disclosure requirements have stood, only management needed to know what had happened or why it had happened (Moore, 2009).

The IFSB produced its standard on corporate governance in December 2006. One of its proposals is that each IFI should establish a governance committee of its board, one of whose responsibilities should be to ensure that the interests of its PSIA holders are looked after (IFSB, 2006). In addition, AAOIFI has set governance standards for Islamic institutions that cover the appointment, composition, and responsibilities the *Shari'ah*

board, one of which is to protect the interests of depositors and PSIA holders (Kailani, 2010, one of the interviewees for this research). As such, this board is a critical governance body within the bank.

It has been suggested by many that the governance process would be significantly enhanced by allowing PSIA holders some representation on the board of directors and by an improvement in the transparency of financial reporting. Another proposal that has been put into practice by the Al Baraka Group is to have a separate investors' committee (Moore, 2009). However, the practicality of both proposals is questionable.

Corporate governance practices can have a material impact on the bank's risk profile, particularly in countries where such practices are weak. Islamic banks do not generally have robust corporate governance frameworks in place. However, in this they are no different from some of their local conventional peers. For instance, family ownership/majority ownership by a core shareholder group is seen in both segments of an Islamic country's banking system. Their prevalence weakens the rights of minority shareholders, could lead to unmerited appointments or promotion of family members and could give rise to conflicts of interest between different stakeholders. The lack of genuinely independent directors is a shortcoming of emerging markets in general and impairs a board's ability to maintain accountability and provide strategic guidance.

The exposure of big family businesses is among the most important risks among Islamic banks and the GCC business environment in general. Saudi Arabia is a clear example: Ahmad Hamad Algozaibi & Brothers owes money to more than hundred banks. This family-owned company owned a Bahraini bank, the International Banking Corporation (TIBC), which defaulted on USD 2.2 billion of debt in early May 2009. In addition, Algozaibi, had defaulted on some USD 1 billion of foreign exchange, trade finance, and swap agreements and was seeking restructuring of all its group obligations, which are reported to include about USD 2.5 billion owed to Saudi banks and hundreds of millions of dollars owed elsewhere. Closely connected with family ties, Saad Group and its subsidiary Awal Bank, owned by Maan Al Sanea were also restructuring debt: the group

owes banks at least USD 5.5 billion. The ripples from the Saad and Algosaiibi's defaults also extend into international waters, weakly in concrete financial terms but perhaps more lastingly in terms of sentiment. Both groups borrowed from foreign banks: Algosaiibi took out a USD 700 million syndicated loan in May 2007 arranged by BNP Paribas and WestLB, while a USD 150 million borrowing in 2006 by Awal was arranged by Arab Bank, Gulf International Bank and Hypovereinsbank. The Financial Times reported on June 11, 2009 that several of the international banks with a relationship with Saad and Mr Al-Sanea had closed down credit lines. It is hardly to find an Islamic bank in the GCC or Europe without significant exposure to these entities. According to Damak (2010), who was interviewed for this research, gross loan exposure within the GCC to Saad and Algosaiibi groups amounts to USD 9.6 billion for 30 banks in six-nation GCC countries. Such developments and incidents have resulted in questioning the nature of corporate governance, if any, in the Middle East, as the two conglomerates were controlled by family members. This Saudi banking scandal is, on one level, a family affair.

The GCC Board Directors Institute, a Dubai-based non-profit that seeks to improve corporate governance standards, issued a report earlier in 2009, highlighting the need for corporate governance reform in the six GCC member states – Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates. The report, 'Building Better Boards,' notes that only 55 percent of GCC companies disclose the main executive positions of board members, compared with 100 percent in Europe, and only 32 percent of companies disclose other positions held by board members, compared with 97 percent in Europe. It urges a reduction in the number of boards on which directors serve; the appointment of strong audit, nomination and remuneration committees; efforts to attract more international directors to the boards of Gulf companies; and the promotion of greater corporate transparency (Townsend, 2009).

Thus, corporate governance risk in the GCC, where most Islamic banks reside, has become publicly exposed. Poor corporate governance imposes heavy costs. The need for additional efforts toward improved corporate transparency is paramount. As long as Gulf companies and banks restricted their activities largely within the region, there was little

pressure to change those opaque practices. However, growing links with international markets and financial institutions are generating greater demands for reform. Changing corporate practices, however, would not be easy. Governance reform needs to be addressed against the cultural backdrop in the Gulf, which places great emphasis on reputation and discretion. Nevertheless, in recent years Bahrain, Dubai, and Qatar have created financial centres that promote high standards of regulation and corporate disclosure, including the requirement to publish regular results under International Financial Reporting Standards.

3.6.7. Regulatory and Tax Issues

As the nature of their operations is different, IFIs have to face different problems in respect of legal, regulatory, and taxation rules. In order to foster stability in Islamic banking, there is a need to develop uniform regulatory and transparency standards that are tailored to the specific characteristics of Islamic financial products and institutions. This task, whilst taking into consideration the financial environment in each country, would also need adaptation of the international standards, core principles, and good practices to the specific needs of IFIs. For example, IFIs have to purchase assets for onward sale or lease to their clients. As such, the levy of taxation and fees on their purchases leads to an uneven playing field for them compared with their conventional counterparts. To avoid such costs, IFIs in some jurisdictions resort to practices creating doubts with respect to *Shari'ah* compliance (Ayub, 2007).

Some regulations need to be amended before an Islamic bank can operate within a particular economy; an example is the stamp duties in mortgaging in Western markets. Since the Islamic bank purchases a product on behalf of a client and then resells it, double stamp duties should not be charged in such circumstances. Regulators in countries where both systems operate side by side should recognize the need to set up flexible regulatory and tax frameworks that could facilitate banking operations in line with the *Shari'ah* principles. Flexibilities granted by the FSA in Britain to accommodate the specific needs of Islamic banking are a welcome move; it is hoped that the process of adaption of laws

will continue in order to make London an international hub for the Islamic finance industry in coming years.

3.6.8. Legal Risk

Given the different nature of financial contracts, Islamic banks face risks related to their documentation and enforcement. As there are no standard forms of contracts for various financial instruments, Islamic banks prepare documentation according to their understanding of the *Shari'ah*, the local laws, and their needs and concerns. Lack of standardized contracts along with the fact that there are no litigation systems to resolve problems associated with enforceability of contracts by the counterparty increases the legal risks associated with the Islamic contractual agreements (Khan and Ahmed, 2001).

There are special concerns for Islamic banks over the enforceability of contracts. Conventional banks use well-established products for which standard documentation has been developed over the years that is accepted globally. This gives comfort, despite any limitations that may exist in the legal systems of the countries where the banks operate. This is not the case for Islamic products as yet. If problems arise and cases go to court, there is considerable uncertainty as to the court's decision (Moore, 2009).

Furthermore, the legal environment in some Islamic countries tends to be ambiguous and has never been tested, which constrains the ability to enforce a contract, recover bad debts, or realize collateral. For example, Chowdhury (2010), one of the interviewees for this research, adds that "in the GCC, the rule of precedent does not apply to court cases, and insolvency rules have not been tested before". Dey and Holder (2008) explain that courts in the United Arab Emirates and Saudi Arabia will generally not honour any provisions of a foreign legal system which are contrary to *Shari'ah*, public order, morals, or any mandatory provisions of the local law.

A number of recent court decisions have proven that when it comes to resolving disputes arising from Islamic finance contracts, *Shari'ah* rules and principles do not necessarily

apply. This is simply because, most often, the issues in dispute are not of *Shari'ah* in nature, but rather specific to the civil and commercial rights and obligations as contracted by the parties. The precedent here is the case of Shamil Bank of Bahrain and Beximco Pharmaceuticals Ltd in 2004, when the Court of Appeal ruled that it was not possible for the case to be considered based on principles of *Shari'ah* law (HMCS, 2009). There were two main reasons: first, there is no provision for the choice or application of non-national system of law, such as *Shari'ah*. Second, because the application of *Shari'ah* principles was a matter of debate, even in a Muslim country.

To mitigate this risk, contracts have to be written very carefully to minimise potential disputes and state the governing law. At present, most Islamic finance contracts are governed by English law, and a few under New York law. There are also advantages in standardization of documentation. However, local courts may not enforce an English law judgement without re-examining the merits of the claim and may not recognise English law as the law of the contracts, or only to the extent that it is not incompatible with local law and public policy. This would mean that the local courts could seek to reinterpret English law governed documents as if they were governed by local law. They could therefore give effect to the documents in a manner not intended by the parties (Miller, 2008). For instance, around 110 banks from all over the world are currently struggling in courts trying to retrieve their money from the defaulted Ahmed Hamad Alghosabi & Brothers group and the Golden Belt *sukuk* issued by Saad group in Saudi Arabia. The ongoing litigations have proved that the ability to enforce English judgement in Saudi Arabia is almost impossible, and that liquidation rules in the GCC are lagging behind.

3.6.9. Short Track Record

Modern Islamic banking has been in existence for only three decades and many products are less than a decade old. This is in addition to the fact that most Islamic banks are active in the developing world where transparency, corporate governance, and risk management at large are still works in progress, if non-existent.

3.7 RISK CATEGORIES ARE ENTANGLED

In a large number of Islamic finance contracts it is often challenging to distinguish between risks because risk categories of a different nature are entangled, along with the changing relationship of parties during the lifetime of the contract. Also, the nature of risks contained in Islamic instruments is likely to change significantly over time.

This is referred to as ‘conglomeration of risks’ where each mode of finance carries various risks bundled together (Khan, 2004). For example, in an *ijarah* contract, which resembles a financial lease, the IFI buys an asset that is subsequently leased or rented to a customer against periodic rental payments. The IFI remains the owner of the leased asset throughout the duration of the lease contract, leaving the bank exposed to the residual value of the asset at maturity or should the lessee be willing to terminate the *ijarah* relationship prior to maturity. The management of leased assets’ residual value is a feature that differs materially from credit risk management and assumes access to robust and reliable market data as to asset-price volatility and behaviour across economic cycles and business conditions, all the more so as IFIs tend to run a portfolio of asset inventories that they buy and then sell or lease (FRSGlobal, 2009).

Inventory management is another aspect that separates IFIs, from a risk management perspective, from their conventional peers. Similar issues arise when it comes to diminishing *musharakah* contracts (co-ownership contracts whereby the customer’s ownership share in a financed asset increases as principal is incrementally repaid to the bank). Should the customer default, the IFI’s share in the financed asset is used as collateral, the value of which might be volatile and naturally subject to scrutiny and management independently from the customer’s perceived creditworthiness (Moody’s, 2009a).

In addition, given the trading-based instruments and equity financing, there are significant market risks along with credit risk in the banking book of Islamic banks. For example, trade-based contracts (*murabahah*, *salam*, and *istisna’a*) and *ijarah* are exposed

to both credit and market risks. During the transaction period of a *salam* contract the bank is exposed to credit risk, and at the conclusion of the contract it is exposed to commodity price risk, the liquidity risk of its conversion into cash, the operational risk of its storing and movement and so on (Ahmed and Khan, 2007).

3.8 RISK MANAGEMENT ISSUES IN SUKUK

Sukuk present specific market and credit risks, particularly with regard to pricing, delays in scheduled payments, events of default, asset protection, structural issues, and reporting standards. The risk and return in *sukuk* are linked to the underlying assets. The key distinction when looking at *sukuk* from a risk management perspective is whether they are asset-backed, or asset-based via a repurchase undertaking. In other words, do *sukuk* holders rely on the assets themselves, or on the ultimate originator for repayment? Due to the nature of *sukuk*, all transactions are likely to involve a set of underlying assets. Both parties – the issuer and the investors – share their risks in the transaction. Where investors enjoy asset-backing, they benefit from some form of security or lien over the assets, and are therefore in a preferential position over other, unsecured creditors. In other words, in the event that the issuer were to default or become insolvent, the *sukuk* holders would be able to recover their exposure by taking control of and ultimately realising the value from the underlying asset(s) (Moody's, 2008a). There have seen a couple of notable issues where the assets were 'truly' sold like Tamweel and Sorouh PJSC, both UAE transactions. They still account for the minority of overall global *sukuk* issuance.

Where the transaction is asset-based (which has been the case for the vast majority of *sukuk* so far), the originator undertakes to repurchase the assets from the issuer at maturity of the *sukuk*, or upon a pre-defined early termination event, for an amount equal to the principal repayment. In such a repurchase undertaking, the true market value of the underlying asset (or asset portfolio) is irrelevant to the *sukuk* holders, as the amount is defined to be equivalent to the notes. In this case, investors in *sukuk* rely wholly on the originator's creditworthiness for repayment. Box 3.7 depicts the practical case of default of East Cameron *sukuk* and the legal complication associated with recovering the assets

by investors. This class of *sukuk* is identical to unsecured lending from a risk perspective. The vast majority of *sukuk* structures to-date fall into this category; they do not aim to complete an off-balance sheet transfer of the assets from the originator. In this sense, from a risk profile, the investors bear similar risk to unsecured lending (Dey and Holder, 2008), and their credit risk will be identical to a conventional unsecured bond.

“There is no scope in the courts for such vagaries – either the investors have a legal enforceable claim on assets or they do not. So when crunch time comes, those investors in asset-based structures are left with nothing: no assets, no security, just an unsecured claim in substance like a debt of the company”, explains Engel (2010), one of the interviewees for this research. Most of the *sukuk* are currently asset-based rather than asset-backed, with a few exceptions. Many investors – Islamic and non-Islamic alike – simply want a fixed-income bond, and it is this powerful investor demand that primarily drives the shape of market. Therefore, securitization has not really taken off in Islamic finance. Thomas (2009), hence, states that “The way forward is to revert to the asset-backed *sukuk*”.

It should also be mentioned that there’s no track record of *sukuk* enforcements to date, and the issue of effective legal ownership of assets between a company and its related sovereign have yet to be tested.

Box 3.7: Practical Default Case of Asset-Based *Sukuk*

East Cameron Asset-Backed *Sukuk*: Who owns the assets?

The East Cameron Partners L.P. (ECP) *sukuk* was relatively small one at USD 165.67 million and was issued in July 2006. It was the first issued by a US company and was a genuine effort at an asset-backed *musharakah*. It was secured by an interest in the oil and gas royalty rights on two gas fields in the Gulf of Mexico. On 16 October 2008, East Cameron Partners (the originating company), filed for Chapter 11 / bankruptcy in the US courts.

A *sukuk* enforcement event was then triggered on 3 September 2008 due to a shortfall in the stressed oil and gas reserves. As an asset-backed structure *sukuk* investors already have legal rights over the oil and gas assets but ECP has requested a ruling that the transaction was not a 'true sale' but a 'secured loan'. In the former, *sukuk* investors have sole rights to the assets in the latter they would lose their rights and share the assets with the other creditors should ECP enter Chapter 7 (liquidation).

Ultimately providing asset security for investors is a legal issue that impacts conventional and *sukuk* structures equally. The concept is well tested in the US so investors' rights should be preserved if structured correctly. In the Middle East, legal systems are less tested and secured *sukuk* are the minority. Investors in asset-based *sukuk* have no senior claim or lien over the *sukuk* assets – but this is deliberate and clear to most parties.

Source: Denton Wilde Sapte (2009)

Transparency is another issue with *sukuk*. Some of the *sukuk* had a huge lack of transparency and the complexities were beyond the comprehension of some scholars and market participants alike. The absence of disclosure and the very weak transparency standards make a clear assessment almost impossible. Going forward with transparency guidelines will be an important part of *sukuk* issues; it will affect not only the risk management but also the pricing of the *sukuk* (Abdul-Ghani, 2009).

Moreover, *sukuk* tend to be document intensive and relatively complex compared to conventional bonds because of the underlying asset structure. They also involve a complex relationship between *Shari'ah* and local (very often secular) legal systems, and the scope for conflict is great (Miller, 2008).

3.9 RISK MITIGATION IN ISLAMIC BANKING

Hedging can be one of the most contentious issues in Islamic banking. Conventional futures and short positions, which are often vital ingredients in risk mitigation, can be difficult to achieve under *Shari'ah* principles (KPMG, 2006). By the late 1990s and early 2000s, there began discussion on the scope of financial engineering and derivatives in Islamic finance. This did not receive much attention in the literature, primarily because most of transactions were designed by lawyers and *Shari'ah* experts and were executed in private by financial institutions who did not discuss the structure in a transparent manner (Askari *et al.*, 2009).

The unique nature of risks faced by Islamic banks, combined with the restrictions added by *Shari'ah*, makes risk mitigation for Islamic banks a difficult and complex process. There are risks that Islamic banks, like their conventional counterparts, can manage and control through appropriate risk policies, controls, and traditional risk management tools like risk diversification, credit ratings, on-balance sheet netting, GAP analysis, stress testing, *etc.* Such traditional tools do not conflict with the *Shari'ah* principles. However, there are other risks that banks cannot eliminate and can only be reduced by transferring to or selling those risk in well-defined markets. These risks can generate unexpected losses that need capital insulation, and hedging can help to restrict the impact of unexpected loss. Traditionally in the conventional world risk transferring techniques include the use of derivatives for hedging, selling or buying of financial claims, and changing borrowing terms. The challenge is, however, that most of the conventional hedging tools do so far not comply with the *Shari'ah* requirements.

Until recently, it had been the opinion of most *Shari'ah* scholars that hedging would fall into the category of speculation and uncertainty. In the last few years, however, the increasing sophistication in Islamic banking products has led some scholars to take the view that Islamic banks could be able to enter into hedging arrangements provided that the hedging tool is in itself structured in a *Shari'ah* compliant manner, and that the trade is being entered into to protect against a genuine exposure or liability, rather than solely

for speculative purposes (Obaidullah, 2007). According to Khan (2010), one of the interviewees for this research, “there is growing demand for hedging and *Shari’ah*-compliant derivatives, which would be used merely for hedging and not speculation”.

In fact, hedging techniques and derivatives have drawn a lot of debate as regards to their permissibility. There are two schools of thought when it comes to hedging in Islamic finance: a very conservative view that prohibits hedging in all its forms, and a more liberal view that is looking to develop *Shari’ah*-compliant hedging tools. This conservative school of thought accuses derivatives of causing volatility in the market through speculation without being involved in real economic transactions. Nonetheless, another viewpoint is that some derivatives are permissible because they involve the full transaction price and do not cause injustice to anyone.

There are two approaches that can be adopted in the product development of hedging tools for Islamic banks: first, through replicating a conventional product. For example, a swap, repo or future could be used as a starting point, before turning into a *Shari’ah* compliant instrument. However, this is not the most efficient way of product development because there will be additional costs involved to fulfil *Shari’ah* requirements and it’s also less creative. The second approach would be to focus on the function of the instrument and the design tools suitable for that purpose. That is what is known as financial engineering. Much research is needed before those techniques can be adapted to Islamic banking. But things are certainly moving in the world of Islamic hedging. In September 2006, the IIFM signed a Memorandum of Understanding with the ISDA, with an eye to developing a master agreement for documenting privately negotiated *Shari’ah*-compliant derivatives transactions (Visser, 2009). The ISDA may prove to be crucial in helping to lift Islamic risk management to a point at which basic- to medium-level hedging instruments can be introduced as it has the expertise in developing derivatives. In addition, the IIFM is currently working on developing a ‘*tahawwut*’ (Hedging) Master Agreement which will lead the way in risk minimization of Islamic economic activity.

Afaq Khan, CEO Standard Chartered Saadiq & Director of IIFM, said:

“Risk management solutions are the need of the Islamic industry with particular focus on treasury risk management. Islamic FI’s continue to grow within their home markets and are increasingly adopting regional and International expansion strategies. It is imperative that they have adequate risk management tools to allow them to play a responsible role in their local economy and also in their expansion plans. *Tahawwut* Master Agreement is another important initiative from IIFM to help the industry in developing a mutually agreed standardized document. This will make it easy for banks to trade with each other” (IIFM, 2009).

This will play a critical role in the development of risk mitigation tools in Islamic banking.

Another challenge for Islamic hedging tools is the lack of liquidity in the secondary market. Derivatives and hedging tools in conventional banking thrive on trading in the liquid secondary market. This is an obstacle for IFIs as liquidity is simply not there yet. Most Islamic banks, as previously discussed, have large balance sheet mismatches, which are difficult to bridge given the lack of long duration liabilities.

There has been substantial development in finding ways to apply derivatives to reduce certain risks such as currency and commodity risks; in Malaysia, for example, some *Shari’ah*-compliant hedging instruments, such as profit rate swaps, have been introduced. However, much of this progress remains localised with limited scope for cross-border application and further work is still needed.

3.9.1 Credit Derivatives

In recent years derivatives have been increasingly taking an important role not only as instruments to mitigate risks but also as sources of income generation. They are one of the newest tools for managing credit risks. A derivative is an instrument whose value depends on the value of something else. In these instruments the underlying risk of a

credit is separated from the credit itself and sold to possible investors whose individual risk profile may be such that the default risk attracts their investment decision (Ahmed and Khan, 2007). This can be done by packaging, securitization, and marketing credit risk exposures with a variety of credit risk features. Derivatives come in many guises for examples futures, options, and swap contracts (Davis, 2009b).

Futures are forward contracts of standardized amounts that are traded in organized markets. Like futures, options are financial contracts of standardized amounts that give buyers/sellers the right to buy/sell without any obligation to do so. A swap involves agreement between two or more parties to exchange set of cash flows in the future according to predetermined specifications (Stremme, 2005).

3.9.2 *Shari'ah* and Islamic Derivatives

Discussion on Islamic derivative products is rare, and even what available in the literature is not very favourable. In general, it is argued by many *Shari'ah* scholars that conventional derivatives are not compliant with the precepts of *Shari'ah* for various reasons (Obaidullah, 2007).

First, they entail *gharar* and *maysir* and are therefore viewed in a similar way to gambling. For example, the argument is often put forward that the huge trading volume of derivative markets is indicative of extensive speculation, that the market attracts and accentuates speculative behaviour (Chapra, 2007).

A second issue that causes uneasiness among *fiqh* scholars is the fact that a large portion of those trading in derivative markets have no intention of either making or taking delivery of the underlying asset; they are based on a system of margin calls without real movement of goods. Third, standard options, swaps, and futures contracts stem from debt and are connected to the sale and purchase of debts and liabilities (Yaccubi, 2010). *Shari'ah* only permits taking on risk proportionate to the real value of the asset and not

beyond the value of the real asset (Usmani, 2009). As a result, the scope for risk transfer techniques in Islamic finance is limited at the present.

Derivatives also introduce a serious moral hazard to the financial matrix due to the nature of their structures. In some situations, a bank could benefit from the customer's default, as the bank makes profit from the Credit Default Swaps (CDS) it bought on this customer. In a creditor's meeting to help the customer, for example, this particular bank will have a hidden agenda of trying to make the customer default. This is against the core principles of Islamic finance that promotes the wellbeing of society.

While the OIC *Fiqh* Council has endorsed *arbutun* under the condition that a time limit is specified for the option, the concept of *arbutun* is merely acceptable to the extent of part payment after finalisation of the deal. Its legality as a separate sale (*i.e. bai' al-arbutun*), detached from real transactions, is in general not approved by the *Shari'ah* scholars. From the main schools of Islamic *fiqh*, only the *Hanbali* considers *bai' al-arbutun* to be a valid legal contract (Ayub, 2007).

Kamali (2005) attempts to make a case for commodity derivatives on the grounds that derivatives are clear if the wrongful devouring of the properties of others and such contracts are concluded through the mutual consent of trading parties. He also argues that commodity derivatives should be viewed under the broad scope of public interest or *maslahah*. In addition, Chapra (2007) argues that hedging has become an important instrument for the management of risks in the present international economic and financial environment where there is a great deal of instability in exchange rates as well as other market prices. He makes a suggestion to the *fiqh* jurists to review their position on currency hedging contracts. To explain his view, he assumes that a Saudi businessman places an order for Japanese goods worth a million dollars (Rls 3.75 million) to be delivered three months from now. If the exchange rate is 117 Yen per dollar, and if the exchange rate remains stable, Yen 117 million will become due at the time of delivery of goods. Since exchange rates are not stable, and consequently if the Yen appreciates over these three months by say 5 per cent, the Saudi importer will have to pay Rls 3.94 million

for the goods instead of Rls 3.75 million. The Saudi businessman will therefore incur an unforeseen loss of Rls 190,000.

Although recognizing that the verdict so far is that “hedging is not permissible,” Chapra (2007) argues that this opinion is based on three objections: hedging involves *gharar*, interest payment and receipt, and forward sale of currencies. All three of these are prohibited by the *Shari’ah*. However, as far as *gharar* is concerned, the objection is not valid because hedging in fact helps eliminate *gharar* by enabling the importer to buy the needed foreign exchange at the current exchange rate. The bank, which sells forward Yen, also does not get involved in *gharar* because it purchases the Yen spot and invests them until the time of delivery. The bank therefore earns a return on the Yen that it invests for three months but also loses the return it would have earned on the Riyals or the dollars that were used to purchase the Yen. The differential in the two rates of return determines the premium or the discount on the forward contract. The second objection with regard to interest can be handled by requiring the Islamic banks to invest the Yen or other foreign currencies purchased in an Islamically permissible manner. There would not have been any interest, but rather profit earned on the investments. The third objection is, of course, very serious. Chapra (2007) argues that although Islam prohibits forward transactions in currencies, we live in a world where instability in the foreign exchange markets has become an unavoidable reality. It is very risky for businessmen as well Islamic banks to carry unhedged foreign exchange positions on their balance sheets, particularly in crisis situation when exchange rates are very volatile. “If they do not resort to hedging, they actually get involved in *gharar* more intensively. In addition, one of the important objectives of the *Shari’ah*, which is the protection of wealth, is compromised unnecessarily” (Chapra, 2007).

Engel (2010), who was interviewed for this research, explains that derivatives will come for Islamic banks; it is just a matter of time. Today the closest structure is *sukuk*, with lease agreements and the transfer of ownership rights, but still a lot of work is needed. The Malaysian market is more liberal than the GCC market and the Islamic financiers in Malaysia are working hard on developing Islamic derivatives that would have a wide

acceptance among *Shari'ah* scholars. Lowe (2010), another interviewee for this research, adds that “if the scholars rule all derivatives *haram*, this would make hedging very difficult for Islamic banks”.

It is said that a wise man learns from others' mistakes; Islamic banking should learn from the painful experience of conventional banking in the over use of derivatives. Derivatives should be used for hedging to reduce risks rather than profit generating purposes. The use should also be carefully controlled and audited by the individual banks and regulators. Judging derivatives should be made within context.

3.9.3 Islamic Hedging Tools

Islamic banking needs to move quickly towards viable hedging alternatives if it is to sustain the growth that it has enjoyed so far. However, Islamic banks are not using any equivalent of credit derivatives, as sale of debt is prohibited, almost by all scholars, except in Malaysia. With the dramatic improvement in financial innovation in Islamic finance, some endeavours have been successful in providing a number of contracts exist in Islamic banking that could be considered a basis for derivative instruments within an Islamic framework. These are *bai'salam*, *arbun*, *khiyar al-shart*, *wa'ad*, and dual *murabahah*.

3.9.3.1 Bai' salam

Bai' salam is similar to the conventional forward contract. However, the major difference is that in a *bai' salam* contract, the buyer pays the entire amount in full at the time the contract is initiated. The contract also stipulates that this payment must be in the form of cash. The buyer in a contract therefore is an Islamic bank. Because there is full prepayment, this potential contract is beneficial to the seller. As such, the predetermined price is normally lower than the potential price. The price behaviour is certainly different from that of conventional forward contracts, where the forward price is typically higher than the spot price by the amount of the carrying cost. Credit or counterparty risks of

forward and *bai' salam* contracts are therefore different. In a *bai' salam* contract, the risk would be one-sided because the buyer has fully paid, and therefore only the buyer faces the seller's default risk as opposed to both parties facing risk, as in a forward contract. In order to overcome the potential for default on the part of the seller, the *Shari'ah* allows the buyer to require security, which may be in the form of a guarantee or pledge (Noraini *et al.*, 2009).

Visser (2009) adds that, instead of using forward contracts for swaps, as they have been traditionally utilised, one could also hedge price risks with the help of futures. Since the buyer of a future really wants to take delivery of a good and thus no speculation, futures contracts should be met with less disapproval. It should be noted that the *Maliki* school allows futures contracts to be traded, like they have always done for *bai' salam* contracts, but the *Hanafi*, *Shafii*, and *Hanbali* schools do not (Visser, 2009).

Ahmed and Khan (2007) assert that by virtue of a number of *fiqh* resolutions, conventions and new research, the scope for commodity futures in Islamic finance is widening; the potential of futures contracts is tremendous in risk management and control. Kamali (2005) argues that if new technology can eliminate *gharar* in the contract, then it may be reconsidered by *Shari'ah* scholars. Futures contracts should not be branded as *maysir* as they serve an economic purpose – to reduce price risk. The implementation of a contemporary futures contract removes *gharar* that is the base of forbidding these contracts, and in the futures they may prove to be instrumental in managing the risks in Islamic banking, particularly commodity risks. He adds that *Shari'ah* scholars require the possession of assets prior to sale is in principle in order to avoid *gharar*, but this argument against futures does not hold water as delivery is guaranteed by the futures clearing house. Kamali concludes that futures contracts are Islamically permissible provided that they steer clear of *haram* commodities and of interest elements.

It should be mentioned that there are a few Muslim countries with futures markets: Indonesia (coffee and crude palm oil), Kazakhstan (wheat), Malaysia (crude palm oil, stock index, and government debt), and Turkey (currency). In addition, there is some

over-the-counter trading based on *bai'salam* in a number of Islamic countries, including Iran (Visser, 2009).

3.9.3.2. Arbun

Arbun is a contract whereby a buyer of goods makes an immediate down payment of part of the price against future delivery. The buyer has the option to pay the balance, being the purchase price less the down payment, at any time until a specified final purchase date. However, should the buyer choose not to buy the goods by the final purchasing date, the down payment will be forfeited. It is very similar to the call option in conventional finance. The main difference is that a call option is purchased by paying a premium which is not offset against the purchase price should the option be exercised, whereas the down payment on an *arbun* purchase is part payment for the good or asset if the sale is effectuated (Visser, 2009). Islamic funds have successfully utilized *arbuns* to minimize portfolio risks in what are now popularly known in the Islamic financial markets as the Principal Protected Funds (PPFs) (Ahmed and Khan, 2007). Further development should move towards credit risk mitigation by way of Islamic credit default swaps and the development of options under the *arbun* structure.

It should be noted that the *Hanbali* school is the most liberal in allowing *arbun*; other schools, in particular the *Hanafi* school, tend to be opposed to it (Yaccubi, 2010). They argue that the retention of a down payment by the seller is akin to misappropriation of the property of others and hence is not permissible (Visser, 2009).

3.9.3.3. Khiyar al-shart

Khiyar al-Shart (option of condition) is a contract in which one or both parties to a contract (or even a third party) holds an option (embedded within the contract) to confirm or rescind the contract within a specified time contingent on the fulfilment of a stipulated condition. The contract has embedded options that could be triggered if the underlying asset's price exceeds certain bounds. The exercise features of this contract are similar to a

conventional put option. What differentiates the *khiyar al-shart* option from conventional options is that there can be no separate fee paid at the start of the contract in respect of granting the option right. Therefore, it is the delivery price of the underlying asset, which includes an element that recognises the economic value awarded to the option holder in the contract. Ahmed and Khan (2007) argue that there are no *fiqh* objections to using non-detachable embedded options and that in Sudan such a contractual agreement has become a regular feature of the *salam* contract.

3.9.3.4. *Wa'ad*

Bai' salam, *arbun*, and *khiyar al-shart* all involve bi-lateral binding contracts, whereas the rules are less stringent with a *wa'ad* contract. It is a promise whereby the party looking to hedge provides a unilateral binding undertaking to buy currency from a third party at a given price in the future. The third party is not under any obligation to act on the transaction when the offer to purchase is submitted, resulting in significant counterparty risk (Wyman, 2009).

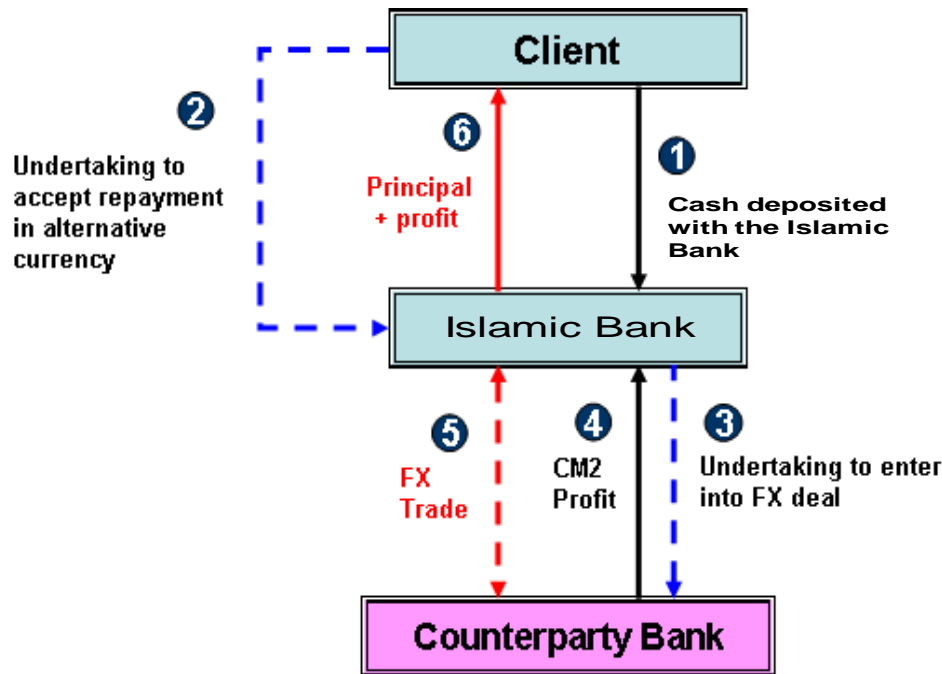
3.9.3.5. Dual *murabahah*

In conventional terms a Dual Currency Deposit is a fixed deposit with variable terms for the currency of payment. Deposits are made in one currency, but repayment at maturity occurs either in the currency of the initial deposit or in another agreed upon currency, depending on the occurrence of a trigger event. The 'optionality' is typically created by buying an option from the client. Rather than return the option premium to the client as a flat payment, it is embedded in the deposit and returned to the client as an enhancement to the deposit yield. This deposit creates foreign exchange rate risk for the investor and is therefore only suitable to clients with a specific view or risk appetite.

To replicate the above payoff and risk profile in an Islamic environment, Islamic banks combine commodity *murabahah* and *wa'ad* technology, enabling the bank to pay the customer an increased profit on the *murabahah* and settle the principal amount of the

deferred price in a pre-specified different currency. Figure 3.8 provides detailed explanation of how the dual currency *murabahah* can be used as a risk mitigation tool.

Figure 3.8: Dual Currency *Murabahah* Structure



Source: EIIB (2010a)

- (1) Client (as seller) undertakes a commodity *murabahah* with the Islamic bank (as purchaser) in a specified original currency (e.g. USD);
- (2) Contemporaneously, but separately, the Client issues an undertaking to the Islamic bank to buy a specified amount of alternative currency (e.g. EUR) in exchange for a specified amount of the original currency (e.g. USD);
- (3) The Islamic bank will give an undertaking to a Counterparty Bank to enter into a FX trade which mirrors the undertaking given by the Client to the Islamic bank;
- (4) Islamic bank completes a contemporaneously but separate *murabahah* transaction (CM2) with the Counterparty Bank and receives the *murabahah* price. This transaction will be concluded for spot settlement with no deferred payment;
- (5) At maturity, subject to the prevailing FX rates, the Islamic bank may enter into a FX trade with the Counterparty Bank pursuant to the Islamic bank's undertaking;
- (6) At maturity, subject to the prevailing FX rates, the Islamic bank may enter into an FX trade with the Client pursuant to the Client's undertaking. The Islamic bank pays the *Murabahah* principal to the client in the original currency and (if appropriate) completes the FX trade with the client to exchange the original currency with the alternative currency. The profit is paid in the original currency.

3.9.4 Further Risk Mitigation Provisions Inherent in Islamic Banking

IFIs have to absorb the risks that they cannot transfer or mitigate. This is done through the use of collateral, guarantees, loss reserves and provisions, allocation of capital through the Risk-adjusted Return on Capital (RAROC) exercise, risk weightings, *etc.* Sundararajan and Errico (2002) argue that in addition the traditional risk mitigants, the management of the risk-return mix, particularly of the unrestricted PSIA, could be used as a key tool of risk management. Appropriate policies toward profit equalization reserves (and possibly investment risk reserves), coupled with appropriate pricing of investment accounts to match the underlying risks, would improve the extent of overall risk sharing by these accounts.

Also, under a PLS system the Islamic bank is subject to higher screening and monitoring, making the danger of insolvency lower, provided that PLS principles are rigorously applied. Managing the risk-sharing of IAHs through proper pricing, reserving, and disclosure policies would greatly enhance risk management in Islamic banks.

Chapra (2007) argues that PLS might go a long way to prevent financial crises, as it would substantially reduce the moral hazard problems associated with prudential supervision of banking, in particular the incentive given by deposit guarantees for high-risk lending and investment. In addition, it is argued that under PLS, there would be more discipline in the system. Depositors would be more interested in the soundness of the banks and in the quality of the banks' assets, in order to prevent having to accept negative returns. Banks would also have a better incentive to be careful in selecting borrowers and projects.

The PLS feature of Islamic banking, therefore, provides an inherent risk management tool that could be of great help to banks and the whole system if properly implemented. Under capital allocation, the IFSB supervisory discretion formula is a step in the right direction as it acknowledges the risks assumed by the PSIA holders and incentivise banks –

through lower capital requirements – to adopt more PLS financing modes as explained in Chapter 4.

In practice, however, the losses of Islamic banks are not shared with PSIA holders, and often a minimum yield on deposits is ‘implicitly’ guaranteed. As a result the potential benefits of the PLS finance cannot be realised. According to Sundararajan (2007), available empirical evidence shows that in practice, because Islamic banks try to provide *Shari’ah*-compliant alternative to conventional products, there is considerable smoothing of the profits paid out to the unrestricted IAHs, and correspondingly reduce sharing of risk between the bank and the holders of such investment accounts, with banks bearing the majority of the risk. The extend of this *de facto* departure from risk-sharing principle for unrestricted IAHs varies between countries; in some countries banks are expected – though not legally bound – to bear virtually all of the asset risk, while in others it is simply a matter of competitive pressure. Under current practices, reserves are passively adjusted to provide a stable return to unrestricted IAHs, effectively not allowing any risk mitigation through investment account management. For example, many banks with sharply divergent risk profiles and returns on assets seem to be offering almost identical returns on unrestricted IAHs, and these are broadly in line with the general rate of return on deposits in conventional banks.

Moreover, most Islamic banks realise the risk management gaps in their current business models especially in areas of liquidity and hedging. Therefore, Islamic banks traditionally have been holding a comparatively larger proportion of their assets in reserve accounts, resulting in higher buffers than conventional banks.

Finally, some constraints attached to the status of IFIs, as sellers and buyers of tangible goods – as opposed to conventional banks intermediating between cash inflows and outflows with different maturities – also have risk-mitigating benefits. One rule of the key principles of modern Islamic finance states that any financial transaction should be backed by a tangible, identifiable underlying asset. This is a powerful way for the IFI to secure, at least in principle, strong access to the collateral backing the transaction. In

short, IFIs naturally have a high level of collateralisation on their credit portfolios, and thus are in a position to somewhat reduce their economic, if not regulatory, exposures at default. In addition, IFIs have in principle greater visibility in terms of the economic allocation of the funds they supply to borrowers. Indeed, contrary to a conventional financial institution where a customer is not obliged to disclose the purpose of its loan, the IFI finances the acquisition of an identifiable asset for which legal ownership belongs, in most cases, to the bank until full repayment is made.

3.10 SURVEYING RISK MANAGEMENT PRACTICES IN ISLAMIC BANKS: A REVIEW OF EMPIRICAL RESEARCH

Given the importance of risk management for the survival of financial institutions, it is no surprise that there are numerous conceptual studies about risk management frameworks and techniques for conventional banks. Also, there are many empirical findings that examine different aspects of risk management practices by various financial institutions.

In the context of Islamic banking, however, risk management is an under-researched area. A few studies have been carried out on the theoretical side of risk management in Islamic banking, including the work of Haron and Hin Hock (2007) on market and credit risk, who explain the inherent risk, *i.e.* credit and market risk exposures in IFIs. They also illustrate the importance of displaced commercial risk in Islamic banking. 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 IFIs differ and may be more complex than those of conventional financial institutions, the principles of credit and market risk management are applicable to both.

Apart from those two risks, Archer and Haron (2007) show that IFIs are exposed to a number of operational risks that are different from those face 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 IFIs operational risk is very important consideration.

Other conceptual research about risk management in Islamic finance include Iqbal and Mirarkor (2007), Akkizidis and Khandelwal (2008), Grais and Kulathunga (2007), Greuning and Iqbal (2007), and Sundararajan (2007).

On the empirical side, research about risk management in Islamic finance is limited. An earlier study by Khan and Ahmed (2001) is still the most profound empirical research that examined different aspects of risk management issues in IFIs. They sent out questionnaires to 68 Islamic financial institutions in 28 countries and also visited Bahrain, Egypt, Malaysia, and the UAE to discuss issues related to risk management with the officials of the Islamic financial institutions. A total of 17 questionnaires were received from 10 countries in their study, which touched on different aspects of risk management in IFs. Their study first identified the severity of different risks and then examined the risk management process in Islamic banks. Among the traditional risks facing Islamic banks, mark-up risk was ranked the highest, followed by operational risk. The results show that Islamic financial institutions face some risks that are different from that faced by conventional financial institutions. These banks reveal that some of these risks are considered more serious than the conventional risks faced by financial institutions. Profit-sharing modes of financing (diminishing *musharakah*, *musharakah*, and *mudarabah*) and product-deferred sale (*salam* and *istisna'a*) are considered more risky than *murabahah* and *ijarah*. Other risks arise in Islamic banks, as they pay depositors a share of the profit that is not fixed ex ante. The results of survey of risk perception in different modes of financing by Khan and Ahmed (2001), thus, show that the risk level is considered elevated as depicted by Table 3.4.

Table 3.4: Risk Perception in Different Modes of Financing

Contract	Credit Risk	Mark-up Risk	Liquidity Risk	Operational Risk
<i>Murabahah</i>	2.56	2.87	2.67	2.93
<i>Mudarabah</i>	3.25	3.00	2.46	3.08
<i>Musharakah</i>	3.69	3.40	2.92	3.18
<i>Ijarah</i>	2.64	3.92	3.10	2.90
<i>Istisna'a</i>	3.13	3.57	3.00	3.29
<i>Salam</i>	3.20	3.50	3.20	3.25
<i>Diminishing Musharakah</i>	3.33	3.40	3.33	3.40

Note: The rank has a scale of 1 to 5, with 1 indicating ‘Not Serious’ and 5 denoting ‘Critically Serious’

Source: Khan and Ahmed (2001: 64)

Their research also indicates that Islamic banks have been able to establish better risk management policies and procedures than measuring, mitigating, and monitoring risks, with internal controls somewhere in the middle. The results also point out that the lack of some instruments (like short-term financial assets and derivatives) and of a money market hampers risk management in IFIs. There is a need for research in these areas to develop instruments and their markets that are compatible with the *Shari'ah*. At the government level, the legal system and regulatory framework of the Islamic financial system need to be understood and appropriate policies should be undertaken to cater to the needs of IFIs.

Furthermore, Khan and Prodhan (1992) carried a survey that focused on the integration of Islamic banks with conventional banking and the problems arising from the potential conflict, such as the need for convertible instruments, proper accounting procedures, etc. they concluded that with an Islamic banking system it becomes more important for the government to take an active position in terms of enforcing regulations and overseeing economic activity. “If policy measures are piecemeal and fiscal intervention uncoordinated, then an inefficient conventional banking and fiscal sector is replaced by an equally inefficient Islamic system” (Khan and Prodhan, 1992: 20)

Moreover, Samad (2004) empirically studied the performance differences between conventional and Bahraini Islamic banks by *t*-testing nine accounting ratios by studying

twenty one banks, out of which six were Islamic, over the period 1991-2001. He concluded that both types of banks performed equally well in terms of profitability and liquidity. However, Islamic banks seem to be less exposed to credit risk.

In a recent IMF research, Heiko and Cihak (2008) used data from 77 Islamic banks and 397 commercial banks across 18 jurisdictions with a substantial presence of *Shari'ah*-compliant banks to provide a cross-country empirical analysis of the role of these banks in financial stability using their so-called *z*-scores. The *z*-score combines a bank's capitalisation, profitability, and a measure of risk faced by the bank into a single index. The interpretation of the *z*-score is straightforward: the lower the score, the more likely it is that a bank will run out of capital. Defining large banks as those with total assets of more than USD 1 billion and small banks as all others, the study found that:

- (i) small Islamic banks tend to be financially stronger (that is, have higher *z*-scores) than small and large conventional banks;
- (ii) large conventional banks tend to be financially stronger than large Islamic banks; and
- (iii) small Islamic banks tend to be financially stronger than large Islamic banks.

A plausible explanation of the contrast between the high stability in small Islamic banks and the relatively lower stability in larger ones is that it is significantly more complex for Islamic banks to adjust their credit risk monitoring system as they become bigger. For example, the PLS modes used by Islamic banks are more diverse and more difficult to standardise than loans used by conventional banks. As a result, as the scale of the banking operation grows, monitoring of credit risk rapidly becomes much more complex, which results in a greater prominence of problems relating to adverse selection and moral hazard. Another explanation is that small banks concentrate on low risk investments and fee income, while large banks do more PLS business. They also found that as the presence of Islamic banks grows in a country's financial system, there is no significant impact on the soundness of other banks. This suggests that Islamic and conventional banks can co-exist in the same system without substantial 'crowding out' effects through competition and deteriorating soundness.

More recently, Shaikh and Jalbani (2009) also provided a differential analysis of risk management procedures in Islamic banking. Studying a sample of four banks, this research used *ROE* as the benchmark for the comparative performance of Islamic banks and conventional banks. The study concluded that there is a strong relationship between the *ROE* of both Islamic and conventional banks, and that the risk management procedures in Islamic banks are adequate to mitigate their largely equity-based investments and give their customers adequate returns which are comparable with conventional banks. The paper optimistically concluded that equity-based business of Islamic banks posing a slightly more risk than conventional banks is well mitigated by Islamic banks through their effective and adequate distinct risk management procedures. However, this research does not agree with the research methodology and the findings of his study.

More relevant to this study is Rosman and Abdul Rahman's (2010) study, which found that the lack of effective risk management practices for both liquidity risks and rate of return risk/displaced commercial risk will be the prime concern for Islamic banks and regulatory agencies. They argue that the inadequacy of risk management practices by Islamic banks that may threaten their sustainability especially during financial crises. They assert that they are still lacking on the use of technically advanced risk measurement approaches among Islamic banks. Hence, IFIs need to further enhance the risk measurement approaches to measure the complex risks such as the liquidity risk and rate of return risk/displaced commercial risk. Islamic banks are also found to be mostly complacent in their risk mitigation approaches as they continued to utilise the risk mitigation techniques that are widely used by the conventional banks. These findings lead to the need to develop the unique *Shari'ah*-compliant risk mitigation techniques

Finally, Noraini *et al.* (2009) attempted to ascertain the perceptions of Islamic bankers about the nature of risks, risk measurement, and risk management techniques in their banks. The study covered 28 Islamic banks in 14 countries, using a questionnaire survey. The results indicated that Islamic banks are mostly exposed to similar types of risks to those in conventional banks, but that there are differences in the level of the risks.

However, the study found no evidence that Islamic bankers in different countries perceived risks differently. The study recommends that each risk should be assessed separately for each financial instrument in order to facilitate appropriate risk management. The findings also suggest that Islamic banks are perceived to use less technically advanced risk measurement techniques, of which the most commonly used are maturity matching, gap analysis and credit ratings. In addition, Noraini *et al.*'s (2009) research shows that Islamic banks are not fully using the *Shari'ah*-compliant risk mitigation methods, which are different from the ones used by conventional banks. The findings of their study have both theoretical and policy implications for the issue of transparency, with particular reference to risk reporting in Islamic banks.

3.11 CONCLUSION

Islamic banks are, for the most part, still small and in the start-up phase of development in an industry which is itself relatively young. Whereas risk management is practiced widely in conventional financial markets, it is underdeveloped in Islamic finance. This gives rise to an array of risks which are not well comprehended yet. Moreover, risks unique to Islamic banks arise from the specific features of Islamic contracts; and the overall legal, governance, and liquidity infrastructure of Islamic finance. Literature review reveals that the infrastructural environment of most Islamic banks is characterized by weak transparency, high concentration risks, lack of commonly accepted *Shari'ah*-compliance and accounting standards, and the shortage of liquidity and hedging products. To solve these problems Islamic finance institutions like the AAOIFI, IFSB, LMC, IILM, IIFM, and others have developed a core set of accounting, liquidity, governance, risk management, auditing, and *Shari'ah* standards. Nevertheless, IFIs still face risks connected to the enforceability of promises, an efficient management of funding and asset liquidity, and many other limitations. Several areas such as asset pricing, hedging, and risk mitigation require, therefore, further research. For example, in the absence of a risk-free asset, how will the Capital Asset Pricing Model (CAPM) behave? Or using Black's zero-beta model, how will the model behave with restrictions on short selling? Several such issues have not been researched yet (Askari *et al.*, 2009). Adopting accepted risk

models from the conventional banking practice or making suitable adjustments to best practices pose major challenges.

The future of Islamic banking will highly depend on innovation. The immediate need is to develop instruments that enhance liquidity; to develop secondary money and interbank markets; to perform asset-liability and risk management; and to develop Islamically acceptable risk hedging tools.

In some ways, Islamic banking could be less risky than the conventional banking industry because there are several features that could make IFIs less vulnerable to risk. For instance, Islamic banks are able, in theory, to pass through a negative shock on the asset side to the PSIA depositors. The risk-sharing arrangements on the deposit side provide another layer of protection to the bank. In addition, it could be argued that the need to provide stable and competitive returns to investors, the shareholders' responsibility for negligence or misconduct, and the more difficult access to liquidity put pressures on Islamic banks to be more conservative (Heiko and Cihak, 2008), and to keep liquidity buffers. Furthermore, because depositors share in the risks (and typically do not have deposit guarantee), they have more incentives to exercise tight oversight over bank management. Finally, Islamic banks have traditionally been holding a comparatively larger proportion of their assets than commercial banks in reserve accounts. So, even though Islamic investments are more risky than conventional instruments, these higher risks have traditionally been compensated for by higher buffers.

In 2007, Michael Ainley, Head of Wholesale Banking at the FSA stated at the Islamic Finance Summit in London that "Risk knows no religion" (Ainley, 2007). He obviously did not get it fully right when he thought that risks are similar for Islamic and conventional banks. Although conventional and Islamic markets share similar risks, the level of risk is different and certainly higher in the case of today's Islamic banking. A common perception about Islamic banking is that it is expected to be safer and more resilient than the debunked Wall Street model, a perception which is not entirely correct. Advocates of Islamic banking have been recently, especially after the start of the credit

crisis, claiming that Islamic finance is a safe haven. The truth is that Islamic banking in its current state can be riskier than conventional banking because of the additional risk management challenges and constraints the industry faces.

In theory, Islamic banking is safer than conventional banking. The theory is, unfortunately, a long way from fact in its current financial practice. Since the risk management needs of Islamic banking are not being met yet, the system is not functioning at its full potential. There is a growing realisation that the long-term sustainable growth of Islamic banking will depend largely on the development of risk-sharing products. Chapter 5 thoroughly explains that Islamic banking could be a safe haven provided that its broader principles on a macro-level are entirely followed by all participants. In other words, when the short-terms risks and the longer-term stability are put together, the outlook for the Islamic banking industry looks less risky than its critics claim.

After mapping out the risk and risk management techniques and also the practices, the following chapter continues with capital adequacy in Islamic banks, which is further explored, like the issues in this chapter, empirically in the later chapter.

CHAPTER 4

CAPITAL ADEQUACY FOR ISLAMIC BANKS: A SURVEY

“Capital isn’t scarce; vision is”

Sam Walton

4.1 INTRODUCTION

Financial liberalisation, as part of globalisation, has keenly been followed by developing countries since the 1990s. Several restrictions were eased, and self-regulation was considered to be the motivating factor. However, the developments show that everything did not work well. There were several instances of malpractice, financial frauds, and some failures. In responding to this, regulators started looking at the existing set of standards and ways to overcome the issue of balancing control and freedom. From simple capital provisions to comprehensive frameworks for risk management, the practice of risk management, as a result, has undergone wholesale transformation over the past two decades (Akkizidis and Khandelwal, 2007). More systematic transformation has taken place during the current straitened times. It is a fact that each country has its own set of regulations based on several parameters. The most common among them is the requirement to hold minimum capital indexed to the activities of the bank.

Capital adequacy is at the core of the supervisory activities all over the world. It is an important benchmark for the soundness of the financial institutions. It is gaining more prominence after the recent credit crunch which saw numerous financial institutions collapsing because their capital was not big enough to absorb the risks they were taking. The developments have shown that the market turmoil turned out to be deeper and more enduring than previously anticipated and that financial markets are failing to sustain the normal flow of capital. Regulators, banks, and industry participants realized that capital is a critical factor for the intrinsic strength of banks. Therefore, this chapter is designated to discuss capital adequacy in Islamic banking, which is explored empirically in the

following chapters with the opinions of sample bankers, financiers, *Shari'ah* scholars, and academics.

The fundamental principle that capital is the currency of risk and adequate capital protects against distress applies equally to all banks. Therefore, the implementation of Basel II is as critical to Islamic banks as it is to their conventional counterparts. With necessary adjustments, the three pillars of Basel II could be applicable to Islamic banks. The need for supervisory oversight in Pillar 2 can hardly be overemphasized, as market discipline through disclosure will provide greater transparency and benefit to Islamic banks. The capital treatment of PSiAs adds complexity to capital requirements for Islamic banks. Notwithstanding the loss-absorbing features of the PSiAs, in practice they behave like normal deposits and most regulators do not treat them as having capital features. Hence, the risk-sharing characteristic of PSiAs requires special capital treatment.

The previous two chapters have dealt with the evolution of Islamic banking and the major types of risks in conventional and Islamic banks. The present chapter provides a brief review of the Basel II Accord and is hence largely based on documents issued by the BCBS. A brief summary of the original Basel I Accord is presented, highlighting the major limitations of the first Accord. A summary of the three Pillars of Basel II and the forthcoming Basel III standards and their applicability for IFIs is also presented. The IFSB has issued capital adequacy standards for the Islamic financial industry, which are discussed in detail. This chapter, however, does not thoroughly discuss Basel II, nor does it examine every single detail of the IFSB papers as plenty of literature exists about Basel Accords and other Bank for International Settlements (BIS) guidelines, and the IFSB papers are brief and simple enough to be self-explanatory. This chapter highlights the specifics of capital adequacy requirements for IFIs, explains the differences between conventional Basel Accords and the Islamic version provided by the IFSB, and illustrates how capital adequacy requirement can be used as a tool for risk mitigation for Islamic banks.

4.2 SIGNIFICANCE OF CAPITAL IN BANKING

Nearly all jurisdictions with active banking markets require banks to maintain a minimum level of capital. Capital plays an important role in any business but it is critically important in case of banks, as it serves as a foundation for a bank's future growth and as a cushion against its unexpected losses. Adequately capitalised banks as well managed banks are better able to withstand losses and to provide credit to consumers and businesses alike throughout the business cycle, particularly during downturns. Hence, capital is one of the key determinants and indicators of the soundness of a bank, not only because adequate capital serves as a safety net but also it is the ultimate determinant of a bank's lending and investment capacity. Adequate levels of capital thereby help to promote public confidence in the banking system.

Banks by the nature of their business have a lower capital-to-liabilities ratio than other types of business. This low ratio is a reflection of the nature of the intermediation business and acceptance of large amounts of liabilities in the form of deposits. To encourage prudent management of the risks associated with the unique balance sheet structure, regulators require banks to maintain a certain level of capital. The idea behind such a requirement is that a bank's balance sheet should not be expanded beyond the level of risks its capital can absorb. The technical challenge, however, for both banks and supervisors, has been to determine how much capital is necessary to serve as a sufficient buffer against unexpected losses. If capital levels are too low, banks may be unable to absorb high levels of losses. On the other hand, excessively low levels of capital increase the risk of bank failures which, in turn, may put depositors' funds at risk. Under-capitalised banks are highly prone to the risk of insolvency and can also suffer from retarded growth. If capital levels are too high, banks may not be able to make the most efficient use of their resources. A bank which is over-capitalised will have low return on its capital and will not be able to pay decent dividends to its shareholders (Jorion and Khoury, 1996). Thus, arriving at an optimal level of capital is in the best interest of banks and shareholders. Both financial intermediaries and regulators are, therefore, sensitive to

the dual role of capital. Financial intermediaries tend to focus more on the earnings-generating role, while regulators tend to be focused on the stability-cushion role.

4.3 CLASSIFICATION OF CAPITAL

Defining what constitutes capital is a long-debated issue. However, there is a wide acceptance of the capital structure that has been stipulated by the BCBS, which segregates capital into three categories as set out in Table 4.1.

Table 4.1: Classification of Capital in the Basel Accords

<i>Classification</i>	<i>Contents</i>
Tier 1 (core capital)	Ordinary paid-up share of capital or common stock, disclosed reserves from post-tax retained earnings, non-cumulative perpetual preferred stock (goodwill to be deducted)
Tier 2 (supplementary capital)	Undisclosed reserves, asset revaluation reserves, general provisions or general loan-loss provisions, hybrid (debt-equity) capital instruments, and subordinated term debts
Tier 3	Unsecured debt: subordinated and fully paid up, to have an original maturity of at least two years and not be repayable before the agreed repayment date unless the supervisory authority agrees

Source: Greuning and Iqbal (2008: 223)

In general, according to BCBS (2006), the capital of a bank should have three important characteristics:

- (i) It must be permanent;
- (ii) It must not impose mandatory fixed charges against earnings; and
- (iii) It must allow for legal subordination to the rights of depositors and other creditors.

4.4 STEPS IN THE BASEL ACCORD

One cannot discuss capital adequacy without mentioning the renowned Basel Accord. The BIS was established on 17 May, 1930; it is the oldest international financial

institution. It provides a platform for consultative cooperation among the central banks. The role of BIS has undergone change as per the needs of the international financial sector. BIS now also acts as an institution for collection, compilation, and dissemination of economic and financial statistics. It actively promotes global financial stability, and also performs the traditional banking function for the central banks community (gold and foreign exchange transactions). It has several committees working on different aspects of international financial stability. The BCBS, as part of the BIS structure, was formed at the end of 1974 by the Governors of G-10 nations. The BCBS issued a series of documents beginning from 1975 on banking supervision (Akkizidis and Khandelwal, 2007).

4.4.1 The Basel I Accord

The 1988 Basel Capital Accord set out the first internationally accepted definition of, and a minimum measure for, bank capital. The Basel Committee designed the 1988 Accord as a simple standard so that it could be applied to banks in several jurisdictions. It requires banks to divide their exposures up into broad ‘classes’ reflecting similar types of borrowers. A minimum capital of 8 percent of risk-weighted assets was given. For example, 0 percent for cash, 20 percent for claims on multilateral development banks, 50 percent for residential mortgages, and 100 for loans to private sector. This risk-based capital charges roughly attempted to create a greater penalty for riskier assets (Jorion and Khoury, 1996).

While the 1988 Accord was initially applied only to internationally active banks in the G10 countries, it quickly became acknowledged as a benchmark measure of a bank’s solvency and is believed to have been adopted in some form by more than 100 countries (KPMG, 2007).

4.4.2 The 1996 Amendment

The 1988 Basel Accord was soon proved insufficient and rendered obsolete by rapid changes in the financial sector. The amendment covered the four major risk categories of market risk (Akkizidis and Khandelwal, 2007: 82-83):

- a. Interest rate-related instruments
- b. Equities
- c. Foreign exchange risk
- d. Commodities

4.4.3 Issues with the Basel I Accord

The world financial system has seen considerable changes since introduction of the Basel I Accord. Financial markets have become more volatile, and a significant degree of financial innovation has taken place. There have also been incidents of economic turbulence leading to widespread financial crises – for example, in Asia in 1997 and in Eastern Europe in 1998. In addition, advances in risk management practices, technology, and banking markets have made the 1988 Accord’s simple approach to measuring capital less meaningful for many banking organisations. For example, the 1988 Accord sets capital requirements based on broad classes of exposures and does not distinguish between the relative degrees of creditworthiness among individual borrowers.

In a similar manner, improvements in internal processes, the adoption of more advanced risk measurement techniques, and the increasing use of sophisticated risk management practices, such as securitisation, have changed leading organisations’ monitoring and management of exposures and activities has been the result of Basel I. However, supervisors and sophisticated banking organisations have found that the static rules set out in the 1988 Accord have not kept pace with advances in sound risk management practices. This suggests that the existing capital regulations did not reflect banks’ actual business practices. In other words, it was not sufficiently risk sensitive (KPMG, 2007).

4.4.4 The Basel II Accord

In June 2004, the Basel Committee finalised a comprehensive revision to the Basel Accord. In the European Union, the new Capital Adequacy Directive began to apply to all banks from 2007 onwards, with the most advanced methods being viable from 2008.

US regulators decided to apply Basel II to a small number of large banks, with other banks subject to a revised version of Basel I.

4.4.4.1. How does Basel II differ from the 1988 Basel Capital Accord?

The Basel II Framework is more reflective of the underlying risks in banking and provides stronger incentives for improved risk management. It builds on the 1988 Accord's basic structure for setting capital requirements and improves the capital framework's sensitivity to the risks that banks actually face. This will be achieved in part by aligning capital requirements more closely to the risk of credit loss and by introducing a new capital charge for exposures to the risk of loss caused by operational failures (EIIB, 2010c).

The Basel Committee, however, broadly maintained the aggregate level of minimum capital requirements, while providing incentives to adopt the more advanced risk-sensitive approaches of the revised Framework. Basel II combines these minimum capital requirements with supervisory review and market discipline to encourage improvements in risk management.

Basel II also covers a wide range of risks which were not previously included in the original accord, such as operational risk, country risk, legal risk, concentration risk, liquidity risk, and reputational risk. Basel II marks a shift from transaction-based supervision to risk-based supervision (KPMG, 2007).

4.4.5 The Three Pillars of Basel II

The overarching goal for the Basel II Framework is to promote the adequate capitalisation of banks and to encourage improvements in risk management, thereby strengthening the stability of the financial system. This goal was accomplished through the introduction of 'three pillars' that mutually reinforce each other and that create incentives for banks to enhance the quality of their control processes. The first pillar

represents a significant strengthening of the minimum requirements set out in the 1988 Accord, while the second and third pillars represent innovative additions to capital supervision. Figure 4.1 provides an overall structure of the Basel II framework and the sub components of each of its main three pillars.

When estimating the minimum capital requirements, there are two types of capital that can be calculated by financial institutions: economic capital and regulatory capital. As opposed to regulatory capital, which is set by the regulators, economic capital is the amount of capital estimated by the bank's management to be maintained. Setting a higher limit for economic capital provides some room for leverage for banks. Economic capital is covered by Pillar 2, while regulatory capital is covered by Pillar 1 of the Basel II Accord.

Pillar 1 of the new capital framework revises the 1988 Accord's guidelines by aligning the *minimum capital requirements* more closely to each bank's actual risk of economic loss.

Basel II improves the capital framework's sensitivity to the risk of credit losses generally by requiring higher levels of capital for those borrowers thought to present higher levels of credit risk, and vice versa. The calculation of the minimum capital is presented with the help of the Capital Adequacy Ratio (CAR), which is defined by the following equation:

CAR computation according to Basel II Accord

$$\frac{\text{Capital (Tier 1, 2, 3 and deductions)}}{\text{RWA (Credit risk + Market risk + Operational risk charge)}} = \text{Bank's capital ratio} \geq 8\%$$

The equation defines the CAR as the ratio of the bank's capital (Tier I and Tier II) to its risk-weighted assets, and it should not be lower than 8 percent. However, the regulators in each jurisdiction are given the discretion to impose higher percentage if required).

Three options are available to allow banks and supervisors to choose an approach that seems most appropriate for the sophistication of a bank's activities and internal controls.

4.4.5.1. Credit risk capital charge

Credit risks are of such great importance to banks from the regulators' perspective that the original 1988 Capital Accord required capital only against credit risks for on-balance sheet and off-balance sheet assets. The primary concern of regulators is that banks should be aware of their credit risk and maintain a minimum level of capital to overcome any instability caused by default by a client. Basel II classifies assets into five risk categories (0%, 10%, 20%, 50%, and 100%), depending on their rating.

Under the 'Standardised Approach' to credit risk, banks that engage in less complex forms of lending and credit underwriting and that have simpler control structures may use external measures of credit risk to assess the credit quality of their borrowers for regulatory capital purposes.

Banks that engage in more sophisticated risk-taking and that have developed advanced risk measurement systems may, with the approval of their supervisors, select from one of two 'Internal Rating Based' (IRB) approaches to credit risk. Under an IRB approach, banks rely partly on their own measures of a borrowers' credit risk to determine their capital requirements, subject to strict data, validation, and operational requirements (BCBS, 2006).

4.4.5.2. Market risk capital charge

The BCBS described detailed methods for the calculation of capital charges for (i) foreign exchange risk, (ii) interest rate risk, (iii) equity position risk, (iv) commodities risk, and (v) derivative trading. The capital charge for foreign exchange risk may exclude structured foreign exchange positions. The capital charge for interest rate risk is applied

to the current trading book items. The Committee has prescribed two alternative models to measure market risk: the Standardized Approach (SA) and the Internal Model Approach (IRA).

4.4.5.3. Operational risk capital charge

Unlike Basel I, which focused on credit risk, Basel II includes an explicit measure for operational risk. This new capital accord requires all banks to hold adequate capital against potential operational losses. The new framework establishes an explicit capital charge for a bank's exposures to the risk of losses caused by failures in systems, processes, or staff, or to losses that are caused by external events such as natural disasters. Similar to the range of options provided for assessing exposures to credit risk, banks will choose one of three approaches for measuring their exposures to operational risk that they and their supervisors agree reflects the quality and sophistication of their internal controls over this particular risk area. Banks have the option to choose from Basic Indicator Approach, Standardised Approach, or Advanced Measurement Approach.

By aligning capital charges more closely to a bank's own measures of its exposures to credit, market, and operational risks, the Basel II Framework encourages banks to refine those measures. It also provides explicit incentives in the form of lower capital requirements for banks to adopt more comprehensive and accurate measures of risk, as well as more effective processes for controlling their exposures to risk.

While understanding the risks and the allocation of capital under Pillar I is a critical step, the core elements of supervision (Pillar 2) and market discipline (Pillar 3) are equally important. The Basel committee believes that a well-designed capital requirement standard cannot be made effective in the absence of strong and prudent supervision.

Pillar 2 of the new capital framework recognises the necessity of exercising an effective *supervisory review* of banks' internal assessments of their overall risks to ensure that

bank management is exercising sound judgement and has set aside adequate capital for these risks.

Supervisors will evaluate the activities and risk profiles of individual banks to determine whether those organisations should hold higher levels of capital than the minimum requirements in Pillar 1 would specify, and to see whether there is any need for remedial actions.

The Committee expects that, when supervisors engage banks in a dialogue about their internal processes for measuring and managing their risks, they will help to create implicit incentives for organisations to develop sound control structures and to improve those processes.

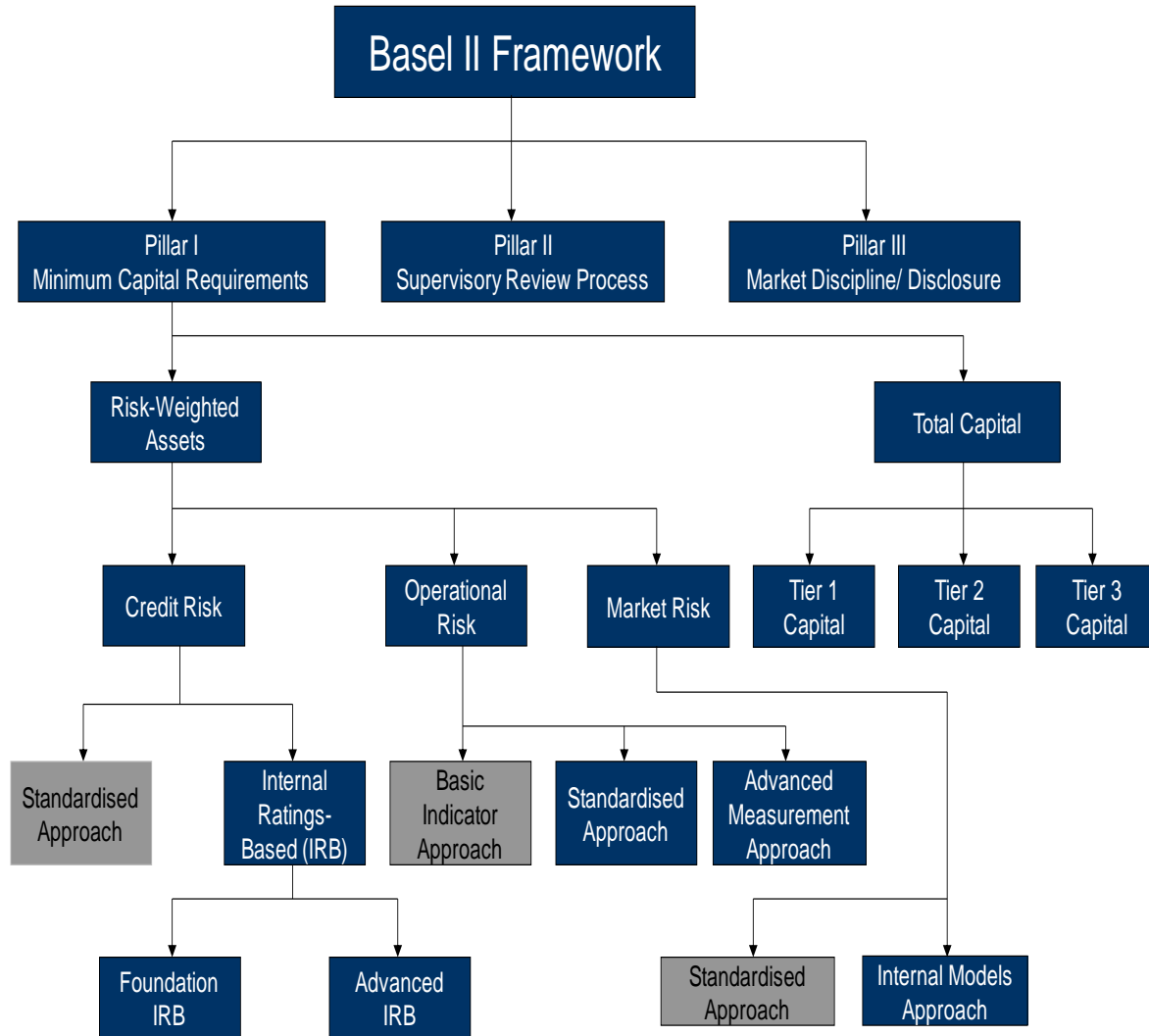
The Committee cautions that increased capital should not be taken as the only option for addressing risks. It advised the use of other means such as: strengthening risk management, applying internal limits, strengthening the level of provisions and reserves, and improving internal controls. Capital should not be treated as a substitute for inadequate control or risk management processes.

Pillar 3 leverages the ability of *market discipline* to motivate prudent management by enhancing the degree of transparency in banks' public reporting. It sets out the public disclosures that banks must make that lend greater insight into the adequacy of their capitalisation. The disclosure requirements are based on the concept of materiality, *i.e.* banks must include all information where omission or misstatement could change or influence the decisions of information users. The only exception is proprietary or confidential information, the sharing of which could undermine a bank's competitive position.

The Committee believes that, when marketplace participants have a sufficient understanding of a bank's activities and the controls it has in place to manage its

exposures, they are better able to distinguish between banking organisations so that they can reward those that manage their risks prudently and penalise those that do not.

Figure 4.1: Structure of the Basel II Accord



The shaded Approaches are the ones most commonly used by Islamic banks.

4.4.6 Criticism and Amendments to the Basel II Accord

As previously mentioned, after the Asian and the Eastern European financial crises in the 1990s, there was an increasing concern that the Basel I Accord did not provide an effective means to ensure that capital requirements match a bank's true risk profile. The

risk measurement and control aspects of the Basel I accord needed to be improved, which lead to introduction of the Basel II Accord. Similar concerns are being raised about Basel II after the current financial tsunami engulfed the world since 2008. As a result, voices have been raised criticising Basel II and requesting a new Accord for measuring and controlling capital requirements (British Bankers' Association, 2009).

“Shortcomings in the Basel II will be definitely addressed” as stated by Engel (2010). This is essential, as the crisis has revealed that, on its own, without a strong liquidity pillar, Basel II is impotent. The Basel regime, which was always meant to be an evolutionary process, will change. The trend – apparent already before the crisis – towards loosening the definition of regulatory capital will be reversed. Definitions of capital will tighten and regulatory capital requirements will increase. Capital must no longer be looked at in isolation. The regulations must recognise the interplay between liquidity and capital and the ability of liquidity problems to become capital problems. In addition to developing a more prescriptive regime for liquidity risk, future capital rules should make excessive leveraging incrementally more expensive and address procyclicality, potentially by requiring banks to maintain larger capital buffers over the cycle (British Bankers' Association, 2009). It is worth mentioning that even before the crisis, Basel II has been widely criticised for encouraging pro-cyclicality, which dynamic provisioning is designed to offset.

The Basel Committee met in March 2009 to discuss embracing provisioning and higher capital. A statement on the BIS website stated that “This will be achieved by a combination of measures such as introducing standards to promote the build-up of capital buffers that can be drawn down in periods of stress, strengthening the quality of bank capital, improving the risk coverage of the capital framework, and introducing a non-risk supplementary measure”. On 13 July 2009, the BCBS announced that proposals for enhancing the Basel II framework have been finalised. The Committee is strengthening the treatment for certain securitisations in Pillar 1 (minimum capital requirements). It is introducing higher risk weights for resecuritisation exposures to better reflect the risk

inherent in these products and is also requiring that banks conduct more rigorous credit analyses of externally rated securitisation exposures.

The supplemental Pillar 2 guidance addresses several notable weaknesses that have been revealed in banks' risk management processes during the current financial turmoil. The areas addressed include:

- (i) firm-wide governance and risk management;
- (ii) capturing the risk of off-balance sheet exposures and securitisation activities;
- (iii) managing risk concentrations;
- (iv) providing incentives for banks to better manage risk and returns over the long term; and
- (v) sound stress testing practices; and sound compensation practices.

The Pillar 3 (market discipline) requirements have been strengthened in several key areas, including:

- (i) securitisation exposures in the trading book;
- (ii) sponsorship of off-balance sheet vehicles;
- (iii) resecuritisation exposures; and
- (iv) pipeline and warehousing risks with regard to securitisation exposures

On 17 December 2009, the BCBS issued two consultative documents, one entitled 'Strengthening the Resilience of the Banking Sector' and the other 'International Framework for Liquidity Risk Measurement, Standards and Monitoring'. These documents contain proposals to strengthen global capital and liquidity regulations with the goal of promoting a more resilient banking sector (BCBS, 2009b). Together with the measures already approved in July 2009, they form the core of the new Basel III Accord. In fact, Basel II is correct in principle but was wrong in implementation. Regulators should focus more on the implementation side.

4.5 BASEL II AND ISLAMIC BANKS

Islamic finance has become part of the global financial industry since the early 1990s; it is, therefore, subjected to international standards and regulations. The capital adequacy, hence, will remain as a core issue for risk management, whether it is for conventional banks or Islamic banks, as the concept of having sufficient capital cannot be refuted in Islamic finance. Although the risks in Islamic banks are more contract-centric rather than conventional product-centric, Basel II standards can still be applied with some adjustments. Thus, application of Basel II is a matter of adoption of the standards to the needs of Islamic banks.

4.5.1. Pillar 1

Unlike depositors of conventional banks, the contractual agreement between Islamic banks and IAHs is based on the concept of profit and loss sharing, which makes IAHs 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. This has serious implications for the determination of adequate capital for Islamic banks as highlighted by Grais and Kulathunga (2007: 79) in the following points:

- (i) PSIAAs should not be subject to any capital requirements other than to cover liability for negligence and misconduct by the bank, and to winding-down expenses;
- (ii) Investments funded by current accounts carry commercial banking risks and should be subject to adequate risk weights and capital allocation;
- (iii) Restricted PSIAAs on the liabilities side form a collection of heterogeneous investments funds resembling a fund of funds. Therefore, banks holding such funds should be subject to the same capital requirements as are applicable to fund managers;

- (iv) The presence of displaced commercial risk and the practice of income smoothing have indirect implications for Islamic banks' capital adequacy, which a regulator may take into account when determining the CAR;
- (v) Islamic banks acting as intermediaries may face a moral hazard issue. Since, as agent, the bank is not liable for losses but shares the profits with the IAHs, it may have an incentive to maximize the investments funded by the account holder and to attract more accounts 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.

Grais and Kulathunga (2007) add that capital as it is classified in conventional banking cannot be used in Islamic banking. To be considered adequately capitalised, banks are required to hold a minimum capital (Tier I and Tier II) equal to 8 percent of risk-weighted assets (in most cases). Tier 1 capital is the same for Islamic and conventional banks. However, in Islamic banks the reserves include the shareholders' portion of the PER, which is included in disclosed reserves. In tier 2 capital, there are no hybrid capital instruments or subordinated debts, as these would bear interest and contravene *Shari'ah* principles. Furthermore, an issue is the treatment of unrestricted PSIAs, which may be viewed as equity investments on a limited term.

In addition, operational risk exposures appear to be higher in Islamic banks. Akkizidis and Khandelwal (2007) argue that the 'Basic Indicator Approach' as indicated by Basel II does not appear to be a case of perfect fit for Islamic banks. The 15% provision for operational risk of the average of three years gross income needs to be examined thoroughly. The use of gross income as the basic indicator approach could be misleading in Islamic banks, insofar as the large volume of transactions in commodities and the use of structured finance raise operational exposures that are not captured by gross income. In contrast, the standardised approach that allows for different business lines would be more suited, but it would have to be adapted to the needs of Islamic banks as the different risk weights as proposed by the 'Standardised Approach' are not entirely applicable to their

needs. In particular, agency services under *mudarabah* and commodity inventory management need to be considered explicitly. The allocation of 18% risk weight for business lines such as corporate finance, trading and sales, and settlements may not represent the true picture of risk exposures of Islamic banks as trading and sales in Islamic finance may include some *murabahah* transactions and some exposure from financing large accounts through *istisna'a*. Also, the 'Standardised approach' allocates 12% to retail banking, asset management, and retail brokerage, which does not fully apply to Islamic banks. As previously discussed, the risk exposures differ greatly during different stages of the Islamic finance contract and a blanket of 12% does not appear to map the risk exposure completely.

Furthermore, the 'Internal Rating Based Approach' (IRB) under credit risk, the 'Internal Model Approach' (IMA) under market risk, and the 'Advanced Measurement Approach' (AMA) under operational risk are not largely applicable to Islamic banks due to several reasons: first, due to the absence of wide spread rating for Islamic finance; second, due to the changing nature of the relationships during the lifetime of the contract; and third, due to difficulties in estimating PDs, LGDs, and EADs for Islamic finance.

4.5.2. Determination of Risk Weights

Assigning risk weights to different asset classes depends on the contractual relationship between the bank and the borrower. For conventional banks, the majority of assets is debt-based, whereas for IFIs, the assets range from trade financing to equity partnership; this fact changes the nature of risks. In some instruments there are additional risks which are not present in conventional instruments. Therefore, the calculation of risk weights for the assets of IFIs differs from the conventional banks because (Iqbal and Mirakhor, 2007:126):

- (i) Assets based on trade are not truly financial assets and carry risk other than credit and market risks;

- (ii) There are non-financial assets such as real estate, commodities, *istisna'a*, and *ijara* contracts that have special risk characteristics;
- (iii) IFIs carry partnership and profit-and-loss sharing assets, which have a higher risk profile;
- (iv) IFIs do not have well-defined risk mitigation and hedging instruments, which raises the overall risk level of assets.

Another complication in risk weightings is explained by Alsayed (2008); as finance provided by Islamic banks is asset-backed, it is connected to the value of tangible assets. These assets are subject to volatility in their values (as distinct from depreciation). Banks are therefore exposed to not only the risk of default by a customer, but also to volatility in the amount of credit mitigation available from the asset in the event of the need to realise their value. This means that there are not just risk-weighted assets for the book value of the outstanding credit facility, but also so-called 'market risk charges' in respect of the value of the assets collateralising the finance facility, at the start of the life of a facility, sometimes during the life of a facility, and at termination of the facility if the customer returns the assets to the bank and does not take title. The regulatory risk-weighting framework for Islamic banks is therefore more complex than for conventional banks, and Islamic banks need additional risk management policies and procedures to manage these risks.

4.5.3. Pillar 2

The role of supervisors is more critical due to the evolving nature of Islamic financial industry. Strong regulatory support in the form of monitoring and assistance is needed for Islamic banks. Some of the recommendations of Pillar 2 can be applied to Islamic banks, such as strengthening risk management systems, applying internal limits, strengthening the level of provisions and reserves, improving internal controls, focus on concentration risk and business cycle risks, *etc.* A few of Pillar 2 recommendations, although very relevant for conventional banks, do not hold ground for Islamic banks (Grais and Kulathunga, 2007). For example, liquidity risk, which is classified as residual risk under

Pillar 2, is one of the most important risks in Islamic banks. Liquidity risk management is at the core of risk management in Islamic banking.

Ironically, after the recent financial crisis and the failure of some banks due to liquidity issues, the BCBS declared the need for a special directive to address liquidity. Regulators around the world began to introduce stricter liquidity standards and independent measures to monitor liquidity.

4.5.4. Pillar 3

The absence of comparable information is one of the main issues in Islamic financial reporting. Since AAOIFI standards are not mandatory, there have been limited implementations, and the problem of non-comparability remains. Basel II recommendations regarding consistent and comparable information are highly applicable to the Islamic financial industry. Due to social commitment attached to Islamic finance, there is special need for market disclosure, and therefore, transparency is considered to be at the core of Islamic financial contracts and thus should also be reflected in reporting.

The role of information in the risk management in Islamic banking is more critical compared to conventional banking; as the PLS contracts are heavily biased towards availability of information for managing the risks. It is, therefore, mandatory to report the investment of funds, lines of business, activities, and sources of revenue. Due to the nature and ethical foundations, the social responsibility is of utmost importance in Islamic finance. Moreover, direct market discipline is embedded in the risk-sharing principle of Islamic finance because IAHs share in the risk of the IFI and are not offered guarantees; incentives are created for a wider range of stakeholders in the bank to monitor its activities and risk-taking, which reduces the moral hazard problem. Along with this, there is greater emphasis on transparency, and thus Pillar 3 of Basel II has more relevance for the Islamic financial industry (Grais and Kulathunga, 2007).

Several recent studies by the World Bank and the IMF such as Greuning and Iqbal (2008), Hasan and Dridi (2010), and others have highlighted the significance of the appropriate balance of prudential supervision and market discipline in Islamic finance, and the related implications for the industry in specific and the wider financial stability in general are also discussed.

4.6 BASEL III

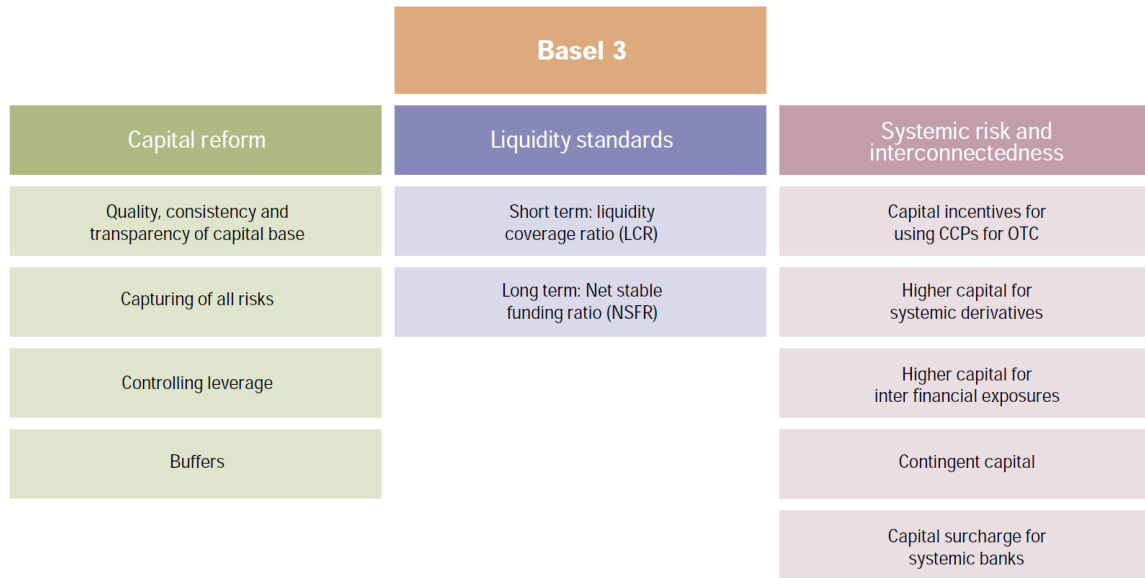
The new tougher framework for international banking came into being in September 2010, when the new guidelines for risk management were announced by the BIS. This new set of rules was denominated as Basel III requirements and was accepted two months later in November 2010 during the G20 meeting in Seoul, South Korea. G20 leaders endorsed the Basel III capital and liquidity framework, and committed to fully adopt and implement these standards within the agreed timeframe that is consistent with economic recovery and financial stability – a finely judged balance. The new framework will be translated into national laws and regulations, and will be implemented commencing on January 1, 2013 and fully phased in by January 1, 2019.

As a result of Basel III, the capital ratio requirement has increased; the eligibility of capital has been tightened, thus reducing the amount of capital banks have to meet the required ratio; and the calculation of risk weighted assets has changed leading to an increase for many institutions. Although implementing Basel III has its challenges and may ultimately not be sufficient to help banks globally withstand another financial blow, it is hoped that the new Accord will improve banking confidence and increase competition between banks. To achieve these objectives, the BCBS Basel III proposals are broken down into three main areas, as shown in Figure 4.2, that address:

- (i) Capital reform (including quality and quantity of capital, complete risk coverage, leverage ratio and the introduction of capital conservation buffers and a counter-cyclical capital buffer);
- (ii) Liquidity reform (short term and long term ratios); and

(iii) Other elements relating to general improvements to the stability of the financial system.

Figure 4.2: Main Components of the Basel III Accord



Source: KPMG 2010

The implications of Basel III for capital can be summarized as follows:

$$\text{Capital ratio} \uparrow = \frac{\text{Eligible Capital} \downarrow}{\text{Risk weighted assets} \uparrow}$$

It should be noted that in general Basel III aims at reducing procyclicality and promoting countercyclical buffers through a combination of forward-looking provisioning and capital buffers. While directionally positive, Moody's (2011b) does not expect Basel III to cure the structural challenges banks face from a credit perspective, including illiquidity and high leverage levels, as well as the tension between equity holders and bank managers whose focus is on maximizing profits, in contrast to risk-averse bondholders.

4.7 IFSB PRINCIPLES ON CAPITAL ADEQUACY

Since Basel II did not answer all the risk management issues for Islamic financial institutions, there has been a need for alternative and supportive standards, as “Basel II was drafted with conventional banking very much in mind”, as observed by Lowe (2010), one of the interviewees for this research.

With the growing size of IFI all over the world, there have been efforts to develop prudent supervisory norms. Thinking along the lines of Basel II and recognizing the differences in the nature of Islamic banks, AAOIFI drafted a basic standard on capital adequacy of Islamic financial institutions in 1999. This standard was further enhanced by the IFSB, which in December 2005 released the Guiding Principles of Risk Management and for Institutions (other than Insurance Institutions) offering Only Islamic Financial services (IFSB-1). Also in December 2005, the IFSB issued the first Capital Adequacy Standards for Institutions (other than Insurance Institutions) offering Only Islamic Financial services (IFSB-2). This was complemented in March 2008 with the IFSB’s Guidance Note In Connection with The Capital Adequacy Standard: Recognition of Ratings by External Credit Assessment Institutions (ECAIs) on *Shari’ah*-Compliant Financial Institutions (GN-1). Finally, in January 2009, the IFSB issued Capital Adequacy Requirements for Sukuk Securitisations and Real Estate Investment (IFSB-7), which deals with aspects relating to regulatory capital requirements for *sukuk* that are not covered in the previous issued standards.

Such intensive documentations are well prepared and address the relevant issues that are fundamental for the successful application of Basel II to IFI. Archer and Karim (2007) highlight that, in spite of their high quality, these standards have been adopted in only a handful of countries. As with most standards, the respective banking regulators need to customize some of their own requirements.

The IFSB Standard on Capital Adequacy (IFSB-2) highlights that Islamic banks carry partnership and profit-and-loss sharing assets that have a higher risk profile, and that

Islamic banks do not have well-defined instruments for mitigating and hedging risks. In the case of partnership-based contracts such as *mudarabah* and *musharakah*, the bank is exposed to both credit and market risk that need to be analysed in a similar manner to the methodology of the Basel Accords. When such partnership-based assets are acquired in the form of tangible assets, such as commodities, and are held for trading, the only exposure is to market risk because credit risk is minimised by direct ownership of the assets. However, there is significant risk of capital impairment when direct investment takes place in such contracts and the investments will be held till maturity. Treatment of this risk within the Basel framework is not straightforward and therefore requires special attention.

The key principle underlying the IFSB's approach is that PERs (and PSIAs overall) have a loss-absorbing feature, the intensity of which would not merit inclusion in eligible capital (the numerator of Basel II's capital adequacy ratio), but would rather allow for some deductions from computed risk-weighted assets (the denominator of Basel II's capital adequacy ratio), depending on the conservativeness of the regulator in terms of the degree to which PSIAs and PERs would be deemed capital-like instruments. PERs being a future claim of PSIA-holders on the bank, they are not part of capital in accounting terms, and thus are not subject to distribution to shareholders. From a regulatory perspective, however, the treatment suggested by the IFSB is very subtle particularly in western jurisdictions.

The IFSB-2 Standard covers minimum capital adequacy requirements based predominantly on the standardised approach for credit risk with respect to Pillar 1 of Basel II, and the various applicable measurement methods for market risk set out in the 1996 Market Risk Amendment. The IFSB is aware of the fact that some Islamic banks are progressively improving their risk management practices to the extent that they will be in a position to meet the requirement for applying the internal models approach for measuring their risk exposures.

The IFSB (2005b) states that:

“While this Standard stops short of explaining approaches other than the standardised approach, supervisory authorities are welcome to use other approaches for regulatory capital purposes if they have the ability to address the infrastructure issues adequately. The IFSB will monitor these developments and plans to consult the industry in the future and eventually to make any necessary revisions.”

In respect of capital charge for operational risk, the IFSB Standard recommends using either the basic indicator approach or the standardised approach given the structure of business lines of Islamic banks at the present stage. The Standard also recommends excluding the share of PSIA holders from gross income in determining capital charge for operational risk. This adjustment is necessary because Islamic banks share these profits with their depositors/investors.

Moreover, the Standard does not address the requirements covered by Pillar 2 (Supervisory Review Process) and Pillar 3 (Market Discipline) of Basel II, as the IFSB intends to cover these two issues by separate standards.

This Standard comprehensively discusses the nature of risks and the appropriate risk weights to be used for different assets. It deals with the minimum capital adequacy requirement for both credit and market risks of seven *Shari'ah*-compliant instruments: (a) *murabahah*, (b) *salam*, (c) *istisna'a*, (d) *ijarah*, (e) *musharakah* and diminishing *musharakah*, (f) *mudarabah*, and (g) *sukuk*. Discussion of each contract includes risk weights to be assigned to each for market and credit risks.

In calculating the CAR, the regulatory capital as the numerator shall be calculated in relation to the total risk-weighted assets as the denominator. The total of RWAs is determined by multiplying the capital requirements for market risk and operational risk by 12.5 (which is the reciprocal of the minimum CAR of 8%) and adding the resulting figures to the sum of RWAs computed for credit risk. The minimum capital adequacy requirements for Islamic banks shall be a CAR of not lower than 8% of its total capital. In this, Tier 2 capital is limited to 100% of Tier 1 capital.

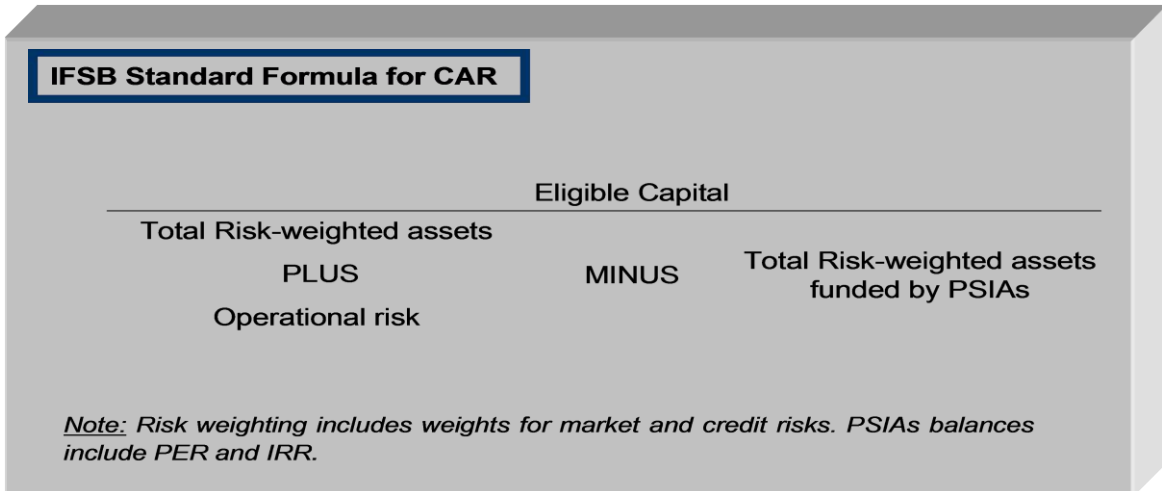
The *Shari'ah* rules and principles, whereby IAH provide funds to the Islamic bank on the basis of profit-sharing and loss-bearing *mudarabah* contracts instead of debt-based deposits, mean that the investment account holders would share in the profits of a successful operation, but could lose all or part of their investments. The liability of the IAHs is limited to the capital provided, and the potential loss of the Islamic bank is restricted to the value or opportunity cost of its work.

In other words, the assets financed by IAH are excluded from the calculation of the capital ratio, considering that the IAH directly share in profits and losses of those assets, and the loss to the bank (as *mudarib*) is limited to the time and resources spent on the investments, except in the case of negligence or misconduct.

However, if negligence, mismanagement, fraud, or breach of contract conditions can be proven, the Islamic bank will be financially liable for the capital of the investment account holders. Therefore, IAHs normally bear the credit and market risks of the investment, while the Islamic bank bears the operational risk.

The IFSB standard is defined in two formulae: standard and discretionary. In the standard formula, depicted by Figure 4.3, capital is divided by risk-weighted assets excluding the assets financed by IAHs, based on the rationale explained earlier. The size of the RWAs is determined for credit risk first then adjusted to accommodate for the market and operational risks. To determine the adjustment, the capital requirements for market risk and operational risk are multiplied by 12.5 (which is the reciprocal of the minimum CAR of 8%).

Figure 4.3: IFSB Standard Formula for Calculating CAR



The second formula, depicted by Figure 4.4, is referred to as the supervisory discretion formula, is modified to accommodate the existence of reserves maintained by Islamic banks to minimise displaced commercial, withdrawal, and systematic risks. In jurisdictions where an Islamic bank has practiced the type of income smoothing for IAH, the supervisory authority has discretion to require the Islamic bank to include a specified percentage of assets financed by PSIA in the denominator of the CAR (represented by α in the Supervisory Discretion Formula). α is simply the percentage of depositors' risk absorbed by the Islamic Bank as percentage of capital required for assets funded by PSIA. This would apply to RWAs financed by both unrestricted and restricted PSIA. Further adjustment is made for PER and IRR in such a manner that a certain fraction of the RWAs funded by the reserves is deducted from the denominator. The rationale given for this adjustment is to allow central banks and supervisors to decide on the profit-sharing / loss-bearing risk (displaced commercial risk) that IFIs are exposed to. For instance, the Bahrain Central Bank has ruled it to α be 30% for the kingdom (Farook, 2008: 19-20). This implies that PSIAs will bear up to 70% of their losses, while the remaining 30% will be borne by the shareholders of the bank.

However, what if an individual IFI is more resistant to shocks in the local economy because it already undertakes pure performance-based PLS with PSIAs, *i.e.* the IFI has a

lower displaced commercial risk? Farook (2008: 19) argues that the supervisory discretion formula is applied on jurisdictional basis, and assumes that all IFIs in that particular jurisdiction fit into the ‘one-size fits all’ category. He adds that most central banks that have applied this regulation did in such a manner, and there is nothing particularly wrong with this in the absence of a better indicator of individual displaced commercial risk exposure. For example, the Central Bank of Kuwait approved the implementation of the amended capital adequacy ratio on local Islamic banks starting from 30 June 2009, aiming to give Islamic banks incentives to improve their ways of managing risks.

Figure 4.4: IFSB Supervisory Discretion Formula for Calculating CAR

Eligible Capital	
Total Risk-weighted assets	1. $(1-\alpha)$ X Total Risk-weighted assets funded by PSiAs
PLUS	MINUS
Operational risk	2. α X Risk-weighted assets funded by PER and IRR

Note: Risk weighting includes weights for market and credit risks. PSiAs balances include PER and IRR. α refers to the proportion of assets funded by PSiAs, which is to be determined by the supervisory authorities. The value of α normally does not exceed 30%.

Table 4.2 summarises the main differences in Capital Adequacy Standards between Basel II & IFSB.

Table 4.2: Capital Adequacy Standards: Basel II vs. IFSB

Capital Adequacy Standards for Credit Risk

<i>Criteria</i>	<i>Basel II</i>	<i>IFSB</i>
Risk weight	Calibrated on the basis of external ratings by the Basel committee	Calibrated on the basis of external ratings by the Basel committee; varies according to contract stage and financing mode
Treatment of equity in the banking book	≥ 150 percent for venture capital and private equity investments	Simple risk weight method (risk weight 300 or 400 percent) or supervisory slotting method (risk weight 90-270 percent)
Credit risk mitigation techniques	Includes financial collateral, credit derivatives, guarantees, netting (on and off balance sheet)	Includes profit-sharing investment accounts (PSIA), or cash on deposits with Islamic banks, guarantees, financial collateral, and pledged assets

Capital Adequacy Standards for Market Risk

<i>Criteria</i>	<i>Basel II</i>	<i>IFSB</i>
Category	Equity, foreign exchange, interest rate risk in the trading book, commodities	Equity, foreign exchange, interest rate risk in the trading book, commodities, inventories
Measurement	1996 market risk amendments (standardized and internal models)	1996 market risk amendments (standardized measurement method)

Capital Adequacy Standards for Operational Risk

<i>Criteria</i>	<i>Basel II</i>	<i>IFSB</i>
Gross income	Annual average gross income (previous three years)	Annual average gross income (previous three years), excluding PSIA holders' share of income

Source: Greuning and Iqbal (2008: 228)

The following example, depicted by Figure 4.5, demonstrates the difference in calculating CAR between Basel II and IFSB. Let us assume that bank A is an Islamic bank with the following balance sheet structure and that its regulator requires supervisory authority discretion (α) of 25%. The example proves that the risk-sharing characteristic of PSIAs requires special capital treatment. Calculating the bank's capital adequacy

requirements according to the IFSB standard formula lead to a higher CAR than the Basel II, meaning that Islamic banks that invest in partnership and profit-and-loss-sharing assets will have a better CAR due to the loss-absorbing feature of these asset classes. Figure 4.5 also demonstrates that calculating an Islamic bank's CAR according to the IFSB supervisory discretion formula is more practical, as the supervisory discretion formula is modified to accommodate the existence of reserves maintained by IFIs to minimise displaced commercial and withdrawal. When an Islamic bank has practiced income smoothing for IAH, the supervisory authority has discretion to require the Islamic bank to include a specified percentage of assets financed by PSIA in the denominator of the CAR (represented by α). The IFSB supervisory discretion formula, therefore, gives a natural incentive to IFIs to engage in providing true economic returns to PSIAs and to stop the smoothing practice.

Figure 4.5: Computation of CAR for an Islamic Bank

Assets		Liabilities & Equity	
	£ mn		£ mn
Commodity <i>murabahah</i>	£150	Demand deposits	£150
<i>Mudarahah</i> investments	£100	Unrestricted PSIAs	£400
<i>Musharakah</i> investments	£120	Restricted PSIAs	£350
Trade financing	£400	PER	£40
<i>Salam & Istisna'a</i>	£100	IRR	£50
<i>Ijarah</i>	£150	Shareholder's Capital	£30
Total assets	£1,020	Total liab. & equity	£1,020
Total RWAs	£250		
RWAs financed by PSIAs	£150		
RWAs financed by PER and IRR	£15		
Supervisory authority discretion (α)	25%		
Market risk	£4		
Operational risk	£2		
Market and operational risk capital charge ($4 \times 12.5 + 2 \times 12.5$)	£75		

CAR according to Basel II Accord Pillar 1

$$\frac{£30 \text{ mn}}{£250 \text{ mn} + £75 \text{ mn}} = 9.23\%$$

CAR according to IFSB Standard Formula

$$\frac{£30 \text{ mn}}{ (£250 \text{ mn} + £75 \text{ mn}) - (£150 \text{ mn} + £15 \text{ mn}) } = 18.75\%$$

CAR according to IFSB Supervisory Discretion Formula

$$\frac{£30 \text{ mn}}{ (£250 \text{ mn} + £75 \text{ mn}) - (0.75 \times £150 \text{ mn} - 0.25 \times £15 \text{ mn}) } = 13.87\%$$

As Wan Yusuf (2011) states the capital adequacy framework for Islamic Banks in Malaysia was implemented on 1 January 2008 and was developed based on the Capital

Adequacy Standard for Institutions (other than Insurance Institutions) Offering Only Islamic Financial Services issued by the IFSB in December 2005. The Malaysia framework is applicable to all Islamic banks licensed under Section 3 (4) of the Islamic Banking Act 1983. The analysis conducted on 12 Islamic banks shows that all banks follow capital adequacy framework for Islamic banking in Malaysia. The exception was in 2006, when Bank Islam fell below the requirements due to net loss of RM1.30 billion. It was attributed to non-performing loans that severely affects the bank. However, the figure was improved to exceed the minimum regulatory requirement after additional capital injection. The analysis showed that banks in the study were overcapitalized. The excess capital could be used to reallocate assets where they could shift to more risky assets such as loans rather than less risky assets such as government bonds. This in turn would increase bank's profitability and thus enhance bank's efficiency by optimal utilisation of available resources. The study also revealed that domestic Islamic banks in Malaysia hold lower Risk-Weighted Capital Ratio compared to foreign Islamic banks that can be attributed to familiarity with local financial environment. It means that foreign Islamic banks are overcapitalized especially in the early years of establishment. The assets that the banks hold tend to be under safer risk category and it moves towards riskier assets as it managed to have a foothold in the industry. Not much difference exists between full-fledged Islamic banks such as Bank Islam Malaysia Berhad and Bank Muamalat Malaysia Berhad, which were established before 2003, and Islamic banks originated from Islamic banking windows, which were established after 2003, with regard to Risk-Weighted Capital Ratio. This can be due to parent banks' familiarity with local financial environment and understanding of Malaysian financial system. Experience and familiarity leads the banks to have a wider portfolio of riskier assets in order to fully utilized capital and enhance efficiency.

4.8 CAPITAL ADEQUACY AS A TOOL FOR RISK MITIGATION

As discussed in the previous chapter, risk mitigation is a key challenge for Islamic banks. Mimicking conventional risk mitigation techniques is not the best way forward because of the constraints imposed on Islamic banking by *Shari'ah* principles and mainly because

the Wall Street conventional banking model has proved to be unstable and unsustainable. Some Islamic hedging tools have been developed; others are still work-in progress, opening the door for huge opportunities in financial engineering. However, the risk-sharing characteristic of PSIA in Islamic banking could greatly enhance risk management and mitigation in IFIs provided that proper pricing, reserving, and disclosure are maintained. A measure of the extent to which the risks to shareholders are reduced on account of risk-sharing with IAHs should be the basis of any capital relief or lower risk weights on assets funded by PSIA. The IFSB supervisory discretion formula is, therefore, a step in the right direction, with α representing the extent of total risk assumed by the PSIA, with the remainder absorbed by the shareholders on account of displaced commercial risk. To take the IFSB standards forward, disclosure for IFIs needs to become more comprehensive and transparent, with a focus on disclosure of risk profile, risk-return mix, and internal governance. This requires coordination of supervisory disclosure rules and accounting standards. In addition, the regulators should monitor and recognize the actual extent of risk sharing by IAHs in assessing capital adequacy, and thereby encourage more effective and transparent risk sharing with IAHs. Adequate disclosure by the IFI of the risks borne by PSIA and shareholders should be a supervisory requirement for giving a low value to the parameter in the supervisory discretion. Thus, inadequate disclosure would result in a high value being set for α in addition to higher risk weights for profit-sharing assets, and hence granting little or no capital relief to the Islamic bank. In addition, Islamic banks that treat PSIA as substitute for conventional deposits should be enforced by the regulator by treating these IAHs in the same way as liabilities for the purpose of calculating capital adequacy ratio. On the other hand, banks that practically implement the risk-sharing technique will be keen on proper disclosure to enjoy a higher capital relief. This would provide the greatest risk mitigation tool for Islamic banks.

4.9 CONCLUSION

It should be noted that risks in Islamic banking are more contract-centric than in conventional banking, where risks tend to be more product-centric. Islamic financial contracts are characterized by the changing relationship between the contracting parties

during the lifetime of the contract. This has a direct bearing on the risk exposures and relevant capital charges. Soundness and safety for banks depend to a great extent on the capital they hold. Since there is a constant dilemma to find the optimal mix of capital for business and regulatory purposes, the Basel I Accord was the first-ever systematic attempt at a global level to provide a framework for capital adequacy. Due to the rapid changes in the financial world, the original Accord proved to be insufficient to cover increasing complexities in financial markets. Basel II (and potentially Basel III) had revolutionised the concept of risk management with the detailed analysis of credit, market and operational risks. The three mutually enforcing pillars of Basel II have improved the framework's sensitivity to the risks that banks actually face.

This chapter examined the three pillars of Basel II and their relevance to Islamic banks. It has become obvious that, although some of the principles of risk management as proposed in Basel II are applicable to the Islamic financial industry, the Accord was developed with conventional banks perspective and, hence, does not apply to the Islamic banks without suitable modifications.

The IFSB has played a key role in the development of risk management and capital adequacy standards in the Islamic financial industry. The IFSB's efforts should be considered as the first attempt at consolidating the Islamic financial risk management principles under one umbrella. More effort and research is needed in this under-researched area. Moreover, the IFSB standards should be made mandatory for Islamic banks to allow for wider implementation, consistency, and standardisation of risk management principles across the IFI. This requires collaboration between regulators, IFSB, AAOIFI, Islamic banks, and industry experts.

It should be mentioned that Sam Walton was indeed right, as finding capital is not the biggest challenge. It is the management and control of capital in an optimum way that worries financial institutions and regulators around the world. International standards like those issued by BCBS, AAOIFI, and the IFSB act as capital guides that provide industry

practitioners with vision for the right direction. It is up to individual banks to make proper use of the compass or lose their way along the hard financial journey.

CHAPTER 5

ISLAMIC BANKING AND THE FINANCIAL CRISIS

“Clearly, the crisis is dire. The situation is deteriorating, and it demands urgent and immediate action”

Barack Obama, on the economic crisis (2009)

5.1 INTRODUCTION

There has been great optimism about the resilience of Islamic finance over the past two years due to the failures witnessed in the conventional financial world; this is, however, based on prejudice rather than proper analysis. Although this optimism has faded out recently, it still exists to a lesser degree. Immediately following the outbreak of the credit crisis in the West, advocates of Islamic finance filled stages and conferences with long emotional speeches on topics like: ‘the resilience of the Islamic financial industry’, ‘Islamic banking is recession-proof’, ‘Islamic finance could have saved the world’, *etc.* In such emotional discourses it is forgotten that modern Islamic financial institutions have been deviating from the foundational principles and aspirations of Islamic moral economy for some time now – principles which could, to a certain degree, provide some resilience against crisis. In theory, the Islamic finance world is definitely more resilient to economic shocks than the flawed Wall Street model, but unfortunately the theory is a long way from fact in its current financial practice, as practitioners of Islamic finance to-date have been mimicking conventional products. This mimicking has resulted in a close correlation between the two systems.

However, it is evident that Islamic banking has avoided some of the major causes of the problems in the conventional system, especially in relation to speculation and trading in derivative instruments that are far removed from the underlying asset. It is not because IFIs’ risk management architecture and culture were more robust that they avoided

carrying toxic products on their books; structurally, they have simply been banned – so far – from investing in such asset classes, as per the core principles they abide by. It is true that most Islamic deals are backed by real assets. There is no doubt that Islamic banks are more resilient to economic shocks than their conventional peers. This was proven in Malaysia during the 1997 currency crisis and it has been confirmed by the delayed effect of the current financial crisis on Islamic banking and finance. This has changed the world's perception of this young industry and given it the chance to grow substantially.

It has been argued that if the world had followed the true principles of Islamic finance, the subprime loan crisis and the collapse of some of the world's largest banks could have been avoided. This raises the interesting question of whether Islamic finance can offer solutions to avoid another global financial crisis. Are the risk management characteristics inherent in Islamic finance more resistant to global woes and economic shocks? Since risk and its management is essential to prevent crisis, raising such questions are essential in gauging the resilience of a particular financial method. This is the essential research question of this research, which aims to empirically explore whether Islamic banking provides a more resilient model.

The relevant Western literature suggests that, theoretically, Islamic banks are more risky than their conventional counterparts in some respects. Western researchers have been urging Islamic banks to follow the steps of conventional banks in adopting sophisticated risk management and mitigation techniques, which have been the pride of Western financial markets until recently. On the other hand, in most literature by Islamic scholars or economists, Islamic banking is presented as a safe haven and a less risky mode of finance. In such studies, one tends to read about the relative benefits of the Islamic economic system, albeit completely normative statements based on theoretical principles without any substantial empirical evidence. Islamic researchers argue that the lack of evidence is due to the absence of real economy that follows full Islamic principles and

where economies do, such as in the case of Iran and Sudan, there have been lapses in governance or modifications in the *Shari'ah* compliance rules that have substantially altered the actual premise of Islamic economics. Hence, researchers were largely unable to empirically detect the impact of following pure Islamic finance principles or to ascertain whether Islamic finance is inherently better than its conventional counterpart. The answer came – paradoxically from the West – in the form of the credit crunch, which has at least shown the shortcomings of the conventional system and has given Islamic finance an opportunity to be marketed as an alternative.

Over the last few years the World economy went into severe recession, starting with the subprime mortgage debt write-downs in the US and the spiralling food and commodity price inflation, followed by quick deflation, all of which have had a crippling effect on the world economies. Figure 5.1 shows the bleak economic picture worldwide in September 2009, amid the peak of the crisis. Most world economies were in recession. The cost of debt has increased and, therefore, access to finance had dried up. So what are the causes of this crisis and where is the connection to Islamic banking? These are the questions for which this chapters aims to find answers; and building on what have been discussed in the previous chapters, evidence will emerge that Islamic finance has conservative risk management techniques - implicitly bent to it - that could provide a safer alternative.

5.2 UNDERSTANDING THE CREDIT CRISIS

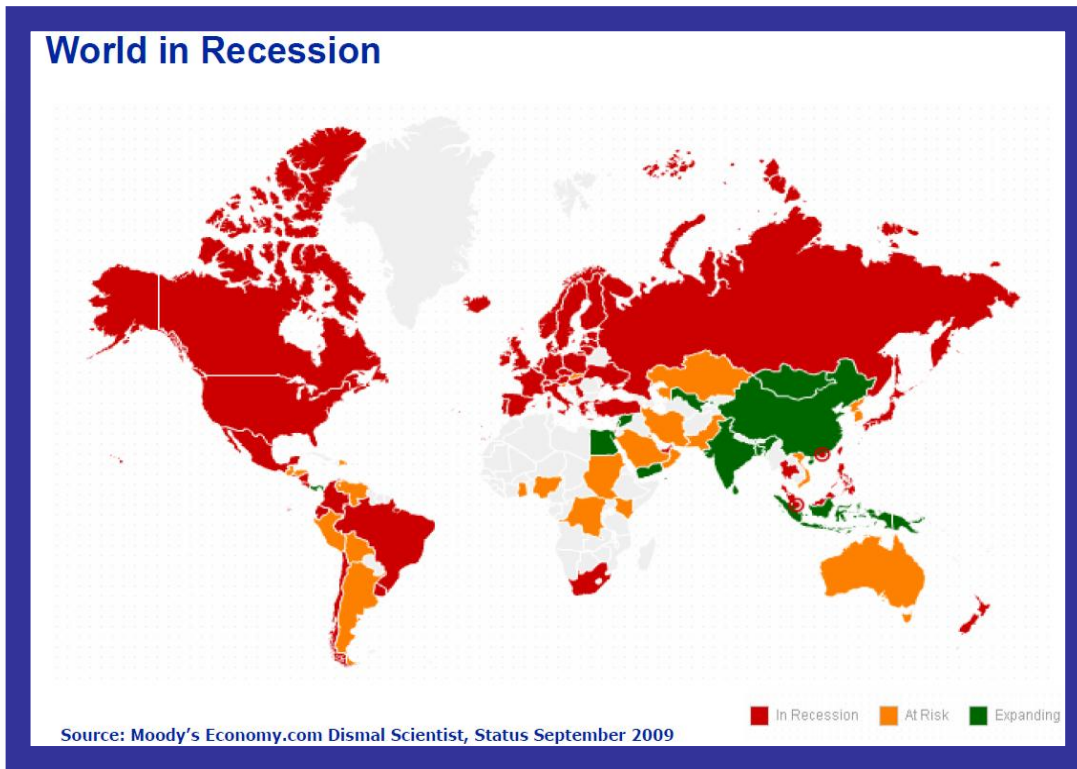
5.2.1 The Debt Bubble

The financial crisis started in one corner of the US mortgage market, but the fallout from the collapse of the sub-prime lending bubble has spread across the globe via the disintermediation of the originate-to-distribute banking model. What began as a crisis for individual markets and institutions has now undermined the foundations of the entire global financial system. Credit markets were the first to be engulfed, but the contagion

has subsequently reached all asset classes that were reliant on a combination of cheap money and high leverage, bringing the demise of the independent Wall Street investment banking model and sending countries from Iceland to Hungary ‘cap-in-hand’ to the IMF.

In the period of the run up to the crisis, the US and the global economy displayed robust growth which was expected to continue. Interest rates were low, liquidity was high and growing, financial innovations were proceeding at a rapid pace (especially in securitization and structure finance), complacency in the face of growing risk was deepening and regulation as well as supervision receding and weakening. All of this created an incentive structure that encouraged excessive risk-taking in search of higher yields. By March of 2007, the excesses “came home to roost” (Mirakhor and Krichene, 2009). Easy credit had already created an incentive for home purchases and refinancing of existing mortgages, while prices in the housing market were already increasing, indicating a boom. This provided the primary motivation for the emergence of the subprime market, for, as long as price of houses were increasing, the underlying debt obligation would be continuously validated by an increase in value regardless of the size of the down payment, the credit record of the buyer, or the adequacy of documentation.

Figure 5.1: World Recession in 2009



Source: Moody's (2010a)

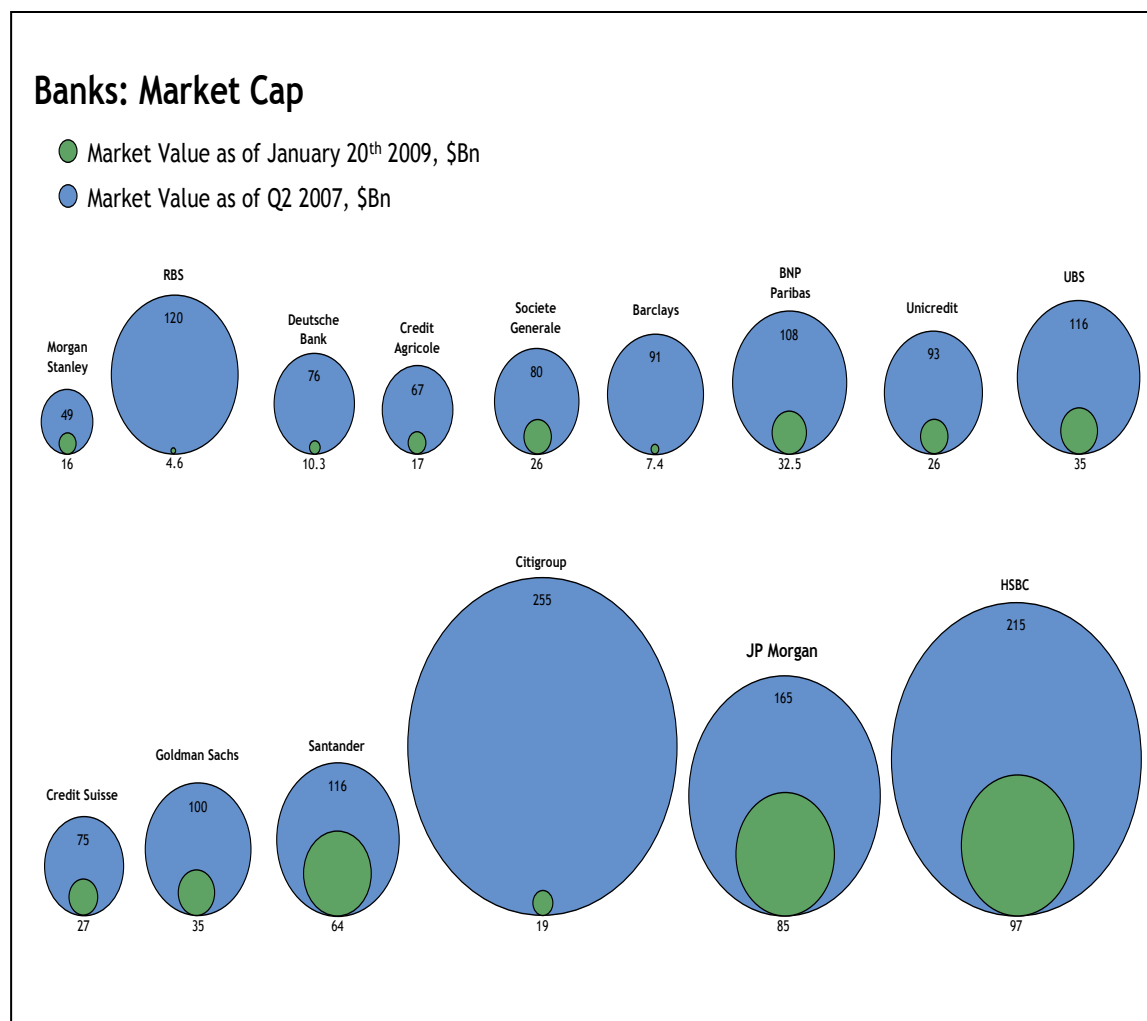
The liquidity crunch was fundamentally the result of the credit bubble bursting. Too much liquidity and overcapacity in the industry resulted in much lower underwriting standards. Consequently, consumers became overleveraged. With new entrants in both the mortgage lending and bank loan markets, competition led to loan terms that did not compensate for the risks. In this process, the risk management model followed by financial institutions is to be blamed for the crisis, as rising risk and falling returns became a dangerous mix.

It should be mentioned that the economy is always passing through cycles in the long-term or what economists call 'Kondratief cycles' within which there are other small cycles. The current cycle is not new, nor did it occur overnight (Economist Intelligence

Unit, 2009). Many commentators recognized the potential consequences long before they became real. Yet the feeling seemed to be that ‘as long as the music was playing, lenders had to dance.’ Indeed, a financial institution cannot afford to sit out the dance unless it can stomach a significant loss of market share. In a hypercompetitive market, however, banks sometimes have to take the long-term view and refrain from dancing. Some did, as they shunned option adjustable-rate mortgages and high loan-to-value products, and their better performance in the current environment is already beginning to differentiate itself.

Banks around the world have been put under significant pressure; most affected are those that were originally highly leveraged and heavily dependent on wholesale funding. A few years ago, it would have been unthinkable that iconic financial services groups would become so widely distrusted. Regaining this trust is, however, key to worldwide economic recovery. Figure 5.2 depicts how the market value of the world’s largest banks had significantly shrunk between mid 2007 and January 2009. Banking giants saw their market value diminishing at an unprecedented pace. For example, Royal Bank of Scotland had its market value shrunk from USD 120 billion in mid 2007 to USD 4.6 billion by January 2009, UBS from USD 116 billion to USD 35 billion, HSBC from USD 215 billion to USD 97 billion, and Citigroup from USD 255 billion to USD 19 billion.

Figure 5.2: Decline in Market Value of Leading Banks in 2009



Source: Bloomberg, Jan 20th 2009

Source: Bloomberg, 20 January 2009

Securitisation channels have shut down in the crisis process from 2008 onward, and banks that rely on the originate-to-distribute model have substantially reduced their volumes of new lending, thus leading to a sharp reduction in revenues. Some banks, in recent times, are attempting to shift back to a more traditional on-balance sheet banking model. The growth of derivatives during the boom years decoupled from the growth of the real economy. There will now be a reduction in that decoupling effect. As a response, indeed, derivatives will not disappear, but their volumes may shrink and become more aligned with the size of real economies. However, as a result of the crisis, access to short-

term funding channels has been severely compromised, and a number of banks became relying on government support. This opened criticism in the financial industry to the substantial malpractice of highly geared investments and questionable risk management practices. More importantly, it has raised questions on the integrity of the sophisticated conventional modern financial system in which regulators are trying desperately to catch up with the market innovations, particularly in the space of derivatives, debt markets, and speculation.

The current period in the markets provoked thoughts on failures in conventional risk management techniques and the need for a better alternative. Therefore, “this crisis has been a wake-up call for reassessing the effectiveness of international financial architecture and in particular for mechanisms to head off systemic risk,” as stated by Reza Moghadam, director of the IMF’s strategy, policy and review department (Wroughton, 2009).

It should be noted that the conventional systems have pretty much forgotten about ethics; this is an important cause of the financial crisis. The fragility of the conventional system operating on the basis of speculation, manipulation, and interest rates was underlined by the infamous 2001 Nobel economist Joseph Stiglitz (2008) who argued that:

“The present financial crisis springs from a catastrophic collapse in confidence. The banks were laying huge bets with each other over loans and assets. Complex transactions were designed to move risk and disguise the sliding value of assets ...Financial markets hinge on trust, and that trust has eroded. It was all done in the name of innovation, and any regulatory initiative was fought away with claims that it would suppress that innovation.”

In addition, the crisis has highlighted shortcomings in banks’ pricing, monitoring and managing of risk. Too much reliance has been placed on quantitative models, based on historical data, to make assessments of current and future risks. The inappropriate use of financially innovative structured products has led to tremendous wealth destruction.

The crisis cannot be explained by the argument that it was because of liquidity which was being there one day and gone the next. As, when trust and confidence disappeared and investors asked for their money back, it became apparent that real liquidity had not been created in the first place; a situation that should not occur under an aspirational Islamic financial system where there is a partner, rather than a debtor, relationship with depositors.

5.2.2 Derivatives and the Crisis: A Source of the Financial Crisis

“Derivatives are financial weapons of mass destruction... I view derivatives as time bombs, both for the parties that deal in them and the economic system.”

Warren Buffet, Berkshire Hathaway Annual Report, 2002

Following the outbreak of the crisis, it became fashionable to malign derivatives for doing much damage to the global economy. Politicians and the media held derivatives responsible for massive corporate losses and the downfall of companies like insurer AIG and Lehman Brothers. Some have gone so far as to suggest that derivatives were the main contributing factors to the credit crisis and to the wider global recession.

Bartram (2009) disagrees with this approach, as he argues that blaming derivatives is like blaming a car for causing a crash, rather than the reckless driver who was behind the wheel. The cause of the global recession in reality is manifold and the reason for many corporate failures is varied too, adds Bartram. However, derivatives are complex securities that transfer one kind of risk but create newer risks, which are difficult to assess. They break down the relationships between lender and borrower and encourage risk-taking at the originator level (Ahmed, 2009). One of the interviewees for this

research, Engel (2010), argues that derivatives should not be blamed for the mess that happened in the financial sector.

As financial products, derivatives are great risk transfer tools: they help stop systemic collapse in the financial sector. For example, when Enron collapsed, many feared that several top banks would go under because of their huge exposure to Enron. It was derivatives that spread the risk among several banks and saved the system from a total meltdown. While it is true that bankers make derivatives look very complicated, but once they are broken down to little boxes and pieces, their structure could be understood with greater ease.

5.2.3 Searching for the Causes of the Crisis

A number of economists have tried to determine the causes of the crisis: Some consider financial liberalization and deregulation to be the cause in an environment where the financial systems of many countries are not sound as a result of improper regulation and supervision. Others feel that the ultimate cause is the bursting of the speculative bubble in asset prices driven initially by excessive risk-taking and the use of innovative complex structures. It has also been argued that the root cause of the crisis was the maturity mismatch and liquidity mismanagement where long-term assets were far greater than short-term liabilities.

The available literature on the financial crisis, thus, indicates as many opinions as there are researchers. However, even though all these factors may have had some role to play in the crisis, no consensus seems to have developed so far in pinpointing the ultimate cause or the cause of all causes. In the absence of a proper understanding on the ultimate cause, conflicting remedies have been proposed. Consequently, the proposals for government bailouts, stricter regulations and supervision have been unable to step beyond the basic principles of the conventional banking mechanism.

In the pre-crisis times, most conventional banks employed intense financial leveraging techniques to magnify their gains in expansionary economic times. The use of leverage amplifies returns during a boom cycle, but it can also have a reverse effect during a recessionary phase when managements not only have to write down losses on their declining asset portfolios, but also have to pay interest on their outstanding loans – the exact situation that most conventional banks are presently faced with.

Banks created complex opaque financial instruments that created new risks which were not well understood (Ahmed, 2009). This decomposing of risk through financial engineering and product development made risk management a serious scientific process, as risk management became often dependent on sophisticated mathematical models.

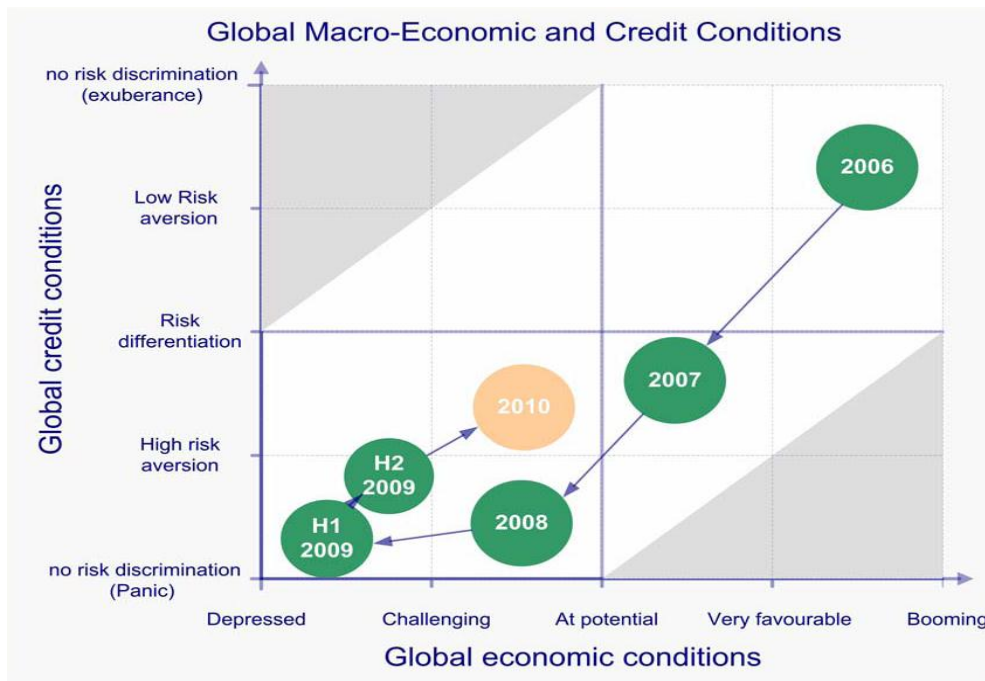
It had become apparent that, during the process of financial crisis, at many banks, multiple lines of defence failed – business managers, risk managers, audit and control. Coupled with these failures was weakness in board risk oversight. The crisis revealed that very few firms have a true ‘culture’ of risk management that will not be compromised when competition heats up, regulatory pressure abates, or management changes.

The weaknesses of the system have to be studied in a comprehensive manner, and as a result of such an approach, the key factors causing the crisis can be identified at three levels: instrumental (the use of innovative complex products), organizational (financial institutions engaged in excessive risk taking), and regulatory (a deregulated environment and lax regulations) (Ahmed, 2009). However, the industry debate has focused on pure risk management failures, particularly the shortcomings of risk models in measuring risks accurately, without addressing the broader issue of how risk is managed at the highest macro-economic levels and how the whole financial system is based on greed and lack of morality.

When the financial crisis erupted, most people refer to ‘greed’ as the source behind the crisis – the ultimate cause; the worship of markets in general and financial markets in particular is considered as the source of ‘greed’. However, the main causes stem from the creation of (excessive) debt, de-linkage of wealth creation from debt creation and the making of money (debt) by banks, which may be linked to the ‘greed’ of those involved in such processes. These have led to debts growing faster than wealth, which must eventually be equalized by a crash resulting in business failures, unemployment, and ultimately gross inequalities of income and wealth. An economy with a heavy reliance on debt could lead to nothing but high risk and volatility.

After the crisis, the global economy is not expected to rebound quickly, but rather return to trend growth rates, with persistent unemployment and budget deficits. Figure 5.3 offers a stylized illustration of global macro-economic and credit conditions over recent years. The financial crisis may be behind but the sovereign risk challenges, with huge public debts, definitely represent a rocky road ahead. World economies went from low risk aversion during the boom in 2006 to high risk aversion during the peak of the panic in 2009. Worldwide economic recovery, which started during the second half of 2009, remains fragile and uncertain. 2010 was expected to be the year of recovery; however, the global recession turned out to be more persistent than initially thought and during the second half of 2011 the budget deficit in the USA and sovereign debt issues in the Eurozone caused worldwide fear of a double dip recession.

Figure 5.3: Global Economic Conditions



Source: Moody's (2010a)

5.3 THE FINANCIAL CRISIS AND THE NEED FOR AN ALTERNATIVE SYSTEM

The current crisis has highlighted shortcomings in the existing conventional banking system. Unlike in the wake of earlier crises, the world economy and its financial markets will not resume their former pattern. The consequences of this current crisis indicate that there will be a fundamental systemic change to the banking industry. In supporting this, a recent report by PricewaterhouseCoopers (PWC, 2009) claims that the nature of the banking system will change. Unsustainable, overleveraged structures will be replaced with simpler and more transparent forms of banking, and some activities may be subject to limitations in a new model that represents a renaissance of classic banking. Thus, it is expected that there should be a new financial culture with a greater focus on 'what you have' in terms of resources, rather than 'what you can' create through financial innovation (PWC, 2009). The developments, thus, show that regulators and financial

institutions must look beyond mere survival mode, accept that the facts have changed, and focus on achieving a sustainable banking model – a model that enjoys trust, is reliable, stable, ethical, and transparent. In other words, the rule of the game has to and will change under the new circumstances. This is echoed by Keynes “When the facts change, I change my mind” (PWC, 2009).

In an attempt to overcome the failures of the conventional financial system, the world has started to look for an alternative method of banking and finance. Calls have been provoking traditional old style banking without the destructive power of derivatives and toxic assets, regulators have been reducing interest rates across the world, hoping to stimulate the stagnant economy, and experts are starting to look for a more ethical mode of finance. Amid all these searches, it so happens that Islamic banking is one of the very few alternatives that are available today, and within the gloom of the global crisis, investors are turning to Islamic finance as the less risky and more ethical option. Islamic finance is gaining credibility as an alternative; the fact that the Wall Street banking model that is based on open-ended innovation and leverage had failed to make people to search for ethical alternatives.

5.4 THE FINANCIAL CRISIS AND ISLAMIC FINANCE AND BANKING AS AN ALTERNATIVE OPTION

5.4.1 Islamic Finance: No Sub-Prime Exposures but not Fully Immune

The foundational principles and operational mechanisms of IBF were discussed in Chapter 2, which made reference to the ethical sources of IBF. Despite such foundational ethical claims, on the surface, the story of Islamic banking as more resilient than conventional banking, which has been repeated in a world torn by a financial tsunami, is attractive. Unfortunately, at least in the current form it is practiced, such expectations from IBF are not entirely true.

Since the main liquidity for Islamic banks comes from the GCC region, it should be mentioned that many Islamic banks, especially in the GCC, have not been immune to the financial crisis. The liquidity squeeze in the region has put pressure on these banks just as much as their conventional peers.

In examining the propensity of IBF for crisis, it can be seen that Islamic banks mainly carry four main asset classes within their investment portfolios: property, equity, *sukuk* and managed funds (which include underlying assets mainly comprising infrastructure, private equity, real estate and stocks). In the financial crisis process, it is observed that such assets have all lost value (Moody's, 2009a). In addition, the volume of *sukuk* issuance has dramatically declined between September 2008 and summer 2009; though it started to take off later in 2009 (Standard and Poor's, 2010a). However, Islamic banks, due to the immaturity of the industry coupled with constraints imposed by the *Shari'ah*, have been relatively protected because they had no exposure to sub-prime assets and their derivatives, such as dubiously rated collateralised debt obligations (CDOs) and special investment vehicles (SIVs) securitised debt-based assets.

Table 5.1: The Impact of the Crisis on Islamic Banking

The 2008-2009 economic crisis has impacted banks globally, with large markets for Islamic finance no exception

- Global banks suffered USD 700 billion losses in 2008
- GCC economies have also felt the crunch, with little or no growth in 2009
- Equity markets have also seen steep declines in spite of a partial recovery in 2009
- Banks in the GCC have faced challenging times, with scarce liquidity, a rising perception of risk, and the ever-present reality of credit defaults

Since 2008, Islamic banks have not been immune from the crisis

- Islamic banking penetration is up in key markets with Islamic banks outperforming in asset growth
- However both market values and profitability of Islamic banks have come under pressure, narrowing the gap with conventional peers
 - o Revenues have declined significantly from 2008, particularly driven by a drop in income from investing activity
 - o A number of Islamic banks have been harder hit by NPLs than conventional peers and continue to face the risk from real estate concentrations even as their operational efficiency continues to lag conventional peers
- Liquidity continues to be a significant constraint for Islamic banks. While Islamic banks maintain their market share of deposits, it will be subject to increased competition in the "war for deposits"

Source: McKinsey & Company (2009)

It can be argued that IFIs around the world have generally displayed strong resilience amid the current global financial debacle. One obvious reason for their proven ability to weather the storm is embedded within the core principles of Islamic banking: both speculation and interest are prohibited. In addition, the sub-prime crisis has been driven by a number of factors that in combination led to the accumulation of risks, which were again magnified through the use of complex, often highly structured financial products – all of which were explicitly *riba*-based. However, it may be that the Islamic finance industry was not as badly affected as its conventional counterpart because of its comparative lack of sophistication and *Shari'ah* restrictions rather than anything different in its current activities. It is a fact that re-packaging of debt obligations into several layers without a substantial trace to the underlying asset is difficult to achieve by *Shari'ah* engineering. Islamic securities should be asset-based. Furthermore, a direct link to the asset is the substantial basis of the asset generating returns. Moreover, *Shari'ah* disallows the trading of future obligations until the asset is actually delivered.

By based on the observed progress, it can be argued that IFIs are not risk-immune, but their current capacity to resist this crisis has been bolstered by the naturally inherent conservatism in the principles of Islamic finance, which is based on ethical norms of Islamic moral economy.

5.4.2 Islamic Banks Affected by the Financial Crisis: No Man is an Island

Similar to any other institutions, Islamic banks do not operate in isolation. They are part of the local, regional and increasingly global interdependent financial markets. In this respect, although they are less sensitive to the monetary fluctuations of the West, they remain dependent on the real economic cycle. The Islamic financial market will always need to interact and engage with the conventional one – it does not exist in some isolated bubble; therefore some level of ‘contamination’ may be difficult to avoid.

The credit crisis has highlighted the globalised nature of the world we live in: imagining that a sub-prime crisis could never happen in Islamic finance would be to encourage complacency. As the financial crisis gradually turned into a real economic downturn, asset quality ultimately deteriorated and Islamic banks' high exposures to the real estate sector turned out to be a curse rather than a blessing. For example, the Gulf countries now contemplate the effects of property and stock market declines coupled with lower economic growth prospects in the short term, and Islamic and conventional institutions alike are feeling the pain of reduced liquidity and credit losses. This is due to the fact that the global financial and economic crisis did not spare the once-booming economies of the Middle East, and the Gulf Arab states in particular. However, in general, the macroeconomic repercussions were milder in the region, where recovering oil prices and large amounts of liquidity in numerous Sovereign Wealth Funds allowed governments to take interventionist counter-cyclical measures to stimulate their domestic economies and support flagship government-owned banks and companies.

As such, Islamic banks have been facing three series of cyclical challenges, which again reflect their current structural strengths and weaknesses (Moody's, 2009c):

- (i) Managing short-term liquidity has been made more difficult;
- (ii) Investment portfolios, concentrated on illiquid and cyclical asset classes, have been impaired;
- (iii) Access to long-term funding has been postponed, forcing banks to reduce the maturity profile of their assets.

With the financial crisis, market disruptions made it difficult for Islamic banks to continue fuelling their aggressive pre-crisis growth as key funding sources dried up. Customer deposits shrank as money that had entered in 2008 left the market leaving governments to prop up deposits single-handedly, and IFIs, particularly in the GCC, started to raise deposit rates to ensure retention. Governments stepped in to ease short-

term liquidity positions; however, this did not alleviate the overall long-term position gap. To help manage their liquidity, Islamic banks will have to develop creative funding strategies and improve their internal capabilities to understand and forecast their liquidity needs.

However, despite such constraints, which are expected to be temporary, Islamic banks have had the capacity to resist due to a number of buffers in the following format:

- (i) Their credit portfolios have been essentially domestic, with limited pressure on asset quality so far;
- (ii) Their entrenchment in the retail banking arena, with high customer loyalty and deposit stability, limits the probability of massive bank runs;
- (iii) High capitalisation and ample core liquidity often provide a relatively higher amount of confidence to counterparts.

In the ongoing economic downturn, falling asset prices, credit seizures, and liquidity crunches have created a difficult situation where retail-funded, commercial Islamic banks are better placed than their rivals. They enjoy low leverage and abundant liquidity. Islamic investment banks, meanwhile, are wholesale-funded with a concentrated deposit base and are also highly exposed to cyclical and illiquid asset classes such as real estate, private equity and venture capital. Consequently, they have suffered far more, with two of them defaulting: Global Investment House and The Investment Dar, both being in the GCC. Another Islamic finance company whose survival has come under pressure for the same reasons is Tamweel, which is merging with its rival Amlak in the UAE.

In general, Islamic banking has shown stronger performance than conventional banking. In 2009, amid the peak of the global crisis, more *Shari'ah* banks have been launched and more markets open up to Islamic products, while most conventional banks suffered substantial losses and severe asset reductions, assets in Islamic finance have grown to

USD 822 billion in 2009, an increase of 29 percent compared with 2008, with the opening of 20 Islamic banks, according to Maris Strategies and the Banker (Oakley, 2009). No comparative data are available for 2010.

Traditionally, IFIs have not been heavily leveraged. The primary reasons for conservative financial leverage maintenance are:

- (i) IFIs have limited incentives to grow debt-like liabilities because their assets tend to be highly profitable;
- (ii) They needed to set aside extra capital buffers to prepare for expansion;
- (iii) Funding is usually cheap, thanks to easy access to non-remunerated *qardh hasan* current-account deposits; and (iv) the necessity to set aside capital charges for specific risks like DCR, reputation risks and concentration risks as per Basel II's Pillar 2 (Moody', 2009d).

These capital and liquidity buffers, previously criticized by opponents of Islamic finance as a burden on profitability, have perhaps been one of the most important strengths of the IFIs amid this crisis because they provide a financial institution with surplus cash to use as a shock absorber. As a result, under the current difficult economic conditions, most IFIs have been able to seek out opportunities by using their surplus liquidity to aggressively boost deposit volumes and thus to increase their market shares by growing lending volumes, while maintaining their focus on the retail and corporate sectors. For example, this is a strategy employed by GCC banks to de-couple their retail lending business from global markets by focusing on extending credit locally. According to one of the interviewees for this research, Thun (2010), stated that with few exceptions (especially in Dubai), funding has been less of a constraint for IFIs because of the market's perception that these players will be more resilient than their conventional peers to the global credit turmoil. Thus, the market has acknowledged that Islamic banks cannot carry assets such as highly leveraged structured instruments or global investment banks'

shares on their balance sheets because these are considered *haram* and therefore are not eligible for investment according to the *Shari'ah* boards' *fatawa*.

In practice, customers are switching their savings from conventional banks (perceived as riskier), to Islamic banks (perceived as less directly exposed to sub-prime). This activity has been recorded in a number of countries, especially the UAE, Kuwait, and Bahrain. The latest figures on these banks show an increase of 34.4% in their Q3 2008 deposit base over the previous year (Moody's, 2009a). This retail entrenchment is a good strategic shift – one suitable for the current environment with wholesale funding restricted and liquidity ratios lower (albeit not severely so).

Moreover, wholesale-funded IFIs were affected by their inability to access the retail deposit segment for funding, as retail deposits are more granular, more stable, and cheaper, while wholesale depositors are savvy and constantly arbitrage institutions in need of funding. It is no coincidence that Islamic intermediaries like Global Investment House (GIH) in the field of merchant banking and Amlak and Tamweel in specialised mortgage finance found it extremely difficult to fund their businesses (Alvi, 2009a).

Islamic investment banks that operate largely as private equity firms have been feeling the impact of global market conditions because they have invested in the real estate markets and companies outside the Gulf region, through private equity transactions. Falling real estate prices, the credit crunch, and the economic recession in Europe and the US lessened the value of these investments and pushed these Islamic investment banks to either enlist their generally sophisticated clients' support to share any losses or to write down losses to preserve their reputations. Effectively illustrating this is Arcapita Bank, which has reported significantly deteriorated liquidity, its 2008 financial performance declined versus historical levels, and between January and June 2009 its credit rating has been downgraded by S&P's from BBB to BB-; this is 4 notches downgrade in less than six months. In June 2009, Arcapita requested to withdraw its rating.

Although GCC countries, home to most IFIs, announced that they stand ready to support their financial systems if needed, providing support to IFIs is more complicated than for conventional banks, because governments are limited to use the same mechanisms as those for conventional institutions. For instance, interest-based repo facilities or traditional deposits are not *Shari'ah*-compliant, which by definition implies the limited instruments for governments to intervene with the liquidity of Islamic banks. The UAE has based its support to IFIs on *wakala*, which has required some time to implement (Standard & Poor's, 2010a).

5.4.3 Failures in Islamic Finance: *Sukuk* Defaults

“Defaults in the *sukuk* market are a sign of market maturity; however, it comes at severe costs, the most expensive of which is reputational risk.”

Badlisyah Abdul-Ghani, CEO of CMB Islamic Bank (2009)

Sukuk issuers such as Kuwait-based The Investment Dar Company defaulted on its *sukuk* as part of a general debt restructuring program. Another noticeable example is Saudi Arabia-based Saad Group, which has defaulted on its debt in the recent past, including the Golden Belt *sukuk* that it issued in 2007. This was followed by the Dubai debt bombshell, which put *sukuk* in the spotlight for all the wrong reasons. As, Nakheel, the property arm of Dubai World, is responsible for key developments in the region such as the Jumeira Palm and The World and has issued three *sukuk* to finance its investments. Three years after issuing the world's biggest *sukuk*, Dubai's Nakheel has grabbed the headlines once again, this time through default. On 25 November 2009, the Government of Dubai announced that it intends to restructure part of the debt (approximately USD 26 billion) of Dubai World, the Emirate's largest state owned conglomerate. Nakheel asked for trading to be suspended on all three of its listed *sukuk* until it is in a position to provide a clarification to investors and the market. On 14 December 2009, Abu Dhabi

provided USD 10 billion to help Dubai to meet its obligations, including USD 4.1 billion needed to repay Nakheel, with the rest of the money to be used to pay trade creditors and contractors as well as meeting interest expenses and company's working capital (Oakley, 2009). Indeed, Dubai's woe did hit the reputation of Islamic banking and finance. As a response, Dubai first had announced that it would restructure the debt, then two weeks later it announced that it would repay, possibly on the back of market reaction. Dubai realised that it could not afford to damage of not repaying. But the damage may have already been done.

The market conditions of the past two years have resulted in others defaults in Islamic finance sector, such as the Saad Group, Investment Dar and the East Cameron Gas Company. These failures have brought several key risk management issues like enforcement of judgments in the GCC, transparency, corporate governance, and asset-based *sukuk* into the limelight.

These episodes reminded investors that default can and does happen in the *sukuk* market, as in any other part of the financial sector. However, *sukuk* default is a new phenomenon, as the market is still in its infancy. This represents an interesting development, and it should help investors to understand what could happen in the case of default and what the legal and financial repercussions could be. According to Professor Habib Ahmed of Durham University (cited in Newby, 2009), "Islamic economists have been saying that Islamic finance was not affected directly by the subprime problems. The Nakheel problem shows that Islamic finance can have similar problems if wrong investments are made ... This case is a wake-up call for Islamic finance to focus more on ethical and moral issues that it has been ignoring for so long".

Recent *sukuk* defaults highlight the issues Sheikh Taqi Usmani battled with, as he rejected the 'opaque' *musharakah/mudarabah* type where investors did not really know what 'assets' as *sukuk* holders they were getting but did not care as they relied on

creditworthiness of obligor. *Ijara*, though not perfect, at least gives *sukuk* holders the ability to assess the value of what they are getting for their money (inflated or otherwise). In addition, the rating agencies were only concerned with the credit rating of the obligor (because of the purchase undertaking), whereas a proper *musharakah/mudarabah sukuk* would have forced them to look at the merits of the underlying business – and perhaps to reject them on that basis.

During the financial crisis, thus, the default of a couple of *sukuk* was possibly partly responsible for the recent slowdown in issuance. The silver lining was that these defaults should provide the market with useful information on how *sukuk* will behave following default.

According to Standard and Poor's (2010a), despite its relative recovery in 2009, major hurdles remain on the path to *sukuk* market development, including:

- (i) Difficult market conditions, which are slowing the planned issuance of numerous *sukuk*;
- (ii) Uncertainty about the legal recourse to the underlying asset as demonstrated by the recent defaults;
- (iii) The lack of standardization, notably when it comes to *Shari'ah* interpretation; and
- (iv) The low liquidity of the *sukuk* market, which constrains investors trying to exit the market in times of turbulence or access the market looking for distressed sellers.

The need to address those issues in a well-regulated Islamic finance market is even more crucial due to its nascent stage of development. Any failure in the Islamic financial sector now will hurt its reputation and could threaten its survival. "If there is a failure of the bond market in California, nobody will question whether there is a systemic risk to the

global bond market. But if a *sukuk* fails, it will raise questions on the entire Islamic finance” said economist Mirakhor, who is formerly an International Monetary Fund executive director (Oana, 2009).

5.4.4 Islamic Banking Emerging Stronger from the Crisis

It should be considered that lower volumes, shrinking margins and deteriorating asset quality will all weigh on IFIs’ profitability and ultimately their capitalisation. However, once again, the impact will be more manageable than for conventional peers. Fortunately, Islamic banks have been very profitable in the past and have therefore accumulated large amounts of capital, making them capable of absorbing these sorts of shocks. Conventional banks have had greater appetite for exotic asset classes, like bank bonds, hedge funds and direct exposures to global financial institutions and insurers, than Islamic banks. In that sense, asset quality deterioration at conventional banks may be more pronounced. In addition, conventional peer banks used to be less well capitalised and less liquid, and hence will find it more difficult to book new business in the current market conditions. To grow today, a bank must have accumulated excess liquidity and capital in the past: most commercial Islamic banks have, some conventional banks have not.

Wilson (2009) points out that Islamic banks have been less adversely affected by the crisis than major international banks. He argues that, as the latter have been weakened by the recent financial crisis, this undoubtedly presents an opportunity for Islamic banks, especially in the GCC, which have been less adversely affected. GCC-based investors in conventional banks, such as Prince Waleed’s Kingdom Holdings, which holds 5 percent of Citibank, and the Abu Dhabi and Qatar Investment Authorities, which hold significant stakes in Barclays, have seen the value of their investments plummet. In contrast, the value of Al Rajhi Bank and KFH investments in retail Islamic banking affiliates in Asia has been much more resilient.

The Islamic financial industry is, therefore, expected to emerge stronger from the crisis, provided some conditions are met: more innovation bound with ethical norms of Islamic moral economy, enhanced transparency, more robust risk-management architecture and culture, and, most importantly, less deviation from the core *Shari'ah* principles. These are the lessons to be learnt from the financial crisis, as the crisis has forced the Islamic banks to have a complete re-assessment of their policies and attitudes to not only whether they are merely Islamizing conventional products but also whether the financing is beneficial to the real economy. In an interview with Arab News (2009), Sheikh Esam M. Ishaq stated that “I think in a way the financial crisis is a blessing in disguise for Islamic banking because Islamic banks unfortunately were far down the road in trying to mimic and replicate anything and everything that was there in the conventional banking sector.” Hence, the call exists for a return to the foundational basics of Islamic finance to overcome or at least moderate the consequences of potential financial crises.

Paradoxically, the reputation of Islamic banks has benefited from the recent crisis (albeit with some exceptions), reflecting their conservative approach to business, a close proximity to their domestic and regional deposit franchises, their balanced and ordered appetite for growth, and their focus on basics of banking as opposed to over innovation, with an emphasis on their domestic market first. All these factors, which used to be perceived as weaknesses before the credit crisis began, are now being used as shields against the potential damages of imported stress. Investors may therefore view IFIs as safer havens less prone to excessive financial shocks. Several Islamic banks therefore are in a position to gain market shares at the expense of conventional peers, which have been weakened by toxic sub-prime assets. Furthermore, a global economic recovery is likely to benefit the GCC as oil and gas prices rebound, resulting in fresh liquidity being pumped into Islamic banks to fuel further expansion (Wilson, 2009).

It is quite clear that the policies implemented and practiced by Islamic banks have luckily worked to their advantage so far. From a risk management perspective, however, (and in

light of the financial crisis) IFIs are using unstable policies without growing their liquid asset supply and monitoring their risk levels. As the market matures and the crisis deepens, the negative impact of these policies could lead to bankruptcies due to inaccurate liquidity management and defective asset qualities. That said, the chances of an IFI becoming insolvent are low due to the availability of government support – especially in the GCC – and support from other financial institutions.

From a conceptual perspective, Islamic banks will probably be the big winners when the crisis ends, provided that the above-mentioned conditions are fulfilled. As a sub-set of ethical finance, Islamic banking is now considered not so much a niche business standing at the margins, but rather as representative of a credible, viable and sustainable alternative business model for sound, ethical, and socially responsible banking (Oakley, 2009). Many now believe that mainstream finance has moved too far into excess leverage, meaningless innovation, and value-destroying investments. As a rule, Islamic bankers tend to view a monetary, banking, and financial system as existing to serve the real economy and not be served by it. In a sense, the Islamic banking model inherently calls for social and economic responsibility from those who create money with credit, encouraging balance, care, honesty and transparency in doing business. What Islamic banking also promotes is that debt is a responsibility and should not be overly traded; that money is a measure of value, not a commodity; and finally that human factors, rather than simply profits, are the cornerstone of any economic and financial system. In that sense, by endogenising such features into its operations, IFIs will undoubtedly find their reputations strengthened, and Islamic finance as a whole will come out stronger from this crisis. At this stage, supervisory authorities and IFIs have a golden opportunity to achieve the true goals of Islamic moral economy and to create a stable Islamic financial system that can resist economic shocks and that truly operate on the basis of profit and loss sharing (Awan, 2008). The credit crunch has shaken confidence in the existing western regulations and created the need for a better more transparent system; this has opened the door for Islamic bankers to take up the opportunity. Indeed at the 5th World Islamic

Economic Forum (WIFE) in Jakarta on 2 March 2009, Muslim leaders, including Indonesian President Susilo Bambang Yudhoyono and Malaysian Prime Minister Abdullah Badawi, called on the Muslim world to leverage the global financial crisis by turning “adversity into opportunity” (Parker, 2009).

In short, Islamic banking has suffered from the liquidity drought, to the point where a few of the sector’s investment banks have defaulted, but as an industry it now has a track record of resilience, which had not been tested before. It is true that Islamic finance has been more conservative because of *Shari’ah* rules, which has resulted in Islamic financiers steering clear of toxic repackaged credit instruments. By partially following the core principles of *Shari’ah* IFIs were more financially stable than their conventional peers. Therefore, a true *Shari’ah*-compliant financial model can be a panacea if it is followed purely without deviations.

5.5 DEVIATIONS FROM THE FOUNDATIONAL *SHARI’AH* PRINCIPLES: EVALUATING THE OPERATIONS OF ISLAMIC FINANCE

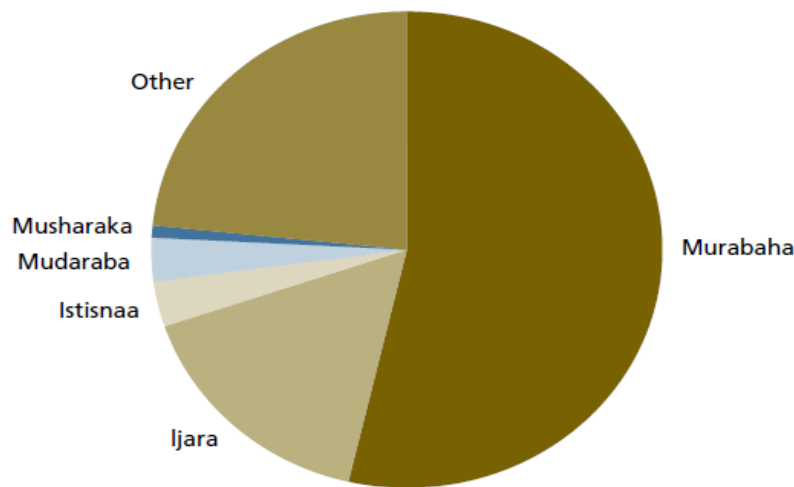
The social failure and the deviation of Islamic finance from its foundational aims have been articulated by a number of studies (Asutay, 2007; and Asutay and Zaman, 2009). An important part of this criticism is related to the notion of *Shari’ah* compliancy, as the real issue in Islamic banking is the excessive reliance on form in the sense of technical norms at the expense of substance or the foundational norms. A critical examination of the developments and trends in Islamic finance indicates that the convergence has been from Islamic finance to conventional finance in terms of operations and functioning; and that Islamic banking, in its current state, does not necessarily uphold the full spirit of an Islamic moral economy (Asutay, 2007). The financial crisis, being an extremely difficult lesson, should encourage the IBF institutions to overcome this apparent divergence and the growing dichotomy between the ideals of an Islamic moral economy and the realities of today’s Islamic banking (Asutay, 2009b). Indeed, a number of scholars are of the view that some IFIs have deviated to a great extent from the fundamental basis of Islamic

finance. Currently, most of the Islamic finance is work in progress. Some Islamic banks have succumbed to the influence of conventional banking. Notably controversial examples include the contemporary mechanisms of *tawarruq* or fixed income instruments, IFIs' reluctance to hold PLS assets, and the issuance of 'asset-based' *sukuk* with no real recourse to the underlying assets.

5.5.1 *Tawarruq*: A Contentious Islamic Finance Instrument

One major example of the apparent divergence between theory and practice is the excessive use of *murabahah*, which gives a fixed return. This has been dubbed as 'murabahah syndrome' with an ironic feeling about operations of IFIs. This practice, referred to as *tawarruq* (meaning 'cash generation' in Arabic), which has been under criticism from many *Shari'ah* scholars, such as Sheikh Muhammad Taqi Usmani, Dr Abdul Latif Al Mahmood, and others. It was initially approved as an interim solution until IFIs move to genuine commodity *murabahah*, but it seems that several banks took advantage from this interim approval and prefer to stick to *tawarruq* as it bears minimal commodity risks to the bank and replicates a conventional loan. Figure 5.4 shows that IFIs have a long-standing bias toward simple products that use mostly *murabahah* and *ijarah* structures, both of which offer more predictable returns, and have similar profiles to conventional products. Furthermore, they do not bear the challenges in terms of governance, profit calculation and allocation of more complex structures, like *musharakah* and *mudarabah*, which allow for more advanced financing offerings such as private equity.

Figure 5.4: Asset Breakdown for a Sample of Leading Islamic Banks (Excluding Fixed Assets and Cash)



Source: Oliver Wyman (2009)

Sheikh Muhammad Taqi Usmani, as cited by Ayub (2007: 446), states that *tawarruq* and fixed income instruments:

“*Shari’ah* scholars have allowed their use for financing purposes only in those spheres where *musharakah* cannot work and that, too, with certain conditions. This allowance should not be taken as a permanent rule for all sorts of transactions and the entire operations of Islamic banks should not revolve around it.”

The problem is that for many banks, *tawarruq* has become an essential tool for conducting day-to-day business (Davies, 2009).

Practically, however, fixed income *murabahah* is being used to a very large extent and the use of PLS mode is negligible, even in institutions in which the honourable Sheikh Usmani used to serve as *Shari’ah* supervisor or member of the *Shari’ah* board.

5.5.2 Lack of Appetite for Risk-Sharing Assets

One of the major criticisms of Islamic banks is their reluctance to hold risk-sharing assets. By design, because of the prohibition of interest and pure debt, and sharing of risks, Islamic banks should engage on partnerships and equity-sharing financial assets, but in practice the portion of such assets on the balance sheets of Islamic banks is minimal. For example, Table 5.2 shows the asset composition of selected banks from 1999 to 2002. It is evident that Islamic banks' first preference is for financial instruments that are generated through debt creating, sale contracts and leasing instruments. Informal observation of more recent balance sheets shows a similar picture.

Table 5.2: Asset Composition of Selected Islamic Banks

	1999	2000	2001	2002
<i>Murabahah</i> and deferred sales	80.1%	83.0%	86.7%	84.3%
<i>Istisna'a</i>	10.8%	8.7%	7.5%	7.0%
<i>Ijara</i>	2.5%	2.4%	1.9%	2.9%
<i>Mudarabah</i>	1.6%	1.6%	1.2%	3.1%
<i>Musharakah</i>	0.9%	0.8%	1.3%	1.2%
<i>Qard ul-hassan</i>	0.2%	0.3%	0.4%	0.5%
Other	0.2%	0.2%	0.5%	3.0%

Source: Askari *et al.* (2009: 95)

Islamic bank' reluctance in regards to risk-sharing instruments such as *musharakah* and *mudarabah* is problematic for achieving the true potential and promise of the system. The reason for shying away from such instruments is a lack of appetite for risky assets, which in turn is due to Islamic banks' attempts to emulate conventional commercial banks where preservation of depositors' principal is their foremost objective. By investing in financing and trade-related instruments, Islamic banks are able to provide low-risk and

good fee investment opportunities; they want the best of both worlds. There are also pressures on Islamic banks to make their investment accounts behave like conventional deposits in terms of return profile. These pressures are two-fold – namely, from the marketplace and from the banking supervisor in some countries (IFSB, 2007).

The real issue in Islamic banking, as mentioned above, is the excessive reliance on form at the expense of substance. By promoting risk-sharing through asset-based equity-type facilities on the assets side and profit-sharing investment accounts on the funding side, Islamic finance could in principle contribute to a better balance between debt and equity, thereby fostering stability. However, in practice, the use of equity-type financing facilities is limited due to risks linked to considerations of asymmetric information and adverse selection (IFSB, 2007).

IFIs should change this business model and expand their portfolio to include risk-sharing instruments. Islamic banks often claim that their reluctance is a direct reflection of the depositors' low appetite for risk-sharing products. However, it is possible that the depositors' low appetite for such instruments is due to a lack of transparency and confidence in the ability of the financial intermediary. Therefore, Islamic banks should consider doing a better job of selecting and monitoring risk-sharing assets and enhance the transparency of the investment process by informing the depositors with good estimates of exposures to risks taken by the bank on investing in risk-sharing instruments (Askari *et al.*, 2009). The long-term sustainable growth of Islamic banking will depend largely on the development of risk-sharing products.

5.5.3 *Sukuk*

While there are many *sukuk* structures (14 described by AAOIFI), the majority of those applied (be they *ijarah*, *musharakah*, or *mudarabah*) effectively 'reduce' to a form that is an Islamic equivalent of a conventional unsecured bond. Much complexity is generated by asset-based aspects of the structure, but the ultimate objective is to replicate the risk

and return characteristics of a fixed income bond. Moreover, most originators in these structures do not intend to sell the contributed assets, and the transfer of assets is often not legally perfected or registered (Dey and Holder, 2008). Most *sukuk* transactions are therefore ‘asset-based’ rather than ‘asset-backed’.

This disparity between the ‘ideal’ and the ‘reality’ of *sukuk* was highlighted by AAOIFI in February 2008 following a well-publicised criticism of the *mudarabah sukuk* structure made by the prominent *Shari’ah* scholar and Chairman of the AAOIFI *Shari’ah* Board, Sheikh Taqi Usmani. AAOIFI then published a statement containing six principles regarding *sukuk* structures. Subsequently, many sources attributed the market decline to this statement. In reality, that the decline in *sukuk* market volume in 2008 was probably due more to prevailing global credit market conditions (it was a very difficult time to raise funds, whether conventional or Islamic) rather than to any direct reaction to the AAOIFI statement. In the midst of this global turmoil and the market pause, the AAOIFI comment has provided for some self-reflection in the industry.

While there was some debate regarding the method of its release, the AAOIFI’s comments constituted a positive effort towards improving transparency and bringing the ‘substance’ of *sukuk* products closer to the basic tangible and risk-sharing principles on which there is an almost universal consensus; it is in the implementation of these principles that matters become complex for investors.

To-date, many of the current *sukuk* types adhere to AAOIFI in form, but not in substance. The highly successful Indonesian sovereign *sukuk* (USD 650 million) issued in April 2009 shows there is still heavy demand for these unsecured, asset ‘based’ structures (Moody’s, 2009d).

The term ‘based’ is often used to reference a ‘looser’ asset security structure that has little or no legal relevance in the event of a corporate default or distress. There is no scope in

the courts for such vagaries – either the investors have a legal enforceable claim on assets or they do not. So when crunch time comes, those investors in asset-based structures are left with nothing: no assets, no security, just an unsecured claim in substance like a debt of the company. The majority of investors happily accept these structures. Many investors – Islamic and non-Islamic alike – simply want a fixed-income bond: rough estimates put the market size at USD 45-50 trillion and it is this powerful investor demand that primarily drives the shape of market (Moody's, 2010b).

5.6 HOW TO ACHIEVE THE FULL POTENTIAL OF ISLAMIC FINANCE?

Although Islamic banking offers a combination of both equity and non-equity based instruments, the system's preference for equity contracts often makes it more efficient and stable than debt-based conventional systems. Sadr and Iqbal (2002) presented empirical evidence based on the data gathered over 15 years from the Agricultural Bank of Iran demonstrating that equity based financing increase transparency, monitoring, and supervision, and thus improve efficiency and stability of the financial system.

The operations of IFIs demonstrate that they tend to shy away from equity and partnership based instruments for several reasons, such as the inherit riskiness and additional costs of monitoring such investments, low appetite for risk, and lack of transparency in the markets. Consequently, bank portfolios are often not diversified either geographically or by product. This unwillingness to take on risk reflects the lack of transparency in the Islamic banking system, which dampens confidence and trust among investors and market participants. The result is that depositors and investors become more risk averse, and so banks become even more risk averse, thus creating a vicious circle which results in a severe financial and economic crisis. In theory, Islamic financial principles contribute to the stability of the financial system. Islamic modes of finance, particularly the profit-sharing principle, provide a loss absorption feature to financial institutions.

The original concept of Islamic financing is undoubtedly in favour of equity participation rather than creation of debt, because it is only equity that brings an equitable and balanced distribution of wealth in the society. Debt-ridden economy, on the other hand, tends to concentrate wealth in the hands of the rich and creates a bubble economy which fuels inflation and brings many other social and economic evils (Usmani, 2008). However, the practice is very different from the theory. All of these deviations between theory and practice of Islamic finance mean that the system is not functioning at its full potential and has adapted itself to a limited functionality. In fact, due to these deviations, the Islamic banking system is exposed to risks that it is not supposed to be exposed to. These deviations and other greedy banking practices, hence, have created additional risks both at the institutional and systematic levels. In a 'pure' *Shari'ah* system, finance would be based around equity rather than debt and, although cycles would occur, they would not be on the same scale and crashes could be avoided. Therefore, Islamic banking needs to develop more ideal equity based Islamic products and shift away from those based on debt. The Holy Prophet (Peace be upon him) declared that "Allah Almighty remains with trade-partners (to help and support them) unless one of them becomes dishonest to the other¹." Also, in the *Hadith*, debt presents a troubling face once the possibility of deferment arises, as it might with a debtor in difficulty. Such Islamic sentiments, under the conditions of the current financial crisis have been raised by contemporary researchers and financiers as well; for examples Davis (2009a) states that "Debt is the weapon used to conquer and enslave societies, and interest is its ammunition".

In addition, IFIs – in theory – should be less exposed to asset-liability mismatch than their conventional counterparts. This comparative advantage is rooted in the 'pass through' nature of Islamic banks, which act as agents for investors/depositors and pass all profits and losses through to them. Following the theoretical model, any negative shock to an Islamic bank is absorbed by both shareholders and investors/depositors. Thus the chronic problem of asset-liability mismatch in Islamic banks should not exist; this type of

¹ Abu Dawood, Chapter 27, *Hadith* no. 3383.

financial intermediation contributes to the stability of the financial system. This is theory; the practice is, however, different as discussed thoroughly in Chapter 3. IFIs tend to sacrifice a share of their profits for the year to subsidise PSIA's appetite for returns. In order to mitigate the displaced commercial risk, these IFIs resort to the practice of smoothing distributions to PSIA's, utilizing IRRs and PERs. This implies that an Islamic bank that practices distributions smoothing may be subject to higher earnings volatility when it does not have a significant build-up of reserves. This renders the Islamic bank riskier than a conventional bank, given that a conventional bank has hedging mechanisms. If IFIs truly provide real economic distributions to their PSIA's, as the *Shari'ah* requires, these banks will be able to avoid systemic risks and be more resistant to economic shocks.

Regrettably, both Islamic banks and their supervisory authorities in some countries consider unrestricted investment accounts to be a product designed to compete with, and to be an acceptable substitute for, conventional deposits; in such an environment profit smoothing may be considered to be an inherent attribute of the product rather than a means of deliberately avoiding transparency and market discipline, especially if it is combined with in-substance capital certainty (Archer and A. Karim, 2007). In some such countries unrestricted IAHs may benefit from deposit guarantee schemes; the compliance of such practices with *Shari'ah* principles seems open to doubt. Therefore, if unrestricted IAHs are considered to be virtual depositors, the implications of this in terms of capital adequacy need to be enforced by the regulator by treating these IAHs in the same way as liabilities for the purpose of calculating capital adequacy ratio.

Dar and Presley (2000) argue that Islamic banking is all about taking risk. Depositors keep their money in profit-sharing accounts and so, in theory, at least, they participate in both the profits and losses of the banks. In practice, however, banks have consistently given depositors returns that are on *par* with the interest rates that conventional banks deliver. Now, as their profits decline, IFIs are dipping into PERs to keep depositors

satisfied. But they will face a dilemma if the economic downturn continues. “Devout Muslims have increasingly migrated to Islamic banks in recent years, but will the trend survive if some of them start losing their money?”, wonders Dar (Khalaf, 2009). It is arguable that illiquidity cases like Northern Rock in the UK would have never happened under a pure Islamic system because instead of borrowers funding investments, they would be sharing the risks with other investors and they would not be able to ‘withdraw’ funding as they did with Northern Rock.

However, many argue that PSIAAs would not agree to receive volatile distributions, since they mistakenly believe that IFIs should provide distributions similar to conventional banks. Archer and Karim (2007) suggest that this might be because of the inherent nature of bank depositors (whether Islamic or conventional) whose relatively low net worth means that they are naturally risk averse and prefer to earn stable low returns compared with high net worth individuals who invest in shares, funds, and all sorts of diversified risky investments. But perhaps it may also have to do with market education about Islamic banking as an alternative system. Many people, particularly after the current crisis, have started to believe in the Islamic finance system and the benefits it offers. AAOIFI and IFSB are working towards educating the market about the best practices of Islamic finance, but it might be difficult to change the mindset of bank depositors, which has been grounded in stone over decades.

It should also be noted that some IFIs might mistakenly see no incentives in moving in this direction of fully applying *Shari’ah* principles. It is, therefore, essential that supervisory authorities, at least in Islamic countries, provide regulatory incentives to IFIs that comply with *Shari’ah* rules and punishments to those that do not comply. Making AAOIFI and IFSB standards mandatory for Islamic banks should be a step in the right direction.

As has been discussed in the previous chapter, the IFSB supervisory discretion formula for calculating CAR gives a natural incentive to IFIs to engage in providing true economic returns to PSIAs and to stop the smoothing practice. However, this formula is not obligatory in most countries and is applied on a jurisdictional basis, *i.e.* if an individual IFI has little or no displaced commercial risk, it still has to abide by the regulatory imposed α factor. One way for regulators and supervisors to resolve this ‘one-size fits all’ issue and indirectly incentivise IFIs to engage in the ‘passing through’ mechanism to PSIAs is imposing a variable α factor on banks (Farook, 2008). The IFSB already provides this flexibility to each regulator. This would, however, require accounting technology that would calculate an individual bank’s exposure to displaced commercial risk, as this is quite achievable. Central banks, for instance, can design a formula to calculate individual displaced commercial risk exposure for each Islamic bank. Based on this exposure, the central bank can impose a variable α factor that will determine the capital that each bank must hold against its RWAs funded by PSIAs. In addition, banks can be given further α factor relief based on the extent of disclosure provided, with more disclosures allowing more haircuts on the extent of RWAs funded by PSIAs to be included in the denominator of the CAR equation (Farook, 2008). If the measure is variable and banks have the opportunity to reduce their CAR by reducing the PSIAs’ displaced commercial risk charge, they will do whatever in their capacity to diminish it. This may include ensuring a more efficient asset allocation strategy, reducing dependence on fixed rate instruments, better disclosure directed towards IAHs, educating them about the nature of their relationship with the bank and the rationale behind the profit share distributed to them, even if it happens to be lower than conventional-based market deposit rates.

This will of course have a positive effect on the broader Islamic financial system, as IFIs will be more resistant to systemic risks as they will actually share the effects of shocks with PSIAs, who will also get to bear the fruit from expansionary cycles.

Even liquidity, which both academics and practitioners identify as one of the highest risks facing Islamic banks, acted in some way as a financial crutch for Islamic banks in the recent years. IFIs have traditionally held high levels of cash/liquid assets, ideally to buffer for their high liquidity risk. This excessive liquidity syndrome of IFIs in fact reduced their liquidity risk during the economic downturn when money market dried up and several banks went under because of liquidity issues.

5.7 CONCLUSION

“The Chinese use two brush strokes to write the word crisis. One brush stroke stands for danger; the other for opportunity. In a crisis, be aware of the danger, but recognise the opportunity.”

John F. Kennedy

The current bleak economic environment represents a golden opportunity for Islamic banking and finance, as the fundamental weaknesses in the Wall Street banking model have been exposed, requiring substantive change to the whole banking system. If it was not for this crisis, the inherent stability and risk management techniques within Islamic finance would not have gained so much attention.

Although IFIs have been more resilient to the financial turbulence than their conventional peers, the shift in the environment did negatively affect some of them. IFIs are not risk-immune; they face their own liquidity and asset decline challenges but to a limited degree. So far, Islamic banks have been following a close mimicry of western products and hence they are being exposed to similar risks. No major collapse has occurred in Islamic finance as a result of the crisis, but Islamic banking has been hit by defaults, for example the slump in Dubai real estate and debt restructuring. Even if Islamic finance had been prevailing, at its current state, the crisis could have happened but at a less severe level. Islamic finance has not yet provided a more principled mode of finance than the

debunked Wall Street model because the embedded ethical foundations have not been explored yet (Asutay, 2009b).

CHAPTER 6

RESEARCH FRAMEWORK AND METHODOLOGY

6.1 INTRODUCTION

The literature review and the examination of other studies about risk management in Islamic banking have shaped the research methodologies used in this study. The previous chapters thoroughly reviewed and synthesised the literature relating to, first, the theoretical overview of Islamic banking with specific reference to risk management; second, the difference between conventional and Islamic banking from a risk management perspective; third, the empirical studies regarding risk management in Islamic banking; and, finally, the impact of the recent financial crisis on the future of Islamic banking. This chapter discusses the research methods employed in this research, and also presents the appropriate analytical tools utilised.

The chapter defines the research objectives and questions introduced earlier in Chapter 1; this is followed by the research hypotheses presented in Section 6.3. The chapter later discusses research design and methodologies, and explores the advantages and disadvantages of each by identifying the research methodology and design for this research. The subsequent sections explain the research design, strategy, methods for primary data collection, and the chosen data analysis methods or tools. An explanation of the questionnaire and interview design and the pilot study are also included.

6.2 RESEARCH QUESTIONS AND OBJECTIVES

As stated in Chapter 1, the aim of this study is to explore and evaluate the risk profile of Islamic banks. At the heart of this paper is the question of whether Islamic banks are more or less risky than their conventional peers as perceived by the participants. A review of the existing literature does not provide a clear-cut answer to this question, which is expected to be explored by primary data. In other words, this is clearly an

empirical question, the answer to which requires feedback from the market place. This study, however, is not merely another addition to the available literature. It distinguishes itself by extracting empirical evidence from the perceptions of banking professionals and from the recent crisis.

Given the complexity of the topic, there are several questions that this research sets out to answer:

- (i) What is the difference between risk management for conventional and Islamic financial institutions?
- (ii) What are the additional risks faced by Islamic banks?
- (iii) How do the Islamic banks perceive their own risks?
- (iv) How advanced are the current risk management practices used by IFIs?
- (v) How do regulators expect to respond to the new risks inherent in Islamic banks?
- (vi) Was Basel II drafted with conventional banking model in mind?
- (vii) What does Basel III carry for Islamic banking?
- (viii) What are the appropriate capital requirement levels for Islamic banks?
- (ix) What possible *Shari'ah*-compatible risk management instruments are available at the present and for the future?
- (x) Can conventional risk mitigation techniques be adopted by Islamic banks or Islamic banking need to engineer its own mitigation techniques?
- (xi) Is Islamic banking actually more resilient than conventional banking?
- (xii) What effects did the recent crisis have on Islamic banking?
- (xiii) Are Islamic banks recession proof?
- (xiv) Will the Islamic banking principles offer a role model for the future?
- (xv) Could the crisis have occurred under an Islamic banking system?
- (xvi) Can Islamic banking survive without proper hedging tools?
- (xvii) Is hedging *Shari'ah*-compliant?
- (xviii) What are the main divergences between the current practice and the moral principles of Islamic banking?
- (xix) What is the next chapter for risk management in Islamic banking?

Following a structured approach, answers for each of these questions are explored through collecting primary data.

After the research questions were identified, an attempt was made to operationalize the research questions within the context of the broader objectives. Thus, the operationalized objectives are:

- (i) to ascertain the fundamental principles underlying risk management in Islamic banking and the unique risks facing the IFIs;
- (ii) to investigate the effect of different control variables like region, country, respondent's position, nature of FI, nature of operations, and accounting standards on the participants' perception on nature of risks, risk measurement and risk management and mitigation approaches of IFIs in comparison to those of conventional banks and with reference to the market conditions in which IFIs operate;
- (iii) to evaluate the applicability of IFSB Standards and Guidelines with respect to risk management and capital adequacy, and how could they operate in a Basel II (and potentially Basel III) era;
- (iv) to investigate the real roots of the recent crisis with a view to draw some lessons for IFIs.
- (v) to examine the dichotomy between the theory and practice of Islamic banking; and
- (vi) to explore the next chapter for risk management in Islamic banking.

In answering the research questions, the impact of various categories of respondents and their profile indicators on risk perception are also investigated.

6.3 RESEARCH HYPOTHESES

Having reviewed the related literature, identified research issues and formulated research objectives and questions, what follows is the formulation of the research hypotheses.

A research hypothesis is the statement created by a researcher when they speculate upon the outcome of a research or experiment. It is a tentative generalization, the validity of which remains to be tested. It is often a statement of the expected relationship between two or more variables. The hypothesis requires more work by the researcher in order to either confirm or disprove it (Creswell and Clark, 2007). Research hypotheses determine the parameters of the research questions; therefore, the methods used in testing the hypotheses should be relevant to the research questions and objectives (Robson, 2011).

For this study, research hypotheses were developed based on the main findings of prior research literature as well as by referring to the researcher's wide practical experience in Islamic banking and also the unique characteristics of IFIs as compared to conventional banks. The hypotheses are related to the opinions of several groups of respondents about risk management in Islamic banking.

As discussed in the following section, Research Design, in order to follow a structured approach that facilitates data collection and analysis, the questionnaire and interview format was utilized which is divided into ten main parts. Research questions and hypotheses are categorized in relation to the topical aspect of each part in the questionnaire and interview. The findings from questionnaire and interview data analysis are tested against those hypotheses and, as a result, conclusions will be drawn accordingly. In addition, the researcher further formulated sub-hypotheses in order to further investigate the impact of various categories of respondents on the risk perception

The research hypotheses and sub-hypotheses are listed and categorized as follows:

Section A - Risk perception and risks in Islamic banking

Hypothesis 1:

The main risks facing Islamic banks are reputational risk, *Shari'ah*- non-compliance risk, asset-liability management risk, liquidity risk, and concentration risk.

H₁₋₁: There is no statistically significant difference among the respondents in relation to their perception of the various risks facing IFIs according to region.

H₁₋₂: There is no statistically significant difference among the respondents in relation to their perception of the various risks facing IFIs according to the country in which they operate.

H₁₋₃: There is no statistically significant difference among the respondents in relation to their perception of the various risks facing IFIs according to the respondent's position.

H₁₋₄: There is no statistically significant difference among the respondents in relation to their perception of the various risks facing IFIs according to accounting standards.

H₁₋₅: There is no statistically significant difference among the respondents in relation to their perception of the various risks facing IFIs according to the nature of the FI.

Section B - Islamic Finance Contracts

Hypothesis 2:

Islamic bankers prefer mark-up based contracts (*murabahah, wakalah, salam, istisna'a, and ijarah*) and shy away from profit sharing contracts (*musharakah and mudarabah*).

H₂₋₁: There are no statistically significant differences among the respondents' use of Islamic finance contracts according to region.

H₂₋₂: There are no statistically significant differences among the respondents' use of Islamic finance contracts according to the respondents' position.

H₂₋₃: There are no statistically significant differences among the respondents' use of Islamic finance contracts according to the nature of the FI.

H₂₋₄: There are no statistically significant differences among the respondents' use of Islamic finance contracts according to the nature of activities.

Hypothesis 3:

Profit sharing contracts are perceived as more risky than mark-up based contracts in the Islamic finance industry.

H₃₋₁: There are no statistically significant differences among the respondents' risk perceptions about Islamic finance contracts according to region.

H₃₋₂: There are no statistically significant differences among the respondents' risk perceptions about Islamic finance contracts according to the respondent's position.

H_{3.3}: There are no statistically significant differences among the respondents' risk perceptions about Islamic finance contracts according to the nature of the FI.

H_{3.4}: There are no statistically significant differences among the respondents' risk perceptions about Islamic finance contracts according to accounting standards.

H_{3.5}: There are no statistically significant differences among the respondents' risk perceptions about Islamic finance contracts according to the nature of activities.

Section C - Additional Risk Issues Facing IFIs

Hypothesis 4:

There is no substantial difference between risk management in Islamic banking and conventional banking.

H_{4.1}: There are no statistically significant differences among respondents' perceptions about additional risk management issues in Islamic banking according to the nature of the FI.

H_{4.2}: There are no statistically significant differences among respondents' perceptions about additional risk management issues in Islamic banking according to region.

H_{4.3}: There are no statistically significant differences among respondents' perceptions about additional risk management issues in Islamic banking according to the respondent's position.

H_{4.4}: There are no statistically significant differences among respondents' perceptions about additional risk management issues in Islamic banking according to the nature of activities.

H_{4.5}: There are no statistically significant differences among respondents' perceptions about additional risk management issues in Islamic banking according to accounting standards.

Section D - Capital adequacy for Islamic banks

Hypothesis 5:

It is generally known that capital requirements levels should be lower in IFIs than in conventional banks.

Hypothesis 6:

Basel II was drafted with conventional banking very much in mind. IFIs should follow their own standards, e.g. IFSB Principles on capital adequacy.

H₆₋₁: There are no statistically significant differences among the respondents' views about capital adequacy for Islamic banks according to region.

H₆₋₂: There are no statistically significant differences among the respondents' views about capital adequacy for Islamic banks according to the nature of the FI.

H₆₋₃: There are no statistically significant differences among the respondents' views about capital adequacy for Islamic banks according to the nature of activities.

Section E- Islamic banking and the global credit crisis

Hypothesis 7:

Islamic banking is more resilient to economic shocks than conventional banking but not recession-proof.

H₇₋₁: There are no statistically significant differences among the respondents' perceptions about credit crisis and Islamic banking according to region.

H₇₋₂: There are no statistically significant differences among the respondents' perceptions about credit crisis and Islamic banking according to the nature of the FI.

H₇₋₃: There are no statistically significant differences among the respondents' perceptions about credit crisis and Islamic banking according to the nature of activities.

H₇₋₄: There are no statistically significant differences among the respondents' perceptions about credit crisis and Islamic banking according to accounting standards.

H₇₋₅: There are no statistically significant differences among the respondents' perceptions about credit crisis and Islamic banking according to the respondent's position.

Section F - Risk Management and Reporting

Hypothesis 8:

Not many Islamic banks use the more technically advanced risk measurement and reporting techniques.

H₈₋₁: There are no statistically significant differences among respondents in the frequency of producing risk management reports according to region.

Section G - Risk Measurement

Hypothesis 9:

The use of risk measurement techniques is less advanced among Islamic banks than their conventional peers.

H_{9.1}: There are no statistically significant differences among respondents in the use of risk measurement techniques according to region.

H_{9.2}: There are no statistically significant differences among respondents in the use of risk measurement techniques according to the respondent's position.

H_{9.3}: There are no statistically significant differences among respondents in the use of risk measurement techniques according to the nature of the FI.

H_{9.4}: There are no statistically significant differences among respondents in the use of risk measurement techniques according to the nature of activities.

H_{9.5}: There are no statistically significant differences among respondents in the use of risk measurement techniques according to accounting standards.

Section H - Risk Mitigation

Hypothesis 10:

Islamic banks use a number of risk mitigation tools that are intended to be *Shari'ah*-compliant and that are less advanced than those utilised by conventional banks.

H_{10.1}: There are no statistically significant differences among respondents in the use of risk mitigation techniques according to region.

H_{10.2}: There are no statistically significant differences among respondents in the use of risk mitigation techniques according to the respondent's position.

H_{10.3}: There are no statistically significant differences among respondents in the use of risk mitigation techniques according to the nature of the FI.

H_{10.4}: There are no statistically significant differences among respondents in the use of risk mitigation techniques according to the nature of activities.

H_{10.5}: There are no statistically significant differences among respondents in the use of risk mitigation techniques according to accounting standards.

Section I - Islamic Banking in Practice

Hypothesis 11:

Most IFIs abandoned conservative risk management *Shari'ah* principles in favour of copying conventional structures.

H₁₁₋₁: There are no statistically significant differences among respondents' perceptions about the current practices in Islamic banking according to the nature of the FI.

H₁₁₋₂: There are no statistically significant differences among respondents' perceptions about the current practices in Islamic banking according to region.

H₁₁₋₃: There are no statistically significant differences among respondents' perceptions about the current practices in Islamic banking according to the respondent's position.

Section J- The next chapter in Islamic banking

Hypothesis 12:

Islamic banking has a great potential to become a strong alternative financing system provided that it goes back to its roots.

H₁₂₋₁: There are no statistically significant differences among respondents' recommended growth strategies for Islamic banks according to region.

H₁₂₋₂: There are no statistically significant differences among respondents' recommended growth strategies for Islamic banks according to the respondent's position.

H₁₂₋₃: There are no statistically significant differences among respondents' recommended growth strategies for Islamic banks according to the nature of the FI.

H₁₂₋₄: There are no statistically significant differences among respondents' recommended growth strategies for Islamic banks according to the nature of activities.

H₁₂₋₅: There are no statistically significant differences among respondents' recommended growth strategies for Islamic banks according to accounting standards.

General hypothesis

Hypothesis 13 is a general hypothesis that is not linked to a specific part of the questionnaire, which aims to develop a conclusion from the main narrative and analysis of the entire research. This hypothesis expects significant differences between the perceptions of Islamic and conventional bankers, with the former being biased in favour of the Islamic banking model and the latter being biased towards their banking model.

Hypothesis 13:

Perceptions of Islamic and conventional bankers differ significantly in relations to risk and risk management issues in Islamic banking and finance, as Islamic bankers are more biased towards their business model, and *vice versa*.

6.4 RESEARCH METHODOLOGY

Research methodology is the approach a researcher follows in carrying out a research project. Bryman (2008) defines methodology as “the practices and techniques used to gather, processes, manipulate and interpret information that can then be used to test ideas and theories about social life.” Thus, research methodology provides a framework of the methods used in collecting, analysing, and reporting data.

According to the literature, there are two types of research methodologies: qualitative and quantitative. Quantitative methodology is designed to reach conclusions based on numerical data, for example by means of testing the strengths of the relationship between dependent and independent variables (Creswell, 1994). It involves the collection of data so the information can be quantified and subjected to statistical treatment in order to support or refute alternative knowledge claims. The main motive in quantitative methodology is to explain and examine a subject matter by correlating various variables.

Qualitative research methodology, on the other hand, places an emphasis on words instead of quantification when a researcher collects and analyses data (Bryman, 2008). Therefore, qualitative methodology is a set of research techniques used to interpret a phenomenon. It should be noted that when the motivation for a research is exploratory and evaluatory, it is constructed as a qualitative research methodology (Cresswell and Clark, 2007).

This research is designed as a qualitative research study, as it aims to explore the opinions and also aim to evaluate the risk perceptions of respondents to develop a better understanding of risk practices in Islamic finance industry.

6.5 RESEARCH DESIGN

Research design is a framework for a certain set of criteria that would generate suitable evidence for the researcher in the desired area of investigation. It, therefore, provides structure for the collection and analysis of data (Bryman, 2008). The objective of research design is to guide the research process from beginning to end by providing the framework within which all the necessary work will be completed. Social research should be constructed with a particular design in mind before a researcher starts collecting and analysing data.

Creswell and Clark (2007) and Bryman (2008) regard a successful research design to comprise of the following tasks:

- (i) Define the research problem;
- (ii) Determine the problem-solving information that is needed and when it is needed;
- (iii) Design the exploratory, descriptive or casual phases of the research;
- (iv) Specify the measurement and scaling procedures;
- (v) Construct and pre-test a questionnaire or an appropriate form for data collection;
- (vi) Specify the sampling process and sample size;
- (vii) Develop a plan of data analysis and tabulation;
- (viii) Specify the time and financial constraints; and
- (ix) Follow-up on the completed research study.

Research design, by considering the above-mentioned tasks, can be classified in numerous ways depending on the objective of the categorization criteria. The most common classification is according to the particular approach taken: exploratory research, descriptive research, and explanatory research, which are explored as follows:

Exploratory research is conducted to provide insights into and comprehension of the problem situation confronting the researcher. It helps the researcher solve an issue that has not been studied extensively previously. As the general nature of a research problem and the relevant variables are investigated, exploratory research is typically inevitable

when the data that are sought for is loosely defined, resulting in an unstructured working format. This does not mean that the research is non-systemic but rather of a qualitative nature providing room for interpretative explanations (Creswell and Clark, 2007).

Descriptive research's main intention is to describe something pertaining to characteristics, functions, or any phenomena. It is conducted to describe what exists. Thus, it is a type of research where the researchers use the past events to explain existing observable facts. Descriptive research is characterised by the preceding formulations of explicit hypotheses, therefore, stressing the importance of clearly defined research problems. This leads to a research design that is more structured, consisting of numerous planning and statistical methodologies (Bryman, 2008).

Explanatory research, on the other hand, exceeds to recognise cause-and-effect relationships between variables in the problem model, which is characterised by a structured design and a considerable amount of planning. This design sees how various independent variables are manipulated in order to check how a dependent variable is affected within a relatively controlled environment. There are, however, disadvantages of explanatory research. Some of the most common issues include it being expensive, and having administrative problems (Creswell and Clark, 2007).

When one considers the relationship between the three previously discussed types of research design, choosing a research approach is not an easy decision. The best way is to rationalise the chosen design(s) by examining the situation at hand. The selected design should be relevant to the problem being studied and the procedure of conducting the research should be economically feasible and realistically attainable. Thus, the nature of the study and the resources available to the researcher will greatly influence the research design.

The framework of the present study contains characteristics of both exploratory and descriptive research designs. This study benefits from the use of both the survey technique and the semi-structured interviews to search the particularities of risk

management in Islamic banking. This enables the researcher to explore the subject matter through the perceptions of banking professionals (explorative). The descriptive nature of the research stems from the fact that it benefits from the available body of knowledge and literature as discussed in the literature review section. Therefore, the chosen research design in this research is mixed research design. This study does not warrant the use of explanatory research, as it does not examine any direct cause-effect relationships.

6.6 RESEARCH STRATEGY

Another important aspect of a research is the research strategy. Research strategy is the approach to the study, and it is related how the connection between theory and empirical data can be made. It is a fact that “social research attempts to connect theory with empirical data – the evidence we observe from the social world. In other words, the relationship between research and theory”, and how it is done is explained by research strategy (Asutay, 2011). In social research, there are two main research strategies: deductive and inductive reasoning methods.

Deductive theory represents the most common view of the nature of the relationship between theory and social research. The researcher, on the basis of what is known about in particular domain and of theoretical considerations in relation to that domain, deduces a hypothesis that must then be subject to empirical scrutiny (Bryman, 2008). The researcher begins with a theory about the topic to be researched; which is then narrowed down to a more specific hypothesis that needs to be tested. This ultimately leads the researcher to be able to test the hypotheses with specific data to reach a conclusion confirming or rejecting the hypotheses (Creswell, 1994).

The inductive approach on the other hand moves from specific observations or findings to a broader generalisation and theory. In other words, the researcher begins with specific observations or arguments, formulates tentative hypotheses to be explored, and finally develops a general theory (Blaikie, 2007).

Since this research is oriented towards an explorative approach, it commences with exploring the field, and with the data collected from the field; it generates particular hypotheses to be tested with the data collected from the field. In other words, since this study begins with the specific and then moves to the general, it therefore, follows a deductive strategy.

6.7 RESEARCH METHOD

Research method includes the techniques, tools, and procedures, by which the data is collected, analysed, and interpreted for the research project (Bryman, 2008). Creswell (1994:64) defines research method as “the practices and techniques used to gather, processes, manipulate and interpret information that can then be used to test ideas and theories about social life.”

According to the literature there are two types of research methods: qualitative and quantitative. The quantitative method is designed to reach conclusions based on numerical data, while qualitative research method places an emphasis on words instead of quantification. Therefore, the qualitative method is a set of research techniques used to interpret a phenomenon. Quantitative analysis depends heavily on statistical significance, while qualitative analysis mainly uses simple human judgment in interpreting and organizing the collected data (Oppenheim, 2001).

Quantitative measurement is perceived as more accurate, valid, reliable and objective than qualitative measurement, due to the former’s scientific nature. However, this does not mean that qualitative research is less valuable. Instead of focusing on numbers, qualitative research focuses on observations and words, stories, visual depictions, interpretations, and other expressive descriptions. Qualitative approaches have the advantage of allowing for more diversity in responses as well as the capacity to adapt to new developments or issues during the research process itself. While qualitative research can be expensive and time-consuming to conduct, many fields of research employ

qualitative techniques that have been specifically developed to provide more succinct, cost-efficient and timely results.

Generally speaking, a research method that combines two or more research methods provides better interpretation as the information missed by one method might be captured by the other and thus an enhanced and integrated result may emerge from the analysis. According to Creswell and Clark (2007:13), mix methods research

“provides more comprehensive evidence for studying a research problem than either qualitative or quantitative research alone. Researchers are given permission to use all of the tools of data collection available rather than being restricted to the types of data collection typically associated with qualitative research or quantitative research. Mixed methods research helps answer questions that cannot be answered by qualitative or quantitative approaches alone.”

This research, hence, is triangulation- or mixed method-based, as it benefits from quantitative and qualitative research methods. While quantitative research method is in the form of self-administered questionnaire, qualitative research method in this study is based on semi-structured interviews. Both the survey questionnaire and the semi-structured interviews are developed from the same perspective and are expected to achieve the same objective of finding relevant responses to the research questions. It should be noted that research related to the literature review being descriptive research further contributes to the triangulation nature of the research.

6.7.1 Research Method: Data Collection

As mentioned above, two main data collection method utilised in this study, namely questionnaire and interviews. The following sections explore the details of the both methods of data collection.

6.7.1.1 The survey questionnaire

A questionnaire is a research instrument which consists of a series of questions and other prompts for the purpose of gathering information from respondents. It is very popular, since many different types primary data can be collected including attitudinal,

motivational, behavioural, and perceptive aspects of the subject being studied (De Vaus, 2002).

In designing the questionnaire, it is important that the questions address the aims of the study. The questionnaire is considered to be effective if it suits the research objectives and questions. A good questionnaire has to be clear, unambiguous, and encourage the respondents' participation (Creswell, 1994).

If properly designed and implemented, surveys can be an efficient and accurate means of determining information about a given population. Results can be provided relatively quickly and, depending on the sample size and methodology chosen, they are relatively inexpensive. Survey questionnaires have many advantages over other methods of data collection (De Vaus, 2002).

Some advantages of questionnaires can be listed as follows:

- (i) The responses are gathered in a standardised way, so questionnaires are more objective, certainly more so than interviews;
- (ii) It can be completed at the convenience of the respondents;
- (iii) Generally it is relatively quick to collect information using a questionnaire;
- (iv) Low cost of data collection & processing;
- (v) As the questionnaire can be anonymous, it gives the respondents freedom and encouragement to answer questions honestly, especially sensitive questions; and
- (vi) It can cover a large sample of respondents at the same time.

On the other hand, the questionnaire method has some disadvantages which have to be taken into consideration. Oppenheim (2001) highlights the following problems:

- (i) Some respondents may not be willing to answer the questions;
- (ii) Respondents may answer superficially especially if the questionnaire takes a long time to complete. The common mistake of asking too many questions should be avoided.

- (iii) The validity of the responses may be compromised by a biased view of the respondent;
- (iv) No opportunity to correct misunderstandings or to probe, or to offer explanations or help;
- (v) Questionnaires are standardised so it is not possible to explain any points in the questions that participants might misinterpret; and
- (vi) Respondent's inability to answer the question might affect the response rate and reliability.

Despite the disadvantages of the questionnaires, they are rather useful and efficient in aiming to collect data related to the perceptions and opinions of individuals on particular subject are; as this study utilized a questionnaire survey in collecting primary data from the bankers and financiers in the form of their opinions and perceptions in mapping out the risks aspects of and their management in Islamic banking and finance. Thus, a questionnaire survey is considered as one of the main methods of primary data collection for this study.

6.7.1.1.1. Open-ended vs. closed questions

In terms of questionnaire design, the questions included may be divided into those which are 'open-ended' and those which are 'closed'. In open-ended or free-response questions, respondents are free to reply to the questions in any way they wish and the answers have to be recorded in full. In 'closed' questions, respondents are offered a choice of alternative replies and they must reply in one of a predetermined number of ways, such as 'yes', 'no', or 'don't know' (De Vaus, 2002). The advantages of using closed ended questionnaires are that this technique is easier and quicker for the respondents to answer; they require no writing. In addition, closed ended questionnaires are easier to code and statistically analyse as and quantification is straightforward. Disadvantages of closed questions are the loss of spontaneity and expressiveness, and perhaps the introduction of bias by 'forcing' respondents to choose between given alternatives or by making them focus on alternatives that might have not occurred to them (Oppenheim, 2001). On the

other hand, open-ended questions have many advantages, stemming from the fact that respondents are encouraged to structure the answer as they wish. This provides a means for obtaining information which cannot be obtained adequately by the use of a closed question (Creswell, 1994). Another advantage of the open-ended question is the information which the respondents indicate with respect to their level of knowledge or degree of expertise. The disadvantage of open-ended questions is that they produce a mass of different words meaning the same thing, or a number of similar words meaning different things.). It can therefore be stated that open-ended questions are easy to ask, difficult to answer, and more difficult to analyse. Oppenheim (2001) explains that these free-response questions require drawing up some system of categories known as coding. The design of such coding framework and the actual coding operation require trained staff and are extremely time consuming; for this reason researchers have to curb their desire to have too many open-ended questions (Oppenheim, 2001).

6.7.1.1.2. Level and characteristics of measurements

The level of scales measurement of a variable in statistics is a classification that is used to describe the nature of data contained within numbers assigned to objects and, therefore, within the variable. According to De Vaus (2002), there are three main levels of measurement scales. These are:

- a) Nominal scale, in which a distinction between categories of a variable can be made, but one cannot rank the categories in any order. The nominal scale is used to measure qualitative variables and yields frequency data that may be subjected to non-parametric statistical tests, such as gender.

- b) Ordinal scale, in which it is meaningful to rank the answers by categories, but it is not possible to quantify precisely how much difference there is between categories, such as more than, less than, equal to).

c) Interval/ratio scale, in which ranking of categories can be made and it is also possible to quantify the differences between the categories precisely. Likert scales are very commonly used with interval procedures.

6.7.1.1.3. Sampling in the questionnaire

A sample is a small selected portion of the whole population. According to Bryman (2008:85), “a sample is the segment of population that is selected to be investigated.” The size of the sample must be sufficient in order represent the population, which the study is intended to investigate. The sample size depends on the homogeneity of the population. If the pilot study indicates that there is a considerable heterogeneity of the population, then it is important to choose a larger sample. As Robson (2011:164) contends, if the population is heterogeneous and the main interest of the study is to generalise the findings to the population from which the sample was drawn, then a larger sample is needed. In addition, a larger sample size will decrease the probability of having sampling error.

According to Bryman (2008), sample sizes smaller than 500 cases and larger than 30 cases tend to be suitable for most studies. As far as the survey sample in this study is concerned, there were obviously some real cost and time constraints which limited the sample size. The target population is the wider group of banking professionals worldwide, both Islamic and conventional banking practitioners, whose perceptions about risk management in Islamic banking could shape the outcome of this study. The significant diversity and dispersion of the population meant the time and cost constraints would be unusually high due to the inherent extra complications associated with such a target population. Caught between these challenges and the strong desire to make the sample size as large as possible, the researcher completed 77 questionnaires out of which 5 were not fit for purpose. The sample size for this study, upon which both descriptive and inferential statistical analysis will be performed, is therefore 77 questionnaires.

There are different sampling strategies such as simple random sampling, systematic sampling, stratified sampling, cluster sampling, panel sampling, and others; each with their own advantages and disadvantages.

According to Robson (2011), a variety of sampling methods can be employed, individually or in combination. Factors commonly influencing the choice between these designs include:

- (i) Nature and quality of the research;
- (ii) Availability of auxiliary information about units on the research;
- (iii) Accuracy requirements, and the need to measure accuracy;
- (iv) Whether detailed analysis of the sample is expected; and
- (v) Cost/operational concerns

It should be noted that snowball sampling method is used for this research, which is a sampling method used to obtain research and knowledge from extended associations through previous acquaintances; it uses recommendations to find people with the specific range of skills that has been determined as being useful. It is referred to metaphorically as snowball sampling because as more relationships are built through mutual association, more connections can be made through those new relationships and a plethora of information can be shared and collected, much like a snowball that rolls and increases in size as it collects more snow. Snowball sampling is a useful tool for building networks and increasing the number of participants. However, the success of this technique depends greatly on the initial contacts and connections made (Babbie, 2010).

Snowball sampling has a number of advantages as opposed to other sampling methods. It is possible for the surveyors to include people in the survey that they would not have known. It is also useful for locating respondents of a specific population if they are difficult to locate. The advantage of this is that the researcher can quickly find respondents who are experts in their fields. This leads to only having the most well-known experts for the sampling group, and also can help the researcher find lead users more simply (Babbie, 2010). The method is, however, heavily reliant on the skill of the

researcher in conducting the actual sampling, and that individual's ability to vertically network and find an appropriate sample. To be successful requires previous contacts within the target areas, and the ability to keep the information flow going throughout the target group. Identifying the appropriate person to conduct the sampling, as well as locating the correct targets is a time consuming process which renders the benefits only slightly outweighing the costs. Another disadvantage of snowball sampling is the lack of definite knowledge as to whether or not the sample is an accurate reading of the target population. By targeting only a few select people, it is not always indicative of the actual trends within the result group (Babbie, 2010).

The experience in conducting this research indicates that due to the nature of the research as well as the subject matter, snowballing strategy of sampling proved to be a very successful strategy.

6.7.1.1.4. Operationalising the questionnaire

(i) Questionnaire Design and Structure

The questionnaire was primarily developed by the researcher drawing on conclusions from the literature review which included articles, books, PhD theses, and exploratory surveys on the topic of risk management in Islamic banking. In particular, the survey by Khan and Ahmed (2001) was quite useful in developing the questions. In addition, the researcher's extensive practical experience in Islamic banking played a role in designing the questionnaire.

The nine-page questionnaire (reproduced in Appendix 1) was drawn up with twenty-two main questions, most of which having a number of sub-statements.

The survey was mainly dominated by closed questions in a manner that ensures that respondents could answer all the questions as easily as possible, with a box ticking response required of respondents. However, at the end of the questionnaire, an open ended question option was provided for the respondents to raise any issue which they

might have in mind in relation to the subject of the questionnaire. The type of questions used in the questionnaire varies according to the type of information required to test the research hypotheses. The questions are mostly multiple choices in order to cover all the relevant data.

The questionnaire was split into five main parts:

Part One, General and Background Information, covers the control variables of the survey by acquiring background data of the respondents and their organisations. The aim of obtaining data for this section is to use them as control variable to investigate whether these variables had any effect on the respondents' answers in the other sections.

The second part, Risk Perception, is used to elicit opinions of respondents on different risk management issues in Islamic banking. This part is subdivided into three main sections: Section One covers the inherent risks, risk measurement, severity of risks facing Islamic banks, in addition to seeking the respondents' perception about different Islamic banking contracts; Section Two deals with capital adequacy for Islamic banks; while Section Three is intended to gather the respondents' views on the impact of the recent credit crisis on Islamic banking. Part Two consists of ten questions. The five-point Likert-scale is used in providing options for each question to the respondents to express his/her preference in terms of how strongly they agree or disagree with statements. In Q7 the five-point Likert-scale is used to express the degree of importance (ranking from Very Unimportant = 1 to Very Important 5). However, the respondents are given space at the end of the question to provide additional comments.

In the third part, Risk Management and Mitigation, respondents requested to provide feedback on the use of risk management and mitigation techniques at their organizations, if applicable. This part consists of four closed-ended questions through which respondents have to express their views on risk management and mitigation techniques employed by the banks. Replies from the respondents were obtained by asking each one

to answer questions using a 5-point Likert scale for Q17, while respondents had to choose from listed options for Q 18, 19, and 20.

Part Four, Islamic Banking in Practice, investigates whether there is a dichotomy between the practice and ideals of Islamic banking. It consists of one closed-ended question, Q21, which is subdivided into four statements. Replies from the respondents were obtained by asking one to answer questions using a 5-point Likert scale (ranking from Strongly Disagree = 1 to Strongly Agree = 5)

Finally, *Part Five, the Next Chapter in Islamic Banking*, explores different growth strategies for IFIs. Respondents were asked to rank the importance of each strategy according to their perception. While Q22 is a closed-ended question, respondents are given space at the end of the question to provide additional comments.

(ii) Administration and Sampling

The list of institutions and respondents to approach was taken from the contact list at the European Islamic Investment Bank Plc (EIIB). Between February 2010 and November 2010, questionnaires were sent to 110 Islamic banker professionals in 19 countries.

In the process of conducting the questionnaire, a cover letter for each questionnaire was provided to explain the purpose of the research, as well as to highlight the importance of the individual's response. The letter aimed at assuring respondents that the information provided is confidential, anonymous and would be used only for the purpose of the research.

The sample included Islamic and conventional bankers, auditors, lawyers, rating analysts, *Shari'ah* scholars, consultants, and brokers from various countries and regions.

The final return date for the questionnaire was 30 November 2010. Questionnaires were distributed via email, fax, post, and in person. 58 questionnaires were initially returned – an initial response rate of 52.7%. Follow-up reminders increased the total to 77 returned

questionnaires from 18 countries. However, out of the 77 surveys returned, 5 were not useable because the researcher felt that their answers were inconsistent or that the respondents were biased in their replies, which could influence the validity and reliability of the findings.

The final sample comprised 72 surveys from 18 countries – a final response rate of 65.5%. The sample represented a diverse geographic spread of institutions, and respondents were spread across different departments and held different positions within their organisations. The sample size and distribution is within acceptable limits.

Table 6.1 provides a breakdown of the response rate, however, detailed analysis of the sample according to respondents’ roles, countries and regions, and nature of institution is provided in Chapter 7.

Table 6.1: Questionnaire Response Rate

Distributed	Received	Not valid	Valid	Response rate
110	77	5	72	65.5%

6.7.1.1.5. Pilot study

A pilot study is a small-scale preliminary study conducted before the main research in order to check the feasibility or to improve the design of the research. The questionnaire must be evaluated rigorously before final administration of the questionnaire (De Vaus, 2002). A pilot test is important as it highlights any shortcomings before the document is fully launched. The objective is to check the overall presentation, clarity and reasonableness in terms of the length of the questions and the depth of the information sought (Bryman, 2008) Also piloting is important to check the uniformity of interpretation of each of respondent, and whether respondents are answering the questions correctly (Dillman, 2000).

The drafted questionnaires for this study were first pilot tested on a group of ten bankers working in London. The respondents were asked about the following questions:

- (i) Is the questionnaire too long?
- (ii) Were the instructions clear?
- (iii) Were any of the statements ambiguous?
- (iv) Did they find any of the questions sensitive?
- (v) If they have any comments and suggestions.

The feedback of this piloting showed some observations, as follows:

- (i) Q7: Some respondents did not understand what is meant by Displaced Commercial Risk.
- (ii) Q7: There was some ambiguity concerning which risks fall under market risk.
- (iii) Q11: Some sub-statements are unclear

These feedbacks were then incorporated into the questionnaire and a further random sample of seven bankers was then selected for second piloting. This time the results from the pilot test resulted in no noticeable difference to the original questionnaire. This produced the final version used for this research.

6.7.1.2 Interviews

An interview is a qualitative research technique that allows face-to-face interaction. It involves asking questions and receiving answers from respondents in an identified research area. As compared to questionnaires, it can lead to increased insight into respondents' thoughts, feelings, and behaviour rather than having simple answers.

Robson (2011) classifies interviews into structured, semi-structured and unstructured interviews. The different types can, to some extent, be linked to the depth of response sought. Oppenheim (2001) classifies interviews to essentially two kinds:

- a) Exploratory interviews, depth interviews, or free-style interviews;

- b) Standardised interviews such as used, for example, in public opinion polls, market research and government surveys.

Oppenheim (2001) provides some advantages of interviews compared to questionnaires:

- (i) Improved response rate;
- (ii) Interviews can give a prepared explanation of the purpose of the study more convincingly than a covering letter;
- (iii) Flexibility as questions that are inappropriate to a particular interviewee can be omitted or additional ones included;
- (iv) Gives the interviewer the opportunity to probe further into a subject to extract more details from the interviewee;
- (v) In interviews it is easier to keep the attention of the respondent; and
- (vi) Enhancing data validity: due to human interaction, interview results have less chance of being biased and unreliable.

However, interviews have some common disadvantages. Creswell and Clark (2007) argue that the disadvantages of using interviews are to some extent a reflection of their advantages. Obviously, interviews are much more expensive than questionnaires. The larger or the more dispersed the sample, the greater the cost. Travel costs and call-backs add to this. The cost factor also enters the data processing stage: since interviews are used particularly where many open-ended questions have to be asked, there will be a major and costly coding operation allied to the use of interviews. Analysis of interview data may be challenging as the data collected usually contains non-standard responses. Moreover, interviews tend to be time consuming, as they require lots of preparation and coordination with the interviewees.

6.7.1.2.1. Operationalising interviews

This study collected qualitative data by conducting exploratory semi-structured interviews because exploratory interview is essentially heuristic, which helps to develop ideas and research hypotheses rather than to gather facts and statistics (Oppenheim,

2001). In addition, Bryman (2008) describes in-depth interview as an engaged conversation between two people. In the interview, the researcher puts him or herself in the participant's situation to try and understand that person's point of view (De Vaus, 2002). The researcher needs to listen and pay constant attention to the participants as they are responding, repeatedly attempting to understand the meaning of what is being said and how the person has shaped his or her perspective. In this way, interviewing is more than 'collecting data'. Furthermore, interviewing allows the researcher and the participant to connect in a profound way, reducing the distance between them (Creswell and Clark, 2007). This type of interview is often unstructured and, therefore, permits the interviewer to encourage a respondent to talk at length about the topic of interest in a flexible approach (Robson, 2011).

(i) Interview Structure

The interview script was developed within the context of the original research questions and hypotheses. The script helps to guide the interview sessions. The interview is divided into six main parts corresponding to the six research parts introduced under the structured approach in Section 9.2. This facilitated data collection and analysis. The interview script covers the same topics as the questionnaire, as the main purpose of the semi-structured interviews is to prove or disprove the conclusions driven from the questionnaire data analysis.

(ii) Administration of the Interview and Sampling

The snowball sampling method, as discussed before, was used for the interview sampling to obtain perceptions and knowledge from an extended network of respondents, through previous acquaintances. The researcher utilised his network of initial contacts and connections to find participants with valuable experience and knowledge in Islamic banking and risk management. From June 2010 to January 2011, in-depth semi-structured interviews were completed with 37 Islamic banking professionals. The interviewees included a mix of senior banking executives and heads of business units who work at either Islamic banks or conventional banks with Islamic activities/windows, researchers,

academics, *Shari'ah* scholars, consultants, and specialized analysts at rating agencies. Five of the respondents in the interview were also included in the sample for questionnaires.

Out of the 37 interviews conducted, 4 interviews were discarded because the researcher felt that the interviewees were biased in their replies or they were not well informed about the issues discussed. Therefore, the final sample included only 33 respondents (five of which were included in the questionnaire sample) who were knowledgeable about the topic and the contemporary developments, and whose replies could be taken, with a high level of confidence, as bias-free.

Out of the 33 interviews that comprise the final sample, 21 interviews were conducted face to face, either in London or in the participants' cities. The researcher utilised his numerous business travels to arrange for these face to face interviews. 7 interviews were conducted via teleconference, and 5 interviews were conducted via video conference facilities. Both the teleconferences and the video conferences were dialled from the researcher's primary location in London. The final sample was diverse both geographically and by participants' roles.

Interviews were conducted to gather primary data for this research to support the primary data generated through quantitative method, namely the questionnaire. It should be noted that the preparation for the interview was carefully planned and professionally conducted. When possible, these interviews were audio recorded with the permission of the interviewee. When recording was not possible because of the spontaneity to engage in the interview, notes were taken in shorthand by the interviewer. Even when an interview was being recorded, shorthand notes were also kept.

However, the interview sample was not as big as the questionnaire sample for a number of reasons:

- (i) In depth-interviews take much more time than structured questionnaires;

- (ii) Interviews require one-on-one interactions;
- (iii) Travelling to meet interviewees was difficult due to time and cost constraints;
- (iv) Despite exploiting video conference and teleconference facilities to conduct some interviews, several potential interviewees did not have the time or the wish to participate;
- (v) Some potential interviewees were located in remote time zones (like America and Southeast Asia), which added to the difficulty of arranging suitable interview times.

Despite these difficulties, the sample size and distribution are within acceptable limits and, therefore, allows for reliable data.

Table 6.2 combines the geographic distribution with the position of interviewees. It is obvious that interviewees represent a wide range of expertise and roles.

Table 6.2: Breakdown of Interview Sample

Position	Country									Total
	Bahrain	Egypt	France	Kuwait	Malaysia	Qatar	Syria	UAE	UK	
Consultant		3%		3%				3%	6%	15%
Conventional Banker		3%				3%			6%	12%
Islamic Banker	6%	6%			3%				9%	24%
Lawyer		3%						3%	3%	9%
Rating Agency Analyst			3%					3%	15%	21%
Researcher	3%	3%							3%	9%
Shari'ah Scholar	3%						3%	3%		9%
Total	12%	18%	3%	3%	3%	3%	3%	12%	42%	100%

A detailed list of interview participants, their positions, organizations, and location is reproduced in Appendix 2.

6.7.1.3 Validity and reliability of the data

Validity refers to whether the questionnaire or interviews measure what they intend to measure, which is crucial, regardless of the method used to collect such data, as invalidity makes the results worthless. Validity depends largely on how honest and accurate the responses given by the respondents are, which is a difficult factor to measure.

Reliability refers to the consistency of the questions. This means that if the research was to be carried out by other independent researchers employing the same methodology and strategy, they would arrive at a similar conclusion, all other things being equal (Creswell, 1994). If a method of collecting evidence is reliable it means that anybody using this method, or the same person using it at another time, would come up with the same results. According to Oppenheim (2001), the key components of data reliability include consistency, precision and explicability of results, which suggests that the researcher should be consistent when collecting the data and should aim for a high degree of precision and accuracy, which of course will be subject to many factors outside the control of the researcher. However, the researcher should try and minimize bias in the data collection process.

In this study, the validity and reliability of the Data were proved acceptable thanks to a number of reasons:

- (i) The use of multiple methods of data collection;
- (ii) Having a cover letter explaining the purpose of the research and assuring confidentiality of responses;
- (iii) The questionnaire was subjected to a sequence of pilot test, which involved every question being scrutinised and edited when necessary;
- (iv) Collected raw data was screened and filtered for errors;
- (v) Personal close follow-up with the questionnaire respondents via telephone calls and emails to ensure eliminating any confusion or lack of clarity that might arise;
- (vi) Checking consistency of answers in questionnaires through multiple questions asking about the same point;
- (vii) Five questionnaires were excluded from inclusion in the final sample as the researcher felt the inconsistency in the answers might spoil the data;
- (viii) Four interviews were discarded because of the same reasons;
- (ix) Personally assuring the interviewees of the semi-structured interviews of the anonymity of both their identity and personal responses;

(x) Sending the draft questionnaire and interview script to a number of PhD students and academics in order to seek their opinions on the proposed drafts and their potential effect of the data validity and reliability.

Cronbach's alpha test

Cronbach's alpha is the most common form of internal consistency reliability coefficients, which ranges in value from 0 (when the true score is not measured at all and there is only an error component) to 1 (when all items measure only the true score and there is no error component). The higher the value of alpha, the more reliable the scale is. As a rule of thumb, alpha should be at least 0.7 (De Vaus, 2002).

Table 6.3 – Reliability Statistics (Cronbach's alpha coefficient)

Cronbach's Alpha	N of Items
0.912	105

Table 6.3 reveals that the Cronbach's alpha coefficient for respondent groups for the 105 items, which used the scale, was 0.912 (>0.70), which should be taken as confirming the reliability of the contents of the questionnaire used in this study.

6.7.2 Research Method: Data Analysis

Data analysis is one of the most difficult parts of the research process. Having chosen the appropriate method of analysis, the choice of statistics is affected by both the method of analysis itself, the level of measurement of variables and the complexity of research questions (De Vaus, 2002). This section provides a detailed description of the methods used to analyse the assembled qualitative and quantitative data.

6.7.2.1 Quantitative data analysis

An initial screening of the questionnaire was carried out regarding the completeness and the eligibility of the responses. As a result of this initial screening, only 72 out of the 77 returned questionnaires were included in the final sample.

The questionnaires were numbered and data was checked for errors. Cross tabulations were carried out to check the inconsistency of the data (skip errors, missed answers, values outside the range). In addition, the frequency distribution for all question items has been checked and corrected if required. Once all the errors had been corrected, raw data was coded and saved as new master file for statistical analysis. The final complete sample was then entered directly into the Statistical Package for Social Science (SPSS) programme. Initially, all the variables were created, and then the actual questionnaires were entered. This enables the data to be created in statistical tables in order to facilitate the inferential statistical analysis.

Most questions in this questionnaire are designed along a 5-point Likert scale in order to measure the respondents' opinions about sets of statements, which make the codification and the analysis of the data easier and efficiently.

The following statistical techniques are utilised:

(i) Descriptive Analysis Methods

Descriptive statistics are summaries of data, which can be tabular, numerical, or graphical. Different types of descriptive statistics such as the mean, the mode, the median, frequency distribution, the minimum, the maximum and percentages are calculated; and presented in the following chapters.

(ii) Non-parametric Tests

The main objective of statistical analysis applied in this research is to test whether there are significant differences in perceptions of respondents through various control variables at the overall sample level and among various groups of respondents. Significance testing is usually concerned with accepting or rejecting hypotheses or propositions, which can be conducted by parametric and non- parametric tests. Non-parametric tests were considered to be appropriate for this study because the data collected were mainly nominal and ordinal; the responses were not normally distributed; and the sample size is relatively small. Parametric tests usually suit samples which are drawn from a normally distributed population and data collected on an interval or ratio scale (Hebel, 2002).

The following non-parametric techniques were used:

(a) Chi-Square test

The Chi-square test is used to measure the association between dependent variables and independent variables (Saunders *et al.*, 2007). The test is appropriate for testing the goodness of fit variables because the test can be applied to determine whether or not an observed set of frequencies matches some expected set of frequencies. The Chi-Square test was used to verify the existence of any significant differences in the responses regarding the degree of response for each statement. A significance level of 5% is used for this study as justification for rejecting the null hypothesis.

(b) Kruskal-Wallis and Mann-Whitney U Test

Kruskal-Wallis test is a non-parametric method for testing equality of population medians among groups. It is identical to a one-way analysis of variance with the data replaced by their ranks. It is an extension of the Mann-Whitney U test to 3 or more groups.

K-W test allows researchers to measure the possible differences between two or more groups in relations to particular control variables. In this study, the K-W test of significance was intensively used for the inferential statistical analysis to test the impact of control variables like region, country, respondent's position, nature of FI, nature of activities, and accounting standards on the perception of survey participants. The significance level used for this Kruskal-Wallis test is 5%.

(c) Spearman's Rank Correlation Coefficient

Spearman's Rank Correlation Coefficient is a measure of correlation, which shows how closely two sets of data are linked. It only can be done on data that can be put in order, highest to lowest (Bryman, 2008). In this study, the Spearman's rank correlation coefficient is used to test whether there is correlation between different groups of respondents.

(iii) Factor analysis

Factor analysis as an inferential statistical analysis tool is used as data reduction method in order to reduce a large number of variables to a small number of factors to facilitate the process of summarising the data which has been collected. Pallant (2007) states that in order to conduct factor analysis the Kaiser-Meyer-Olkin (KMO) and Bartlett's test need to be conducted. For the factor analysis to be considered as appropriate, the Bartlett's test of Sphericity value should be significant ($P < .05$), while for the KMO test, the suggested minimum outcome must be at least 0.6 (KMO score ranging from 0 to 1). The KMO test's benchmarks are as follows: if the KMO measure is in the 0.90s, the sampling is considered as marvellous. If the outcome is in the 0.80s, then the sampling is considered as meritorious; if it is in 0.70, then the sample is middling; if it is in the 0.60s, then the sample is mediocre; if it is in 0.50s, then the sample deemed as miserable, and lastly if it is below than 0.50, then the sample is unacceptable (Pallant, 2007).

In this study, factor analysis was used for questions 11 and 16 to test whether the observed variables can be explained largely or entirely in terms of a much smaller number of components. This also helps to organise large numbers of factors into components generated by the study.

(iv) MANOVA

Multivariate analysis of variance (MANOVA) is a generalized form of univariate analysis of variance (ANOVA). It is used when there are two or more dependent variables (Tabachnick and Fidell, 2006). MANOVA tests aim at whether mean differences among groups on a combination of dependent variables is likely to occur by chance (Pallant, 2007). In this study, after conducting factor analysis, MANOVA test was computed for questions 11 and 16 in order to investigate if there is any significant difference between the component groups identified by factor analysis in relation to some control variables. This helps to locate the impact or significance of each control variable on the generated distribution and components.

(v) Friedman test

The Friedman test is used to find a tendency for some variables to receive higher ranks than others, for example assigning the ranks of 1 to 10 to the most preferred and least preferred variables, respectively (Creswell, 1994). The Friedman test ranks the scores for each of the cases and then calculates the mean score for each sample. If there is no significant differences between the samples, their mean score ranks should be similar (Bryman, 2008). The Friedman test determines whether the rank totals for each condition or variable differ significantly from the values which would be expected by chance (Bryman, 2008).

In this study, Friedman test was used in questions 9 and 10 to examine whether there is a significant difference between the respondents' perceptions in ranking the given options. The significance level used for this Friedman test is 1%.

(vi) Interpretative Analysis

In addition to these quantitative methods, an interpretative approach was employed to provide further meaning to the results of the questionnaires and in-depth understanding of the issues in an integrated manner. This interpretative approach interacts the primary data findings with the literature review in order to provide better understanding of the findings of the questionnaire analysis.

6.7.2.2 Qualitative data analysis

Analysis of the qualitative data collected through the semi-structured interviews is more complex and demanding than that of quantitative data. This means that unless great care is taken in its analysis, it may cause real harm to the research itself (Robson, 2011).

Since the interviews were based on open-ended questions, the researcher transcribed all recorded interviews and read the interviews' notes and transferred them into segments representing complete thoughts on a single question or topic, in line with the original research questions. All transcribed interviews were broken into coded segments

representing complete thought statements. Answers were codified according to the most common responses provided by interviewees. After coding, the interview segments were transferred from word processing format into a spreadsheet for further analysis.

As Charmaz (1983:114) also states “Codes serve to summarize, synthesize, and sort many observations made of the data ... coding becomes the fundamental means of developing the analysis ... Researchers use codes to pull together and categorize a series of otherwise discrete events, statements, and observations which they identify in the data ... At first the data may appear to be a mass of confusing, unrelated, accounts. But by studying and coding, the researcher begins to create order”. Thus, the qualitative data collected through interview schedule were analysed by the use of coding analysis, which was conducted manually rather than with the help of a software, such as n-vivo.

The generated findings through coding analysis were also subjected to interpretative analysis with the objective of developing a better understanding of the data and findings. This social constructivist oriented method helps to develop an integrative approach to the data to render a rich qualitative analysis.

6.8 DIFFICULTIES AND LIMITATIONS

This study, as any research, has experienced a number of challenges and constraints which may have limited the range of the study both for the questionnaire and the interviews. These issues are as follows:

Limitation of the time available to the researcher was no doubt a restricting factor as he was unable to increase the sample size, as to do so would have called for more resources than were at his disposal. The coverage of the sample used in this research, for both the questionnaire and the interviews, can be extended to a larger number of banks across a wider scope of countries to enrich the findings. However, due to limitations of time and costs this was unfortunately not possible. Also, a more comprehensive data collection may help address some of the other data-related issues recognized in this paper;

The fact that the researcher is an Islamic banker known to most of the respondents added some sensitivity. Some respondents were worried about the conflict of interest and potential use of the information provided by the researcher's employer, despite assurances that the researcher is acting in his personal rather than professional capacity.

It should also be noted that some respondents expressed a degree of suspicion concerning the objectives of the study despite assurances regarding their anonymity and the strict confidentiality.

Other difficulties include:

- (i) Incomplete questionnaires and ineligible text;
- (ii) void or biased responses; and finally
- (iii) Due to the sampling technique limitations, which have been highlighted, this study is unable to use more robust statistical tools in analysing the data, such as parametric statistical tools, which arguably are more powerful.

6.9 CONCLUSION

This chapter aimed to render a discussion of the research process by identifying the details of the research and its conduct. Initially, the research objectives and questions were developed and then the research propositions were formulated. The chapter began by explaining the importance of research design and its significant role in planning the overall research project. It also explained the chosen research methodology for this thesis and the justification therein. Research methods in the form of survey questionnaires and semi-structured interviews were discussed in some detail, emphasizing their relevance to this research as confirmed by both the research questions and hypotheses. Data reliability and validity were also discussed with relevance to this study. In addition, the stages of conducting the fieldwork were briefly explained with emphasis on the practical phases of collecting the primary data.

The final part of this chapter discussed the statistical techniques which were used in order to analyse the collected data. In this research, non-parametric statistical tests were used

due to the violations of the distribution assumptions of parametric tests, namely due to not having normally distributed data. Having discussed the research instrument, the survey and interview samples, the pilot study, the administration of the research instruments and the form of data analysis, the following chapters present the findings of the empirical work conducted.

CHAPTER 7

PROFILING PERSPECTIVES ON RISK DIMENSIONS IN ISLAMIC FINANCE: DESCRIPTIVE QUESTIONNAIRE DATA ANALYSIS

7.1 INTRODUCTION

This chapter, the first of the empirical chapters, summarises the descriptive findings from the collected primary data in terms of providing a quantitative analysis of respondents' answers to the self-administrated questionnaire. The questionnaire follows the structure explained in the Research Methodology Chapter with the aim of empirically answering the research questions.

The chapter begins by providing a descriptive analysis of the general characteristics of the respondents. Then the research questions and hypotheses, explained in the previous chapter, are tested and general observations are made of the findings. Cross tabulation and descriptive statistics are used to provide indications of respondents' perceptions. The findings are examined with respect to the extant literature review, while the second part of quantitative analysis – inferential statistics – is used in the following chapter. A more complete discussion of the research findings will be provided in Chapter 10 in the context of existing knowledge and information, and also in association with the findings of the qualitative interview analysis that will be separately presented in Chapter 9.

7.2 DATA ANALYSIS AND RESULTS

As mentioned in Chapter 6, the questionnaire survey was conducted between February and November 2010. The questionnaires were distributed to 110 respondents in 18 selected countries among 6 global regions. The final sample comprised of 72 surveys – a final response rate of 65.5%. The sample represented a diverse geographic spread of institutions, and respondents were spread across different departments and held different positions within their organizations.

7.2.1 Characteristics of the Respondents

The first part of the questionnaire aimed at identifying different characteristics of the respondents. Among the many variables used in the study, the main control variables used to assess the respondents' profiles are the primary location of the financial institution, nature of operations and activities, and the accounting standards used. These control variables aim to test the effect of these characteristics on the respondents' answers.

Table 7.1 depicts the findings in relations to the primary country of operation of financial institution, which indicates that the majority of participating banks are located in the UK followed by Egypt, Bahrain, and France. GCC countries and Malaysia follow; while Jordan, Pakistan, Palestine, Singapore, and Turkey each is represented by one financial institution in the sample.

Table 7.1: Geographic Distribution of the Study Sample

Country	Number of Questionnaires	Percent of Final Sample
UK	21	29%
Egypt	9	13%
Bahrain	6	8%
France	4	6%
Germany	4	6%
Qatar	4	6%
Kuwait	3	4%
Malaysia	3	4%
Saudi Arabia	3	4%
Syria	3	4%
UAE	3	4%
Switzerland	2	3%
USA	2	3%
Jordan	1	1%
Pakistan	1	1%
Palestine	1	1%
Singapore	1	1%
Turkey	1	1%
Total	72	100%

In addition, Table 7.2 combines the financial institution's main region of operation together with the respondents' positions. As can be seen in Table 7.2., Heads of Risk

Management and Risk Managers are represented by more than 32% of the sample, followed by General Managers and Managing Directors. Respondents included only one Head of Investment Banking and one *Shari'ah* Scholar. The participants' length of service at their organisations does not form part of this questionnaire.

Table 7.2: Breakdown of the Positions of the Participants

Participant's Role	Americas	Europe	GCC	Other	Other Middle East	South East Asia	Total (Count)	Total (%)
Analyst	1	2			2		5	7%
Auditor		2					2	3%
CEO		2	1		1	1	5	7%
Chief Financial Officer			1	1			2	3%
Consultant		2					2	3%
Director		5			1		6	8%
General Manager			4		6		10	14%
Head of Investment Banking			1				1	1%
Head of Risk Management		8	3				11	15%
Managing Director		1	4		3		8	11%
Risk Manager	1	4	3	1		3	12	17%
Senior Analyst		3	1				4	6%
Senior Trader		1	1				2	3%
<i>Shari'ah</i> Scholar					1		1	1%
Solicitor		1					1	1%
Total (Count)	2	31	19	2	14	4	72	
Total (%)	3%	43%	26%	3%	19%	6%		100%

The nature of the participating financial institutions is also investigated. As can be seen in Table 7.3, out of the 72 institutions which participated in this study, 34.7% were fully-fledged Islamic banks, with the remainder being conventional banks with Islamic activities (19.4%), conventional banks (27.8%), and others (18.1%).

Table 7.3: Nature of Financial Institution

Nature of Institution	Region						Total
	Americas	Europe	GCC	Other	Other Middle East	Southeast Asia	
Audit Firm		3%					3%
Brokergae					1%		1%
Consulting Firm		3%					3%
Conventional Bank	3%	11%	4%		10%		28%
Conventional Bank with Islamic activities		10%	10%				19%
Fully-fledged Islamic Bank		7%	13%	3%	7%	6%	35%
Law Firm		3%					3%
Rating Agency		7%					7%
Sharia'a Scholar					1%		1%
Total	3%	43%	26%	3%	19%	6%	100%

Since the operational nature of the participating institutions has implications for some of the questions in the questionnaire, the nature of activities of the financial institutions are also examined. As depicted in Table 7.4., respondents are almost equally distributed among retail banking (14%), commercial banking (15%), and investment banking (15%). 24% of respondents stated that their institutions offer both retail and commercial banking, while 14 % considered their institutions as integrated bank or private equity house. The ‘Other’ category (18%) comprises of audit, consulting, and law firms, together with rating agencies and *Shari’ah* scholars.

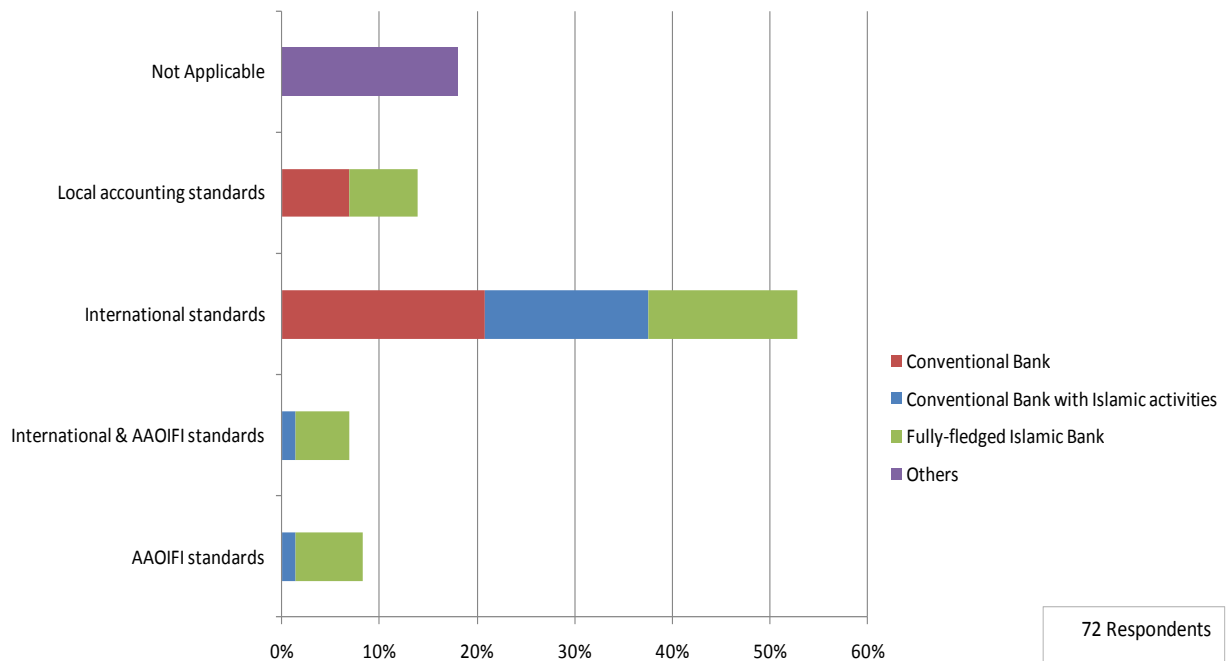
Table 7.4: Activities of Financial Institution

	Conventional Bank	Conventional Bank with Islamic activities	Fully-fledged Islamic Bank	Others	Total
Commercial banking	4%	7%	4%		15%
Integrated banking	8%	4%			13%
Investment banking	6%	3%	7%		15%
Private Equity House			1%		1%
Retail & commercial banking	10%	3%	11%		24%
Retail banking		3%	11%		14%
Other				18%	18%
Total	28%	19%	35%	18%	100%

Finally, the accounting standards utilized by the sampled financial institutions were also enquired in the questionnaire. As illustrated in Figure 7.1, the majority of participating banks use international accounting standards (53%), 8.3% use AAOIFI standards, 13.9%

use local accounting standards, while 6.9% of respondents said their institutions adapt both AAOIFI and international standards concurrently. 18% of respondents fall under the ‘Not Applicable’ category as these respondents are not working for financial institutions.

Figure 7.1: Accounting Standards Used by Financial Institution



7.2.2 Locating Risk Perception

7.2.2.1 Perceptions on risk issues in Islamic banks

7.2.2.1.1. Overall risks faced by Islamic banks

Respondents were asked in Question 7 to express their perceptions about the severity of risks facing IFIs by indicating the degree of importance of each risk on a 5-point Likert scale (ranking from Very Unimportant = 1 to Very Important = 5). In addition, Question 8, being an open-ended question, requested respondents to list any additional risk(s) – in order of seriousness – that could affect IFIs.

The descriptive statistics in Table 7.5 demonstrates the importance attached to each of the risk areas by the participants as faced by their financial institution. As can be seen from

Table 7.5, the mean values for the risk categories are between 4.01 and 2.72, the median is between 4 and 2, and the mode is between 5 and 2. However, due to the nature of the data collected by using a Likert scale, the median and the mode seem to be more appropriate measurements for this study. According to Howell (1997), the major advantage of the median and the mode is that unlike the mean, they are unaffected by extreme scores. Another advantage of these measures, when contrasted with the mean, is that they do not require any assumptions about the interval properties of the scale.

Table 7.5: Descriptive Statistics for Each Type of Risk (Aggregate Results)

Risk	n	Mean	Median	Mode	Chi-square
Liquidity Risk	72	4.01	4	5	0.000
Asset-Liability Management Risk	72	3.94	4	5	0.000
Reputation Risk	72	3.92	4	5	0.000
Concentration Risk	72	3.81	4	5	0.000
Credit Risk	72	3.75	4	4	0.000
Shari'ah-Non-Compliance Risk	72	3.71	4	3	0.000
Legal Risk	72	3.49	3	3	0.000
Corporate Governance Risk	72	3.21	3	2	0.108 N/S
Displaced Commercial Risk	69	2.94	3	4	0.160 N/S
Operational Risk	72	2.93	3	3	0.000
Equity Investment Risk	72	2.86	3	3	0.046
Fiduciary Risk	70	2.74	3	2	0.004
Market Risk	71	2.72	2	2	0.002

Notes: n = Number of responses;

N/S indicates that the differences of the responses are not significant at 5% using the Chi square test of significance

Furthermore, Chi-square test, a non-parametric test, is used to explore frequency data in order to test whether the data represent good fit or not. This study uses a significance level of 5%. Since, for this question, for most risks (except Displaced Commercial Risk and Corporate Governance Risk) the P-value is less than 0.05, it is concluded that for most risks there is goodness of fit between the data.

On an aggregate level, as can be seen from Table 7.5, liquidity risk is perceived as the most severe risk facing IFIs with the highest mean value of 4.01 followed by asset-

liability management risk (3.94), and reputation risk (3.92). Concentration, credit, and *Shari'ah*-non-compliance risks followed the initial risk categories but were not recognized as critical as the top risks by the participants. Among the risks listed, market risk was considered as the least risky (2.72).

It is no surprise that liquidity and ALM risks are ranked as the highest risks facing the industry. The limited range of possible funding sources for IFIs and the consistent focus on longer-term assets leads to concentrated liabilities, imbalanced funding mixes, and stretched capital management strategies. The two risks are closely correlated and the impact of liquidity risk is magnified by the lack of money market instrument to manage liquidity. These two risks, together with reputation and concentration risks, support research Hypothesis 1 about the top risks facing IFIs.

Shari'ah-non-compliance risk has been ranked sixth as it is likely to be a significant and unique risk for IFIs, as *Shari'ah*-compliance should be the core focus of every IFI. Any divergence from *Shari'ah* principles exposes the IFI to a wide range of risks at different levels as discussed in previous chapters.

Operational risk has been ranked tenth by respondents; this is not in line with the researcher's expectations as operational risk could be critical to IFIs due to their specific contractual features. In addition, because of the relatively new nature of Islamic banking, a lot of the issues related to the operations need to be instituted. These include people's risk, creating computer programmes, and legal documents, *etc.* It should be noted that Research Hypothesis 1 does not consider operational risk to be among the top five risks; however, a higher ranking was expected.

Market risk (incorporating rate of return risk, currency risk, commodity risk, benchmark risk, and mark-up risk) is incurred on instruments like commodities and currencies traded in well-traded markets appears to be less risky for Islamic banks. This risk arises from movements in the prices of goods/securities are usually a part of the trading book of a bank. On the banking book, conventional banks trade in currencies, indices, and bonds to

boost their profitability and to keep a part of their assets in liquid money-market instruments. Market risk tends to be more speculative in nature. However, the majority of the *Shari'ah* scholars forbid the sale of debt, and trading in *sukuk* is almost non-existent among IFIs as most of them hold the *sukuk* till maturity. Islamic banks, however, can trade in commodities and assets-backed securities; however, not too many IFIs are involved in this, and this may be a reason for a low ranking of market risk.

Equity investment risk was intentionally separated from market risk in the questionnaire as PLS through *musharakah* and *mudarabah* contracts should be the essence of Islamic banking. Unfortunately, IFIs in practice tend to allocate limited funds to equities and therefore equity investment risk was ranked among the lowest risks recognized by bankers. As more IFIs shift their strategic attention to equities after the drying up of international money markets and the attractive equity investment opportunities emerging following the recent crisis, equity investment risk is expected to attract more attention in the Islamic banking world.

Of note is the low rank given to displaced commercial risk, as the practice of smoothing investment returns through 'profit equalisation reserves', 'investment risk reserves', and active management of *mudarib* fees is a very common feature of IFIs to avoid random, business, and confidence-driven liquidity crises. In addition, it was observed that some respondents did not understand what is meant by displaced commercial risk, despite defining it in the questionnaire. This was reflected in the relatively lower number of responses for this risk category (69) compared to the others.

In order to examine the risk perceptions further, Table 7.6 breaks down the risk perceptions according to the nature of financial institutions: Islamic banks, conventional banks (including those offering Islamic activities), and 'Others'. For each category of the financial institutions, the mean ranking of risk categories are presented.

Table 7.6: Risk Perception Among Different Groups

Islamic Banks		Conventional Banks		Others	
Risk	Mean	Risk	Mean	Risk	Mean
Liquidity Risk	4.48	Liquidity Risk	3.79	Reputation Risk	4.23
Asset-Liability Management Risk	4.44	Credit Risk	3.62	<i>Shari'ah</i> -Non-Compliance Risk	4.00
Reputation Risk	4.44	Asset-Liability Management Risk	3.62	Asset-Liability Management Risk	3.85
Concentration Risk	4.36	Concentration Risk	3.47	Credit Risk	3.69
<i>Shari'ah</i> -Non-Compliance Risk	4.24	Legal Risk	3.47	Liquidity Risk	3.69
Credit Risk	3.96	Reputation Risk	3.41	Concentration Risk	3.62
Legal Risk	3.56	Corporate Governance Risk	3.29	Market Risk	3.54
Equity Investment Risk	3.16	<i>Shari'ah</i> -Non-Compliance Risk	3.21	Corporate Governance Risk	3.46
Operational Risk	3.00	Displaced Commercial Risk	3.18	Legal Risk	3.38
Corporate Governance Risk	2.96	Operational Risk	2.85	Operational Risk	3.00
Fiduciary Risk	2.79	Fiduciary Risk	2.71	Equity Investment Risk	2.92
Displaced Commercial Risk	2.76	Equity Investment Risk	2.62	Fiduciary Risk	2.75
Market Risk	2.48	Market Risk	2.58	Displaced Commercial Risk	2.64

Note: Conventional banks include Islamic subsidiaries

The results depicted in Table 7.6 can be summarised as follows:

- (i) The top 4 risks identified by Islamic bankers are the same top 4 risks ranked by the total sample in aggregate (see Table 7.5);
- (ii) 3 out of the top 4 risks identified by Islamic bankers are also listed by conventional bankers among the top 4 risks;
- (iii) Only 2 out of the top 4 risks identified by Islamic bankers are among the top 4 risks ranked by 'Others'; these are Reputation and ALM risks;
- (iv) Different patterns exist for the last 4 risk categories; however, no trends could be identified;
- (v) Islamic Bankers' risk perception of Corporate Governance risk (2.96) is noticeably lower than the risk perception of Conventional bankers (3.29) and Others (3.46). This opposes literature review which indicates that weak corporate governance structures are a general feature of Islamic banking. Also, the inferential statistics analysis in Chapter 8 proves that Corporate Governance is the most statistically significant risk facing IFIs across a number of control variables. In fact, Corporate Governance is a significant risk facing IFIs. However, the Islamic bankers included in this sample are mainly from the Middle East and the GCC, and their risk perceptions are influenced by cultural and social aspects.

It should also be noted that the results in Table 7.6 indicate that bankers, whether Islamic or non-Islamic, have better understanding about the Islamic banking model and its risk architecture than non-bankers (Others) who tend to be more theoretical in their approach.

In supporting the findings in Table 7.6, Table 7.7 spreads the responses of each group across the 5 scaling criteria through frequency distribution. This provides a better understanding of the risk perception of each group and helps to reach significant findings.

Table 7.7: Frequency Distribution of Risk Perceptions

Risk	Islamic Banks					Conventional Banks					Others				
	VI	I	N	U	VU	VI	I	N	U	VU	VI	I	N	U	VU
Credit Risk	20%	60%	16%	4%	0%	18%	38%	35%	6%	3%	23%	31%	38%	8%	0%
Market Risk	8%	24%	8%	28%	32%	6%	12%	21%	55%	6%	23%	38%	15%	15%	8%
Operational Risk	8%	20%	44%	20%	8%	3%	29%	26%	32%	9%	8%	31%	23%	31%	8%
Equity Investment Risk	16%	24%	36%	8%	16%	9%	18%	26%	21%	26%	8%	15%	46%	23%	8%
Liquidity Risk	64%	24%	8%	4%	0%	35%	26%	24%	12%	3%	38%	23%	15%	15%	8%
ALM Risk	60%	28%	8%	4%	0%	29%	26%	24%	18%	3%	38%	31%	15%	8%	8%
Displaced Commercial Risk	8%	20%	36%	12%	24%	15%	39%	12%	15%	18%	9%	18%	27%	18%	27%
Shari'ah-Non-Compliance Risk	44%	36%	20%	0%	0%	15%	18%	41%	26%	0%	38%	23%	38%	0%	0%
Concentration Risk	52%	36%	8%	4%	0%	26%	24%	26%	18%	6%	23%	23%	46%	8%	0%
Reputation Risk	52%	40%	8%	0%	0%	26%	26%	18%	21%	9%	46%	38%	8%	8%	0%
Fiduciary Risk	8%	17%	33%	29%	13%	18%	6%	24%	35%	18%	8%	8%	42%	33%	8%
Corporate Governance Risk	12%	20%	32%	24%	12%	24%	26%	12%	32%	6%	31%	23%	15%	23%	8%
Legal Risk	16%	44%	24%	12%	4%	26%	12%	44%	18%	0%	15%	23%	46%	15%	0%

Note 1: Scale: 1 = Very Unimportant (VU), 2 = Unimportant (U), 3 = Neutral (N), 4 = Important (I), 5 = Very Important (VI)

Note 2: Conventional banks include Islamic subsidiaries

As depicted by the frequency distribution in Table 7.7, there is similarity in risk perceptions between Islamic and conventional bankers. This will be further emphasized by the results of the Kruskal-Wallis test of significance in Chapter 8, which proves that there is a general trend in terms of risk perception that can be attributed to prevailing market conditions.

Finally, under open ended Question 8, two respondents added political and country risks as additional risks facing IFIs. Most Muslim countries have a high degree of corruption,

political instability, and weak currencies, which add political and country risks for IFIs. However, the lesson from the recent political unrest and revolutions in the Middle East is that political risk indeed matters and remains an important risk category area considering the volatility of the political circumstances. However, as an Islamic finance risk category, this was largely ignored. It should be also acknowledged that political risks are hard to predict and are not recurring. However, considering the recent and current political developments in the Middle East, if the questionnaire is to be administered now, namely after the eruption of the Middle Eastern revolutions, political risk would most likely to attract much higher scores given that most Islamic banks are located in, or directly affected by, the Middle Eastern events, which is the main liquidity source for Islamic financial institutions. Lastly, in locating the risk categories for the IFI, one respondent mentioned regulatory risk, and another added technical risks.

7.2.2.1.2. Perceived risk levels of Islamic finance contracts

The questionnaire also aims at locating the perceptions and opinions of the respondents on various Islamic modes of financing. While Question 9 covers the intensity of use of different Islamic finance contracts, Question 10 searches for feedback on the risks inherent or perceived to be attached in those contracts. Question 9 is only applicable to IFIs and conventional banks with Islamic activities, while such restriction does not hold for Question 10.

(i) Intensity of use of different Islamic financial contracts

Table 7.8 summaries the mean values of Islamic finance contracts. As expected, *murabahah* contracts are by far the most-used contracts. This '*murabahah* syndrome' has been under criticism from many Islamic economists and some *Shari'ah* scholars, but unfortunately still remains the backbone of Islamic banking and finance. In addition to the findings in this study, the other studies in the literature also demonstrate that *murabahah* has been intensively used by IFIs for money market transactions, investment and retail activities. Recently, more banks began using *walaka* for money market

transactions to replace the commodity *murabahah*, which brings about more complications and raises *Shari'ah* concerns.

The low mean values for *musharakah* and *mudarabah* in Table 7.8. reflect Islamic banks' reluctance to hold risk-sharing assets. In addition, the analysis revealed that *salam* has a long way to go before becoming commonly used by Islamic banks. It is evident from the responses that the banks' first preference is for financial instruments that are generated through debt creating, sale contracts and leasing instruments. This is enhanced by the responses about risk perception in different modes of financing.

Table 7.8: Intensity of Use of Islamic Finance Contracts

Risk	n	Mean	Median	Mode	Chi-square
Murabaha	39	6.95	1	1	0.00
Wakala	39	5.56	2	2	0.00
Ijarah	39	4.28	4	4	0.00
Mudaraba	39	4.00	4	4	0.01
Istisna'a	39	2.46	6	6	0.00
Musharaka	39	2.41	6	5	0.00
Salaam	39	2.33	6	7	0.00

Notes: n = Number of responses; Question 9 is only applicable to IFIs and conventional banks with Islamic activities

These findings are supported by the results of the Chi-square test as reported in Table 7.8, which indicated that the Chi-square values related to the goodness-of-fit of the risk categories are highly significant ($p < 1\%$).

In addition, as depicted in Table 7.9, Spearman's Rank Correlation Coefficient between the medians of Islamic banks and conventional banks offering Islamic products shows that at 5% significance level the rankings of the two groups are correlated ($\rho = 0.9420 > 0.714$).

Table 7.9: Correlation Between Islamic and Conventional Banks in Using Islamic Finance Contracts

	Islamic banks Median	Conventional Banks Median	Difference	(Difference) ²
<i>Murabaha</i>	1	1	0	0
<i>Wakala</i>	2	2.5	0.5	0.25
<i>Mudaraba</i>	4	3	-1	1
<i>Ijarah</i>	4	4	0	0
<i>Musharaka</i>	5	6	1	1
<i>Istisna'a</i>	6	6	0	0
<i>Salam</i>	6	5	-1	1
Spearman's Rank Correlation Coefficient				0.94196

(ii) Perceptions on risks attached to various Islamic finance contracts

Table 7.10 emphasizes the perception that the profit-sharing modes of financing have higher risks, while fixed income contracts (such as *ijara* and *murabahah*) are perceived as least risky. The main reason for higher concern of partnership contracts may be that 'principals' invested are not guaranteed under partnership modes of finance. In addition, these instruments are usually of long-term nature. This is particularly true for real estate projects, while fixed income contracts are perceived to have shorter maturities and to be less risky with some 'implied' guarantees. Even though *ijarah* contracts may be of long-term, they can be adjusted to reflect changing market conditions. It is important to note that the manipulation of the contracts by Islamic finance practitioners made the equity and risk sharing contracts, for instance *wakala*, share the same risk characteristics like fixed income contracts. This created a gap in risk perceptions among different groups of respondents. These findings are supported by the results of the Chi-square test which indicates that the presence of goodness of fit for the financial contracts with high significance level ($p < 1\%$).

Table 7.10: Risk Perception in Islamic Finance Contracts

Risk	n	Mean	Median	Mode	Chi-square
Mudaraba	72	6.21	1	1	0.00
Musharaka	72	5.89	2	1	0.00
Istisna'a	70	4.20	3.5	3	0.00
Salaam	71	3.75	4	5	0.00
Ijarah	71	3.73	4	2	0.01
Wakala	72	2.26	6	6	0.00
Murabaha	72	1.90	7	7	0.00

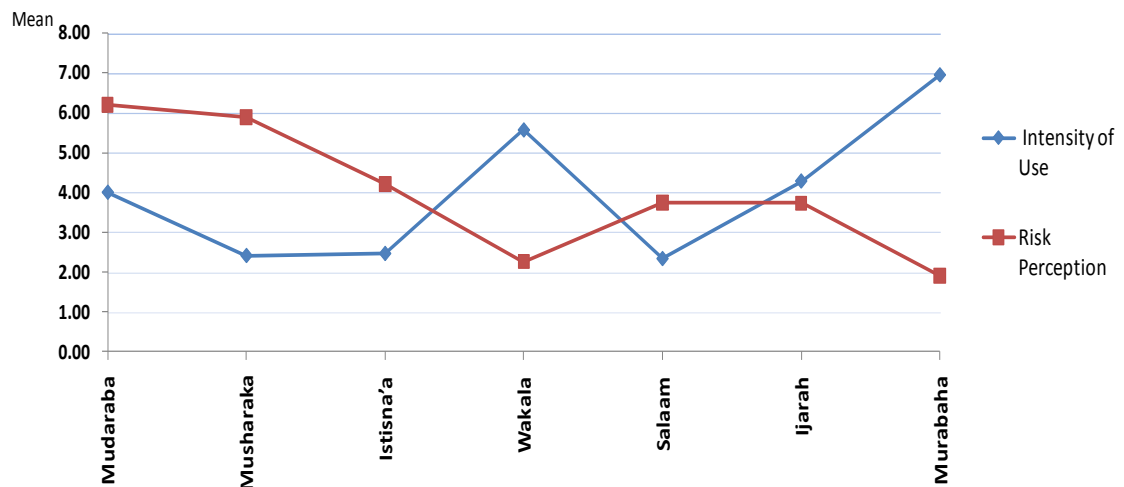
Notes: n = Number of responses

In addition, as shown in Table 7.11, Spearman's Rank Correlation Coefficient between the medians of Islamic banks and conventional banks offering Islamic products shows that the at 5% significance level the rankings of the two groups are correlated ($\rho = 0.8929 > 0.714$).

Table 7.11: Correlation Between Islamic and Conventional Banks in Risk Perception About Islamic Finance Contracts

	Islamic banks Median	Conventional Banks Median	Difference	(Difference) ²
<i>Murabaha</i>	7	7	0	0
<i>Mudaraba</i>	1	1	0	1
<i>Wakala</i>	6	6	0	1
<i>Ijarah</i>	4	4	0	1
<i>Musharaka</i>	2	2	0	1
<i>Istisna'a</i>	3	4	1	1
<i>Salam</i>	4	4	0	1
Spearman's Rank Correlation Coefficient				0.89286

Figure 7.2: Islamic Finance Contracts: Intensity of Use vs. Risk Perception



In furthering the analysis, intensity of use of Islamic finance contracts correlated with the attached risk perceptions of the respective financial contracts. This is depicted in Figure 7.2; which demonstrates that Islamic finance contracts that are perceived as higher risk (like *mudarabah* and *musharakah*) are much less used by banks than less risky contracts. In fact, *murabahah* scored the lowest mean on the risk matrix (1.90) compared to the highest mean on the intensity of use (6.95). This reflects the extent to which banks are shying away from risk taking or equity participation. Manipulation of the contracts changed the risk characteristics of these contracts from principles defined by Islamic finance. This manipulation made the Islamic finance contracts behave differently and thus perceived differently by practitioners on the risk scale. Thus, the Islamic financial institutions are heavily using less risky products regardless of the aspirational expectations related to asset-based Islamic finance.

7.2.2.1.3. Additional risk issues facing IFIs

Question 11 asked respondents for their views on some risk and risk management issues related to IFIs that were identified in the literature review. This is a closed question that provided eleven statements and respondents were requested to express their preference in

terms of how strongly they agree or disagree with each statement. The five-point Likert scale was used with answered labelled as ‘strongly agree’, ‘agree’, neutral’, ‘disagree’, and ‘strongly disagree’. The findings based on frequency results are summarized in Figure 7.3 and Table 7.12 which ranks the importance of statements according to their mean values.

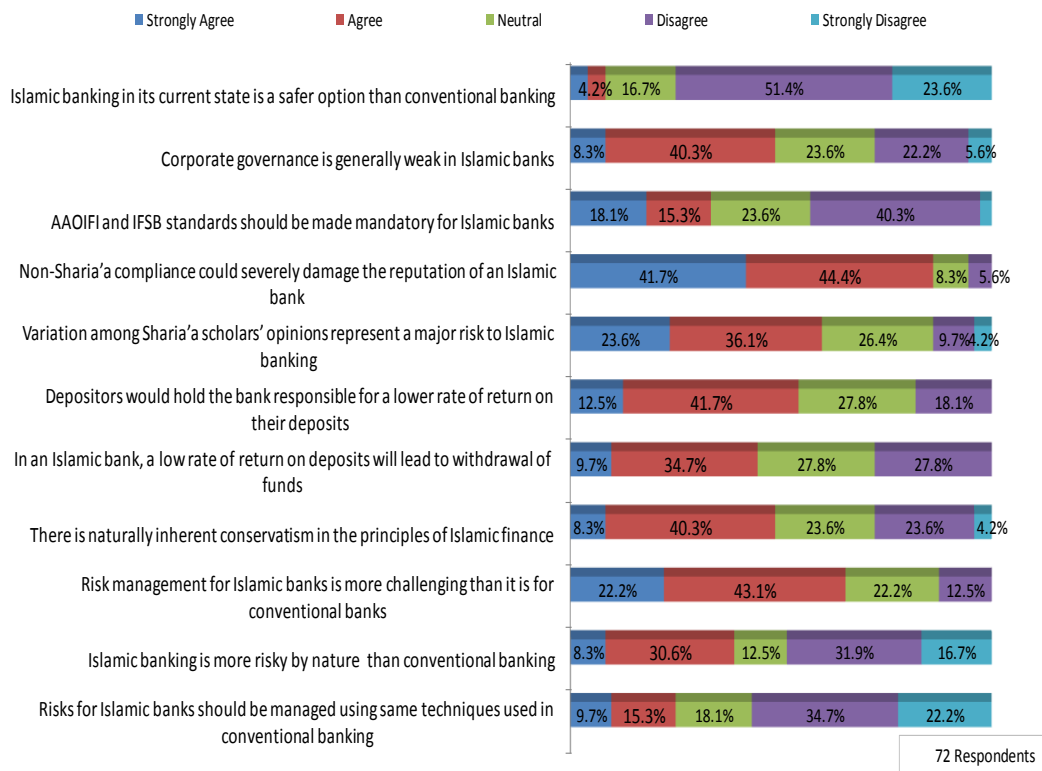
Table 7.12: Frequency Results of Responses to Statements Under Question 11

Statement	SA	A	N	D	SD	n	Mean	Median	Mode	Chi-square
Non-Sharia'a compliance could severely damage the reputation of an Islamic bank	41.7%	44.4%	8.3%	5.6%	0.0%	72	4.22	4	4	0.00
Risk management for Islamic banks is more challenging than it is for conventional banks	22.2%	43.1%	22.2%	12.5%	0.0%	72	3.75	4	4	0.00
Variation among Sharia'a scholars' opinions represent a major risk to Islamic banking	23.6%	36.1%	26.4%	9.7%	4.2%	72	3.65	4	4	0.00
AAOIFI and IFSB standards should be made mandatory on Islamic banks	18.1%	15.3%	23.6%	40.3%	2.8%	72	3.51	4	4	0.44
Depositors would hold the bank responsible for a lower rate of return on their deposits	12.5%	41.7%	27.8%	18.1%	0.0%	72	3.49	4	4	0.00
In an Islamic bank, a low rate of return on deposits will lead to withdrawal of funds	9.7%	34.7%	27.8%	27.8%	0.0%	72	3.26	3	4	0.00
There is naturally inherent conservatism in the principles of Islamic finance	8.3%	40.3%	23.6%	23.6%	4.2%	72	3.25	3	4	0.00
Corporate governance is generally weak in Islamic banks	8.3%	40.3%	23.6%	22.2%	5.6%	72	3.24	3	4	0.00
Islamic banking is more risky by nature than conventional banking	8.3%	30.6%	12.5%	31.9%	16.7%	72	2.82	3	2	0.00
Risks for Islamic banks should be managed using same techniques used in conventional banking	9.7%	15.3%	18.1%	34.7%	22.2%	72	2.56	2	2	0.01
Islamic banking in its current state is a safer option than conventional banking	4.2%	4.2%	16.7%	51.4%	23.6%	72	2.14	2	2	0.00

Notes: n = Number of responses; Scale: 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), 5 = Strongly Agree (SA)

As can be seen in Table 7.12, the Chi-square values indicate that the responses for all these statements but one are significant at the 5% level. Furthermore, the findings indicate that the majority of respondents (56.9%) believe that risk for Islamic banks should be managed using different techniques than those used in conventional banking. Although more than 48% of respondents consider that the Islamic finance principles have naturally built-in conservatism within, around 75% of respondents think that the malpractices in Islamic banking in its current state made it a riskier mode of finance than conventional banking.

Figure 7.3 – Additional Risk Management Issues Facing IFIs



The following salient points are identified in Table 7.12 and Figure 7.3:

- (i) The findings demonstrate that, although respondents do not perceive Islamic banking to be by nature a more risky model than conventional banking, the Islamic banks as it stands today could be more risky than the conventional banks;
- (ii) As the findings shows risk management for IFIs is more challenging than it is for conventional banks;
- (iii) The findings indicate that risks for IFIs cannot be managed using conventional risk management tools and techniques;
- (iv) The findings in Table 7.12 and Figure 7.3. show that not only IFIs face some risks that are different from their conventional peers, but these risks are also more serious and not well understood;

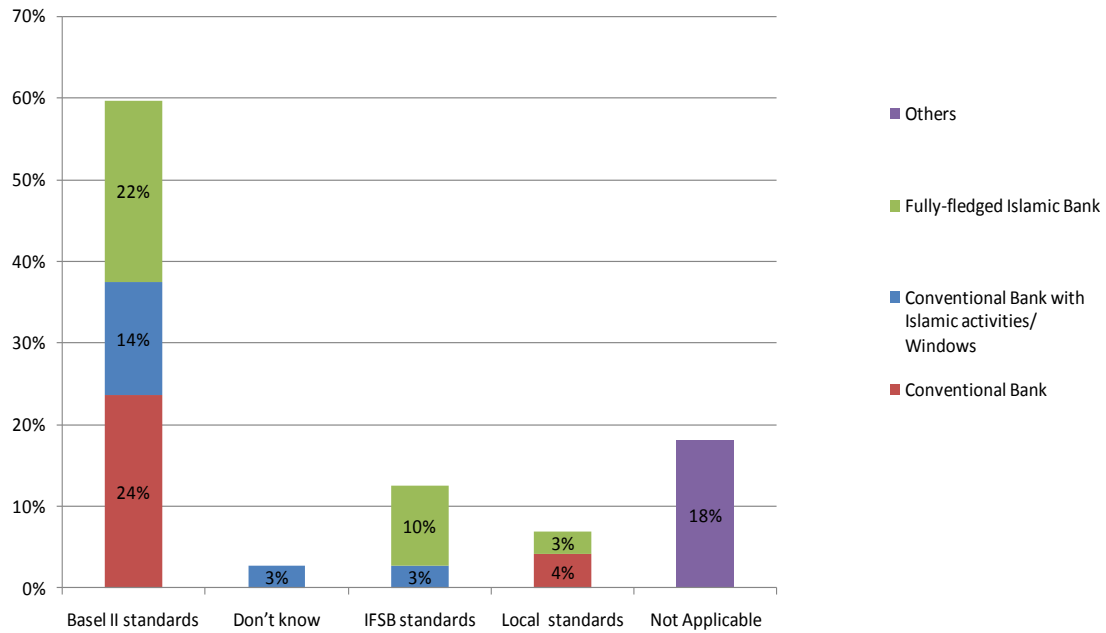
- (v) It can be generalised from the findings that *Shari'ah* principles carry natural inherent conservatism;
- (vi) It is important to state that despite the principles of Islamic finance, depositors seek competitive rates of return from IFIs;
- (vii) In addition to the risk categories identified in the previous section, displaced commercial risk and *Shari'ah* standardisation are obvious examples of additional challenges facing IFIs;
- (viii) As being a particular risk area for Islamic banking, *Shari'ah*-non-compliance risk could be a severe risk for IFIs. This is emphasised by the responses under Q 7;
- (ix) As the findings demonstrate, majority of respondents do not believe that AAOIFI and IFSB standards should be made mandatory for Islamic banks;
- (x) Importantly, the results also demonstrate that weak corporate governance is noticeable among IFIs.

7.2.2.2 Gauging perceptions on capital adequacy for Islamic banks

This section addresses capital adequacy issues facing IFIs as perceived by the participants. It tackles the research questions concerning whether Basel II and Basel III Accords were drafted with conventional banking model in mind, and also aims to identify the appropriate capital requirement levels for Islamic banks as perceived by the participants.

As shown by Figure 7.4, the majority of respondents (59.7%) expressed their adherence to Basel II guidelines. Interestingly, 12.9% of the participants stated that their institution use IFSB standards on capital adequacy, and 6.9% stated that they use local standards imposed by the regulator (mainly Egyptian banks), which are highly likely to be derived mainly from Basel II guidelines.

Figure 7.4: Frequency Distribution of Capital Adequacy Standards Used by Respondents



Among those implementing Basel II (43 respondents), the majority of the participants stated that their institution use the less sophisticated approaches to calculate credit, market, and operational risks due to their relatively limited size of operations and the absence of advanced IT systems, as summarised in Table 7.13. Conventional multinational banks use a combination of different approaches for different portfolios; however, the ‘Advanced’ techniques dominate. As the findings demonstrate, among IFIs, it is mainly the Islamic windows of big international banks that selected the ‘Advanced’ capital adequacy approaches as they make use of the infrastructure and systems available at their parent companies.

Table 7.13: Descriptive Statistics for Question 13: Capital Requirement Methodologies Used

	n	Percentage of Total
<u>Credit Risk</u>		
Standardised Approach	25	59.5%
Foundation IRB	5	11.9%
Advanced IRB	12	28.6%
Total	42	100.0%
<u>Market Risk</u>		
Standardised Approach	29	69.0%
Internal Models Approach	13	31.0%
Total	42	100.0%
<u>Operational Risk</u>		
Basic Indicator Approach	24	57.1%
Advanced Measurement Approach	18	42.9%
Total	42	100.0%

Notes: n = Number of responses; For multinational banks that use more than one methodology, the most advanced methodology is the one counted.

The participants were asked to evaluate the capital requirements for Islamic and conventional banks. The responses to Question 14 in Figure 7.5 and Table 7.14 produced unexpected findings, as more than 65% of participants believe that capital requirements for IFIs should be higher than those of their conventional peers. This could be understood, as it stands today, that Islamic banking carries more risks and, hence, should have higher capital buffers in order to enable IFIs absorb unexpected losses.

Figure 7.5 Evaluating Capital Requirements for Islamic Banks vs. Conventional Banks

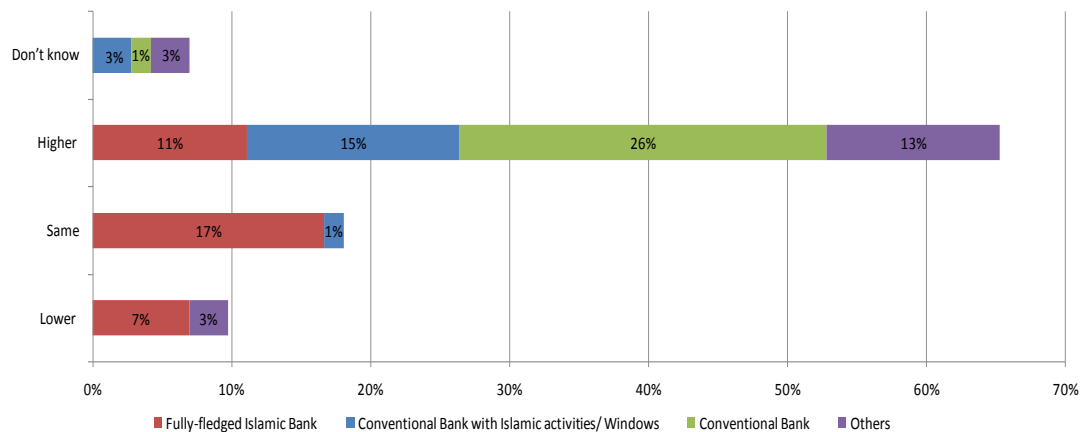


Table 7.14: Evaluating Capital Requirements for Islamic Banks vs. Conventional Banks

	Region	Fully-fledged Islamic Bank	Conventional Bank	Conventional Bank with Islamic activities	Others	Total
Don't know	Europe			1.4%	2.8%	4.2%
	GCC		1.4%	1.4%	0.0%	2.8%
Higher	Americas		2.8%		0.0%	2.8%
	Europe	5.6%	11.1%	6.9%	11.1%	34.7%
	GCC	2.8%	2.8%	8.3%	0.0%	13.9%
	Other Middle East	1.4%	9.7%		1.4%	12.5%
	Southeast Asia	1.4%			0.0%	1.4%
Lower	Europe				1.4%	1.4%
	GCC	2.8%			0.0%	2.8%
	Other	1.4%			0.0%	1.4%
	Other Middle East	1.4%			1.4%	2.8%
	Southeast Asia	1.4%			0.0%	1.4%
Same	Europe	1.4%		1.4%	0	2.8%
	GCC	6.9%			0	6.9%
	Other	1.4%			0	1.4%
	Other Middle East	4.2%			0	4.2%
	Southeast Asia	2.8%			0	2.8%
Total		34.7%	27.8%	19.4%	18.1%	100%

The participants' opinions on Basel II and IFSB Capital Adequacy Standards were also questioned, as question 15 in the questionnaire asked respondents for their views on additional capital adequacy issues. This closed question provided five statements, and respondents were requested to express their preference in terms of how strongly they agree or disagree with each statement. The results, using the five-point Likert scale, are summarized below. The frequency results for the whole sample are summarized by Figure 7.6, while Table 7.15 which breaks down the findings for Islamic bankers and non-Islamic bankers (including Islamic subsidiaries, conventional banks, and others) and ranks the importance of statements according to their mean values.

Figure 7.6: Perceptions About Capital Adequacy Standards

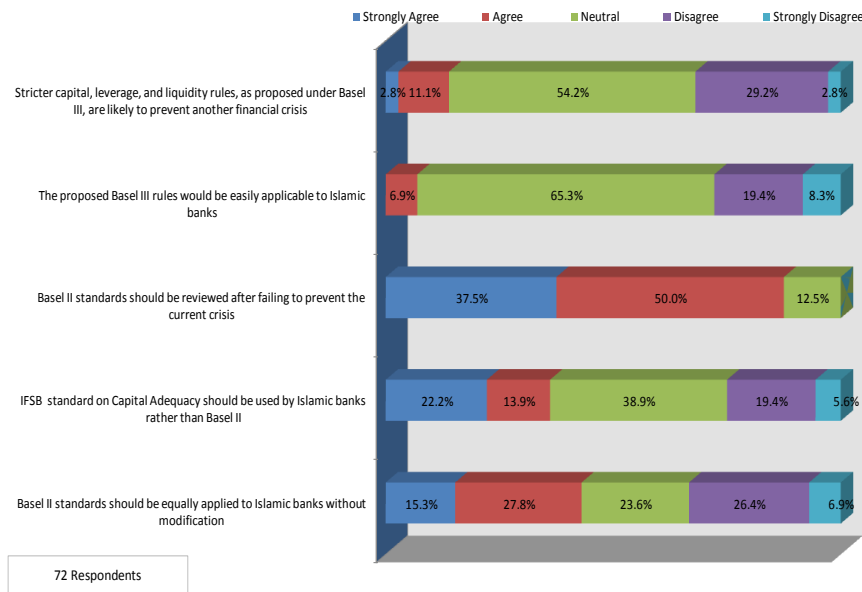


Table 7.15: Breakdown of Perceptions About Capital Adequacy Standards

Fully-fledged Islamic Banks

Statement	SA	A	N	D	SD	n	Mean	Median	Mode	Chi-square
Basel II standards should be reviewed after failing to prevent the current crisis	40.0%	48.0%	12.0%	0.0%	0.0%	25	4.28	4	4	0.00
IFSB standard on Capital Adequacy should be used by Islamic banks rather than Basel II	24.0%	12.0%	44.0%	16.0%	4.0%	25	3.36	3	3	0.02
Stricter capital, leverage, and liquidity rules, as proposed under Basel III, are likely to prevent another financial crisis.	4.0%	20.0%	48.0%	24.0%	4.0%	25	2.96	3	3	0.00
Basel II standards should be equally applied to Islamic banks without modification	4.0%	32.0%	20.0%	32.0%	12.0%	25	2.84	3	2	0.11
The proposed Basel III rules would be easily applicable to Islamic banks	0.0%	8.0%	48.0%	36.0%	8.0%	25	2.56	3	3	0.00

Non-Islamic Bankers (including Islamic subsidiaries and conventional banks)

Statement	SA	A	N	D	SD	n	Mean	Median	Mode	Chi-square
Basel II standards should be reviewed after failing to prevent the current crisis	36.2%	51.1%	12.8%	0.0%	0.0%	47	4.23	4	4	0.00
Basel II standards should be equally applied to Islamic banks without modification	21.3%	25.5%	25.5%	23.4%	4.3%	47	3.36	3	3	0.11
IFSB standard on Capital Adequacy should be used by Islamic banks rather than Basel II	21.3%	14.9%	36.2%	21.3%	6.4%	47	3.23	3	3	0.02
The proposed Basel III rules would be easily applicable to Islamic banks	0.0%	6.4%	74.5%	10.6%	8.5%	47	2.79	3	3	0.00
Stricter capital, leverage, and liquidity rules, as proposed under Basel III, are likely to prevent another financial crisis.	2.1%	6.4%	57.4%	31.9%	2.1%	47	2.74	3	3	0.00

Notes: n = Number of responses; Scale: 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), 5 = Strongly Agree (SA)

From Table 7.15 and Figure 7.6, the following generalisation can be made:

(i) On aggregate level, the majority of respondents had 'No' views about the new Basel III standards and their effects on Islamic banking and financial stability in general. This shows that there is still lack of clarity about Basel III and its potential impacts. Around one third of respondents do not believe that the new standards, with its stricter capital, leverage, and liquidity rules, are likely to prevent another financial crisis. Almost the same percentage of respondents does not think that Basel III standards will be easily applicable to IFIs. The break down between Islamic and non-Islamic bankers reveals the same pattern.

(ii) A similar pattern exists between the two groups regarding their views about the failings of Basel II to prevent the recent crisis. The majority of respondents support this view with zero responses 'D' or 'SD' with the need to review Basel II standards.

(iii) While most non-Islamic bankers (46.8%) believe that Basel II standards should be equally applied to IFIs without modification, most Islamic banker support the opposite (44%). On aggregate level no consensus pattern is obvious, with the 'SA' and 'A' side scoring slightly higher than 'D' and 'SD' side.

(iv) A Similar pattern exists between views of the two groups regarding the use of IFSB standards by IFIs with the majority favouring the 'SA' and 'A' side to 'D' and 'SD' side.

(v) As shown in Table 7.15, Islamic and non-Islamic bankers rank the statements differently. This divergence in the mean rankings reflects differences in risk perceptions.

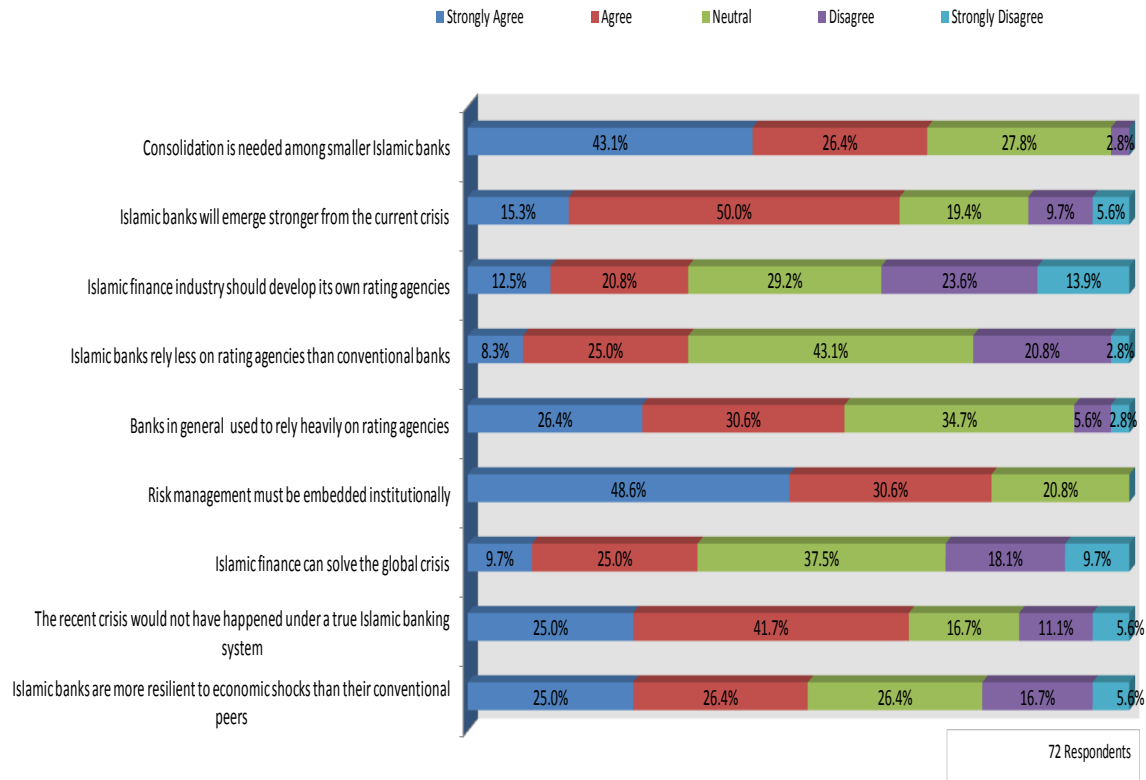
It should be noted that these findings are supported by the Chi-square values as depicted in Table 7.15, which indicate that the data for all statements, but one, represent a good fit at the 5% level.

7.2.2.3 Credit crisis and Islamic banks

This last section of Part Two of the questionnaire aimed to reveal the respondents' views on different issues relating to the current global crisis. This closed question provided nine statements and respondents were requested to express their opinion in terms of how strongly they agree or disagree with each statement. The frequency results for the entire

sample are summarized by Figure 7.7, while Table 7.16 breaks down the findings for Islamic bankers and non-Islamic bankers (including Islamic subsidiaries, conventional banks, and others), and ranks the importance of statements according to their mean values.

Figure 7.7: Perceptions on Islamic Banking and the Global Financial Crisis



The findings in Figure 7.7 and Table 7.16 can be generalised as follows:

As can be seen from the responses, both groups support the view that IFIs are more resilient to economic shock than their conventional peers. 72 % of Islamic banker ranked this statement either ‘SA’ or ‘A’, while 40% of non-Islamic bankers are either ‘SA’ or ‘A’.

In addition, on aggregate level more than 66% of respondents support the view that the current crisis would not have happened under a true Islamic banking system. This was further emphasized by 34.7% who believe that Islamic finance can solve the global crisis. A break down between the two groups shows varying patterns: 76% of Islamic bankers as

the total of ‘Strongly Agree’ or ‘Agree’ stated that the crisis would not have happened under a true Islamic banking system, a view shared by *circa* 61% of non-Islamic bankers. However, while the majority of the former support the view that Islamic finance can solve the global crisis; the majority of non-bankers decline this view.

Table 7.16: Perceptions on Islamic Banking and the Financial Crisis

Total Sample

Statement	SA	A	N	D	SD	n	Mean	Median	Mode	Chi-square
Risk management must be embedded institutionally	48.6%	30.6%	20.8%	0.0%	0.0%	72	4.28	4	5	0.00
Consolidation is needed among smaller Islamic banks	43.1%	26.4%	27.8%	2.8%	0.0%	72	4.10	4	5	0.00
Banks in general used to rely heavily on rating agencies	26.4%	30.6%	34.7%	5.6%	2.8%	72	3.72	4	3	0.00
The recent crisis would not have happened under a true Islamic banking system	25.0%	41.7%	16.7%	11.1%	5.6%	72	3.69	4	4	0.00
Islamic banks will emerge stronger from the current crisis	15.3%	50.0%	19.4%	9.7%	5.6%	72	3.60	4	4	0.00
Islamic banks are more resilient to economic shocks than their conventional peers	25.0%	26.4%	26.4%	16.7%	5.6%	72	3.49	4	4	0.00
Islamic banks rely less on rating agencies than conventional banks	8.3%	25.0%	43.1%	20.8%	2.8%	72	3.15	3	3	0.00
Islamic finance could have solved the global crisis	9.7%	25.0%	37.5%	18.1%	9.7%	72	3.07	3	3	0.00
Islamic finance industry should develop its own rating agencies	12.5%	20.8%	29.2%	23.6%	13.9%	72	2.94	3	3	0.00

Fully-fledged Islamic Banks

Statement	SA	A	N	D	SD	n	Mean	Median	Mode	Chi-square
Risk management must be embedded institutionally	32.0%	40.0%	28.0%	0.0%	0.0%	25	4.04	4	4	0.00
Banks in general used to rely heavily on rating agencies	28.0%	48.0%	20.0%	4.0%	0.0%	25	4.00	4	4	0.00
Islamic banks are more resilient to economic shocks than their conventional peers	40.0%	32.0%	8.0%	20.0%	0.0%	25	3.92	4	5	0.01
The recent crisis would not have happened under a true Islamic banking system	20.0%	56.0%	16.0%	8.0%	0.0%	25	3.88	4	4	0.00
Consolidation is needed among smaller Islamic banks	28.0%	36.0%	32.0%	4.0%	0.0%	25	3.88	4	4	0.01
Islamic banks will emerge stronger from the current crisis	24.0%	32.0%	36.0%	8.0%	0.0%	25	3.72	4	3	0.02
Islamic finance can solve the global crisis	16.0%	40.0%	32.0%	12.0%	0.0%	25	3.60	4	4	0.01
Islamic banks rely less on rating agencies than conventional banks	12.0%	20.0%	24.0%	36.0%	8.0%	25	2.92	3	2	0.20
Islamic finance industry should develop its own rating agencies	20.0%	12.0%	24.0%	28.0%	16.0%	25	2.92	3	2	0.74

Non-Islamic Bankers (including Islamic subsidiaries, conventional banks, and others)

Statement	SA	A	N	D	SD	n	Mean	Median	Mode	Chi-square
Risk management must be embedded institutionally	57.4%	25.5%	17.0%	0.0%	0.0%	47	4.40	5	5	0.00
Consolidation is needed among smaller Islamic banks	51.1%	21.3%	25.5%	2.1%	0.0%	47	4.21	5	5	0.00
The recent crisis would not have happened under a true Islamic banking system	27.7%	34.0%	17.0%	12.8%	8.5%	47	3.60	4	4	0.03
Banks in general used to rely heavily on rating agencies	25.5%	21.3%	42.6%	6.4%	4.3%	47	3.57	3	3	0.00
Islamic banks will emerge stronger from the current crisis	10.6%	59.6%	10.6%	10.6%	8.5%	47	3.53	4	4	0.00
Islamic banks rely less on rating agencies than conventional banks	6.4%	27.7%	53.2%	12.8%	0.0%	47	3.28	3	3	0.00
Islamic banks are more resilient to economic shocks than their conventional peers	17.0%	23.4%	36.2%	14.9%	8.5%	47	3.26	4	4	0.04
Islamic finance industry should develop its own rating agencies	8.5%	25.5%	31.9%	21.3%	12.8%	47	2.96	3	3	0.08
Islamic finance can solve the global crisis	6.4%	17.0%	40.4%	21.3%	14.9%	47	2.79	3	3	0.00

Notes: n = Number of responses; Scale: 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), 5 = Strongly Agree (SA)

Furthermore, most respondents (56.9%) agree that banks in general heavily relied on rating agencies. The same view is shared among the Islamic and non-Islamic bankers. In aggregate, there was no consensus whether Islamic banks rely less or more on rating agencies than conventional banks; however, surprisingly enough, more non-Islamic bankers believe that IFIs rely less on rating agencies than Islamic bankers, whose majority declined such a view.

Moreover, some respondents believe that conventional rating agencies do not fully understand and appreciate certain aspects of Islamic financial institutions, principally the fiduciary aspect, and that conventional rating methodologies do not recognise the need for a different approach to capital adequacy calculation and accounting standards. However, there is no consensus whether the Islamic finance industry needs to develop its own rating agencies either on the aggregate level or by the non-Islamic bankers. The majority of Islamic bankers did not support such a view (44%). Although there are some important differences between Islamic and conventional banks that must be properly understood and considered, these can be incorporated within the existing rating frameworks.

The results also demonstrate that more than 69% of respondents support consolidation among smaller Islamic banks; as the prevailing opinion state that there are far too many Islamic banks to serve this growing market, but only a handful have the size necessary to compete on a global stage. Same pattern could be traced on break down of findings among the two groups.

Lastly, the findings in Table 7.16 and Figure 7.7 show that, on aggregate level, most respondents agreed that Islamic banks will emerge stronger from the current crisis as they provide an ethical banking alternative (65.3%). A similar pattern exists between the two groups as 56% of Islamic bankers and 70.2% of non-Islamic bankers support the view that Islamic banks will emerge stronger from the crisis.

7.2.3 Perceptions on Risk Management and Mitigation

The third part of the questionnaire aims to examine the risk management and hedging techniques used within individual Islamic banks. Risk mitigation has recently come under spot lights within Islamic banking in particular with the emergence of a number of defaults in the Gulf region. Traditionally, the unique nature of risks faced by Islamic banks, combined with the restrictions added by *Shari'ah*, makes risk mitigation for Islamic banks a difficult and complex process. There are risks that Islamic banks, similar to their conventional counterparts, can manage and control through appropriate risk policies, controls, and traditional risk management tools. However, there are other risks that banks cannot eliminate and can only be reduced or moderated by transferring or selling those risks in well-defined markets. The challenge is, however, that most of the conventional hedging tools do not so far comply with the *Shari'ah* requirements, which limits the available tools of risk management for Islamic banks.

7.2.3.1 Risk management and reporting

The first part in this section aims to depict the findings related to risk management reporting used by the institutions of the participants. Table 7.17 shows the different risk management reports that participating banks produce and the frequency of publishing those reports, while Table 7.18 shows the frequency distribution of the findings among Islamic and conventional banks (including Islamic subsidiaries).

As depicted by Table 7.17, the most widely used reports in general are capital requirement, liquidity risk, and credit exposure reports, followed by industry concentration risk and profit rate risk reports. Commodity risk report is the least used with 29% of respondents indicating it is not used. Some institutions produce other specific reports not listed in the questionnaire like market risk report (10%), stress testing report (5%), counterparty concentration report (7%), and collateral management report (3%).

Table 7.17: Risk Management Reports – Market Practice

Report	Daily	Weekly	Monthly	Yearly	Never	Don't know	Total Responses
Capital requirement report	44%	24%	31%	-	-	2%	100%
Operational risk report	37%	17%	37%	2%	-	3%	97%
Profit rate risk report	56%	10%	29%	-	-	3%	98%
Foreign exchange risk report	42%	20%	29%	-	-	3%	95%
Liquidity risk report	61%	25%	14%	-	-	-	100%
Commodity risk report	39%	5%	24%	0%	29%	3%	100%
Country risk report	54%	17%	29%	-	-	-	100%
Equity mark-to-market report	51%	12%	22%	5%	5%	5%	100%
Classified accounts report	27%	3%	47%	17%	-	2%	97%
Industry concentration risk report	42%	-	53%	2%	-	2%	98%
Credit exposure report	68%	3%	29%	-	-	-	100%
Large exposure report	58%	-	34%	-	3%	3%	98%
Other risk reports							
Market Risk	5%	-	5%	-	-	-	10%
Stress Testing	0%	-	5%	-	-	-	5%
Counterparty Concentration	3%	-	3%	-	-	-	7%
Collateral Management	3%	-	-	-	-	-	3%

In terms of frequency of producing these reports, credit exposure report is the most produced daily report, followed by liquidity risk report, and profit rate risk report. Classified accounts report is the least produced daily report (27%) as banks tend to produce it on monthly basis. As the findings show, 31 institutions indicate that they produce industry concentration risk report on monthly basis, followed by classified accounts report (47%) and operational risk report (37% respondents). A small number of respondents indicated that they produce some reports annually. Finally, few respondents indicated that they do not know the frequency of reports' production; this is because these respondents work in non-risk management rules like traders and financial officers.

The analysis in Table 7.18 in a comparative manner shows that IFIs use the same risk management techniques as conventional banks for managing the risks, in particular liquidity, credit, and market risks. Nevertheless, the spread and frequency of utilising these techniques is lower among Islamic banks compared to their conventional peers. Generally, IFIs still use less technically advanced risk measurement approaches as they are still in the emerging phase and do not have sufficient resources and systems to use more technically advanced techniques. The most widely used report among IFIs on daily

basis is liquidity risk report, followed by credit exposure report and profit rate risk report. Commodity risk and equity mark-to-market reports are the least used by IFIs in this survey.

Table 7.18: Risk Management Reports – Islamic vs. Conventional Banks

Fully- fledged Islamic Banks							
Report	Daily	Weekly	Monthly	Yearly	Never	Don't know	Total Responses
Capital requirement report	36%	24%	36%	-	-	4%	100%
Operational risk report	32%	8%	44%	4%	-	4%	92%
Profit rate risk report	48%	8%	36%	-	-	4%	96%
Foreign exchange risk report	28%	24%	32%	-	-	8%	92%
Liquidity risk report	52%	36%	12%	-	-	-	100%
Commodity risk report	8%	-	20%	-	68%	4%	100%
Country risk report	28%	32%	40%	-	-	-	100%
Equity mark-to-market report	16%	12%	36%	12%	12%	12%	100%
Classified accounts report	-	4%	48%	40%	-	-	96%
Industry concentration risk report	16%	-	76%	4%	-	-	96%
Credit exposure report	48%	8%	44%	-	-	-	100%
Large exposure report	28%	-	56%	-	8%	8%	100%
Other risk reports							0%
Market Risk	4%	-	4%	-	-	-	8%
Stress Testing	-	-	8%	-	-	-	8%
Counterparty Concentration	4%	-	4%	-	-	-	8%
Collateral Management	4%	-	-	-	-	-	4%

Conventional banks (including Islamic subsidiaries)							
Report	Daily	Weekly	Monthly	Yearly	Never	Don't know	Total Responses
Capital requirement report	50%	24%	26%	-	-	-	100%
Operational risk report	41%	24%	32%	-	-	3%	100%
Profit rate risk report	62%	12%	24%	-	-	3%	100%
Foreign exchange risk report	53%	18%	26%	-	-	-	97%
Liquidity risk report	68%	18%	15%	-	-	-	100%
Commodity risk report	62%	9%	26%	-	-	3%	100%
Country risk report	74%	6%	21%	-	-	-	100%
Equity mark-to-market report	76%	12%	12%	-	-	-	100%
Classified accounts report	47%	3%	47%	-	-	-	97%
Industry concentration risk report	62%	0%	35%	-	-	3%	100%
Credit exposure report	82%	0%	18%	-	-	-	100%
Large exposure report	79%	0%	18%	-	-	-	97%
Other risk reports							
Market Risk	6%	-	6%	-	-	-	12%
Stress Testing	-	-	3%	-	-	-	3%
Counterparty Concentration	3%	-	3%	-	-	-	6%
Collateral Management	3%	-	-	-	-	-	3%

7.2.3.2 Risk measurement

In addition to risk management reports, financial institutions use various techniques to measure and analyse risks. Table 7.19 exhibits different techniques used to measure and assess risks. There may be a variety of formats in which these techniques can be used, ranging from simple analysis to sophisticated models. The most common technique used

by IFIs as indicated by respondents is maturity matching analysis (88%), followed by reliance on external ratings provided by rating agencies (84%), internal based rating and Gap analysis (76% each). Only 56% indicated they use VAR models, while Simulation techniques are used by just 6 IFIs in the sample to assess different risks.

Comparing these figures to the responses by conventional bankers emphasises the fact that risk management techniques in Islamic banking are not as sophisticated as in the conventional banking world. The most common technique used by conventional banks is external ratings provided by rating agencies (94.1%), followed by maturity matching analysis (91.2%), internal based rating (88.2%), and duration analysis (85.3%).

Moreover, the results for this question confirm those obtained by Q11 as reported in the preceding section. As discussed in Section 7.2.2.1.3, more than 65% of respondents either Agree or Strongly Agree that risk management for IFIs is more challenging as compared to the conventional banks. In addition, around 57% of respondents believe that risk management for IFIs should not use the same tools as conventional banks.

Table 7.19: Risk Measurement Techniques

Risk Management Technique	Fully-fledged Islamic Banks		Conventional Banks	
	Total Responses	Percentage	Total Responses	Percentage
Internal based ratings	19	76.0%	30	88.2%
Credit ratings by rating agencies	21	84.0%	32	94.1%
Gap analysis	19	76.0%	28	82.4%
Duration analysis	17	68.0%	29	85.3%
Maturity matching analysis	22	88.0%	31	91.2%
Earnings at risk	11	44.0%	27	79.4%
Value at risk	14	56.0%	23	67.6%
Stress testing	15	60.0%	22	64.7%
Simulation techniques	6	24.0%	16	47.1%
Risk Adjusted Rate of Return on Capital (RAROC)	8	32.0%	26	76.5%
Others				

Ranking	Fully-fledged Islamic Banks	Conventional Banks
1	Maturity matching analysis	Credit ratings by rating agencies
2	Credit ratings by rating agencies	Maturity matching analysis
3	Internal based ratings	Internal based ratings
4	Gap analysis	Duration analysis
5	Duration analysis	Gap analysis
6	Stress testing	Earnings at risk
7	Value at risk	RAROC
8	Earnings at risk	Value at risk
9	RAROC	Stress testing
10	Simulation techniques	Simulation techniques

Notes: a) Question 18 is only applicable to respondents in the banking field, whether Islamic or conventional; b) Conventional banks include Islamic subsidiaries.

7.2.3.3 Risk mitigation

A comparative analysis was conducted on risk mitigation between Islamic and conventional banks. As can be seen in Figure 7.8., 72.2% of respondents believe that risk mitigation techniques in Islamic banking are less advanced than conventional banking (Figure 7.8). Table 7.20 provides detailed analysis of the findings.

Figure 7.8: Risk Mitigation in Islamic Banking vs. Conventional Banking

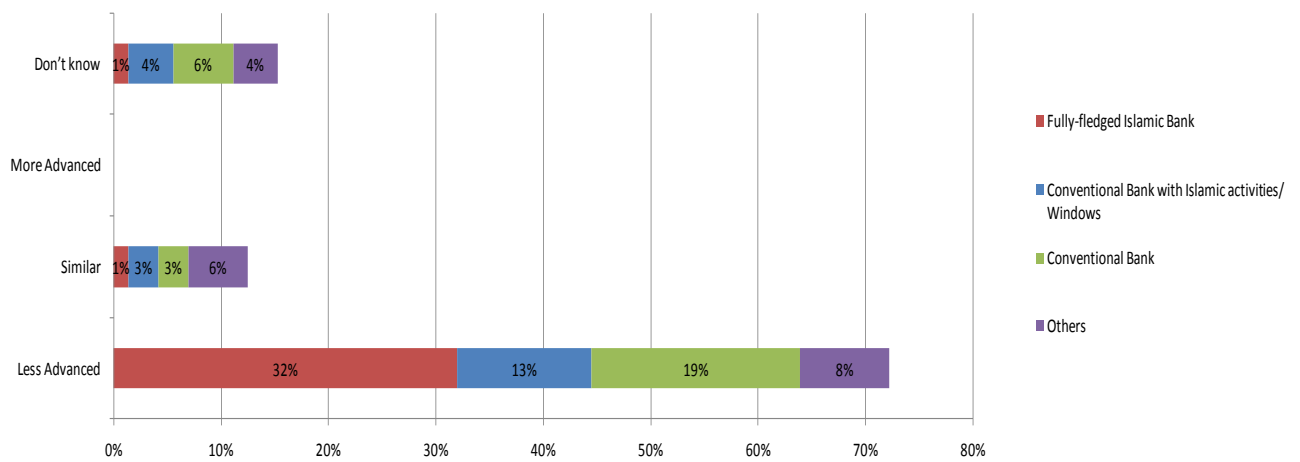


Table 7.20: Risk Mitigation in Islamic Banking

Region		Fully-fledged Islamic Bank	Conventional Bank	Conventional Bank with Islamic activities	Others	Total
Don't know	Europe	0.0%	2.8%	2.8%	1.4%	6.9%
	GCC	0.0%	2.8%	1.4%	1.4%	5.6%
	Other Middle East	1.4%	0.0%	0.0%	1.4%	2.8%
Less Advanced	Americas	0.0%	1.4%	0.0%	1.4%	2.8%
	Europe	6.9%	6.9%	5.6%	1.4%	20.8%
	GCC	12.5%	1.4%	6.9%	1.4%	22.2%
	Other	2.8%	0.0%	0.0%	1.4%	4.2%
	Other Middle East	5.6%	9.7%	0.0%	1.4%	16.7%
	Southeast Asia	4.2%	0.0%	0.0%	1.4%	5.6%
Similar	Americas	0.0%	1.4%	0.0%	1.4%	2.8%
	Europe	0.0%	1.4%	1.4%	1.4%	4.2%
	GCC	0.0%	0.0%	1.4%	1.4%	2.8%
	Southeast Asia	1.4%	0.0%	0.0%	1.4%	2.8%
Total		34.7%	27.8%	19.4%	18.1%	100%

The results depicted in Table 7.20 can be summarised as follows:

- (i) The majority of respondents (72.2%) believe that risk mitigation in Islamic banking is less advanced than conventional banking. The main responses came from fully-fledged Islamic banks in the GCC (12.5%), followed by conventional banks in Other Middle East (9.7%) and Islamic subsidiaries in the GCC (6.9%);

- (ii) 15.3% of the respondents indicated that they ‘Don’t know’ whether risk mitigation techniques in Islamic banking are more or less advanced than those used in conventional banking. Within this category, conventional banks in Europe, conventional banks in the GCC, and Islamic subsidiaries in Europe had the main responses with 2.8% of total responses each;
- (iii) 12.5% of respondents believe that risk mitigation techniques are similar in Islamic and conventional banking. The main responses in this category came from Europe (4.2%), followed by Americas, GCC, and Southeast Asia with 1.4% each;
- (iv) No respondents believe that risk mitigation techniques are more advanced in Islamic banking than in conventional banking.

In searching for risk and risk management attitudes in Islamic banks, the participants were also asked to express their opinions on risk mitigation techniques. These results obtained from Question 19 were confirmed by the poor responses for Question 20 about the techniques IFIs use to mitigate their risks as summarised in Table 7.21.

This question is only applicable to fully-fledged Islamic banks and Islamic subsidiaries of conventional banks as the listed risk mitigation techniques are all *Shari’ah*-compliant. As summarised in Table 7.21, collateral arrangements is the most commonly used technique (92.3%), followed by Islamic currency forwards (82.1%), guarantees (76.9%). Dual currency *murabahah* represented under ‘Others’ is the least used risk mitigation techniques at 2.6% of responses.

Table 7.21: Risk Mitigation Techniques

Risk Mitigation Technique	Total Responses	Percentage of Total Sample
On-balance sheet netting	25	64.1%
Collateral arrangements	36	92.3%
Islamic options	10	25.6%
Islamic swaps	14	35.9%
Guarantees	30	76.9%
Islamic currency forwards	32	82.1%
Parallel contracts	12	30.8%
Other (Please Specify)	1	2.6%

Notes: Question 20 is applicable only to Islamic banks & conventional banks with Islamic activities. Total sample for this question = 39 respondents.

The reasons for the lack of usage of *Shari'ah*-compliant risk mitigation techniques may be because those techniques are subject to different interpretation by *Shari'ah* scholars. Other reasons may include that, as previously indicated in Table 7.8 (section 7.2.2.1), *salam* and *istisna'a* contracts are not widely used in IFIs. As explained in Chapter 3, there have been substantial efforts in developing *Shari'ah*-compliant hedging instruments; however, much of this progress remains localised with limited scope for cross-border application and further work is still needed.

7.2.4 Evaluating the Practice of Islamic Banking

This last section aims to analyse the opinions and the evaluation of the participants on the practice of Islamic banking. One of the main statements considered in this section is the proposition that Islamic banking has been diverting from its roots by mimicking conventional banks. In doing so, Question 21, a closed question, provided four statements, and respondents were requested to express their preference in terms of how strongly they agree or disagree with each statement. The frequency results for the entire sample are summarized by Figure 7.9, while Table 7.22 breaks down the findings between Islamic bankers and non-Islamic bankers (including Islamic subsidiaries, conventional banks, and others), and ranks the importance of statements according to their mean values.

As can be seen from the findings depicted in Table 7.22 and Figure 7.9, on both aggregate and individual levels, the majority of respondents either 'Strongly Agree' or 'Agree' with the four statements. Although Islamic finance provides an ethical banking alternative, IFIs need to reform before they can exploit the ethical foundation in the Islamic banking model. The responses between Islamic bankers and non-Islamic bankers were close, with the former's responses being closer to 'SA' than the latter. These findings are supported by the significant results of the Chi-square test ($p < 1\%$). However, the mean rankings for the responses of Islamic bankers are higher than those of non-Islamic bankers across all statements, reflecting higher risk perceptions.

Figure 7.9: Frequency Distribution for Question 21 - Current Practices in Islamic Banking

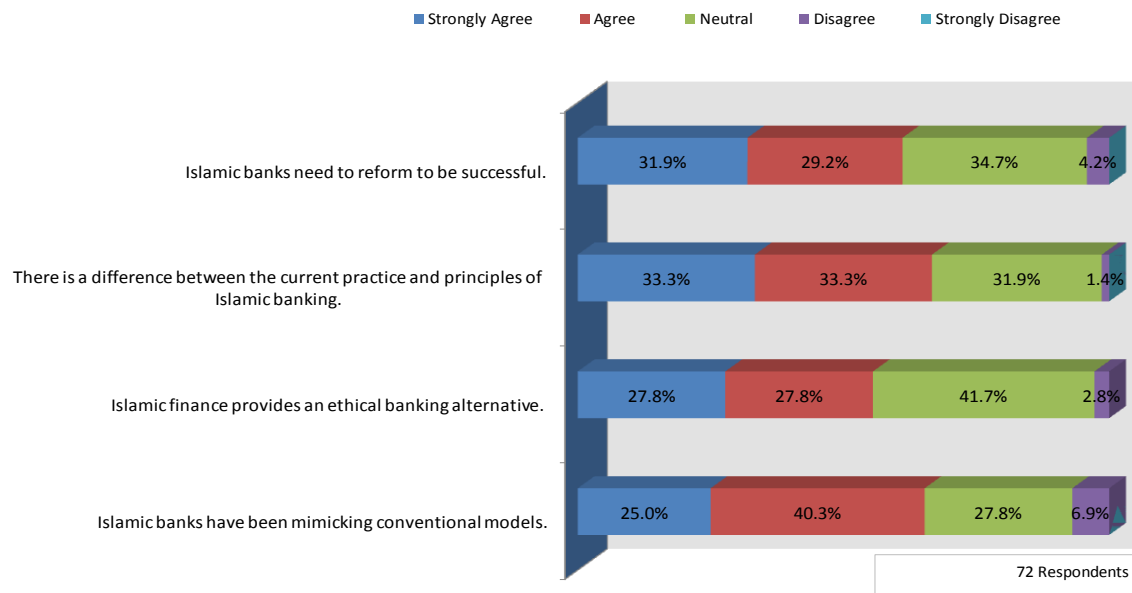


Table 7.22: Breakdown of Perceptions About Current Practices in Islamic Banking

Total Sample

Statement	SA	A	N	D	SD	n	Mean	Median	Mode	Chi-square
There is difference between the current practice and principles of Islamic banking.	33.3%	33.3%	31.9%	1.4%	0.0%	72	3.99	4	4	0.00
Islamic banks need to reform to be successful.	31.9%	29.2%	34.7%	4.2%	0.0%	72	3.89	4	3	0.00
Islamic banks have been mimicking conventional models.	25.0%	40.3%	27.8%	6.9%	0.0%	72	3.83	4	5	0.00
Islamic finance provides an ethical banking alternative.	27.8%	27.8%	41.7%	2.8%	0.0%	72	3.81	4	3	0.00

Fully-fledged Islamic Banks

Statement	SA	A	N	D	SD	n	Mean	Median	Mode	Chi-square
There is difference between the current practice and principles of Islamic banking.	44.0%	32.0%	20.0%	4.0%	0.0%	25	4.16	4	4	0.01
Islamic finance provides an ethical banking alternative.	44.0%	20.0%	36.0%	0.0%	0.0%	25	4.08	4	5	0.00
Islamic banks need to reform to be successful.	28.0%	40.0%	28.0%	4.0%	0.0%	25	3.92	4	4	0.01
Islamic banks have been mimicking conventional models.	28.0%	44.0%	16.0%	12.0%	0.0%	25	3.88	4	5	0.00

Non-Islamic Bankers (including Islamic subsidiaries, conventional banks, and others)

Statement	SA	A	N	D	SD	n	Mean	Median	Mode	Chi-square
There is difference between the current practice and principles of Islamic banking.	27.7%	34.0%	38.3%	0.0%	0.0%	47	3.89	4	4	0.00
Islamic banks need to reform to be successful.	34.0%	23.4%	38.3%	4.3%	0.0%	47	3.87	4	3	0.00
Islamic banks have been mimicking conventional models.	23.4%	38.3%	34.0%	4.3%	0.0%	47	3.81	4	3	0.00
Islamic finance provides an ethical banking alternative.	19.1%	31.9%	44.7%	4.3%	0.0%	47	3.66	4	3	0.00

Notes: n = Number of responses; Scale: 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), 5 = Strongly Agree (SA)

7.2.5 The Future of Islamic Banking

The last section of the questionnaire includes a forward-looking question that explores different strategies IFIs should follow in order to prepare for the future. The participants were provided a number of statements and were asked to express their opinions. The results related to the growth strategies for IFIs are presented in Table 7.23.

Table 7.23: Growth Strategies for IFIs

Total Sample

Strategy	n	Mean	Median	Mode	Chi-square
Improved risk management	72	6.75	2	1	0.0
Better risk mitigation	72	6.33	2	2	0.0
Enhanced morality – Back to roots	72	5.72	3	5	0.0
Diversification – reduce concentration	72	5.24	3	3	0.0
Innovation	72	3.26	6	8	0.0
Standardization	72	3.14	7	7	0.0
Mergers and Acquisitions	72	3.08	6	6	0.0
Organic growth in home market	72	2.49	7	8	0.0

Fully-fledged Islamic Banks

Strategy	n	Mean	Median	Mode	Chi-square
Improved risk management	25	6.64	2	1	0.0
Enhanced morality – Back to roots	25	5.96	3	1	0.1
Better risk mitigation	25	5.88	3	4	0.0
Diversification – reduce concentration	25	4.44	4	8	1.0
Innovation	25	3.72	5	6	0.3
Mergers and Acquisitions	25	3.32	6	6	0.1
Organic growth in home market	25	3.16	7	8	0.1
Standardization	25	2.88	7	7	0.0

Non-Islamic Bankers (including Islamic subsidiaries, conventional banks, and others)

Strategy	n	Mean	Median	Mode	Chi-square
Improved risk management	47	6.81	2	1	0.0
Better risk mitigation	47	6.57	2	2	0.0
Diversification – reduce concentration	47	5.66	3	3	0.0
Enhanced morality – Back to roots	47	5.60	4	5	0.0
Standardization	47	3.28	6	8	0.0
Innovation	47	3.02	6	8	0.0
Mergers and Acquisitions	47	2.96	6	6	0.0
Organic growth in home market	47	2.13	7	8	0.0

Table 7.23 reveals that both Islamic and non-Islamic bankers (including Islamic subsidiaries, conventional banks, and others) consider improved risk management and mitigation practices among the top priorities IFIs should focus on in their development plans. While Islamic bankers ranked ‘Enhanced morality – Back to roots’ second (mean= 5.96), non-Islamic bankers ranked it in the fourth place (mean = 5.60). ‘Diversification’ was highly ranked by both groups, while mergers and acquisitions, and organic growth in home market received lower ranking. Non-Islamic bankers ranked ‘Standardisation’ higher than Islamic bankers.

These findings are supported by the significant results of the Chi-square test for most strategies. In addition, Spearman’s Rank Correlation Coefficient shows that the at 5% significance level the rankings of the two groups are correlated ($\rho= 0.9405 > 0.643$) as depicted in Table 7.24.

Table 7.24: Correlation Between Perceptions of Islamic and Conventional Banks About Growth Strategies for IFIs

	Islamic banks Median	Conventional Banks Median	Difference	(Difference) ²
Improved risk management	2	2	0	0
Enhanced morality – Back to roots	3	4	1	1
Mergers and Acquisitions	6	6	0	0
Organic growth in home market	7	7	0	0
Better risk mitigation	3	2	-1	1
Innovation	5	6	1	1
Diversification – reduce concentrati	4	3	-1	1
Standardization	7	6	-1	1
Spearman’s Rank Correlation Coefficient				0.94048

7.3 CONCLUSION

This chapter is the first empirical analysis chapter of the quantitative data assembled through survey questionnaire where mainly descriptive statistics were applied to the primary data. Frequency distribution is among the descriptive statistics used, in addition to Spearman’s correlation coefficient test and Chi-square test. The analyses produced

results on different aspects of risk management in Islamic banking, which are summarized and explained in the context of the research objectives.

The findings in this chapter show that, although IFIs face additional risks to those faced by conventional financial institutions, both Islamic and conventional bankers have similar perceptions about risk management in Islamic banking. Liquidity, ALM, and concentration risk were among the top risks identified by both groups. Moreover, profit-sharing modes of financing and product-deferred sales are perceived to be more risky than *murabahah*, *wakalah* and *ijarah*. This explains why IFIs shy away from such instruments due to their lack of appetite for risky assets, which in turn is due to IFIs trying to emulate the conventional model. The manipulation of the contracts by Islamic finance practitioners, in order to mimic conventional products, made the risk perception of equity and risk sharing contracts, for instance *wakalah*, similar to risk perception of fixed income contracts like *murabahah*. This manipulation made the contracts behave differently and created a gap in risk perceptions.

The findings also indicate that, although IFIs are doing comparatively well in terms of their general risk management and reporting, they are still perceived as using less advanced risk management approaches. *Shari'ah*-compatible risk mitigation techniques are also not widely used by IFIs. Developing *Shari'ah*-compliant risk mitigation and hedging tools, in addition to improving risk management and reporting practices, represent a serious challenge to Islamic banking in order to lift itself to the next level. Most IFIs use Basel II capital adequacy standards, with greater use of basic and standardised approaches rather than advanced models. This is due to the relative simplicity of their capital requirements. The majority of respondents perceived that Basel II could be applied to IFIs, but with a few amendments.

It is interesting to note that both Islamic and non-Islamic bankers share the view that, although IFIs have shown resilience, they are not immune from economic shocks. Broadly speaking, Islamic banking had a relatively 'mild crisis' in that it suffered less

damage as a result of the global economic and financial turmoil of the past few years than conventional banking.

Empirical evidence shows that Islamic banking is expected to emerge stronger from the crisis, provided some conditions are met, such as: ‘further innovation’, ‘enhanced transparency’, ‘more robust risk-management architecture and culture’, and above all, ‘enhanced *Shari’ah*-compliance’.

After providing some descriptive analysis of the general characteristics of the sample, and examining the research questions and hypotheses, the findings of this chapter will be further analysed by the inferential statistical analysis in Chapter 8, which studies the attitudes of the respondents by providing a comparative analysis between several identified groups or respondents’ categories.

CHAPTER 8

ANALYSING PERCEPTIONS ON RISK AND RISK MANAGEMENT DIMENSIONS AND ISSUES: INFERENCE STATISTICAL ANALYSIS

8.1 INTRODUCTION

This chapter is a continuation of the previous chapter in analysing the quantitative data represented by the survey questionnaire. In this chapter inferential statistics are employed for exploring and analysing the opinions and attitudes of the respondents by providing a comparative analysis between several identified groups or respondents' categories. In addition, the chapter considers some determinants and factors which contribute to the perception and knowledge of the respondents concerning risk management in Islamic banking.

As mentioned earlier in the research methodology chapter, the analysis in the present chapter employs several inferential statistics tools for non-parametric data analysis, ranging from cross-tabulation, Friedman test, Kruskal-Wallis test, Chi-square tests to factor analysis and MANOVA multivariate analysis of variance. Each of these statistical analyses will be used in the relevant section of the chapter; a brief description of it will be presented prior to its application, and the result will subsequently be interpreted. The chapter is divided into six broad sections in line with the main parts of the questionnaire and in accordance to the thematic division used in the interview analysis in the following chapter. Each section is developed to find satisfactory answers to one or more of the main research questions and their sub-questions as previously explained in the thesis. This chapter concludes with a brief summary of the overall analysis and findings.

It should be noted that in order to avoid details, various analyses were brought together under one table to consolidate the analysis in a concise manner.

8.2 RISK PERCEPTION

It is highly expected that the respondents have different risk perceptions and understanding of risk management in Islamic banking according to their background, region, position within the organisation, nature of the FI, and other control variables. Therefore, this section analyses the respondents' opinions according to the selected category of the respondents' profile.

8.2.1 Risk Issues in Islamic Banks

8.2.1.1 Overall risks faced by Islamic banks

The first factor to be examined is the respondents' perceptions about the severity of risk facing IFIs. Descriptive statistics for Q7, in Chapter 7, showed that Islamic and conventional bankers share similar views about the top risks facing IFIs, unlike non-bankers who adopted a more theoretical approach in their views. This section will investigate further to examine the difference in perceptions among different subgroups of respondents. For this purpose, the researcher has employed the Kruskal-Wallis (K-W) tests for 'region', 'country', 'respondent's position', 'nature of FI', 'nature of activities' and 'accounting standards'.

The first control variable is 'region'. The results from the K-W test for the entire research sample in Table 8.1 indicate that there is no statistically significant difference among various regions in the risk perception (P value >0.05) except for Corporate Governance Risk (P value = 0.002), , which is also evident from the mean ranking. With a "relaxation" of the confidence level to 0.06, we can accept Displaced Commercial Risk as significant as well.

Table 8.1 – K-W Test Results by Region for Question 7 (Entire Research Sample)

Risk	Region	N	K-W Test Mean Rank	Chi-Square	Asymp. Sig.
Credit Risk	Americas	2	54	6.05	0.301
	Europe	31	32.19		
	GCC	19	40.13		

	Other	2	22.25		
	Other Middle East	14	37.54		
	Southeast Asia	4	47.38		
	Total	72			
Market Risk	Americas	2	63	10.568	0.061
	Europe	30	41		
	GCC	19	29		
	Other	2	31.75		
	Other Middle East	14	36.04		
	Southeast Asia	4	20.25		
	Total	71			
Operational Risk	Americas	2	38	4.496	0.48
	Europe	31	35.58		
	GCC	19	41.68		
	Other	2	37.75		
	Other Middle East	14	28.39		
	Southeast Asia	4	46		
	Total	72			
Equity Investment Risk	Americas	2	63	10.34	0.066
	Europe	31	40.37		
	GCC	19	36.29		
	Other	2	48		
	Other Middle East	14	27		
	Southeast Asia	4	21.75		
	Total	72			
Liquidity Risk	Americas	2	23	5.89	0.317
	Europe	31	39.42		
	GCC	19	38.18		
	Other	2	43.25		
	Other Middle East	14	26.79		
	Southeast Asia	4	43.25		
	Total	72			
Asset-Liability Management Risk	Americas	2	24.5	3.482	0.626
	Europe	31	39.53		
	GCC	19	37.39		
	Other	2	32.5		
	Other Middle East	14	29.57		
	Southeast Asia	4	41		
	Total	72			
Displaced Commercial Risk	Americas	2	36	11.002	0.051
	Europe	29	28.64		
	GCC	19	45.79		
	Other	2	49.5		
	Other Middle East	13	34.04		
	Southeast Asia	4	25.25		
	Total	69			
<i>Shari'ah</i> -Non-Compliance Risk	Americas	2	42.5	4.49	0.481
	Europe	31	39.11		
	GCC	19	36.18		
	Other	2	52.25		
	Other Middle East	14	27.93		
	Southeast Asia	4	36.88		

	Total	72			
Concentration Risk	Americas	2	41	5.869	0.319
	Europe	31	37.9		
	GCC	19	35.21		
	Other	2	51		
	Other Middle East	14	28.21		
	Southeast Asia	4	51.25		
	Total	72			
Reputation Risk	Americas	2	33	3.644	0.602
	Europe	31	34.68		
	GCC	19	35.53		
	Other	2	58.5		
	Other Middle East	14	36.64		
	Southeast Asia	4	45.5		
	Total	72			
Fiduciary Risk	Americas	2	33	4.978	0.419
	Europe	30	34.12		
	GCC	19	33.89		
	Other	2	13.75		
	Other Middle East	13	42.77		
	Southeast Asia	4	42		
	Total	70			
Corporate Governance Risk	Americas	2	57	19.086	0.002
	Europe	31	45.98		
	GCC	19	29.21		
	Other	2	49.25		
	Other Middle East	14	26.07		
	Southeast Asia	4	17.5		
	Total	72			
Legal Risk	Americas	2	26	2.067	0.84
	Europe	31	38.19		
	GCC	19	34.58		
	Other	2	48.5		
	Other Middle East	14	33.93		
	Southeast Asia	4	40.75		
	Total	72			

Repeating the K-W test with ‘region’ as the control variable for different samples of data, in terms of the institutional nature of respondents, gives consistent results as illustrated by Table 8.2 which confirms that there is a difference in the risk perception about corporate governance risk among regions due to fundamental market reasons. In other words, there is a significant difference between regions when institutional settings were also considered.

Table 8.2 – K-W Test Results by Region for Question 7 for Selected Sample Data

Risk	Fully-fledged Islamic Banks, Conventional Banks with Islamic Activities, and Conventional Banks		Fully-fledged Islamic Banks & Conventional Banks with Islamic Activities		Fully-fledged Islamic Banks	
	Chi-Square	Asymp. Sig.	Chi-Square	Asymp. Sig.	Chi-Square	Asymp. Sig.
Credit Risk	6.037	0.303	2.65	0.618	2.384	0.666
Market Risk	8.4	0.136	2.962	0.564	1.331	0.856
Operational Risk	4.181	0.524	4.241	0.374	1.222	0.874
Equity Investment Risk	9.399	0.094	3.188	0.527	6.795	0.147
Liquidity Risk	5.266	0.384	0.096	0.999	0.938	0.919
Asset-Liability Management Risk	2.404	0.791	0.894	0.925	3.006	0.557
Displaced Commercial Risk	9.785	0.082	7.992	0.092	7.219	0.125
<i>Shari'ah</i> -Non-Compliance Risk	4.609	0.465	1.387	0.846	6.283	0.179
Concentration Risk	7.318	0.198	2.751	0.6	4.077	0.396
Reputation Risk	4.388	0.495	2.795	0.593	2.223	0.695
Fiduciary Risk	5.846	0.322	3.128	0.537	9.058	0.06
Corporate Governance Risk	17.733	0.003	14.866	0.005	9.745	0.045
Legal Risk	2.656	0.753	2.904	0.574	3.398	0.494

In addition, examining the mean rankings across different regions for corporate governance risk confirms the existence of structural pattern. As apparent from Table 8.3 below, the rankings do not change much when conducting K-W with different samples identifying different institutional settings. The inclusion of conventional banks and non-bankers in the test sample gives similar results. ‘Americas’ disappear when conventional banks are excluded from the test sample as there were no respondents from IFIs in the ‘Americas’ in this research sample. Also, the difference in values between the highest and the lowest mean rankings is noticeable, which confirms that the distribution of corporate governance risk is significantly different across regions.

Table 8.3 – K-W Test Mean Rankings for Corporate Governance Risk for Different Sample Data

Corporate Governance Risk	Full Sample		Fully-fledged Islamic Banks, Conventional Banks with Islamic Activities, and Conventional Banks		Fully-fledged Islamic Banks & Conventional Banks with Islamic Activities		Fully-fledged Islamic Banks	
	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank
Americas	57	1 st	47.75	1 st	N/A	N/A	N/A	N/A
Europe	45.98	3 rd	39.78	3 rd	28.75	1 st	19	1 st
GCC	29.21	4 th	24.74	4 th	17.34	3 rd	13.61	3 rd
Other	49.25	2 nd	41.25	2 nd	27.75	2 nd	18.75	2 nd
Other Middle East	26.07	5 th	22.25	5 th	12.1	4 th	8.3	4 th
Southeast Asia	17.5	6 th	14.88	6 th	10.38	5 th	7.13	5 th

There is a pattern regardless of the nature of the respondents included in the sample, which implies that there are structural issues determined by the nature of the market, which can be explained by fundamental market reasons. Although corporate governance practices have material impacts on a bank’s risk profile, IFIs do not generally have robust corporate governance frameworks in place particularly in the GCC, Middle East, and Southeast Asia.

The same pattern could be identified, although to a lesser extent, when examining concentration risk, one of the main risk identified by respondents as explained in the previous chapter. Table 8.4 confirms that there are fundamental market reasons for the difference in mean rankings among different regions. The mean ranking for K-W test for the full sample ranks Southeast Asia first (51.25), followed by ‘Other’ (51), Americas (41), while ‘Other Middle East’ comes last with mean rank of 28.21. This ranking changes little when conducting the K-W test for different samples using different institutional settings, which confirms that for concentration risk there is a significant difference between regions when institutional settings are also applied.

Table 8.4 – K-W Test Mean Rankings for Concentration Risk for Different Sample Data

Concentration Risk	Full Sample		Fully-fledged Islamic Banks, Conventional Banks with Islamic Activities, and Conventional Banks		Fully-fledged Islamic Banks & Conventional Banks with Islamic Activities		Fully-fledged Islamic Banks	
	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank
Americas	41	3 rd	31.75	4 th	N/A	N/A	N/A	N/A
Europe	37.9	4 th	34.83	3 rd	21.38	3 rd	16.8	2 nd
GCC	35.21	5 th	26.58	5 th	17.59	5 th	12.28	4 th
Other	51	2 nd	38.75	2 nd	24.75	2 nd	13.5	5 th
Other Middle East	28.21	6 th	22.25	6 th	17.8	4 th	8.8	4 th
Southeast Asia	51.25	1 st	40.13	1 st	25.88	1 st	14.88	1 st

Furthermore, examining the mean rankings across different raw data for other significant risks like credit and liquidity risks (as identified by the respondents in Chapter 7) shows that rankings remain very similar between fully-fledged Islamic banks and fully-fledged Islamic Banks combined with Islamic subsidiaries of conventional banks. However, adding conventional banks with no Islamic activities to the sample change the rankings slightly as summarized in Tables 8.5 and 8.6. Under credit risk, for instance, when only fully-fledged Islamic banks are included in the sample, Southeast Asia ranks first (15.63), followed by Other Middle East (13.2), Europe (13.1), GCC (13), and Other (7). Also, the difference in values between the mean rankings is minimal reflecting the close perception among different regions. When the institutional sample settings change to include Islamic subsidiaries as well, this pattern of mean rankings remains very similar. However, changing the institutional sample settings to include conventional banks change the rankings and the gap between mean values become wider. Of note is the existence of the same pattern when non bankers are also included in the sample. This shows that for credit risk, there is a difference between regions when conventional banks and other non-banking respondents are also considered. Islamic and conventional bankers have different risk perceptions about credit risk across various regions.

Table 8.5 – K-W Test Mean Rankings for Credit Risk for Different Sample Data

Region	Credit Risk	Full Sample		Fully-fledged Islamic Banks, Conventional Banks with Islamic Activities, and Conventional Banks		Fully-fledged Islamic Banks & Conventional Banks with Islamic Activities		Fully-fledged Islamic Banks	
		Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank
Americas		54	1 st	44.25	1 st	N/A	N/A	N/A	N/A
Europe		32.19	5 th	25.45	5 th	18.58	4 th	13.1	3 rd
GCC		40.13	3 rd	32.61	3 rd	20.72	3 rd	13	4 th
Other		22.25	6 th	18	6 th	11	5 th	7	5 th
Other	Middle	37.54	4 th	30.17	4 th	21	2 nd	13.2	2 nd
East									
Southeast Asia		47.38	2 nd	38.75	2 nd	24.63	1 st	15.63	1 st

Table 8.6 shows that the same trend exists for liquidity risk. K-W test results for different institutional samples indicate a similar pattern between samples of fully-fledged Islamic banks and fully-fledged Islamic banks combined with Islamic subsidiaries. Also, there is another similar pattern between the full sample and a sample comprising fully-fledged Islamic banks, Islamic subsidiaries, and conventional banks. This empathises that Islamic and conventional bankers have different risk perceptions about liquidity risk across various regions, while the perceptions of Islamic subsidiaries is the same like that of fully-fledged Islamic banks.

Table 8.6 – K-W Test Mean Rankings for Liquidity Risk for Different Sample Data

Region	Liquidity Risk	Full Sample		Fully-fledged Islamic Banks, Conventional Banks with Islamic Activities, and Conventional Banks		Fully-fledged Islamic Banks & Conventional Banks with Islamic Activities		Fully-fledged Islamic Banks	
		Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank
Americas		23	6 th	17.75	6 th	N/A	N/A	N/A	N/A
Europe		39.42	3 rd	33.65	3 rd	19.29	5 th	12	5 th
GCC		38.18	4 th	30.58	4 th	20.47	2 nd	14.61	2 nd
Other		43.25	2 nd	34.75	2 nd	20	3 rd	12	3 rd
Other	Middle	26.79	5 th	22.67	5 th	20.2	1 st	12.3	1 st
East									
Southeast Asia		43.25	1 st	34.75	1 st	20	3 rd	12	3 rd

The findings indicate that there is an observed pattern, which can be generalised to most of the risk categories. This can only be explained by market realities.

The K-W test was conducted in a similar manner according to ‘country’ as control variable; the results confirm those produced by the test conducted according to the ‘region’.

In addition, an attempt was made to test the impacts of the ‘respondent’s position’ and ‘accounting standards’ on the risk perception, however, the results show that there are no significant differences as summarised in Table 8.7.

Table 8.7 – K-W Test Results by Respondent’s Position and Accounting Standards for Question 7 (Entire Research Sample)

Risk	K-W according to Respondent’s Position			K-W according to Accounting Standards		
	Chi-Square	df	Asymp. Sig.	Chi-Square	df	Asymp. Sig.
Credit Risk	11.817	14	0.621	1.098	4	0.778
Market Risk	20.115	14	0.127	1.616	4	0.656
Operational Risk	15.095	14	0.372	3.472	4	0.324
Equity Investment Risk	7.749	14	0.902	6.584	4	0.086
Liquidity Risk	13.051	14	0.522	7.051	4	0.07
ALM Risk	7.108	14	0.93	5.677	4	0.128
Displaced Commercial Risk	15.899	13	0.255	5.266	4	0.153
<i>Shari’ah</i> -Non-Compliance Risk	22.246	14	0.074	6.074	4	0.108
Concentration Risk	16.891	14	0.262	5.79	4	0.122
Reputation Risk	13.971	14	0.452	4.421	4	0.219
Fiduciary Risk	17.288	14	0.241	0.525	4	0.913
Corporate Governance Risk	18.487	14	0.186	5.596	4	0.133
Legal Risk	11.305	14	0.662	0.668	4	0.881

Finally conducting the K-W test to examine the significance of perceived differences among various risk groups for the entire research sample according to the ‘nature of FI’ provided dispersed results. Table 8.8 shows that liquidity, ALM, *Shari’ah*-non-compliance, concentration, reputation, and displaced commercial risks have significant p values, while the remaining risks do not.

Table 8.8 – K-W Test Results by Nature of FI for Question 7 (Entire Research Sample)

Risk	Chi-Square	df	Asymp. Sig.
Credit Risk	2.943	3	0.4
Market Risk	6.238	3	0.101
Operational Risk	3.237	3	0.357
Equity Investment Risk	3.599	3	0.308
Liquidity Risk	8.818	3	0.032
Asset-Liability Management Risk	9.381	3	0.025
Displaced Commercial Risk	13.528	3	0.004
Sharia'a Non-Compliance Risk	15.674	3	0.001
Concentration Risk	16.629	3	0.001
Reputation Risk	11.257	3	0.01
Fiduciary Risk	0.796	3	0.851
Corporate Governance Risk	1.511	3	0.68
Legal Risk	4.146	3	0.246

Further examination of the mean rankings for risks with significant p value, as summarised in Table 8.9, confirms the dispersion of data as no trend could be established. In general, fully fledged Islamic banks and conventional banks with Islamic activities have higher mean values than conventional banks alone and 'Others', particularly for liquidity, ALM, and displaced commercial risks. This trend, nonetheless, slightly changes for concentration and reputation risks. Of note is also the proximity of mean value among fully fledged Islamic banks and Islamic subsidiaries, which reflects the similar perception about risks in Islamic banking. One possible reason for this can be the similar knowledge and awareness about Islamic banking products and structures among those professionals with hands on experience in Islamic banking. This confirms the findings of section 7.2.2 in the previous chapter.

Table 8.9 – K-W Test Results by Risk Categories in Relation to Nature of FI for Question 7 (Entire Research Sample)

Risk	Nature of FI	N	Liquidity Risk		ALM Risk		Displaced Commercial Risk		Shari'ah-Non-Compliance Risk		Conc. Risk		Rep.Risk	
			Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank
Fully-fledged Islamic Bank		25	44.64	1 st	45.18	1 st	31.98	2 nd	46.88	1 st	48.48	1 st	44.7	1 st
Islamic subsidiary		14	38.29	2 nd	35.64	2 nd	52	1 st	25.46	4 th	27.93	3 rd	32.5	3 rd
Conventional Bank		20	28	4 th	27.05	4 th	29.13	4 th	27.73	3 rd	35.85	2 nd	25.93	4 th
Others		13	32	3 rd	35.27	3 rd	30.36	3 rd	41.92	2 nd	23.69	4 th	41.31	2 nd
Total		72												

Based on the above results, it can be concluded that three control variables (region, country, and nature of FI) contribute to some significant differences about risk perception among respondents, but not for all risks. In addition, this can also be supported by the fact that there is no significant difference in perception levels between respondents from stand-alone Islamic banks and Islamic subsidiaries. Initially, it was expected that respondents from stand-alone Islamic banks have stronger perception compared to those from Islamic subsidiaries for two reasons: firstly, stand-alone Islamic banks have been in existence much longer than Islamic subsidiaries, and, secondly, the respondents from stand-alone Islamic banks have the advantage of dealing with only Islamic banking products and services, whereas Islamic subsidiaries still need to operate side-by-side with their respective conventional counterpart in sharing the same operating platforms and buildings. Nevertheless, the results have indicated otherwise. Differences could be spotted between perceptions of conventional banks and stand-alone Islamic banks, and more noticeably between the perceptions of bankers and non-bankers, represented by 'Others'. This could be because bankers, whether Islamic or non-Islamic, have hands-on experience and better understanding of the Islamic banking model and its risk architecture than non-bankers who tend to be more theoretical in their approach.

8.2.1.2 Islamic finance contracts

Questions 9 and 10 seek respondents' views on various Islamic modes of financing. Question 9 targets institutions that use Islamic finance contracts only, therefore, when conducting the K-W test for Q9 only stand-alone Islamic banks and Islamic subsidiaries were included in the data analysis.

8.2.1.2.1 Intensity of use of different Islamic finance contracts

Table 8.10 shows that regardless of neither the respondent's position nor the nature of activities, banks use the Islamic finance contracts in similar pattern; all products had p value > 0.05. However, K-W test results according to 'region' indicate that there is significant difference in the use of *mudarabah* across different regions. Moreover, there is significant difference in the use of *wakala* and *Salaam* according to the nature of FI.

Table 8.10 – K-W Test Results for Question 9 for Selected Sample Data

Contract	K-W according to Region		K-W according to Respondent's Position		K-W according to Nature of FI		K-W according to Nature of Activities	
	Chi-Square	Asymp. Sig.	Chi-Square	Asymp. Sig.	Chi-Square	Asymp. Sig.	Chi-Square	Asymp. Sig.
<i>Murabahah</i>	0.867	0.929	6.847	0.445	0.178	0.674	2.81	0.729
<i>Wakala</i>	1.273	0.866	6.472	0.486	6.875	0.009	6.946	0.225
<i>Mudarabah</i>	10.283	0.036	3.999	0.78	3.692	0.055	1.334	0.931
<i>Ijarah</i>	7.573	0.109	10.752	0.15	0.111	0.739	4.572	0.47
<i>Musharakah</i>	2.085	0.72	5.511	0.598	0.727	0.394	2.85	0.723
Istisna'a	2.07	0.723	3.622	0.822	2.064	0.151	8.831	0.116
<i>Salaam</i>	4.794	0.309	10.661	0.154	4.729	0.03	3.073	0.689
Friedman test	0.00							

The Friedman test is used to find a tendency for some variables to receive higher ranks than others, *i.e.* to test whether the ranking is significant or not. The results of the test reflect that ranking for this question is significant.

Table 8.11 – K-W Test Mean Rankings for *Mudarabah* According to Region

	Region	N	Mean Rank
<i>Mudarabah</i>	Europe	12	17.71
	GCC	16	16.47
	Other	2	16.50
	Other Middle East	5	32.50
	Southeast Asia	4	27.13
	Total	39	

As can be seen in Table 8.11, Other Middle East and Southeast Asia use *mudarabah* the most with means values of 32.5 and 27.13 respectively, while Europe (17.71) and the GCC (16.74) rank less on the use of *mudarabah* as FIs in these regions tend to rely more on *murabahah*, *wakala*, and *ijarah*. This should be explained by the economies of the regions in question, as the lack of financial depth may necessitate more use of equity financing.

Table 8.12 – K-W Test Mean Rankings for *Wakala* and *Salaam* According to Nature of FI

	Nature of Financial Institution	N	Mean Rank
<i>Wakala</i>	Fully-fledged Islamic Bank	25	17.08
	Conventional Bank with Islamic activities/ Windows	14	25.21
	Total	39	
<i>Salaam</i>	Fully-fledged Islamic Bank	25	22.86
	Conventional Bank with Islamic activities/ Windows	14	14.89
	Total	39	

As depicted by Table 8.12, Islamic subsidiaries (25.21) tend to use *wakala* more than fully-fledged Islamic banks (17.08), while the picture is reversed for the use of *salaam*, where the disparity between mean values of the two groups is wide

In addition, Q9 was re-tested by excluding Islamic subsidiaries from the sample. However, there were no significant differences between the use of different contracts across different control variables: region, respondent's positions, nature of activities, and accounting standards.

8.2.1.2.2 Risk perception for different Islamic finance contracts

Unlike Q9 which targeted FI using Islamic finance contracts, Q10 seeks risk perceptions for these contracts. The feedback of all respondents is valuable; therefore, the K-W test is conducted on the entire research sample.

Table 8.13 – K-W Test results for Question 10 (Risk Seriousness) by Region for Entire Sample

Contract	Region	N	K-W Test Mean Rank	Chi-Square	Asymp. Sig.
<i>Murabahah</i>	Americas	2	28.75	11.554	0.041
	Europe	31	38.63		
	GCC	19	43.13		
	Other	2	54		
	Other Middle East	14	25.93		
	Southeast Asia	4	20.63		
	Total	72			
<i>Wakala</i>	Americas	2	33	4.682	0.456
	Europe	31	32.26		
	GCC	19	37.29		
	Other	2	33		
	Other Middle East	14	42.14		
	Southeast Asia	4	49.38		
	Total	72			
<i>Mudarabah</i>	Americas	2	28.25	1.983	0.851
	Europe	31	36.77		
	GCC	19	37		
	Other	2	28.25		
	Other Middle East	14	34.64		
	Southeast Asia	4	46.75		
	Total	72			

<i>Ijarah</i>	Americas	2	33.25	4.637	0.462
	Europe	31	35.85		
	GCC	19	34.08		
	Other	2	39.5		
	Other Middle East	13	43.88		
	Southeast Asia	4	20.25		
	Total	71			
<i>Musharakah</i>	Americas	2	36.75	3.503	0.623
	Europe	31	39.85		
	GCC	19	33.05		
	Other	2	36.75		
	Other Middle East	14	37.64		
	Southeast Asia	4	22.63		
	Total	72			
<i>Istisna'a</i>	Americas	2	46.5	6.413	0.268
	Europe	29	37.4		
	GCC	19	33.21		
	Other	2	46.5		
	Other Middle East	14	27.5		
	Southeast Asia	4	49.63		
	Total	70			
<i>Salaam</i>	Americas	2	59.75	4.569	0.471
	Europe	31	35.13		
	GCC	19	35.53		
	Other	2	28.75		
	Other Middle East	13	33		
	Southeast Asia	4	46.5		
	Total	71			
Friedman test	0.00				

As can be seen in Table 8.13, the results of Friedman test reflect that ranking for this question is significant, indicating that there is a significant difference between the risk perceptions for Islamic contracts.

K-W test results according to 'region', as illustrated in Table 8.13, indicate that *murabahah* is the only contract that reflects significant results across regions. This is

expected because *murabahah* is extensively used globally. Moreover, mean rankings for *murabahah*, in Table 8.14, show that ‘Other’ regions, like Turkey and Pakistan, have a higher ranking (54.0) than the GCC (43.13) and Europe (38.63), while the remaining regions follow. This can be attributed to two main reasons. First, the European and GCC markets are more sophisticated in their financial awareness about risk management, products’ structures, and the use of risk hedging techniques than Turkey and Pakistan, which has a direct impact on the risk perception among those markets. Second, at the time of conducting this questionnaire, European and GCC markets enjoyed stable political environment and ‘relatively’ less volatile business cycles compared to ‘Others’.

Table 8.14 – K-W Test Mean Rankings for *Murabahah* According to Region (Entire Research Sample)

Contract	Region	N	K-W Test Mean Rank	Chi-Square	Asymp. Sig.
<i>Murabahah</i>	Americas	2	28.75	11.554	0.041
	Europe	31	38.63		
	GCC	19	43.13		
	Other	2	54.0		
	Other Middle East	14	25.93		
	Southeast Asia	4	20.63		
	Total	72			

Repeating the K-W test with ‘region’ as the control variable for different institutional samples of data gives consistent results as depicted by Table 8.15, which confirms that there is a difference in the risk perception about *murabahah* among regions in comparing according to institutional nature due to fundamental market reasons.

Table 8.15 – K-W Test Results by Region for Question 10 for Selected Institutional Data

	Fully-fledged Islamic Banks, Conventional Banks with Islamic Activities, and Conventional Banks		Fully-fledged Islamic Banks & Conventional Banks with Islamic Activities		Fully-fledged Islamic Banks	
	Chi-Square	Asymp. Sig.	Chi-Square	Asymp. Sig.	Chi-Square	Asymp. Sig.
<i>Murabahah</i>	14.146	0.015	13.497	0.009	9.788	0.044
<i>Wakala</i>	4.339	0.502	3.369	0.498	3.927	0.416
<i>Mudarabah</i>	2.043	0.843	1.896	0.755	2.255	0.689
<i>Ijarah</i>	6.546	0.257	2.152	0.708	4.189	0.381
<i>Musharakah</i>	2.647	0.754	3.601	0.463	4.015	0.404
<i>Istisna'a</i>	7.964	0.158	3.241	0.518	5.859	0.21
<i>Salaam</i>	5.065	0.408	1.954	0.744	1.937	0.747

In addition, examining the mean rankings across different regions for *murabahah* confirms the existence of a structural pattern. As apparent from Table 8.16, the rankings are similar when conducting the K-W with different raw data. The inclusion of conventional banks and non-bankers in the test sample gave similar results. ‘Americas’ disappear when conventional banks are excluded from the test sample as there were no respondents from Islamic banks in the ‘Americas’ in this research sample.

Table 8.16 – K-W Test Mean Rankings for *Murabahah* According to Region for Selected Institutional Data

<i>Murabahah</i>	Full Sample		Fully-fledged Islamic Banks, Conventional Banks with Islamic Activities, and Conventional Banks		Fully-fledged Islamic Banks & Conventional Banks with Islamic Activities		Fully-fledged Islamic Banks	
	K-W Test Mean Rank	Rank	K-W Test Mean Rank	Rank	K-W Test Mean Rank	Rank	K-W Test Mean Rank	Rank
Americas	28.75	4 th	23	4 th	N/A		N/A	
Europe	38.63	3 rd	34.48	2 nd	23.83	2 nd	17.1	2 nd
GCC	43.13	2 nd	34.42	3 rd	22	3 rd	14.78	3 rd
Other	54	1 st	43.5	1 st	27	1 st	19	1 st
Other Middle East	25.93	5 th	19.13	5 th	10	4 th	7.9	4 th
Southeast Asia	20.63	6 th	16	6 th	9.5	5 th	7.25	5 th

As depicted by Table 8.16, there is a general pattern in terms of perception about *murabahah*-related issues. Such regional and institutional differences can be attributed to market conditions prevailing in each region.

Furthermore, using the entire research sample, attempts were made to test the impact of the respondent's positions, nature of FI, nature of activities, and accounting standards on the risk perception. However, the results, as depicted in Table 8.17, show that there are no significant differences except for *murabahah* contracts which had significant risk perception according to accounting standards ($p = .028$), and nature of FI (0.03).

Table 8.17 – K-W Test Results for Q10 (Perceived Risk Seriousness) for Entire Sample Data

Contract	K-W according to Respondent's Position		K-W according to Nature of FI		K-W according to Accounting Standards		K-W according to Nature of Activities	
	Chi-Square	Asymp. Sig	Chi-Square	Asymp. Sig	Chi-Square	Asymp. Sig	Chi-Square	Asymp. Sig
<i>Murabahah</i>	19.85	0.14	8.75	0.03	10.90	0.028	4.08	0.67
<i>Wakala</i>	17.98	0.21	2.23	0.53	3.87	0.42	2.68	0.85
<i>Mudarabah</i>	14.02	0.45	0.27	0.97	2.82	0.59	4.36	0.63
<i>Ijarah</i>	13.99	0.45	7.07	0.07	6.13	0.19	9.06	0.17
<i>Musharakah</i>	19.02	0.16	1.50	0.68	3.18	0.53	2.34	0.89
<i>Istisna'a</i>	19.46	0.15	0.49	0.92	4.87	0.30	1.69	0.95
<i>Salaam</i>	18.39	0.19	0.97	0.81	3.52	0.48	1.69	0.95

8.2.1.3 Additional Risk Issues Facing IFIs

Q11 aimed at exploring the perceptions of the participants in relation to a number of risks related statements. For this, the K-W test was employed to determine if there were any statistical significant differences across the categories of respondent profiles.

Table 8.18 shows the K-W test results for the 'nature of FI' variable. Statements 1, 2, 3, 4, 8, 10, and 11 are statistically significant, which reflects that there are significant

differences in the risk perception among respondents according to the nature of their FI. It should be noted that insignificant categories are eliminated and hence are not depicted in the table. Table 8.18 also breaks down the mean rankings for these statements.

Statements:

1. Risks for Islamic banks should be managed using same techniques used in conventional banking.
2. Islamic banking is more risky by nature than conventional banking.
3. Risk management for Islamic banks is more challenging than it is for conventional banks.
4. There is naturally inherent conservatism in the principles of Islamic finance.
5. In an Islamic bank, a low rate of return on deposits will lead to withdrawal of funds.
6. Depositors would hold the bank responsible for a lower rate of return on their deposits.
7. Variation among *Shari'ah* scholars' opinions represents a major risk to Islamic banking.
8. Non-*Shari'ah* compliance could severely damage the reputation of an Islamic bank.
9. AAOIFI and IFSB standards should be made mandatory for Islamic banks.
10. Corporate governance is generally weak in Islamic banks.
11. Islamic banking in its current state is a safer option than conventional banking

Table 8.18 – K-W Test Results for Question 11 for the Full Research Sample According to Nature of FI

		Statement						
		1	2	3	4	8	10	11
Chi-Square		9.73	28.631	7.969	36.833	12.224	23.692	15.743
Asymp. Sig.		0.021	0.00	0.047	0.00	0.007	0.00	0.001
Nature of FI	N	Mean Rank						
Fully-fledged Islamic Bank	25	28.68	21.92	37.06	55.5	38.9	23.86	42.92
Conventional Bank with Islamic Activities	14	41.36	33	25	26.21	23.79	30.46	39.14
Conventional Bank	20	46.05	44.55	37.48	22.45	34.35	47.4	38.85
Others	13	31.62	55.92	46.31	32.65	48.88	50.54	17.69
Total	72							

Only statements with significant p value are displayed in the table

Studying the mean ranking for each statement does not reveal a certain pattern governing the data; the data is widely dispersed with no clear trend of ranking according to nature of FI.

Repeating the K-W test for the entire research sample using other control variables (such as region, position of respondent, nature of activities, and accounting standards) gives similar results as seen in Table 8.19, which confirms that there is a significant difference in the risk perception among various groups. With a ‘relaxation’ of the significance level to 0.06, more statements can be considered as significant. An attempt was made to study the mean ranking for each statement within each test, however, the results did not reveal a certain pattern, and the data is widely dispersed with no clear ranking trend.

Table 8.19 – K-W Test Results for Question 11 for the Full Research Sample According to Various Control Variables

Statement	Region		Position of Respondent		Nature of Activities		Accounting Standards	
	Chi-Square	Asymp. Sig.	Chi-Square	Asymp. Sig.	Chi-Square	Asymp. Sig.	Chi-Square	Asymp. Sig.
1	9.695	0.084	18.272	0.195	7.736	0.258	9.534	0.049
2	29.87	0.00	32.308	0.004	31.623	0.00	22.755	0.00
3	11.308	0.046	23.068	0.059	9.59	0.143	5.236	0.264
4	24.749	0.00	24.06	0.045	18.209	0.006	15.894	0.003
5	9.5	0.091	18.734	0.175	5.504	0.481	6.408	0.171
6	10	0.075	18.471	0.186	1.598	0.953	0.937	0.919
7	19.217	0.002	24.05	0.045	14.798	0.022	7.077	0.132
8	4.523	0.477	18.66	0.178	12.829	0.046	8.222	0.084
9	16.245	0.006	16.724	0.271	11.293	0.08	8.495	0.075
10	33.479	0.00	25.222	0.032	25.108	0.00	17.862	0.001
11	14.644	0.012	22.839	0.063	23.755	0.001	21.018	0.00

Factor Analysis for Question 11

In order to provide further statistical robustness to the analysis, factor analysis was conducted. Factor analysis seeks to discover if the observed variables can be explained largely or entirely in terms of a much smaller number of variables called the factors.

As there are eleven statements for Q11, all analysing the respondents’ perceptions of different risk issues in Islamic banking, the researcher felt that reducing these statements

into a more manageable number would enhance the analysis and would tell more about how respondents perceived these issues. Hence, factor analysis is deemed to be relevant in this respect as the main task of factor analysis is to cluster the related group of variables through their common variance (Pallant, 2007).

In order to test the factorability of the data in terms of sampling adequacy, there are two statistical measures available in the SPSS software that can be used: Bartlett's test of Sphericity and also the Kaiser-Meyer-Olkin (KMO) test. As laid down in Pallant (2007), for the factor analysis to be considered as appropriate, the Bartlett's test of Sphericity value should be significant ($P < .05$), while for the KMO test, the suggested minimum outcome must be at least 0.6 (KMO score ranging from 0 to 1). The KMO test's benchmarks are as follows: KMO measure in the 0.90s the sampling is considered as marvellous. If the outcome is in the 0.80s, then the sampling is considered as meritorious, if it is in 0.70 then the sample is middling, if it is in the 0.60s then the sample is mediocre, if it is in 0.50s then the sample deemed as miserable and lastly if it is below than 0.50 then the sample is unacceptable (Pallant, 2007).

Table 8.20 presents the results of KMO and also Bartlett's test for this factor analysis.

Table 8.20 - KMO and Bartlett's Test Results for the 11 Items Combined

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.760
Bartlett's Test of Sphericity	Approx. Chi-Square	268.223
	df	55
	Sig.	0.000

The outcome of the KMO measure for all 11 items combined, related to the risk perception, produced the value of 0.760, which is higher than 0.60, therefore the factor analysis is appropriate for this study. In addition, the significant P-Value as presented in the table of 0.000 is significantly lower than critical P-Value of 0.05. Therefore, the identity matrix can be rejected. Based on the very encouraging results from the both testing, factor analysis may be performed.

The second step is to choose the most suitable method of data extraction. As discussed in Chapter 6, the researcher selected principle component analysis (PCA) as it is deemed to be the most suitable method for the data at hand. PCA involves determining the patterns with the objective of studying the similarities and the differences among the components of the data set.

After determining the factors, the next step in order to facilitate the interpretation selection of rotation method is very important. In this regard, orthogonal (uncorrelated) and oblique (correlated) approaches are the two main techniques to rotation (Pallant, 2007). Results of the orthogonal rotation are easier to interpret, describe, and report (Field, 2009). There are various rotational approaches in SPSS within both orthogonal and oblique categories. Varimax, Quartimax, and Equamax are typically orthogonal approaches of rotation, whereas Direct Oblimin, Quartimin, and Promax are oblique methods. Varimax is the most commonly used orthogonal technique in order to reduce the number of variables whereas direct oblimin technique is generally used for the oblique method. The researcher opted for Varimax rotation with Kaiser Normalization as Table 8.21 suggests.

Table 8.21 - Total Variance Explained for Q11

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.732	33.926	33.926	3.732	33.926	33.926	3.103	28.214	28.214
2	1.887	17.151	51.076	1.887	17.151	51.076	2.013	18.296	46.509
3	1.439	13.078	64.155	1.439	13.078	64.155	1.941	17.646	64.155
4	.982	8.929	73.084						
5	.675	6.136	79.219						
6	.571	5.190	84.410						
7	.443	4.023	88.433						
8	.370	3.366	91.799						
9	.349	3.171	94.970						
10	.299	2.722	97.692						
11	.254	2.308	100.000						

Extraction Method: Principal Component Analysis.

Table 8.21 presents the output of the number of factors that are retained according to Kaiser’s criterion, in which all the eigenvalues are more than 1.0. In this situation, there are three factors that will be retained, since the eigenvalues are 3.732, 1.887 and 1.439 respectively. The screen plot, which is basically a graph of the eigenvalues, shows that the eleven variables could be reduced to only three as the graph slopes down steeply before becoming parallel to the horizontal line. It is therefore clear from the plot that there is only a three factor solution to this question. Therefore it was decided to retain the three factors.

According to Pallant (2007), the eigenvalue has to be greater than 1.0 to be regarded as significant and to be used in determining the factors. The assumption here is that the eigen values stand for the amount of total variation represented by the factors and this means that an eigenvalue of 1.0 or above indicates a high level of variation. Table 8.21 shows that there are three factors with an eigenvalue greater than 1.0. This means that the original eleven items can be simply reduced to three factors. The three component

solution explained 64.2% of the variance with component 1 contributing 33.9%, component 2 contributing 17.1%, and component 3 contributing 13.1%. The explanatory power of the first factor is very high.

Figure 8.1 – Screen Plot for Q11

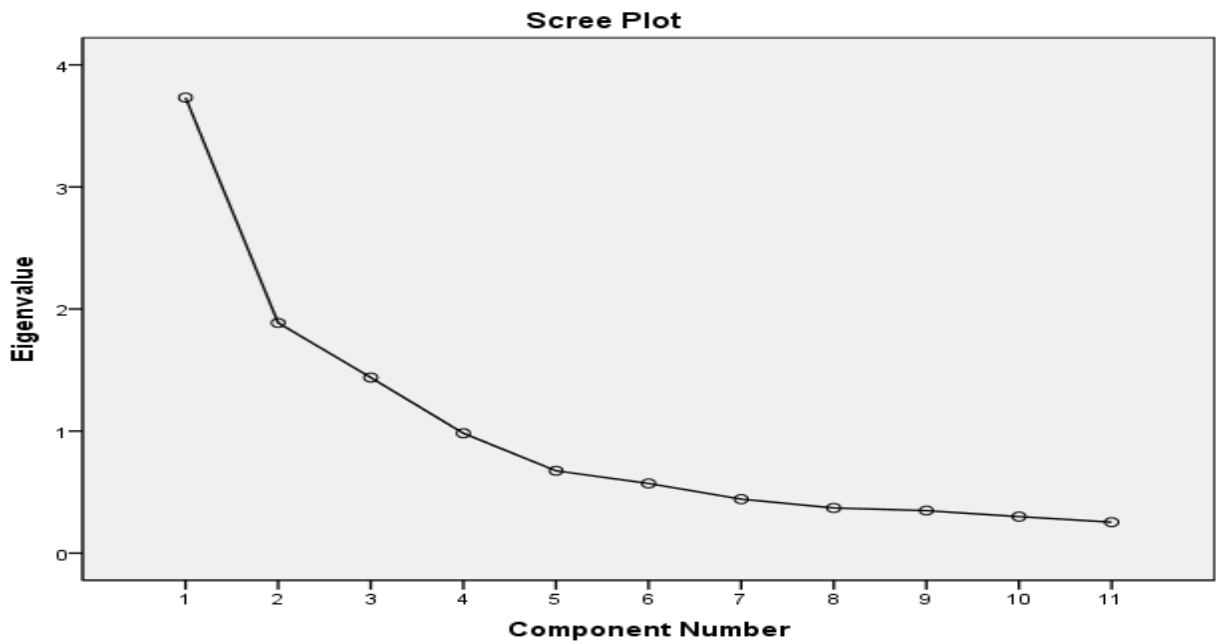


Table 8.22 - Rotated Component Matrix^a for Q 11

	Component		
	1 Risk Perception	2 <i>Shari'ah</i> Compliance	3 Rate of Return
1- Risks for Islamic banks should be managed using same techniques used in conventional banking	.134	-.770	-.168
2- Islamic banking is more risky by nature than conventional banking	.806	-.237	.061
3- Risk management for Islamic banks is more challenging than it is for conventional banks	.521	.301	.400
4- There is naturally inherent conservatism in the principles of Islamic finance	-.484	.627	-.289
5- In an Islamic bank, a low rate of return on deposits will lead to withdrawal of funds	.062	-.012	.882
6- Depositors would hold the bank responsible for a lower rate of return on their deposits	-.010	-.059	.886
7- Variation among <i>Shari'ah</i> scholars' opinions represent a major risk to Islamic banking	.584	-.448	-.006
8- <i>Shari'ah</i> -Non-Compliance could severely damage the reputation of an Islamic bank	.038	.647	-.098
9- AAOIFI and IFSB standards should be made mandatory on Islamic banks	-.693	.419	.112
10- Corporate governance is generally weak in Islamic banks	.790	-.145	.253
11- Islamic banking in its current state is a safer option than conventional banking	-.693	-.241	.121

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Table 8.22 further provides Rotated Component Matrix by distributing all variables to the identified three components. The factors in each component have some common characteristics and measure the same phenomenon and, therefore, each component is named with a general description of the factors or variables it includes. For instance, factors in component one deal with the respondents' risk perception. The factors in component two deal with *Shari'ah* principles and its impact on the risk profile of an IFI,

while the factors in component three deal with the rate of return paid by IFI and its effect on depositors' behaviour and perception of how safe the IFI is. Thus the results indicate that all these statements can be explained with three main components.

After conducting factor analysis one way between groups, a MANOVA test was computed in order to investigate if there is any significant difference between the three component groups in relation to same control variables. This will help to locate the impact or significance of each control variable on the established distribution.

The outputs of the relevant tests are presented in terms of data conforming to the assumptions before the main MANOVA analysis. In this sense, the sig. value of the Box's Test of Equality of Covariance Matrices should not be lower than 0.001 in terms of not violating the assumption (Tabachnick and Fidell, 2006). In this example, the output of the Box's Test shows that there is no violation of assumption of homogeneity of variances of variance-covariance matrices since the sig. value of 0.248 is higher than the critical value of 0.001.

Table 8.23 – Box's Test of Equality of Covariance Matrices^a

Box's M	27.466
F	1.209
df1	18
df2	544.584
Sig.	0.248

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept + Region

Additionally, the output of the Levene's Test of Equality of Error Variances is explored. The results in the Sig. column show that sig. values of 'Risk Perception' (0.806), 'Shari'ah Compliance' (0.121), and 'Rate of Return' (0.112) are higher than 0.05. Thus, there is no violation of the assumption of equality of variances for these three factors.

Table 8.24 - Levene's Test of Equality of Error Variances^a

	F	df1	df2	Sig.
Risk Perception	.458	5	66	.806
Shari'ah Compliance	1.818	5	66	.121
Rate of Return	1.867	5	66	.112

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Region

After performing the Box's Test of Equality of Covariance Matrices and Levene's test, the set of multivariate test was employed. Pallant (2007) states that multivariate tests of significance demonstrate if there are any significant differences amongst the groups; the sig. value should be lower than 0.05 in order to find a statistically significant result. There are several statistics which are also used in the SPSS such as Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root. In this research Wilks' Lambda result is taken into account since it is one of the most commonly used statistics (Tabachnick and Fidell, 2006). The results of the Wilks' Lambda show that there is a statistically significant difference between regions in relation to the perceptions on the three components since the sig. value of 0.00 is quite lower than the critical level of 0.05.

Table 8.25 - Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.995	4017.889 ^a	3.000	64.000	.000	.995
	Wilks' Lambda	.005	4017.889 ^a	3.000	64.000	.000	.995
	Hotelling's Trace	188.339	4017.889 ^a	3.000	64.000	.000	.995
	Roy's Largest Root	188.339	4017.889 ^a	3.000	64.000	.000	.995
Region	Pillai's Trace	.568	3.083	15.000	198.000	.000	.189
	Wilks' Lambda	.472	3.693	15.000	177.077	.000	.222
	Hotelling's Trace	1.036	4.330	15.000	188.000	.000	.257
	Roy's Largest Root	.951	12.550 ^c	5.000	66.000	.000	.487

a. Exact statistic

b. Computed using alpha = .05

Since, multivariate test suggests that there is a statistically significant difference, a further investigation is conducted. Thus, in order to reveal if there is a difference in terms of region on 'Risk Perception', '*Shari'ah* Compliance', 'Rate of Return' or only to some extent. Tests of Between Subjects Effects provide this information. Bonferroni adjustment, which is one of the most commonly employed methods, gives this information when the alpha level of 0.05 is divided by the number of dependent variables (Pallant, 2007). In this example, since there are three dependent variables, therefore, 0.05 is divided by three and the new alpha level is 0.0167. As can be seen in the Tests of Between-Subjects Effects in Table 8.26, the results indicate that the dependent variables 'Risk Perception' and '*Shari'ah* Compliance' have significant values of 0.000, while 'Rate of Return' has a Sig. value of 0.671 which is higher than the critical value of 0.0167 for this example.

Furthermore, Tests of Between-Subjects Effects provide the effect size. Partial Eta Squared is used to determine the impact of independent variable on dependents variables, and it signifies the percentage of the variance in the dependent variable which is explained by the independent variable (Pallant, 2007). In this question, the effect of 'region' (independent variable) on 'Risk Perception' and '*Shari'ah* Compliance' (dependent variables) can be evaluated by the Partial Eta Squared which is depicted in the Tests of Between-Subjects Effects in Table 8.26. The importance of this impact is explored using the effect size values. Cohen (2005) categorises the effect size of 0.01 as a small effect, 0.06 as a medium effect whereas 0.14 as a large effect.

Therefore, the effect size values for this case are 0.459 and 0.344, which are deemed large effect sizes using Cohen's. These results signify 45.9% and 34.4% of the variances in 'Risk Perception' and '*Shari'ah* Compliance' scores are explained respectively by the region.

Table 8.26 - Tests of Between-Subjects Effects

Source	Dependent Variable	Type I Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Risk Perception	18.683 ^a	5	3.737	11.212	.000	.459
	<i>Shari'ah</i> Compliance	14.314	5	2.863	6.937	.000	.344
	Rate of Return	1.537	5	.307	.638	.671	.046
Intercept	Risk Perception	738.561	1	738.561	2216.046	.000	.971
	<i>Shari'ah</i> Compliance	886.673	1	886.673	2148.655	.000	.970
	Rate of Return	629.139	1	629.139	1305.938	.000	.952
Region	Risk Perception	18.683	5	3.737	11.212	.000	.459
	<i>Shari'ah</i> Compliance	14.314	5	2.863	6.937	.000	.344
	Rate of Return	1.537	5	.307	.638	.671	.046
Error	Risk Perception	21.996	66	.333			
	<i>Shari'ah</i> Compliance	27.236	66	.413			
	Rate of Return	31.796	66	.482			
Total	Risk Perception	779.240	72				
	<i>Shari'ah</i> Compliance	928.222	72				
	Rate of Return	662.472	72				
Corrected Total	Risk Perception	40.679	71				
	<i>Shari'ah</i> Compliance	41.549	71				
	Rate of Return	33.333	71				

a. R Squared = .459 (Adjusted R Squared = .418)

MANOVA test according to Nature of FI for Question 11

After conducting a MANOVA test according to 'region' as the independent variable, another MANOVA test was computed according to 'nature of FI' as the independent variable in order to investigate if there is any significant difference between the three dependent factors identified by the factor analysis.

In this case, the output of the Box's Test in Table 8.27 shows that there is no violation of the assumption of homogeneity of variances of variance-covariance matrices since the sig. value of 0.080 is higher than the critical value of 0.001

Table 8.27 - Box's Test of Equality of Covariance Matrices^a

Box's M	29.551
F	1.497
df1	18
df2	9866.884
Sig.	0.080

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept + NatureFI

Additionally, the output of the Levene's Test of Equality of Error Variances is explored. The results in the Sig. column show that sig. values of 'Risk Perception' (0.753), 'Shari'ah Compliance' (0.427), and 'Rate of Return' (0.077) are higher than 0.05. Thus, there is no violation of the assumption of equality of variances for these three factors.

Table 8.28 - Levene's Test of Equality of Error Variances^a

	F	df1	df2	Sig.
Risk Perception	.400	3	68	.753
Shari'ah Compliance	.938	3	68	.427
Rate of Return	2.386	3	68	.077

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + NatureFI

The results of the Wilks' Lambda in Table 8.29 show that there is a statistically significant difference according to nature of FI since the sig. value of 0.00 is quite lower than the critical level of 0.05.

Table 8.29 - Multivariate Tests^c

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.995	4340.694 ^a	3.000	66.000	.000	.995
	Wilks' Lambda	.005	4340.694 ^a	3.000	66.000	.000	.995
	Hotelling's Trace	197.304	4340.694 ^a	3.000	66.000	.000	.995
	Roy's Largest Root	197.304	4340.694 ^a	3.000	66.000	.000	.995
NatureFI	Pillai's Trace	.621	5.921	9.000	204.000	.000	.207
	Wilks' Lambda	.478	6.335	9.000	160.777	.000	.218
	Hotelling's Trace	.890	6.396	9.000	194.000	.000	.229
	Roy's Largest Root	.534	12.100 ^b	3.000	68.000	.000	.348

a. Exact statistic

b. The statistic is an upper bound on F that yields a lower bound on the significance level.

c. Design: Intercept + NatureFI

Since the multivariate test suggests that there is a statistically significant difference, a further investigation is conducted. Tests of Between-Subjects Effects provide this information. In this case, since there are three dependent variables, therefore, 0.05 is divided by three and the new alpha level is 0.0167. As can be seen in the Tests of Between-Subjects Effects in Table 8.30, the results indicate that the dependent variables 'Risk Perception' and 'Shari'ah Compliance' have significant values of 0.000, while 'Rate of Return' has a Sig. value of 0.234 which is higher than the critical value of 0.0167 for this example. Furthermore, the effect size values as evaluated by the Partial Eta Squared for this case are 0.301 and 0.336, which are deemed large effect sizes using Cohen's. These results signify 30.1% and 33.6% of the variances in 'Risk Perception' and 'Shari'ah Compliance' scores are explained respectively by the nature of FI.

Table 8.30 - Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Risk Perception	12.240 ^a	3	4.080	9.755	.000	.301
	Sharia Compliance	13.952 ^b	3	4.651	11.459	.000	.336
	Rate of Return	2.014 ^c	3	.671	1.457	.234	.060
Intercept	Risk Perception	715.613	1	715.613	1711.036	.000	.962
	<i>Shari'ah</i> Compliance	799.581	1	799.581	1970.166	.000	.967
	Rate of Return	570.736	1	570.736	1239.172	.000	.948
NatureFI	Risk Perception	12.240	3	4.080	9.755	.000	.301
	Sharia Compliance	13.952	3	4.651	11.459	.000	.336
	Rate of Return	2.014	3	.671	1.457	.234	.060
Error	Risk Perception	28.440	68	.418			
	Sharia Compliance	27.597	68	.406			
	Rate of Return	31.319	68	.461			
Total	Risk Perception	779.240	72				
	<i>Shari'ah</i> Compliance	928.222	72				
	Rate of Return	662.472	72				
Corrected Total	Risk Perception	40.679	71				
	<i>Shari'ah</i> Compliance	41.549	71				
	Rate of Return	33.333	71				

a. R Squared = .301 (Adjusted R Squared = .270)

b. R Squared = .336 (Adjusted R Squared = .306)

c. R Squared = .060 (Adjusted R Squared = .019)

Conducting the MANOVA test according to 'region' and 'nature of FI' as independent variables provided consistent results. It can be concluded that 'Risk Perception' and '*Shari'ah* Compliance' are significant dependent variables and have strong explanatory power, while 'Rate of Return' does not follow the pattern.

8.2.2 Capital Adequacy for Islamic Banks

This section addresses capital adequacy challenges facing IFIs. It tackles the controversial issues regarding the applicability of Basel II and Basel III accords to IFIs, and the appropriate capital requirement levels for Islamic banks.

The results of the K-W test in Table 8.31 show that all statements are statistically significant (P value < 0.05) except for Statement 5 (P value = 0.358) implying that regional differences in relation to capital adequacy is significant.

Statements as depicted in the following tables and their coding are:

1. Basel II standards should be equally applied to Islamic banks without modification.
2. IFSB standard on Capital Adequacy should be used by Islamic banks rather than Basel II.
3. Basel II standards should be reviewed after failing to prevent the current crisis.
4. The proposed Basel III rules would be easily applicable to Islamic banks.
5. Stricter capital, leverage, and liquidity rules, as proposed under Basel III, are likely to prevent another financial crisis.

Table 8.31 – K-W Test Results by Region for Q15 (Capital Adequacy) for Entire Research Sample

	Statement									
	1		2		3		4		5	
Chi-Square	18.081		24.185		20.089		20.24		5.502	
Asymp. Sig.	0.003		0.000		0.001		0.001		0.358	
Region	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank
Americas	2	59.25	2	22	2	27.5	2	57	2	28
Europe	31	45.13	31	24.66	31	30.26	31	45.06	31	32.06
GCC	19	23.16	19	51.24	19	50.71	19	24.24	19	40.39
Other	2	18	2	48.5	2	59	2	28.75	2	28
Other Middle East	14	34.54	14	42.86	14	33.29	14	32.39	14	39.93
Southeast Asia	4	37.75	4	37.25	4	21.88	4	36.38	4	48.88
Total	72		72		72		72		72	

Conducting the K-W test with ‘nature of FI’ as the control variable for the entire research sample gives different results as illustrated by Table 8.32. All statements are statistically insignificant except Statement 5 that shows different views between bankers (whether Islamic or conventional) and non-bankers, which is also evident from the mean ranking. This implies that the nature of FI is not a statistically determining factor; and that the opinions of the respondents are rather similar.

Table 8.32 – K-W Test Results by Nature of FI for Q15 (Capital Adequacy) for Entire Research Sample

Statement										
	1		2		3		4		5	
Chi-Square	5.611		5.127		5.781		4.07		9.79	
Asymp. Sig.	0.132		0.163		0.123		0.254		0.02	
Nature of FI	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank
Fully-fledged Islamic Bank	25	30.92	25	37.9	25	37.4	25	31.86	25	39.98
Conventional Bank with Islamic Activities	14	33.93	14	45.71	14	46.14	14	34.57	14	40.75
Conventional Bank	20	45	20	32.05	20	32	20	39.73	20	38.78
Others	13	36.92	13	30.73	13	31.31	13	42.54	13	21.73
Total	72		72		72		72		72	

Furthermore, repeating the K-W test with ‘nature of activities’ and ‘respondent’s position’ as control variables for the entire research sample gives consistent results to those results of K-W according to ‘nature of FI’ as illustrated by Tables 8.33 and 8.34 respectively. For ‘nature of activities’, statements are statistically insignificant, except statements 1 and 3, while, as depicted by Table 8.34 for ‘respondent’s position’, all statements are statistically insignificant, except statement 5. This reflects the difference in opinions among different groups regarding the newly developed Basel III capital and liquidity standards and their applicability to Islamic banking.

Table 8.33 – K-W Test Results by Nature of Activities for Question 15 (Entire Research Sample)

Statement										
	1		2		3		4		5	
Chi-Square	8.467		12.532		11.053		13.98		14.255	
Asymp. Sig.	0.206		0.051		0.087		0.03		0.027	
Nature of Activities	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank
Commercial banking	11	34.91	11	39.68	11	38.95	11	29.23	11	42.86
Integrated banking	9	38.67	9	37.5	9	39	9	40.61	9	36.33
Investment Banking	11	44.09	11	23.86	11	24.23	11	48.32	11	37.91
Private Equity House	1	67	1	11.5	1	27.5	1	44	1	43
Retail & commercial banking	17	37.35	17	39.79	17	38.35	17	33.26	17	45.71
Retail banking	10	22.9	10	50.4	10	49.55	10	24.7	10	31
Other	13	36.92	13	30.73	13	31.31	13	42.54	13	21.73
Total	72		72		72		72		72	

Table 8.34 – K-W Test Results by Position of Respondent for Question 15 (Entire Research Sample)

Statement										
	1		2		3		4		5	
Chi-Square	12.056		12.503		16.546		19.49		29.835	
Asymp. Sig.	0.602		0.566		0.281		0.147		0.008	
Position of Respondent	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank
Analyst	5	43	5	32.5	5	29.3	5	44	5	43
Senior Analyst	4	37.75	4	27.75	4	21.88	4	44	4	13
Auditor	2	42.25	2	42	2	16.25	2	57	2	13
CEO	5	36.9	5	34.3	5	29.3	5	37	5	34.7
Chief Financial Officer	2	9	2	64.5	2	59	2	13.5	2	13
Consultant	2	27.25	2	42	2	43.25	2	23.75	2	13
Director	6	39.17	6	22	6	29	6	48.33	6	31.92
General Manager	10	37.8	10	36.6	10	37.85	10	33.85	10	47.7
Head of Investment Banking	1	3	1	64.5	1	59	1	3.5	1	13
Head of Risk Management	11	33.27	11	37.95	11	36.91	11	39.91	11	33.64
Managing Director	8	37.81	8	38.88	8	40.44	8	28.75	8	48.06
Risk Manager	12	41.63	12	35.17	12	38.75	12	34.33	12	41.92
Senior Trader	2	41	2	38	2	59	2	44	2	57.25
Shari'ah Scholar	1	3	1	64.5	1	59	1	13.5	1	13
Solicitor	1	51.5	1	32.5	1	27.5	1	44	1	43
Total	72		72		72		72		72	

8.2.3. Credit Crisis and Islamic Banks

This section of the questionnaire seeks respondents' views on different issues relating to the recent global crisis. For this purpose, Question 16 of the survey presented 9 statements to respondents. This part applied to all the respondents, which means replies from all institutional samples of data were obtained by asking respondents to answer using a 5-point Likert scale (ranking from Strongly Agree = 5 to Strongly Disagree = 1). Table 8.35 employs K-W test to examine the significant difference among respondents' perceptions according to the 'region'.

Statements that are tested in this section and their coding are as follows:

1. Islamic banks are more resilient to economic shocks than their conventional peers.
2. The recent crisis would not have happened under a true Islamic banking system.
3. Islamic finance could have solved the global crisis.
4. Risk management must be embedded institutionally.
5. Banks in general used to rely heavily on rating agencies.
6. Islamic banks rely less on rating agencies than conventional banks.
7. Islamic finance industry should develop its own rating agencies.
8. Islamic banks will emerge stronger from the current crisis.
9. Consolidation is needed among smaller Islamic banks.

Table 8.35 – K-W Test Results by Region for Question 16 (Entire Research Sample)

Statement	1	2	3	4	5	6	7	8	9
Chi-Square	11.052	19.879	27.446	14.571	10.877	4.863	18.587	11.171	3.695
Asymp. Sig.	0.05	0.001	0.00	0.012	0.054	0.433	0.002	0.048	0.594
Region	Mean Rank								
Americas	30.25	29	9	55	30.75	33	38	31	44.5
Europe	28.39	27.08	26.1	42.5	33.89	34.16	25.11	30.05	39.06
GCC	44.76	50.87	51.37	38.05	47.42	43.16	49.32	48.29	29.5
Other	52.5	41	56.5	17.25	52.75	51.25	43.5	31	32
Other Middle East	38.86	41.93	35.43	26.71	29.29	33.57	41.89	38.04	38.93
Southeast Asia	47	23.75	54	17.25	24.88	27.63	40.75	30.63	39.63

N for all statements = 72

The results in Table 8.35 show that most statements are statistically significant (P value < 0.05). With a “relaxation” of the confidence level to 0.06, we can accept all statements, except statements 6 and 9. Mean rankings reveal that, although there is no clear pattern that could be traced, ‘GCC’ and ‘Other’ categories are usually ranked at the top for most statements. This emphasises the fact that respondents from these two regions are more aggressive than those from other regions in their views about the credit crunch and Islamic finance. Thus the findings indicate that there are statistically different and significant opinions among the respondents coming from different regions.

In addition, attempts were made to test the impacts of ‘nature of the FI’, ‘nature of activities’, ‘accounting standards’, and ‘respondent’s position’ on the responses, the results are summarised in Tables 8.36 to 8.39.

Table 8.36 – K-W Test results by Nature of FI for Question 16 (Entire Research Sample)

Statement	1	2	3	4	5	6	7	8	9
Chi-Square	4.614	1.698	12.818	4.531	5.573	5.631	2.965	4.369	4.238
Asymp. Sig.	0.202	0.637	0.005	0.21	0.134	0.131	0.397	0.224	0.237
Region	Mean Rank								
Fully-fledged Islamic Bank	41.6	38.46	46.2	30.44	42.02	31.48	35.64	37.3	31.54
Conventional Bank with Islamic Activities	38.21	35.29	40.25	36.07	36.82	42.93	43.32	43.07	33.96
Conventional Bank	34.95	38.75	27.38	40.83	28.1	33.23	37.05	29.53	43.1
Others	27.23	30.58	27.85	41.96	38.46	44.27	29.96	38.62	38.62

N for all statements = 72

With the exception of statement 3 ($p = 0.005$), there is no statistically significant difference among all other statements. Mean ranking for statement 3, as seen in Table 8.36, shows that Fully-fledged Islamic Banks are far more aggressive in their belief that Islamic finance could have solved the global crisis than other categories (46.2), followed by Islamic Subsidiaries (40.25), then by Others and Conventional Banks. This is consistent with the K-W test result according to ‘region’ as the control variable (Table 8.35) because respondents from the ‘GCC’ and ‘Other’ regions in this research sample are mainly Fully-fledged Islamic Banks and Islamic Subsidiaries.

Table 8.37– K-W Test Results by Nature of Activities for Question 16 (Entire Research Sample)

Statement	1	2	3	4	5	6	7	8	9
Chi-Square	12.156	8.402	11.446	12.029	4.862	15.608	10.263	6.527	2.581
Asymp. Sig.	0.059	0.21	0.076	0.061	0.562	0.016	0.114	0.367	0.859
Region	Mean Rank								
Commercial banking	41.36	41.59	46.73	36.86	37.41	31.32	39.86	34.27	35.77
Integrated banking	38.94	32.61	27.61	45.5	24.22	35.89	34.61	29.11	39.39
Investment banking	27.55	25.95	29.45	42.95	33.68	22.68	28.32	29.82	36.27
Private Equity House	7	39.5	34	55	42.5	1.5	19	18.5	12.5
Retail & commercial banking	39.29	40.85	39.88	30.03	39.38	37.59	37.35	40.38	38.21
Retail banking	49.05	46	46.75	22.95	41.6	49.5	52.3	45.4	31.7
Other	27.23	30.58	27.85	41.96	38.46	44.27	29.96	38.62	38.62

N for all statements = 72

The same statements are further investigated in relation to the nature of activities. As depicted by Table 8.37, only statement 6 is statistically significant. With a relaxation of the confidence level to 0.06, one can also accept statement 1. For both statements 1 and 6, ‘Retail banking’ is the most aggressive category according to mean rankings, and ‘Private Equity Houses’ is by far the least aggressive. Other categories fall in-between, without a particular trend that can be established. These results confirm the K-W test results according to ‘region’ (Table 8.35), as out of the 10 retail banks included in the research sample, 5 are located in the ‘GCC’ and one is located in ‘Other’. It should be noted that the sole Private Equity House in this research sample is also located in the ‘GCC’. Furthermore, results from Table 8.37 are also consistent with the K-W test results according to ‘nature of FI’ (Table 8.36) because 8 out of the 10 retail banks included in the research sample are Fully-fledged Islamic Banks, and the other 2 are Islamic subsidiaries. The one Private Equity House is also a fully-fledged Islamic Bank.

Table 8.38– K-W Test Results by Accounting Standards for Question 16 (Entire Research Sample)

Statement	1	2	3	4	5	6	7	8	9
Chi-Square	6.86	7.494	11.839	8.564	11.496	6.621	10.72	5.72	4.252
Asymp. Sig.	0.143	0.112	0.019	0.073	0.022	0.157	0.03	0.221	0.373
Region	Mean Rank								
AAOIFI standards	52.5	51.5	54.83	28.17	45.42	49.5	57	43.25	22.25
International & AAOIFI standards	40.9	49.1	54.5	45.6	58.9	29.7	49.8	52.6	33.1
International standards	36.79	33.74	34.33	38.32	34.61	34.32	33.12	32.76	39.08
Local accounting standards	35.65	39.4	36	22.95	24.6	30.3	38.9	35.85	34.2
N/A	27.23	30.58	27.85	41.96	38.46	44.27	29.96	38.62	38.62

N for all statements = 72

Table 8.38 shows that only statements 3, 5, and 7 are statistically significant according to accounting standards. Mean rankings reflect that for these three statements, ‘AAOIFI’ and ‘International & AAOIFI standards’ are always top ranked, then followed by other criteria. These results confirm the K-W results for the previous control variables in

Tables 8.35 to 8.37; therefore, the results indicate that the perceived views in relation to accounting standards are statistically significant for these three statements.

Table 8.39– K-W Test Results by Respondent’s Position for Question 16 (Entire Research Sample)

Statement	1	2	3	4	5	6	7	8	9
Chi-Square	17.068	19.453	19.773	13.82	23.564	14.194	23.054	15.677	17.272
Asymp. Sig.	0.253	0.148	0.137	0.463	0.052	0.435	0.059	0.333	0.242
Region	Mean Rank								
Analyst	36.9	40.1	24	39.9	19	33	40.2	24.3	52
Senior Analyst	26.13	35	39.63	40.75	21.25	45.25	21.5	34.63	45.88
Auditor	30.25	51.5	14	55	63	33	47	25.75	57
CEO	32.1	33.3	39	39.9	46	24.1	18.5	26.4	38.1
Chief Financial Officer	63.5	63.5	56.5	40.75	52.75	39.75	68	55.25	32
Consultant	41.25	51.5	41.5	31.5	63	51.25	43.5	55.25	29.25
Director	21	20.83	15.67	42.42	30.33	41.17	18.42	35.17	33.83
General Manager	30	41.2	34.5	27.65	30.75	31.75	40.8	33.5	28.1
Head of Investment Banking	63.5	39.5	69	55	63	57.5	68	67	32
Head of Risk Management	38.23	36.59	41.27	37.77	43.55	32.55	39.14	40.82	30.45
Managing Director	46.94	45.5	41.5	25.44	28.94	49.81	40	43.31	34.06
Risk Manager	40	26.25	38.79	36.13	33.92	30.42	32.88	32.88	47.04
Senior Trader	30.25	29	34	55	42.5	33.75	47	37.5	22.25
<i>Shari’ah</i> Scholar	63.5	63.5	69	8	63	69.5	68	67	12.5
Solicitor	19	8.5	34	55	42.5	33	38	18.5	12.5

N for all statements = 72

The potential impact of the respondents’ positions on the same statements is also investigated. The p values in Table 8.39 show that there are no significant differences according to respondent’s position. By relaxing the confidence level to 0.06, one can also accept statements 5 and 7. No pattern could be concluded by studying the mean ranking. The only obvious conclusion is that *Shari’ah* scholars ranked the highest mean and Solicitors had the lowest mean values for most, but not all, statements. This is expected because *Shari’ah* scholars tend to be more conservative in their views about Islamic banking and *Shari’ah* compliance, while Solicitors usually focus more on legal structures rather than the *Shari’ah* side of transactions.

Factor Analysis for Q16 (Credit Crisis and Islamic Finance)

To locate the perception of the participants regarding the credit crisis in relation to a number of issues related to Islamic finance, they were provided with a number of statements. The opinions are analysed through factor analysis.

As previously explained, factor analysis seeks to discover if the observed variables can be explained largely or entirely in terms of a much smaller number of variables called the factors.

As there are nine statements for Q16, analysing the respondents' perceptions towards Islamic banking and the global credit crisis, the researcher felt that reducing these statements into more a manageable number would enhance the analysis and would tell more about how respondents perceived these issues. Hence, factor analysis is deemed to be relevant in this respect as the main task of factor analysis is to cluster the related group of variables through their common variance.

In order to test the factorability of the data in terms of sampling adequacy, Table 8.40 presents the results of KMO and also Bartlett's test for this factor analysis.

Table 8.40 - KMO and Bartlett's Test Results for the 9 Items Combined

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.844	
Bartlett's Test of Sphericity	Approx. Chi-Square	173.046
	df	36
	Sig.	0.000

The outcome of the KMO measure for all 9 items combined, related to the respondents' perception, showed the value of 0.844, which is higher than 0.60, implying that the factor analysis is appropriate for this study. In addition, the significant P-Value of 0.000 is significantly lower than critical P-Value of 0.05. Therefore, the identity matrix can be rejected. Based on the very encouraging results from the both testing, factor analysis may be performed.

In the second step PCA is used for data extraction, and then Varimax rotation was used in order to reduce the number of variables as in Table 8.41 which presents the output of the number of factors that are retained according to Kaiser's criterion, in which all the eigenvalues are more than 1.0. In this situation, there are three factors that will be retained, since the eigenvalues are 3.170, 1.356 and 1.332 respectively.

The results indicate that these three components can explain the 64.9% of the total variation, which hence satisfies the use of factor analysis.

Table 8.41 - Total Variance Explained for Q16

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.682	40.906	40.906	3.170	35.225	35.225
2	1.136	12.617	53.523	1.356	15.064	50.289
3	1.031	11.456	64.980	1.322	14.691	64.980
4	.746	8.287	73.267			
5	.637	7.081	80.348			
6	.523	5.813	86.161			
7	.459	5.098	91.260			
8	.402	4.472	95.732			
9	.384	4.268	100.000			

Extraction Method: Principal Component Analysis.

Figure 8.2, which is basically a graph of the eigenvalues, shows that the nine variables could be reduced to only three as the graph slopes down steeply before becoming parallel to the horizontal line after the third component. It is clear from the plot that there is only a three factor solution to this question. Therefore it was decided to retain the three factors.

Table 8.41 shows that there are three factors with an eigenvalue greater than 1.0, this means that the original nine items can be simply reduced to three factors. The three component solution explain 64.9% of the variance with component 1 contributing 40.9%, component 2 contributing 12.6%, and component 3 contributing 11.5%. The explanatory power of the first factor is very high.

Figure 8.2 – Screen Plot for Q16

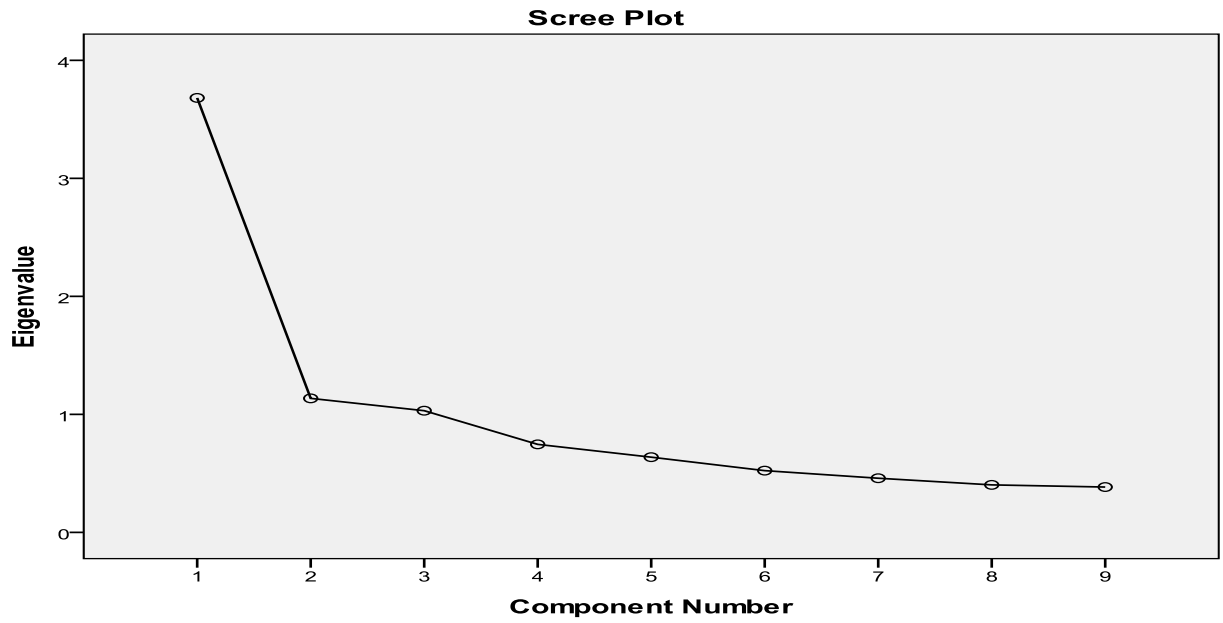


Table 8.42 - Rotated Component Matrix^a for Q16

	Component		
	1. Resilience of IFIs	2	3 Risk management must be institutional
1- Islamic banks are more resilient to economic shocks than their conventional peers	.776	-.050	-.238
2- The recent crisis would not have happened under a true Islamic banking system	.764	.081	-.082
3- Islamic finance could have solved the global crisis	.643	.468	-.146
4- Risk management must be embedded institutionally	-.100	-.189	.834
5- Banks in general used to rely heavily on rating agencies	.552	.447	.358
6- Islamic banks rely less on rating agencies than conventional banks	.454	-.029	-.583
7- Islamic finance industry should develop its own rating agencies	.743	.265	-.075
8- Islamic banks will emerge stronger from the current crisis	.706	-.007	-.211
9- Consolidation is needed among smaller Islamic banks	-.012	-.906	.156

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 9 iterations.

Table 8.42 further provides a Rotated Component Matrix by distributing all variables to the identified three components. The test results showed no component for factor 2; therefore, the researcher accepted factors 1 and 3 only. The factors in each component have some common characteristics and measure the same phenomenon and, therefore, each component is named with a general description of the factors or variables it includes. For instance, factors in component one deal with ‘resilience of IFIs’. The factors in component three deal with ‘risk management must be embedded

institutionally'. The former includes seven statements, while the latter includes only two components. Thus, the heavy weight is with the 'resilience of IFIs' component.

MANOVA test according to Region for Question 16

After conducting factor analysis a one way between groups a MANOVA test was computed in order to investigate if there is any significant difference between the two factors in relation to same control variables. This will help to locate the impact or significance of each control variable on the established distribution.

MANOVA test was conducted according to 'region' as the independent variable with the objective of testing the significance of 'region' on the identified two components. In this case, the output of the Box's Test shows that there is no violation of assumption of homogeneity of variances of variance-covariance matrices since the sig. value of 0.013 is higher than the critical value of 0.001.

Table 8.43 - Box's Test of Equality of Covariance Matrices^a

Box's M	24.157
F	2.342
df1	9
df2	824.888
Sig.	.013

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept + Region

Additionally, the output of the Levene's Test of Equality of Error Variances is explored. The results in the Sig. column show that sig. values of 'Resilience of IFIs' (0.681) and 'Risk management must be institutional (0.236) are higher than 0.05. Thus, there is no violation of the assumption of equality of variances for these two factors.

Table 8.44 – Levene’s Test of Equality of Error Variances^a

	F	df1	df2	Sig.
Resilience of IFIs	.625	5	66	.681
Risk management is institutional	1.398	5	66	.236

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Region

The results of the Wilks’ Lambda in Table 8.45 show that there is a statistically significant difference according to the region since the sig. value of 0.01 is quite lower than the critical level of 0.05.

Table 8.45 - Multivariate Tests^c

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	
Intercept	Pillai’s Trace	.975	1255.030 ^a	2.000	65.000	.000	.975
	Wilks’ Lambda	.025	1255.030 ^a	2.000	65.000	.000	.975
	Hotelling’s Trace	38.616	1255.030 ^a	2.000	65.000	.000	.975
	Roy’s Largest Root	38.616	1255.030 ^a	2.000	65.000	.000	.975
Region	Pillai’s Trace	.370	2.992	10.000	132.000	.002	.185
	Wilks’ Lambda	.646	3.175^a	10.000	130.000	.001	.196
	Hotelling’s Trace	.524	3.354	10.000	128.000	.001	.208
	Roy’s Largest Root	.473	6.249 ^b	5.000	66.000	.000	.321

a. Exact statistic

b. The statistic is an upper bound on F that yields a lower bound on the significance level.

c. Design: Intercept + Region

Since, multivariate test suggests that there is a statistically significant difference, a further investigation is conducted. Tests of Between-Subjects Effects provide this information. In this case, since there are two dependent variables, therefore, 0.05 is divided by two and the new alpha level is 0.025. As can be seen in the Tests of Between-Subjects Effects in Table 8.46, the results indicate that ‘Resilience of IFIs’ has significant values of 0.000, while ‘Risk management must be institutional’ has a sig. value of 0.242 which is higher than the critical value of 0.025 for this example. Furthermore, the effect size values as

evaluated by the Partial Eta Squared for ‘Resilience of IFIs’ is 0.320, which are deemed large effect sizes using Cohen’s criteria. It can be concluded that these results signify 32% of the variances in ‘Resilience of IFIs’ scores are explained respectively by the region.

Table 8.46 - Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Resilience of IFIs	13.209 ^a	5	2.642	6.221	.000	.320
	Risk management is institutional	2.821 ^b	5	.564	1.384	.242	.095
Intercept	Resilience of IFIs	313.934	1	313.934	739.239	.000	.918
	Risk management is institutional	438.911	1	438.911	1076.963	.000	.942
Region	Resilience of IFIs	13.209	5	2.642	6.221	.000	.320
	Risk management is institutional	2.821	5	.564	1.384	.242	.095
Error	Resilience of IFIs	28.028	66	.425			
	Risk management is institutional	26.898	66	.408			
Total	Resilience of IFIs	877.837	72				
	Risk management is institutional	1292.250	72				
Corrected Total	Resilience of IFIs	41.237	71				
	Risk management is institutional	29.719	71				

a. R Squared = .320 (Adjusted R Squared = .269)

b. R Squared = .095 (Adjusted R Squared = .026)

An attempt was also made to see the effect of ‘nature of FI’ on the identified components in factor analysis through MANOVA. However, no significant results could be established.

8.3 RISK MANAGEMENT AND REPORTING

This part of the questionnaire examines the risk management and hedging techniques used within IFIs. Question 17 covers the frequency of producing risk management reports as perceived by the participants, and it is only applicable to financial institutions.

Table 8.47 – K-W Test Results for Q17 (Risk Reporting) by Region for Selected Sample Data

Frequency of producing:	Fully-fledged Islamic Banks, Conventional Banks with Islamic Activities, & Conventional Banks			Fully-fledged Islamic Banks & Conventional Banks with Islamic Activities			Fully-fledged Islamic Banks		
	Chi-Square	df	Asymp. Sig.	Chi-Square	df	Asymp. Sig.	Chi-Square	df	Asymp. Sig.
Capital Requirement Report	28.727	5	0	11.746	4	0.019	7.89	4	0.096
Operational Risk Report	18.01	5	0.003	3.534	4	0.473	2.208	4	0.698
Profit Rate Risk Report	20.859	5	0.001	8.04	4	0.09	4.539	4	0.338
FX Risk Report	19.469	5	0.002	10.321	4	0.035	9.646	4	0.047
Liquidity Risk Report	19.312	5	0.002	8.026	4	0.091	5.357	4	0.253
Commodity Risk Report	9.405	5	0.094	6.636	4	0.156	7.297	4	0.121
Country Report	11.58	5	0.041	6.554	4	0.161	5.218	4	0.266
Equity mark-to-market Report	12.611	5	0.027	11.406	4	0.022	6.464	4	0.167
Classified Accounts Report	16.91	5	0.005	9.651	4	0.047	5.386	4	0.25
Industry Concentration Risk Report	8.537	5	0.129	3.168	4	0.53	3.153	4	0.533
Credit Exposure Report	9.479	5	0.091	10.937	4	0.027	12.452	4	0.014
Large Exposure Report	10.155	5	0.071	9.408	4	0.052	7.111	4	0.13

As depicted by Table 8.47, the K-W test for fully-fledged Islamic Banks, conventional Banks with Islamic activities, and conventional Banks shows that, statistically, there is a significant difference among various regions in the frequency of producing risk reports (P value <0.05) except for Commodity Risk report (0.094), Industry Concentration Risk Report (0.129), Credit Exposure Report (0.091), and Large Exposure Report (0.071).

Hence, for the rest of the reports there are significant differences in the perceptions of the participants. Thus, for most of the reports ‘region’ is a significant factor.

Repeating the K-W test with ‘region’ as the control variable for various institutional samples of data gives different results as the removal of conventional banks from the sample shows that the distribution of frequency of producing reports becomes the same across more reports, i.e. fewer risk reports show statistical significance in the frequency of production across regions. By removing Islamic subsidiaries from the sample and conducting the K-W test on Fully-fledged Islamic Banks exclusively, only two reports (FX Risk Report and Credit Exposure Report) become statistically significant across various regions.

The results reflect the risk management culture difference between Islamic and conventional banks. By conducting the K-W on fully fledged IFIs only, there was little significance between the responses across different regions. However, expanding the sample to include Islamic subsidiaries of conventional banks increased the significant difference in risk reporting across regions. When the sample was expanded further to incorporate conventional banks, the significance in difference becomes more noticeable.

Tables 8.48 to 8.55 examine the mean ranking for reports with statistically significant difference in frequency of production.

In this particular case mean ranking requires clarification. Since during coding ‘daily reporting’ was assigned value 1; and ‘never’ was assigned value 5, this has impact on the mean ranking. In other words, the better mean value here would be the lower value indicating better disclosure.

Table 8.48 - Frequency of Producing Capital Requirement Report

	Fully-fledged Islamic Banks, Conventional Banks with Islamic Activities, & Conventional Banks			Fully-fledged Islamic Banks & Conventional Banks with Islamic Activities			Fully-fledged Islamic Banks		
Region	N	Mean Rank	Rank	N	Mean Rank	Rank	N	Mean Rank	Rank
Americas	2	13.5	1 st	N/A	N/A	N/A	N/A	N/A	N/A
Europe	20	18.3	2 nd	12	13.46	1 st	5	8	1 st
GCC	19	32.03	4 th	16	20.75	3 rd	9	12.5	3 rd
Other	2	23.5	3 rd	2	14.75	2 nd	2	8.75	2 nd
Other Middle East	12	47.63	6 th	5	31.9	5 th	5	19.5	5 th
Southeast Asia	4	37.5	5 th	4	24.38	4 th	4	14.38	4 th
Total	59			39			25		

Table 8.49 - Frequency of Producing Operational Risk Report

	Fully-fledged Islamic Banks, Conventional Banks with Islamic Activities, & Conventional Banks			Fully-fledged Islamic Banks & Conventional Banks with Islamic Activities			Fully-fledged Islamic Banks		
Region	N	Mean Rank	Rank	N	Mean Rank	Rank	N	Mean Rank	Rank
Americas	2	11.5	1 st	N/A	N/A	N/A	N/A	N/A	N/A
Europe	20	19.5	2 nd	12	15.17	1 st	5	9.1	1 st
GCC	19	33.08	4 th	16	19.94	3 rd	9	12.22	3 rd
Other	2	27.5	3 rd	2	17	2 nd	2	10.25	2 nd
Other Middle East	11	40.18	6 th	4	24.13	5 th	4	14.63	5 th
Southeast Asia	3	38.17	5 th	3	23.83	4 th	3	13.83	4 th
Total	57			37			23		

Table 8.50 - Frequency of Producing Profit Rate Risk Report

	Fully-fledged Islamic Banks, Conventional Banks with Islamic Activities, & Conventional Banks			Fully-fledged Islamic Banks & Conventional Banks with Islamic Activities			Fully-fledged Islamic Banks		
Region	N	Mean Rank	Rank	N	Mean Rank	Rank	N	Mean Rank	Rank
Americas	2	17	1 st	N/A	N/A	N/A	N/A	N/A	N/A
Europe	20	18.95	2 nd	12	13.67	1 st	5	7.9	1 st
GCC	19	33.11	4 th	16	20.56	2 nd	9	12.61	2 nd
Other	2	32.5	3 rd	2	21.5	3 rd	2	12.75	3 rd
Other Middle East	12	41.88	6 th	5	27.5	5 th	5	16.5	5 th
Southeast Asia	3	33.83	5 th	3	22.5	4 th	3	13	4 th
Total	58			38			24		

Table 8.51 - Frequency of Producing FX Risk Report

	Fully-fledged Islamic Banks, Conventional Banks with Islamic Activities, & Conventional Banks			Fully-fledged Islamic Banks & Conventional Banks with Islamic Activities			Fully-fledged Islamic Banks		
Region	N	Mean Rank	Rank	N	Mean Rank	Rank	N	Mean Rank	Rank
Americas	2	13	1 st	N/A	N/A	N/A	N/A	N/A	N/A
Europe	19	19.18	2 nd	11	13.5	1 st	5	8	1 st
GCC	19	29.97	4 th	16	17.66	3 rd	9	9.67	2 nd
Other	2	29.5	3 rd	2	17.25	2 nd	2	10.75	3 rd
Other Middle East	11	39.91	5 th	4	29.5	5 th	4	18.75	5 th
Southeast Asia	3	46	6 th	3	27.5	4 th	3	17.5	4 th
Total	56			36			23		

Table 8.52 - Frequency of Producing Liquidity Risk Report

	Fully-fledged Islamic Banks, Conventional Banks with Islamic Activities, & Conventional Banks			Fully-fledged Islamic Banks & Conventional Banks with Islamic Activities			Fully-fledged Islamic Banks		
Region	N	Mean Rank	Rank	N	Mean Rank	Rank	N	Mean Rank	Rank
Americas	2	18.5	1 st	N/A	N/A	N/A	N/A	N/A	N/A
Europe	20	19.78	2 nd	12	13.5	1 st	5	7	1 st
GCC	19	33.13	4 th	16	22	3 rd	9	14.44	3 rd
Other	2	31.25	3 rd	2	21	2 nd	2	12.5	2 nd
Other Middle East	12	41.25	6 th	5	24.4	4 th	5	14.8	4 th
Southeast Asia	4	37.63	5 th	4	25.5	5 th	4	15.25	5 th
Total	59			39			25		

Table 8.53 - Frequency of Producing Country Report

	Fully-fledged Islamic Banks, Conventional Banks with Islamic Activities, & Conventional Banks			Fully-fledged Islamic Banks & Conventional Banks with Islamic Activities			Fully-fledged Islamic Banks		
Region	N	Mean Rank	Rank	N	Mean Rank	Rank	N	Mean Rank	Rank
Americas	2	16.5	1 st	N/A	N/A	N/A	N/A	N/A	N/A
Europe	20	25.13	2 nd	12	18.79	1 st	5	13.9	3 rd
GCC	19	27.47	3 rd	16	16.53	2 nd	9	9.17	1 st
Other	2	33.75	4 th	2	20.75	3 rd	2	12.25	2 nd
Other Middle East	12	39	5 th	5	28.1	5 th	5	16.9	5 th
Southeast Asia	4	44.25	6 th	4	27	4 th	4	16	4 th
Total	59			39			25		

Table 8.54 - Frequency of Producing Equity Mark-to-Market Report

	Fully-fledged Islamic Banks, Conventional Banks with Islamic Activities, & Conventional Banks			Fully-fledged Islamic Banks & Conventional Banks with Islamic Activities			Fully-fledged Islamic Banks		
Region	N	Mean Rank	Rank	N	Mean Rank	Rank	N	Mean Rank	Rank
Americas	2	15.5	1 st	N/A	N/A	N/A	N/A	N/A	N/A
Europe	20	22.55	2 nd	12	15.13	1 st	5	8.9	1 st
GCC	19	30.34	3 rd	16	18.03	2 nd	9	11.94	3 rd
Other	2	36.75	4 th	2	23	3 rd	2	13.25	4 th
Other Middle East	12	39.96	6 th	5	33.8	5 th	5	19.8	5 th
Southeast Asia	4	39.63	5 th	4	23.75	4 th	4	11.88	2 nd
Total	59			39			25		

Table 8.55 - Frequency of Producing Classified Accounts Report

	Fully-fledged Islamic Banks, Conventional Banks with Islamic Activities, & Conventional Banks			Fully-fledged Islamic Banks & Conventional Banks with Islamic Activities			Fully-fledged Islamic Banks		
Region	N	Mean Rank	Rank	N	Mean Rank	Rank	N	Mean Rank	Rank
Americas	2	8.5	1 st	N/A	N/A	N/A	N/A	N/A	N/A
Europe	20	20	2 nd	12	14.75	1 st	5	11.9	3 rd
GCC	19	33.95	4 th	16	19.78	3 rd	9	12.28	4 th
Other	2	32.5	3 rd	2	17	2 nd	2	7.5	1 st
Other Middle East	10	37.7	6 th	4	32.5	5 th	4	18.5	5 th
Southeast Asia	4	37.25	5 th	4	20.88	4 th	4	10.25	2 nd
Total	57			38			24		

The results presented in this section so far indicate a particular pattern. The trend is obvious: conventional banks, concentrated in Europe and the Americas, produce risk reports more frequently than Islamic banks. Risk management and reporting is more advanced in conventional banking than in Islamic banking.

8.4 RISK MEASUREMENT

This section expands the descriptive analytical analysis conducted in Chapter 7 by examining the impact of various control variables on respondents' views regarding the use various techniques to measure and analyse risk. For this purpose, the researcher used K-W to determine if there were any statistical significant differences across the categories of respondent profiles specifically region, respondent's position, nature of FI, nature of activities, and accounting standards. Since this question targets FI only, the sample used for this question is restricted to bankers.

Table 8.56 - K-W Test Results for Q18 (Risk Measurement) for Selected Sample Data According to Various Control Variables

Risk Management Technique	Region		Respondent's Position		Nature of FI		Nature of Activities		Accounting Standards	
	Chi-Sq.	Asymp. Sig.	Chi-Sq.	Asymp. Sig.	Chi-Sq.	Asymp. Sig.	Chi-Square	Asymp. Sig.	Chi-Sq.	Asymp. Sig.
Internal based ratings	6.223	0.285	9.79	0.459	1.612	0.447	3.067	0.69	3.699	0.296
Credit ratings by rating agencies	1.58	0.904	6.81	0.743	3.396	0.183	8.01	0.156	11.78	0.008
Gap analysis	17.56	0.004	10.8	0.372	0.516	0.773	6.884	0.229	7.119	0.068
Duration analysis	15.69	0.008	14.2	0.163	2.468	0.291	6.559	0.256	7.151	0.067
Maturity matching analysis	8.155	0.148	5.78	0.833	0.344	0.842	10.79	0.056	6.028	0.11
Earnings at risk	8.58	0.127	10.0	0.438	7.754	0.021	10.14	0.071	4.029	0.258
Value at risk	10.98	0.052	13.0	0.222	1.926	0.382	5.731	0.333	5.134	0.162
Stress testing	17.48	0.004	9.70	0.466	4.91	0.086	7.604	0.179	5.687	0.128
Simulation techniques	14.60	0.012	19.2	0.038	6.64	0.036	13.05	0.023	7.708	0.052
RAROC	19.65	0.001	16.0	0.097	12.29	0.002	10.79	0.056	7.373	0.061

'Region' and 'nature of FI' are the control variables selected for analysis by mean ranking, being the control variables with the most significant results, and because these two variables are most essential to the difference in risk management techniques among banks. As can be seen in Table 8.56, 'region' has five significant risk management techniques, and 'nature of FI' has three significant techniques. Thus, they have the more significant variables compared to others, which justifies why they should be analysed further.

Table 8.57 – K-W Test Mean Rankings for Risk Measurement by Region for Selected Sample Data

Risk Management Technique		GAP analysis		Duration analysis		Stress testing		Simulation techniques		RAROC	
Nature of Financial Institution	N	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank
Americas	2	36	1 st	36.5	1 st	41	1 st	48.5	1 st	42.5	1 st
Europe	20	33.05	4 th	35.03	3 rd	36.58	3 rd	36.7	2 nd	33.65	3 rd
GCC	19	34.45	3 rd	31.84	4 th	30.13	4 th	28.32	4 th	36.29	2 nd
Other	2	36	1 st	36.5	1 st	41	1 st	33.75	3 rd	27.75	4 th
Other Middle East	12	18.79	6 th	19.29	6 th	21.33	5 th	21.46	5 th	15.46	6 th
Southeast Asia	4	21.25	5 th	21.75	5 th	11.5	6 th	19	6 th	20.38	5 th
Total	59										

Only techniques with significant p value are further analysed by mean ranking

Table 8.57 shows that conventional banks in relation to their regional location, concentrated outside of the GCC and Middle East, use more advanced risk management techniques than Islamic banks. The ‘Americas’ are the most advanced across all techniques, followed often by ‘Other’ or ‘Europe’. The rest of the regional samples include mostly Islamic banks, their use of sophisticated risk measurements, however, is not as significant as in conventional banks in the Americas and Europe, as evidenced from mean ranking.

Table 8.58 – K-W Test Mean Rankings for Risk Measurement by Nature of FI for Selected Sample Data

Risk Management Technique		Earnings at risk		Simulation techniques		RAROC	
Nature of Financial Institution	N	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank
Fully-fledged Islamic Bank	25	23.98	3 rd	26.08	3 rd	22.44	3 rd
Conventional Bank with Islamic activities	14	34.18	2 nd	27.43	2 nd	38.29	1 st
Conventional Bank	20	34.6	1 st	36.7	1 st	33.65	2 nd
Total	59						

Only techniques with significant p value are further analysed by mean ranking

These results in Table 8.58 confirm that there is a particular trend determined by the market realities. The use of risk management techniques in IFIs is not as sophisticated and widely spread as in the conventional banking world. Fully-fledged Islamic Bank rank

3rd across all techniques as not many IFIs use the more technically advanced risk measurement approaches, which is evidenced from the mean ranking in Table 8.58.

8.5 RISK MITIGATION

As previously discussed, risk mitigation and hedging are controversial issues in Islamic banking. Different mitigation techniques are subjected to different interpretation by *Shari'ah* scholars. There have been substantial efforts in developing *Shari'ah*-compliant hedging instruments, which are the subject of this section. These include: On-balance sheet netting, Collateral arrangements, Islamic options, Islamic swaps, Guarantees, Islamic currency forwards, and Parallel contracts. However, much of this progress remains localised with limited scope for cross-border application and further work is still needed as evident from the results of K-W test in Table 8.59. Question 20 targets institutions that use Islamic finance contracts only; therefore, when conducting the K-W test, only stand-alone Islamic banks and Islamic subsidiaries were included in the raw data in relation to five control variables: region, respondent's position, nature of FI, nature of activities, and accounting standards.

Table 8.59 - K-W Test Results for Q20 (Risk Mitigation) for Selected Sample Data According to Various Control Variables

Risk Mitigation Technique	Region		Respondent's Position		Nature of FI		Nature of Activities		Accounting Standards	
	Chi-Sq.	Asymp. Sig.	Chi-Square	Asymp. Sig.	Chi-Square	Asymp. Sig.	Chi-Square	Asymp. Sig.	Chi-Square	Asymp. Sig.
On-balance sheet netting	9.65	0.086	22.841	0.011	44.91	0.00	8.483	0.132	5.371	0.147
Collateral arrangements	11.25	0.047	22.177	0.014	53.14	0.00	8.599	0.126	5.248	0.155
Islamic options	16.94	0.005	20.417	0.026	46.59	0.00	15.034	0.01	9.811	0.02
Islamic swaps	14.65	0.012	21.024	0.021	44.73	0.00	12.76	0.026	12.991	0.005
Guarantees	8.64	0.124	24.37	0.007	52.24	0.00	11.293	0.046	6.088	0.107
Islamic currency forwards	9.98	0.076	23.579	0.009	54.59	0.00	8.787	0.118	5.287	0.152
Parallel contracts	10.30	0.067	18.794	0.043	45.59	0.00	12	0.035	6.838	0.077

'Nature of FI' is the control variable selected for analysis by mean ranking as it has the highest number of significant results and because this variable is most essential to the

difference in risk mitigation techniques among financial institutions as illustrated in Table 8.59.

Table 8.60 – K-W Test Mean Rankings by Nature of FI for Selected Sample Data

Risk Technique	Mitigation	On-balance sheet netting	Collateral arrangements	Islamic options	Islamic swaps	Guarantees	Islamic currency forwards	Parallel contracts
Nature of FI	N	Mean Rank						
Fully-fledged Islamic Bank	25	19.2 (2nd)	19.94 (2nd)	19.68 (2nd)	20.02 (1st)	18.88 (2nd)	20.22 (1st)	19.46 (2nd)
Conventional Bank with Islamic activities	14	21.43 (1st)	20.11 (1st)	20.57 (1st)	19.96 (2nd)	22 (1st)	19.61 (2nd)	20.96 (1st)
Total	39							

Note: Ordering in parentheses refers to mean ranking

These results confirm that there is a general trend determined by the market realities. With the exception of Islamic swaps and Islamic currency forwards, Fully-fledged Islamic banks fell behind Islamic subsidiaries in using all other risk mitigation techniques. The latter group tends to benefit from the already developed risk mitigation platforms at their conventional parents. However, of notice is that the difference in the value of mean ranking between the two groups is small, which reflects that IFIs are progressing in the use risk mitigation but still the use of risk mitigation techniques in IFIs is not as developed as in conventional banking.

8.6 ISLAMIC BANKING IN PRACTICE

This section examines the proposition that Islamic banking has been diverting from its roots by mimicking conventional banks. In doing so, a K-W test was conducted using the entire sample according to nature of FI.

This section aims to test the participants' perceptions in relation to the following statements. The coding of the statements as appeared in the tables is as follows:

1. Islamic banks have been mimicking conventional models.
2. Islamic finance provides an ethical banking alternative.
3. There is difference between the current practice and principles of Islamic banking.
4. Islamic banks need to reform to be successful.

Table 8.61 – K-W Test Results by Nature of FI for Question 21 (Entire Research Sample)

Nature of FI		Statement							
		1		2		3		4	
Chi-Square		7.566		4.589		12.812		7.171	
Asymp. Sig.		0.056		0.205		0.005		0.067	
Nature of FI	N	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank
Fully-fledged Islamic Bank	25	38.22	2 nd	42.3	1 st	40.94	2 nd	37.24	2 nd
Conventional Bank with Islamic Activities	14	26.79	4 th	37.86	2 nd	29.89	4 th	27	4 th
Conventional Bank	20	34.23	3 rd	30.15	4 th	27.18	3 rd	35.2	3 rd
Others	13	47.15	1 st	33.65	3 rd	49.42	1 st	47.31	1 st
Total	72								

As depicted by Table 8.61, only statement 3 is statistically significant, reflecting the similarities in views among respondents about the diversion between principles and current practices in Islamic banking. However, with a ‘relaxation’ of the confidence level to 0.06, statement 1 can also be accepted as statistically significant. Furthermore, mean rankings reflect a pattern across all statements, with the exception of statement 2. Non-bankers, others, scored the highest mean, followed by fully-fledged Islamic banks, conventional banks, and Islamic subsidiaries respectively. This reflects the risk appetite of each group. Interestingly, Islamic bankers are more critical of the current practices in the industry than their conventional peers. This could be explained by the fact that Islamic bankers are more educated about the underlying principles of Islamic finance and have a better understanding of current structures than conventional bankers. The ‘others’ category comprises *Shari’ah* scholars, consultants, researchers, *etc.*, whose better understanding of the ideologies of Islamic banking is reflected in their lack of satisfaction of Islamic banking at its current state (highest mean ranking for 3 statements).

Repeating the K-W test with ‘region’ as the control variable for the entire research sample gives different results, as illustrated by Table 8.62. All statements are statistically insignificant, except statement 2, which shows the common dissatisfaction with the current status of Islamic banking across all regions.

Table 8.62 – K-W Test Results by Region for Question 21 (Entire Research Sample)

Region		Statement							
		1		2		3		4	
Chi-Square		8.202		19.551		4.25		3.227	
Asymp. Sig.		0.145		0.002		0.514		0.665	
Region	N	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank
Americas	2	51.75	1 st	9.5	6 th	24.75	6 th	27.5	6 th
Europe	31	40.45	2 nd	29.24	4 th	35.92	4 th	38.42	2 nd
GCC	19	26.92	5 th	46.71	2 nd	36.66	3 rd	38	3 rd
Other	2	51.75	1 st	62.5	1 st	60.5	1 st	50	1 st
Other Middle East	14	35.39	4 th	42.5	3 rd	34.11	5 th	32.14	4 th
Southeast Asia	4	40	3 rd	23.75	5 th	42.5	2 nd	27.5	5 th
Total	72								

Despite the similarities between views of respondents across various regions (only statement 2 has a significant p value), the mean ranking results show dispersed results; no trend can be established across various regions.

In addition, an attempt was made to test the impact of the ‘respondent’s position’ on the views, however, the results show that there are no significant differences as all p value > 0.05.

8.7 THE NEXT CHAPTER IN ISLAMIC BANKING

The last section of the questionnaire is a forward looking question that explores different strategies IFIs should follow in order to prepare for the day after tomorrow. For this, eight statements were provided to the respondents to disclose their opinion. The data were analysed through K-W test.

Table 8.63 - K-W Test Results for Q22 for the Entire Sample According to Various Control Variables

Strategy	Region		Respondent's Position		Nature of FI		Nature of Activities		Accounting Standards	
	Chi-Sq.	Asymp. Sig.	Chi-Sq.	Asymp. Sig.	Chi-Sq.	Asymp. Sig.	Chi-Sq.	Asymp. Sig.	Chi-Sq.	Asymp. Sig.
Improved risk management	5.22	0.389	15.3	0.358	2.59	0.458	1.991	0.921	3.607	0.462
Enhanced morality – Back to roots	9.10	0.105	11.82	0.621	5.49	0.139	9.002	0.173	3.799	0.434
Mergers and Acquisitions	3.80	0.578	17.49	0.231	1.28	0.732	5.956	0.428	6.094	0.192
Organic growth in home market	10.83	0.055	13.98	0.451	8.57	0.036	2.965	0.813	2.216	0.696
Better risk mitigation	9.07	0.106	16.07	0.309	7.28	0.063	9.697	0.138	3.556	0.469
Innovation	1.42	0.921	12.13	0.596	3.04	0.385	12.17	0.058	1.435	0.838
Diversification – reduce concentration	5.09	0.404	17.36	0.238	5.06	0.167	6.979	0.323	6.118	0.191
Standardization	7.14	0.21	21.59	0.087	10.5	0.015	5.246	0.513	5.301	0.258

As shown in Table 8.63, ‘nature of FI’ is the only control variable whose results had some statistically significant outcomes across different groups. ‘Organic growth in home market’ and ‘Standardization’ had p values of 0.036 and 0.015 respectively. The mean rankings of these two strategies according to ‘nature of FI’ are examined in Table 8.64. As regards to other control variables, the opinions do not show differences but rather convergence.

Table 8.64 – K-W Test Mean Rankings by Nature of FI for Entire Sample

Strategy			Organic growth in home market		Standardization	
Nature of Financial Institution	N		Mean Rank	Rank	Mean Rank	Rank
Fully-fledged Islamic Bank	25		31.68	3 rd	38.88	2 nd
Conventional Bank with Islamic Activities	14		28.86	4 th	49.68	1 st
Conventional Bank	20		46.6	1 st	28.65	4 th
Others	13		38.46	2 nd	29.81	3 rd
Total	72					

As can be seen from Table 8.63, no particular pattern could be identified. For ‘Organic growth in home market’, conventional banks were more aggressive with a high mean value (46.6), followed by others (38.46), Fully-fledged Islamic Bank (31.68), and finally

Islamic subsidiaries (28.86). However, this trend was almost reversed for ‘Standardization’ with Islamic subsidiaries having the highest mean value (49.68), which is much higher than the rest of categories. Conventional banks rank last with a mean of 28.65.

8.8 CONCLUSION

This chapter represents the second part of the quantitative analysis for the questionnaire. The objective of this chapter was to gauge the perception of the respondents regarding different risk management and capital adequacy issues in Islamic banking, the effect of the recent global crisis on Islamic banking, and what the future holds for the industry. Various inferential statistical tools were employed to examine the relationship between the characteristics of the sample respondents and their risk perceptions. Kruskal-Wallis analysis was the most-performed test to find out if there were any significant differences caused by the respondents’ category and this was subsequently interpreted.

‘Region’ was the control variable that displayed the most statistically significant differences among respondents’ perceptions for different parts of the questionnaire. Analysis according to ‘nature of FI’, ‘nature of activities’ and ‘respondent’s position’ also revealed some general trends that can be attributed to prevailing market conditions. ‘Accounting standards’ was used as control variable as well, however, the results did not often provide much statistical significance for this category.

The differences among respondents’ answers were scrutinized to test if there were significant differences due to characteristics. The next chapter takes the analysis one step further by qualitatively analysing the field interviews conducted with Islamic banking professionals, while further analysis was then carried out to make more sense of the available facts. Detailed analysis of the findings of this chapter, within the context of the findings of descriptive statistical analysis of the questionnaire and the interview analysis, is provided in an integrated manner in Chapter 10.

CHAPTER 9

EXPLORING THE PERCEPTIONS ON RISK AND RISK MANAGEMENT PRACTICES IN ISLAMIC BANKING: INTERVIEW DATA ANALYSIS

9.1 INTRODUCTION

This chapter focuses on the qualitative analysis of data assembled through individual in-depth interviews with Islamic banking professionals. In analysing the data, focused coding technique is used. The objective is to explore the responses of the interviewees in relation to risk practices as conducted in their financial institutions and banks. It is also considered that the findings from this chapter can help to substantiate the findings established in the earlier analyses, but also to develop further meaning in relation to the risk management practices.

In this chapter, the primary data collected through in-depth interviews is summarized and analysed. The outcomes and results are matched with the research objectives. Although the outcomes from the interviews are mainly discussed in this chapter, views and quotes from interviewees are used as supporting arguments throughout this paper.

It should be noted that focused coding method based on thematic understanding is utilised as the main method of analysis.

9.2 INTERVIEW ANALYSIS

A detailed explanation in relation to the process and analysis of interviews was dealt with in the Research Methodology Chapter. It should be reiterated that the interviews conducted with bankers, financiers, and *Shari'ah* scholars were audio recorded with the permission of the interviewees. When recording was not possible because of the

spontaneity to engage in the interview, notes were taken in shorthand by the interviewer; even when an interview was being recorded, shorthand notes were also kept.

Interviews were transcribed and the interview notes were read several times, which helped to create the thematic areas but also the focused coding. In other words, notes were transferred into segments representing complete thoughts on a single question or topic, in line with the original research questions. All transcribed interviews, thus, were broken into coded segments representing complete thought statements. After coding, the interview segments were transferred from word processing format into a spreadsheet for further analysis.

9.3 FORMING THE MAIN INTERVIEW THEMES

The interview themes and questions were designed within the context of the main research questions and hypotheses explained in Chapter 6. The interviews covered the same topics as the questionnaire, as the main purpose of the semi-structured interviews was to prove or disprove the conclusions driven from the questionnaire data analysis. The main themes were:

- (i) Risk perception in Islamic banking;
- (ii) Capital adequacy for Islamic banks;
- (iii) Islamic banking and the global credit crisis;
- (iv) Risk mitigation in Islamic banking;
- (v) The dichotomy between the theory and practice of Islamic banking;
- (vi) The next chapter in Islamic banking.

It should be noted that a theme may have occurred several times within an interview, but, for purposes of analysis, a theme was counted only once per interview.

9.4 INTERVIEW QUESTIONS

Prior to the interviews, an interview guide was prepared by listing the important topics to be covered and drafting a list of questions to be explored with the respondents, including sub-topics. Nevertheless, in-depth interviews are never rigidly defined. They are, by nature, structured to allow respondents the freedom to express their thoughts, feelings, and insights. Therefore, during the interviews, the phrasing of questions and their order or sequence were re-defined to fit the characteristics of each interview.

The following were the main interview questions:

Theme A - Risk perception in Islamic banking

1. What are the main risks facing Islamic banks?
2. Does the risk perception in Islamic banks differ from conventional banking, and in what sense? Are Islamic banks riskier than their conventional counterparts?
3. Do you believe that Islamic banking products are structured differently as compared to conventional banking products?
4. Do you think IFIs actually favour mark-up based contracts to profit-sharing contracts? Why?

Theme B - Capital adequacy for Islamic banks

5. How suitable are Basel II standards to Islamic banking?
6. Do Islamic banks need to reserve more or less capital compared to their conventional peers?
7. What impact will Basel III have on Islamic banks?? Will the Basel III standards consider Islamic banking?
8. Are Basel III new regulatory standards more likely to prevent a major crisis similar to the recent one? Has Basel II failed in preventing the crisis?

Theme C - Islamic banking and the global credit crisis

9. There is much debate about the resilience of Islamic banking against the financial crisis. Do you think that Islamic banking has really been resilient to the crisis, or does it suffer from the same flaws of conventional banking?
10. Could the recent crisis have occurred under an Islamic banking system? Will the Islamic finance industry gain confidence after the current financial crisis?

Theme D - Risk mitigation in Islamic banking

11. What do you think about risk mitigation in Islamic banking? Do you consider it as *Shari'ah*-compliant? How important is hedging to the industry?

Theme E - The dichotomy between the theory and practice of Islamic banking

12. How *Shari'ah*-compliant is Islamic banking within its current practice? Do you believe that Islamic banks need to reform in order to be successful?

Theme F - The next chapter in Islamic banking

13. What strategies should Islamic banks focus on over the coming decade? What do you believe are the catalysts for the growth of Islamic banking?

9.5 RESULTS AND DATA ANALYSIS

9.5.1 Risk Perception in Islamic Banking

This first part of the interview analysis aims at the participants' opinions regarding risk management issues in Islamic banking. Questions 1, 2, 3, and 4 explore how the risk perception in Islamic banking differs from conventional banking, the unique risk characteristics of IFIs, the risks inherent in Islamic banking contracts, and the risk management techniques used by IFIs. Tables 9.1 to 9.6 present the findings from the

focused coding analysis for Question 1 about the main risks facing Islamic banks. The results of the analysis for Question 2 are presented in Tables 9.7 to 9.9, while Tables 9.10 to 9.12 summarise the findings for Question 3, which asks the participants whether they believe that Islamic banking products are structured differently than the conventional products.

Table 9.1 – Results for Question 1

Question 1	
What are the main risks facing Islamic banks?	
Focused Coding	
1	<i>Shari'ah</i> -non-compliance risk
2	Liquidity risk
3	Asset liability management risk
4	Concentration risk
5	Reputational risk
Theme: Main risks facing IFIs are liquidity risk, ALM risk, concentration risk, <i>Shari'ah</i>-non-compliance risk, and concentration risk.	

As can be seen from Table 9.1, several weaknesses and vulnerabilities have been identified by the respondents among IFIs in the areas of risk management and governance, particularly in terms of the handling of asset-liability maturity mismatches, *Shari'ah*-non-compliance, reputational risk, and real estate exposure and concentration risk. Respondents identified *Shari'ah*-non-compliance, liquidity, concentration, ALM, and reputational risks as the main risk facing IFIs. Tables 9.2 to 9.6 examine the respondents' answers regarding each of these identified risks.

Table 9.2 – Focused Coding Number 1 for Question 1

<i>Shari'ah</i> non-compliance risk	
Interview 1	The risk of being perceived as non- <i>Shari'ah</i> -compliant could severely damage the creditworthiness of an IFI
Interview 3	AAOIFI has taken some steps in this regard with its institutional certifications of <i>Shari'ah</i> compliance
Interview 4	Interface between <i>Shari'ah</i> and civil systems create range of risks

Some interviewees, particularly *Shari'ah* scholars and researchers, regarded *Shari'ah*-non-compliance as a major risk, as it can have a material impact on the IFIs' risk profile, and its ripple effect can create other risks, particularly reputational and legal risks. Islamic finance disputes in courts, especially in international deals, are decided by judges trained under common law and not particularly under Islamic jurisprudence. This requires an interface between *Shari'ah* and civil law, thus adding additional legal risks. Moreover, respondents widely felt that the application of *Shari'ah* compliance as a commercial and defensive legal tool, like the distressed Investment Dar Company's own *Shari'ah* board retracting from its approval, undermines the credibility and ethical ethos that underpins Islamic finance. Given the consequences of such reversals, it is key for the industry that the approval process be extensively documented, formalised, and open to inspection. One *Shari'ah* scholar in interview 3 expressed that AAOIFI has taken some steps in this regard with its institutional certifications of *Shari'ah* compliance, but for a deeper, stable and more liquid market the concept needs to gain wider acceptance.

Table 9.3 – Focused Coding Number 2 for Question 1

Liquidity risk	
Interview 13	IFIs suffer from managing excessive liquidity, especially with regards to the management of short-term liquidity and overnight liquidity
Interview 27	The liquidity/leverage trade-off for many IFIs is a double-edged sword
Interview 30	Liquidity management is structurally difficult at IFIs
Interview 33	Liquidity is one of the most critical issues for IFIs

Table 9.4 – Focused Coding Number 3 for Question 1

Asset liability management risk	
Interview 23	Handling of asset-liability maturity mismatches is a challenge

As depicted by Tables 9.3 and 9.4, several respondents recognized liquidity and ALM risks as the most severe risks facing IFIs and stated that IFIs need to factor liquidity more fully into risk management. Respondents believe that both liquidity and ALM risks are strongly correlated. In the absence of a wide pool of *Shari'ah*-compliant and sufficiently liquid investment vehicles (especially in fixed income), IFIs find it difficult to manage their balance sheet from an asset-liability management perspective, especially with regard

to liquidity and margin-rate risk. IFIs use cash from deposits and short-term liquid assets to finance long-term liabilities. As a result, the liability makeup affects their funding structures differently and reflects an institution’s specific asset-liability management policies. Most respondents, therefore, believe that IFIs’ funding mix tends to be imbalanced, with the dominance of deposits, PSiAs and equity making IFIs’ funding profile predominantly short-term at a time when the maturity of their asset classes is widening. To mitigate nascent maturity mismatches, some IFIs started issuing medium-term *sukuk* to lengthen the maturity profile of their funding, but *sukuk* still represent a minor share of total liabilities. Subordinated *sukuk* and hybrid instruments have not been used yet; these are more expensive funding sources and incentives to issue them are limited given the relative abundance of capital in the region. IFIs are also increasingly focusing on retail deposits to boost liquidity, due to the deposits’ sticky nature. As a result, according to the responses given by the interviewees, the Islamic banking industry is faced with a conundrum: its institutions maintain high concentrations in current/short-term liabilities, but, at the same time, they are exposed to highly profitable, but illiquid, long-term assets (e.g. property and infrastructure, and *sukuk*), and they have limited access to long-term funding solutions.

Table 9.5 – Focused Coding Number 4 for Question 1

Concentration risk	
Interview 9	Reliance on limited funding sources
Interview 12	Concentration risk is a time bomb that might bring down many IFIs, particularly in the GCC
Interview 25	Real estate financing is one of IFIs' preferred habitats hence creating scary concentrations
Interview 29	High concentration risk made it necessary for IFIs to maintain strong capitalisation

As Table 9.4 shows, some respondents opined that IFIs tend to have a concentration base of assets and/or deposits; they face high concentration by name and sector, as well as high geographical concentration. This is inflated by the IFIs’ limited geographic reach, as most IFIs are domestic players and only very few have material operations outside their home country. The limited scope of eligible asset creates asset concentration risk. Non-

deposit liabilities could have concentration risk as well, due to the relatively small number of IFIs available to participate in the inter-bank market. There is also a limited range of *Shari'ah*-compliant instruments available for managing or transferring risks. Participants opined that the focus on tangibles had led to increased property-related financings at IFIs, affected by relatively undiversified nature of the economies. As the real estate markets are highly volatile in the GCC, the concentration risk is magnified. The recent crash in the property market has put several Islamic banks, whose assets are heavily concentrated in real estate, in dire straits.

Table 9.6 – Focused Coding Number 5 for Question 1

Reputational risk	
Interview 18	Because Islamic banking is at a its infancy stage of development, its reputational risk is critical

Reputational risk is the last one among the top risks facing IFIs as identified by interviewees. Some participants, principally conventional bankers, indicated that reputational risk can have a material impact on the risk profile of an Islamic bank because the industry is still at its infancy stage of development.

Finally, it is interesting to note that the analysis of Question 1 revealed that the views of Islamic bankers, conventional bankers, and rating agency analysts were quite similar. *Shari'ah* scholars and researchers, on the other hand, had different perceptions, which tend to be more academic in nature. Some respondents also expressed that due to the nature of Islamic finance contracts, risk are strongly bundled together

Question 2 examines the difference in risk management perceptions in Islamic banking vs. conventional banking. The results obtained are summarized in Tables 9.7 to 9.9.

Table 9.7 – Results for Question 2

Question 2	Does the risk perception in Islamic banks differ from conventional banking, and in what sense? Are Islamic banks riskier their conventional counterparts?
Focused Coding	
1	There are specific challenges in the management of risks in Islamic banks
2	Islamic banking, as it stands today, carries more risks than the conventional model
Theme: Risk management for Islamic banks is more challenging than it is for conventional banks. Theoretically, Islamic banks are safer than conventional banks. Practically, the story is different.	

Table 9.8 – Focused Coding Number 1 for Question 2

There are specific challenges in the management of risks in Islamic banks	
Interview 6	Risk management is not the same for conventional and Islamic banking
Interview 12	Risk management in Islamic banking is still evolving
Interview 21	There are distinguished elements of an IFI’s risk profile that need to be evaluated differently to those of a conventional bank
Interview 24	The Islamic financial model works on the basis of risk sharing
Interview 27	Risks in IFIs must be assessed in an integrated manner
Interview 29	Risk management in Islamic banking is still below the desired level
Interview 31	Risk management for Islamic banks is far more of a complex issue when compared to conventional banking
Interview 33	Since the risk management needs of Islamic banking are not being met yet, the system is not functioning at its full potential

As Table 9.8 shows, most interviewees believe that Islamic banking in its current state can be riskier than conventional banking because of the additional risk management and mitigation challenges and constraints the industry faces. As stated by the interviewees, since the risk management needs of Islamic banking are not being met yet, the system is not functioning at its full potential.

Table 9.9 – Focused Coding Number 2 for Question 2

Islamic banking, as it stands today, carries more risks than the conventional model	
Interview 12	Unfortunately, Islamic bankers made the industry more risky than conventional banking
Interview 14	Many IFIs swapped basic PLS concepts for conventional-like products
Interview 18	Islamic banking suffers from weak risk management practices
Interview 26	Islamic banking in its current practice is riskier than conventional banking
Interview 29	IFIs face a whole additional array of risks not faced by conventional banks

As depicted in Table 9.9, interviewees believe that no financial system is perfect. Although Islamic banking by default enjoys better risk management practices built into its principles, these principles tend to be ignored in favour of mimicking conventional risk solutions. Islamic banking products display unique features relating to credit, funding, liquidity, and other risks that need to be considered and which have an impact on risk management. Moreover, most interviewees asserted that IFIs paradoxically suffer from weak risk management practices. In fact, IFIs face a number of challenges in terms of risk management. Many *sukuk* are structured to resemble conventional bonds, meaning the risks of ownership are transferred to the issuer rather than shared by the investors. Whereas risk management is practiced widely in conventional financial markets, it is underdeveloped in Islamic finance. This gives rise to an array of risks which are not well-comprehended yet.

Table 9.10 – Results for Question 3

Question 3	Do you believe that Islamic banking products are structured differently as compared to conventional banking products?
Focused Coding	
1	Islamic banking transactions have inherent features that induce financial stability
2	Many of Islamic banking products aim to essentially replicate the products and processes of the conventional system
Theme: Islamic finance products have special relationships between the contracting parties, however, Islamic banking has so far been unable to escape the trappings of conventional finance.	

Table 9.11 – Focused Coding Number 1 for Question 3

Islamic banking transactions have inherent features that induce financial stability	
Interview 8	The overarching principle of Islamic banking and finance products is that all forms of interest are forbidden
Interview 12	PLS principle is a unique feature of Islamic finance

Table 9.12 – Focused Coding Number 2 for Question 3

Many of Islamic banking products aim to essentially replicate the products and processes of the conventional system	
Interview 14	If IFIs continue to mimic conventional products, they will weaken their value proposition
Interview 17	Many of Islamic banking products aim to essentially replicate the products and processes of the conventional system
Interview 20	Theoretically yes, very different. In practice, they are very similar
Interview 30	IFIs are excessively replicating conventional financial instruments

Most respondents agreed that Islamic banking products display unique features, and that developing risk management tools and practices is one of the biggest challenges for Islamic banks. This challenge also offers some opportunities to develop unique solutions that do not suffer from the weaknesses in the conventional banking model. In addition, respondents criticised adopting risk models from the conventional banking practice or making minor adjustments to best practices as this poses major challenges. Participants indicated that, unfortunately, most IFIs closely mimic western products, and hence IFIs are being exposed to similar risks like their conventional counterparts. Practitioners of Islamic finance to-date have been mimicking conventional products. This mimicking has resulted in a close correlation between the two systems. With the absence of advanced risk management and mitigation tools, and with the bundling of risks in Islamic finance contracts, Islamic banking ends up being more risky than the conventional model.

In addition, participants indicated that through *Shari'ah*-compliant engineering most conventional contracts can be copied, at least conceptually. Some interviewees opined that, if IFIs continue to mimic conventional products, they will weaken the uniqueness of their value proposition and the powerful nature of their natural factors of differentiation. Participants recognize that Islamic banking might find it difficult to innovate because it

exists in a deeply-rooted conventional system. However, they strongly recommended that Islamic banks should start innovating *Shari'ah*-based solutions because if the industry is not innovating authentic products according to genuine *Shari'ah* principles, it might end up with the same failures as conventional banking.

Table 9.13 – Results for Question 4

Question 4	Do you think IFIs actually favour mark-up based contracts to profit-sharing contracts? Why?
Focused Coding	
1	IFIs want to share rewards without sharing risks
2	There is lack of appetite for risk-sharing assets
Theme: Fixed income contracts are widely used and the use of PLS mode is negligible	

Table 9.14 – Focused Coding Number 1 for Question 4

IFIs want to share rewards without sharing risks	
Interview 1	Risk sharing is the exception rather than the rule
Interview 3	This ' <i>murabahah</i> syndrome' is a disgrace to the industry
Interview 24	Financial engineering in Islamic finance needs to focus on the development of products that foster <i>Shari'ah</i> principles instead of focusing only on the risk-return characteristics of the product

Table 9.15 – Focused Coding Number 2 for Question 4

There is lack of appetite for risk-sharing assets	
Interview 4	IFIs should engage on partnerships and equity-sharing financial assets, but in practice the portion of such assets on the balance sheets of Islamic banks is minimal
Interview 21	There is limited innovation most of which is in the form of reverse engineering where the objective is to replicate the behaviour and risk/return profile of conventional products

As depicted in Tables 9.14 and 9.15, interviewees, particularly *Shari'ah* scholars and consultants agree that while Islamic banking is asset-based and centres on risk sharing, in practice IFIs vary in terms of the level of risk sharing. For example, on the funding side PSiAs are being replaced in a several IFIs by time deposits based on reverse *murabahah*

transactions. These deposits do not have the risk-sharing features of PSIAAs, since the return is almost guaranteed. On the asset side, risk sharing is the exception rather than the rule. Most financing is in the form of *murabahah* or *wakala*, making the IFIs' activities similar to conventional banks. Interviewees recommend that practitioners should not create instruments and investments that are identical in substance to conventional ones by combining a redundant succession of trades and labelling them with 'new' Arabic names. The emphasis should be placed on innovation that encourages and favours particular types of investment (such as more tangible risk-sharing ones) and funding that is closer to *Shari'ah* principles. The tendency by some IFIs to blindly replicate and repackage some exotic products of conventional finance through cosmetic changes to make them *Shari'ah*-compliant should be curbed. Respondents expressed their worry that some initiatives to design some forms of 'Shari'ah-compliant' subprime instrument have been undertaken before the crisis happened – fortunately there were enough wisdom among *Shari'ah* boards that these instruments did not really see the light.

9.5.2 Capital Adequacy for Islamic Banks

This section, through questions 5, 6, 7, and 8, examines the suitability of Basel II and III standards to IFIs, compare capital requirement levels between Islamic and conventional banks, and assess the credibility of Basel II after failing to prevent one of the most damaging financial crises. The results obtained are given in Tables 9.16 to 9.28

Table 9.16 - Results for Question 5

Question 5	How suitable are Basel II (and potentially Basel III) standards to Islamic banking?
Focused Coding	
1	Basel II can be applied to Islamic banks
2	IFIs need their own standards
Theme: With a few amendments, Basel II becomes applicable to IFIs	

Interviewees had varying views about the suitability of Basel II and potentially Basel III to Islamic banking. In general, respondents, particularly bankers and rating agencies'

analysts agree that with a few amendments, Basel II becomes applicable to IFIs. Results of the focused coding analysis is summarised in Tables 9.17 and 9.18.

Table 9.17 – Focused Coding Number 1 for Question 5

Basel II (and potentially Basel III) standards can be applied to Islamic banks	
Interview 13	IFSB Principles are difficult to implement, particularly in the West
Interview 17	Application of Basel II is a matter of adjusting the standards to the needs of Islamic banks
Interview 21	Basel II can be applied to Islamic banks
Interview 30	Applying other standards than Basel II to IFIs will make it a not level playing field

Table 9.18 – Focused Coding Number 2 for Question 5

IFIs need their own standards	
Interview 2	The risk-sharing feature necessitates the use of different capital rules
Interview 6	Cannot apply conventional definition of capital to Islamic banking
Interview 9	IFSB Principles on capital adequacy provide motivation for better risk management
Interview 12	Basel II was drafted with conventional banking very much in mind
Interview 19	IFSB Principles incentivises banks to be more transparent

As demonstrated by Table 9.18, *Shari'ah* scholars and consultants interviewed shared the belief that conventional capital adequacy standards do not fully understand and appreciate certain aspects of IFIs, principally the fiduciary aspect, and that Basel II methodologies do not recognise the need for a different approach to capital adequacy calculation. Another problem mentioned by Islamic bankers related to the lack of ratings in IFIs and their corporate customer; and the fact there is no historical data to implement Basel II. However, as Table 9.17 depicts, the majority of bankers and analysts interviewed believed that Basel II standards could be applied to Islamic banking with a few amendments to accommodate its unique model. They argue that, although there are some important differences between Islamic and conventional banks that must be properly understood and considered, these can be incorporated within the existing Basel framework. With Basel II being widely applied consistently across the globe, some regulators hesitate to applying bespoke capital rules to Islamic banks in order to ensure a level playing field for all banks.

Question 6 examines the participants' perception regarding the level of capital reserves that IFIs should hold in comparison to capital held by conventional banks. Looking at the theme in Table 9.19 and the respondents' answers in Tables 9.20 and 9.21, it is evident that most interviewees believe that IFIs should hold higher capital levels than their conventional counterparts because the Islamic banking business model at its current state carries more risks.

Table 9.19 – Results for Question 6

Question 6	Do Islamic banks need to reserve more or less capital their conventional peers?
Focused Coding	
1	Less capital
2	More capital
Theme: IFIs are exposed to higher risks, thus should reserve more capital	

Table 9.20 – Focused Coding Number 1 for Question 6

Less capital	
Interview 1	If IFIs genuinely apply <i>Shari'ah</i> principles, they will require much lower capital reserves than they currently do.
Interview 2	The risk-sharing feature necessitates the use of different capital rules. The better the disclosure and risk-sharing the Islamic banks applies, the lower capital it needs to reserve
Interview 23	If PSIA's absorb losses, IFIs should keep less capital aside

Table 9.21 – Focused Coding Number 2 for Question 6

More capital	
Interview 8	IFIs have historically been keeping higher capital buffers anyway
Interview 11	IFIs have recently accumulated more capital buffers than their conventional peers due to rising non-performing loans.
Interview 21	IFIs are more risky than conventional banks, thus should reserve more capital
Interview 25	Due to their nature of operations, IFIS should reserve more capital

In theory, the risk-sharing principles inherent in Islamic banking should make IFIs less vulnerable to economic shocks and thus reserve less capital levels than their conventional peers as they could “pass through” economic losses to PSIAs. This is the view expressed by some participants like *Shari’ah* scholars and Middle Eastern consultants, as Table 9.20 shows. Unfortunately, the theory is a long way from fact in the current practice as argued by the participants’ views in Table 9.21. This submerges the inherent stability within IFIs, rendering them as riskier than conventional banks, and hence requiring higher capital buffers. In addition, several bankers and consultants interviewed revealed that many IFIs do not have an internal performance management approach to measure the cost of liquidity and capital in their business decisions. This can lead to suboptimal choices made by the management teams. IFIs, thus, need to change how they measure performance by taking into consideration actual cost of liquidity and capital. By adjusting for true cost of liquidity and capital, the profitability picture can change considerably. As indicated by the respondent from interview 11, capital levels among IFIs have increased compared to prior years and are at levels much higher than global peers. However, that extra capital buffer should not be taken for granted and IFIs need to be mindful of rising non-performing loans. Moreover, some interviewees warned that, with the tightening of new Basel III capital standards, IFIs have to pay greater attention to capital management as profitability will be impacted.

Table 9.22 – Results for Question 7

Question 7	What impact will Basel III have on Islamic banks? Do the Basel III standards consider Islamic banking?
Focused Coding	
1	Too early to judge
2	Basel III will have bigger impact on conventional banks due to their business models
3	Basel III will impact all banks
Theme: Basel III will affect all banks, however, its impact on conventional banking will be higher than on Islamic banking	

It is interesting to note that despite a general lack of absolute clarity about Basel III and its potential impact on IFIs as indicated by Table 9.22. Most interviewees agreed that

Basel III is a fact that is here to stay. There is also a general belief among respondents that although Basel III is more demanding than Basel II with regard to addressing systemic risk, it may not be the last of the Basel series. This is mainly because risk is inherent in the complex global financial markets of increasing sophistication. Participants were generally divided among three groups as summarised by Tables 9.23 to 9.25. The general theme agreed upon by most interviewees is that Basel III will affect all banks, however, its impact on conventional banking will be higher than on Islamic banking.

Table 9.23 – Focused Coding Number 1 for Question 7

Too early to judge	
Interview 28	The ink is barely dry on Basel III Accord
Interview 32	Basel III has an extended implementation period making its impact relatively irrelevant at the time being

The first group believed that Basel III new regulatory standards are still recently fresh and have a prolonged implementation timeline. No clear idea has been formed yet on their potential effects on IFIs. For most Basel III proposals, implementation is postponed until 2018, 10 full years after the peak of the financial crisis, which is beyond what would have been reasonable to assume. This group consists mainly of analysts at rating agencies and consultants.

Table 9.24 – Focused Coding Number 2 for Question 7

Basel III will have bigger impact on conventional banks due to their business models	
Interview 12	Islamic banks have been addressing procyclicality issues way before Basel III proposals
Interview 13	Most IFIs are capital rich and have liquidity buffers, therefore the newly proposed capital & liquidity ratios will have minimal effect

Table 9.24 summarises the views of the second group of interviewees which argued that the counter-cyclical capital buffer concept introduced by Basel III (as opposed to Basel II, which has been widely criticised for encouraging pro-cyclicality) has been at the heart of Islamic banking via the PLS financing. IFIs will be less impacted by Basel III because

of smaller market and counterparty risk exposures and lower level of debt. They are expected to meet the more stringent requirements without raising additional capital. This group was dominated by Islamic bankers.

Table 9.25 – Focused Coding Number 3 for Question 7

Basel III will impact all banks	
Interview 5	The increased risk-weighting for assets across the board will affect IFIs
Interview 21	Common equity will be squeezed much harder
Interview 23	Any new regulation will affects all banks, whether Islamic or conventional

The third group of participants, comprising of consultants and solicitors, opined that the tightening of capital, leverage, and liquidity requirements will affect all banks, Islamic and non-Islamic, alike. While the definition of capital and the deductions in capital calculations are less likely to affect IFIs as their capital structures tend to comprise mainly core tier one capital.

Question 8 aims to get the interviewees’ perceptions of the failure of Basel II to prevent the recent crisis and whether the newly proposed Basel III standards will help to prevent similar crises. Despite divergence among the participants’ views, the theme as shown in Table 9.26 is that the shortcomings in Basel II are definitely addressed in Basel III. Participants expressed their doubt that Basel III will succeed in preventing another major crisis because crises are part of business cycles.

Table 9.26 – Results for Question 8

Question 8	Are Basel III new regulatory standards more likely to prevent a major crisis like the recent one? Did Basel II fail in preventing the crisis?
Focused Coding	
1	Failings of Basel II needed to be addressed, Basel III addresses those issues
2	The soundness of Basel III is mutually linked to powerful regulatory and economic reinforcements
<u>Theme:</u> Shortcomings in Basel II are definitely addressed in Basel III	

Table 9.27 – Focused Coding Number 1 for Question 8

Failings of Basel II needed to be addressed, Basel III addresses those issues	
Interview 12	Basel II totally failed to prevent the crisis
Interview 25	Basel II got it wrong on different fronts: procyclicality, liquidity, stress testing to name a few

Table 9.28 – Focused Coding Number 2 for Question 8

The soundness of Basel III is mutually linked to powerful regulatory and economic reinforcements	
Interview 4	Basel III is intended to promote a more resilient banking sector and eliminate systemic risk, but so did Basel II
Interview 14	Don't blame Basel II, blame the system based on greed and lack of morals
Interview 16	Basel II is correct in principle but wrong in implementation

There was unarguably divergence among respondents for the question on the potential capacity of Basel III to prevent a major crisis as the recent one and whether Basel II has failed in preventing the crisis. As the results in Table 9.26 show, those in the West are focusing on the need for increased buffers for both capital and liquidity, while those in the East are focusing on comprehensive coverage of risk management, enhanced stress-testing and the need for risk and capital management to align and be a core part of a bank's strategy. In general both camps agree that supervisory discretion will influence detailed implementation and leave scope for some jurisdictions to apply a more rigid interpretation of Basel III than elsewhere. Political issues and the debate around the implementation and operation of supervisory challenges mean on-going fear of an uneven playing field. If different jurisdictions implement Basel III in different ways, issues seen under Basel I and Basel II with respect to international regulatory arbitrage may continue to disrupt the overall stability of the financial system. Moreover, compared with the implementation of Basel II, this enhanced level of dynamism, complexity and interdependency within the global regulatory landscape will add significant challenges to the implementation of Basel III.

A number of respondents, particularly researchers and consultants, believe that the Basel III proposals are unlikely to be the last word on reforms of the banking industry following the credit crunch. Interviewees asserted that Basel III is sometimes sold as the solution to the outstanding issues left by Basel I and II. Some stated that while history does not repeat, it sure does show similarities, and it is very unlikely that Basel III will be the answer to all the banking problems. Banks must therefore retain flexibility to accommodate years of fine tuning and future reforms.

During the current tumultuous economic times, a higher capital buffer will generally reduce volatility and improve the intrinsic financial strength of banks. Increased capital requirements, increased cost of funding, and the need to reorganise and deal with regulatory reform will put pressure on margins and operating capacity. Investor returns will decrease at a time when banks need to encourage enhanced investment to rebuild and restore buffers. This will drive banks to go up the risk curve to make up for lost profitability.

9.5.3 Islamic Banking and the Global Credit Crisis

A lot has been said about Islamic finance being resilient in the wake of the global financial crisis, but once the dust of the financial crisis settled, it has become clear that not necessarily everything is well in Islamic finance. The assumption at one point early in the crisis was that Islamic banking would be totally unaffected and would sail through the crisis unaffected. However, the crisis has flushed out the false premise that Islamic banking is disconnected from conventional banking, and that it is immune to economic crises.

Questions 9 and 10 aim to explore the market feedback regarding the long-debated issue of whether IFIs are recession proof. Is Islamic banking actually more resilient than conventional banking? Could the current crisis have occurred under an Islamic banking system? The results of the focused coding analysis are presented as follows:

Table 9.29 – Results for Question 9

Question 9	There is much debate about the resilience of Islamic banking against the financial crisis. Do you think that Islamic banking has really been resilient to the crisis, or does it suffer from the same flaws of conventional banking?
Focused Coding	
1	IFIs were not caught by toxic assets as <i>Shari'ah</i> prohibits interest
2	Islamic banking had similar problems like conventional
Theme: IFIs have shown some resilience but they are not risk immune	

Table 9.30 – Focused Coding Number 1 for Question 9

IFIs were not caught by toxic assets as <i>Shari'ah</i> prohibits interest	
Interview 17	Islamic banks have been lucky so far
Interview 23	IFIs have displayed strong resilience

Table 9.31 – Focused Coding Number 2 for Question 9

Islamic banking had similar problems like conventional	
Interview 4	To some extent Islamic lenders were not applying best practices and that may have led to the large amount of non-performing loans and others
Interview 13	Lack of liquidity is squeezing <i>sukuk</i> issuance
Interview 21	IFIs are part of the globalised financial system – they are not immune from the credit crisis
Interview 25	IFIs have all been penalized by their investment portfolios
Interview 26	The industry faced its greatest ever test. Some IFIs came close to collapse
Interview 33	IFIs have always displayed funding imbalances, but this had worsened as the crisis reached its peak

Table 9.32 – Results for Question 10

Question 10	Could the recent crisis have occurred under an Islamic banking system? Will the industry gain confidence after the current financial crisis?
Focused Coding	
1	The crisis served as a wake-up call for Islamic banks
2	The crisis had less severe impact on Islamic banking
3	Crisis provides opportunity for IFIs
Theme: Even if Islamic finance had been prevailing, at its current state, the crisis could have happened but at a less severe level. Paradoxically, Islamic banking reputation has benefited from the crisis.	

Table 9.33 – Focused Coding Number 1 for Question 10

The crisis served as a wake-up call for Islamic banks	
Interview 1	Allowed Islamic banking some time for reflection
Interview 3	In a way the crisis is a blessing in disguise for Islamic banking because IFIs so far have been following a close mimicry of western products
Interview 32	The shake-out resulting from the crisis has been good for the Islamic finance market

Table 9.34 – Focused Coding Number 2 for Question 10

The crisis had less severe impact on Islamic banking	
Interview 16	Although IFIs have been more resilient, the shift in the environment did negatively affect some of them
Interview 20	The crisis highlighted additional risks that IFIs need to carefully understand and mitigate
Interview 24	Islamic banking can also face systemic failure
Interview 27	Islamic banks do not operate in isolation

Table 9.35 – Focused Coding Number 3 for Question 10

Crisis provides opportunity for IFIs	
Interview 2	Perceived now as more stable as it has an anti-speculation bent to it
Interview 7	The industry has come out stronger from the global crisis and learnt good lessons
Interview 11	Will emerge stronger from the crisis, provided some conditions are met
Interview 14	IFIs' reputation has benefited from the current crisis
Interview 17	IFIs have been lucky so far, and they will be winners after the crisis
Interview 23	Despite flaws in the industry, the crisis has strengthened Islamic banking
Interview 29	The ideals of Islamic finance are receiving more attention in the current crisis

As depicted in Table 9.33, respondents agreed that the credit crisis has allowed the Islamic banking industry some time for reflection. They gave examples of a number of renowned players in the management of Islamic funds, such as The Investment Dar (TID) and Global Investment House (GIH) that suffered major losses during the crisis and have become technically insolvent. Some IFIs had to undertake a painful restructuring process, and the legal battles are still to be fought. The global *sukuk* market is seeing smaller issuance and increasing defaults, led by the bankruptcy of the US-based *sukuk* issuer East Cameron Gas, followed by the Al Gosaibi and Saad Groups of Saudi Arabia.

Most interviewees agree that IFIs should, therefore, ensure that they do not overlook the lessons to be learnt from the financial crisis. As shown in Table 9.35, respondents believe that since the global economy is still recovering and growth rate is much slower, IFIs should take this opportunity to clean up the house and tighten up the loose ends.

Interviewees argued that when the financial crisis erupted in mid-2007, the Islamic finance industry remained relatively healthy and insulated, and recorded robust performance. Some commentators wrongly labelled Islamic finance as a 'risk-free' sector. However, the significant defaults of TID and GFH since early 2009 and the growing difficulties of the rest of the Islamic investment banking community makes this assessment dubious, as the structural weaknesses of the Islamic financial industry started to become more obvious. Responses depicted in Table 9.35 reflect that the crisis was a

unique opportunity for the industry to prove that it had the capacity and ability to react and absorb shocks, but not for all its sub-segments. Some interviewees from rating agencies explained that, while the commercial banking sector seems to have emerged from the crisis relatively unscathed, the investment banking sector could not have been more different, as it suffered a very sudden and sharp dip in performance as losses mounted. And yet, until 2007, IFIs were portrayed by market participants as having significant potential, benefiting from cheap funding, high liquidity, exceptional profits and robust capitalisation. At the time, the combination of these four factors led them to pursue investments in riskier markets and asset classes – such as private equity, infrastructure or real estate, mostly in emerging markets ranging from the Maghreb to Southeast Asia. Some business was also booked in the private equity markets in Europe and the US. While GFH focused more on infrastructure, Arcapita invested heavily in private equity, and both were eager to improve their asset-management capabilities. Moreover, some other *Shari'ah*-compliant investment banks were beginning to discover the merits of unfunded business lines. Respondents gave the examples of Liquidity Management House (LMH, the investment banking subsidiary of leading Kuwait Finance House) and Al Rajhi Capital further enhanced their advisory and structuring services, until they eventually became significant players in the GCC's debt and capital markets. However, when the region's economy started to fracture under the stresses of the global liquidity drought, the pro-cyclical nature of IFIs became more pronounced. The illiquid nature of their investments contributed to rapid asset-value decreases at a time when their wholesale and short-term funding features were rapidly damaging their liquidity profile. This structural feature of IFIs' asset-liability management – which was once a benefit when ample liquidity was chasing too few assets – started to turn negative when too many impaired assets were available to serve massive liquidity withdrawals.

Some interviewees explained that lower volumes, shrinking margins and deteriorating asset quality will all weigh on IFIs' profitability and ultimately their capitalisation. However, the impact is more manageable than for conventional ones. Fortunately, IFIs have been very profitable in the past and had therefore accumulated large amounts of capital, making them capable of absorbing these sorts of shocks. Strangely enough, IFIs'

reputation has generally benefited from the current crisis as it has exposed the weakness of a debt-based financial system. It is, therefore, the most fortunate time for Islamic banking to re-emphasise on its equity-based approach. Interviewees think that this will help the industry to expand not only in the Muslim world but also in the West.

Some researchers interviewed stated that this is not the first time IFIs are tested with a systemic crisis, although previous crises were all on a regional scale. However, the recent crisis, with its unprecedented scale and scope, is the first global crisis to hit Islamic finance. The experiences of Kuwait Finance House in surviving the Kuwait Souq al-Manakh crisis in 1982, of Bank Islam in navigating through the Asian financial crisis in 1997-1998, and of a Turkish participation (Islamic) bank in coming out of the economic crisis (2000-2001), should all convey a clear message that Islamic finance does have some inherent qualities that contribute to its resilience. Most interviewees, including non-Islamic bankers, actually see the Islamic financial industry emerging stronger from the crisis, provided some conditions are met as shown in Table 9.35.

In general, most interviewees opined that IFIs will probably be the big winners when the crisis ends. As a sub-set of ethical finance, IFIs are now considered not so much niche businesses standing at the margins, but rather as representative of a credible, viable and sustainable alternative business model for sound, ethical and socially responsible banking. Many interviewees believe that mainstream finance has moved too far into excess leverage, meaningless innovation and value-destroying investments and therefore, IFIs will undoubtedly find their reputations strengthened.

9.5.4 Risk Mitigation in Islamic Banking

Risk mitigation is currently one of the most contentious issues in Islamic banking. The unique nature of risks faced by Islamic banks, combined with the restrictions added by *Shari'ah*, makes risk mitigation for Islamic banks a difficult and complex process. There are risks that Islamic banks, like their conventional counterparts, can manage and control through appropriate risk policies and controls that do not conflict with the *Shari'ah* principles. However, there are other risks that banks cannot eliminate and can only be

reduced by transferring to or selling those risk in well-defined markets. These risks can generate unexpected losses that need capital insulation, and hedging can help to restrict the impact of unexpected loss. In this section of the interview analysis, the participants' opinions and perceptions were sought regarding the risk mitigation in Islamic banking. Looking at the theme in Table 9.36 and the respondents' answers in Tables 9.37 and 9.38 shows that risk mitigation has become a must in Islamic banking, provided that it is used merely for hedging and not for speculation.

Table 9.36 – Results for Question 11

Question 11	What do you think about risk mitigation in Islamic banking? Is it <i>Shari'ah</i>-compliant? How important is risk mitigation to the industry?
Focused Coding	
1	Could be used for hedging purposes only and not for speculative trading activities
2	Hedging is urgently needed by IFIs
Theme: Risk mitigation tools highly demanded among IFIs but still there is a long way to go.	

Table 9.37 – Focused Coding Number 1 for Question 11

Could be used for hedging purposes only and not for speculative trading activities	
Interview 1	Should be used solely for hedging and not speculation
Interview 2	Necessities permit forbiddance, but also Necessities is determined based on its degree
Interview 22	Many IFIs already use Islamic derivatives but they call them something else because <i>Shari'ah</i> scholars don't like the word 'derivatives'
Interview 33	IFIs have a limited range of <i>Shari'ah</i> -compliant instruments for risk transferring

Table 9.38 – Focused Coding Number 2 for Question 11

Hedging is urgently needed by IFIs	
Interview 8	Not having hedging tools puts Islamic banks at competitive disadvantage
Interview 14	Without proper hedging approaches at our disposal, it feels like trying to clap with one hand
Interview 20	Islamic banking is still in its infancy in terms of hedging solutions
Interview 25	Islamic banking is not mature enough to apply existing conventional market risk mitigation and hedging techniques
Interview 27	Today lack of risk transferring techniques is described as Islamic finance's Achilles heel
Interview 29	Islamic banks need to move quickly towards <i>Shari'ah</i> -complaint hedging solutions
Interview 30	There is growing demand for <i>Shari'ah</i> -compliant hedging products

Respondents almost unanimously agreed that the unique nature of risks faced by IFIs, combined with the restrictions added by *Shari'ah*, make risk mitigation for IFIs a difficult and complex process. However, there was clear disparity among respondents regarding the applicability of *Shari'ah*-compliant hedging solutions. Although derivatives were originally designed to manage or mitigate risks, they have been mutated to trade risks. Some respondents did not have a clear demarcation between the two. They stated that before the crisis, Islamic finance has been criticized because it could not freely hedge its risks using derivatives instruments. Today, this feature has been proven to be truly a blessing in disguise. In addition, the bankers interviewed asserted that even with the *Shari'ah* approved structures, Islamic hedging currently costs much more than it normal costs conventional hedging; it is documentation intensive and banks have to do dual *murabahahs*, rather than a single standardized transaction. *Shari'ah*-compliant tools are available, they need to be signed and accepted quicker and cheaper.

In general, most interviews reveals that there is growing demand for hedging and *Shari'ah*-compliant derivatives, which should be used merely for hedging and not speculation. Risk mitigation within Islamic banking is still to a large extent a grey area and work-in-progress.

9.5.5 The Dichotomy Between the Theory and Practice of Islamic Banking

This section examines the proposition that Islamic banking has been diverting from its roots by mimicking conventional banks. The theme in Table 9.39 indicates that although, in theory, the Islamic financial system is more resilient to economic shocks than the debunked Wall Street model, unfortunately the theory is a long way from fact in its current financial practice. The findings from the analysis through focus coding are presented in the following tables.

Table 9.39 – Results for Question 12

Question 12	How <i>Shari'ah</i>-compliant is Islamic banking within its current practice? Do you believe that Islamic banks need to reform in order to be successful?
Focused Coding	
1	Mimicking conventional became the norm
2	IFIs are in a constant struggle to reconcile faith and finance
Theme: Islamic banking have been long deviating from true <i>Shari'ah</i> principles	

Table 9.40 – Focused Coding Number 1 for Question 12

Mimicking conventional became the norm	
Interview 2	With sorrow there is a tendency of mimicking everything that is offered by traditional banks
Interview 13	They are still heading the same direction as conventional banks
Interview 21	Customers are fed up with the market imitating conventional banking
Interview 27	There is lots of form over substance compliance in Islamic banking
Interview 33	Big difference between practice and principles

Table 9.41 – Focused Coding Number 2 for Question 12

IFIs are in a constant struggle to reconcile faith and finance	
Interview 5	It is not fair to claim that current Islamic banking is merely a disguised version of the conventional substance
Interview 10	IFIs must resolve inner tensions
Interview 16	Everything that is not forbidden in the Holy Quran is ok
Interview 31	You can create and invest in very risky assets and still be <i>Shari'ah</i> -compliant

As Tables 9.40 and 9.41 show, most interviewees criticized Islamic banking for trying to ‘shoe-horn’ *Shari’ah* principles into conventional product structures, where Islamic products replicate conventional products they are being exposed to the same risks. IFIs are also shying away from being sufficiently socially responsible. A number of respondents are of the view that some IFIs deviated to a great extent from the fundamental basis of Islamic finance; they have succumbed to the influence of conventional banking. *Shari’ah* scholars interviewed, therefore, emphasised that there is an internal logic to *Shari’ah* principles, which IFIs will only see if they stop trying to duplicate conventional structures.

9.5.6 The Next Chapter in Islamic Banking

In this last part of the interview analysis, the participants’ opinions and perceptions were sought for on the future of Islamic banking and finance with a particular focus on risk management related issues. The theme in Table 9.42 indicates that various strategies have been suggested by interviewees in order to achieve profitable growth and to enhance IFIs’ competitiveness. However, participants asserted that while asset growth is important, addressing risk issues need to be in place to support sustainable growth. Therefore, strategic focus needs to be timed, with risk management being implemented first, followed by growth. The findings from the analysis through focus coding are presented in the following tables.

Table 9.42 – Results for Question 13

Question 13	What strategies should Islamic banks focus on over the coming decade? What do you believe are the catalysts for the growth of Islamic banking?
Focused Coding	
1	Enhanced Risk management and mitigation
2	Diversification
3	Back to roots
4	Consolidation
Theme: Various strategies suggested. One thing most sides agreed on is the need for enhanced risk management and return to <i>Shari’ah</i> principles	

Table 9.43 – Focused Coding Number 1 for Question 13

Enhanced risk management & mitigation	
Interview 9	The industry urgently needs more advanced risk management architecture
Interview 11	Think capital, think risk ... the risk culture must change and must be embedded institutionally
Interview 13	Enhance risk management practices and culture
Interview 20	Without proper risk mitigation, I can't see how Islamic banking will go be able to compete in a global competitive environment
Interview 28	Clearly there is substantial room for improvement in risk management
Interview 29	IFIs must manage the funding gap carefully

Table 9.44 – Focused Coding Number 2 for Question 13

Diversification	
Interview 25	Concentration kills, IFIs must diversify
Interview 27	Diversification: geographically and operationally

Table 9.45 – Focused Coding Number 3 for Question 13

Back to roots	
Interview 4	Back to basics and core values
Interview 19	Innovate do not replicate

Table 9.46 – Focused Coding Number 4 for Question 13

Consolidation	
Interview 18	Cross-border consolidation
Interview 21	Mergers and acquisitions, there are far too many small Islamic banks

As the findings in Tables 9.42 depict, recommendations given in terms of strategies that Islamic banks should focus on over the coming decade for being catalysts for the growth of Islamic banking are numerous and diversified. Many challenges still lie ahead, as is clear from the interviews. However, the on-going improvements in banks' risk management and mitigation techniques and prudential frameworks for *Shari'ah*-compliant banking give reasonable hope that the Islamic banking industry's growth will contribute positively to broader financial and economic stability, especially after the

financial crisis has proved Islamic finance to be a more ethical and sustainable banking alternative than the debunked Wall Street model.

In particular, IFIs need to improve their liquidity management and diversify their activities from what is mostly a real estate and ‘vanilla’ lending play, to offer a comprehensive service suite including advanced treasury services, innovative asset management, and securitisation services. This will allow them to address the needs of underserved market segments such as sovereign wealth funds and private wealth clients. The bankers interviewed recommended that there is also a lot to be done in trade finance, which used to be the staple of Islamic finance but for many years has been unfashionable. The corporate finance, liability management areas are also open for huge expansion. IFIs should also exploit consolidation in order to benefit from economies of scale as well as enhancement of scope. Both approaches offer diversification benefits.

9.6 CONCLUSION AND SUMMARY

The objective of this chapter is to analyse the semi-structured interviews conducted with Islamic banking professionals. First, the responses of the interviewees were individually recorded and later coded presenting the results of the coded answers in a table. The interview was then organized into various topics to simplify the analysis of the responses given by the interviewees.

As regards to the findings, interviewees indicated that the IFI’s unsound risk-management architecture is reflected by their concentration risks, poor sector allocation, imprudent liquidity management and imbalanced ALM. In addition, the interviews revealed that *Shari’ah*-non-compliance risk is a significant risk facing IFIs. It is also noticeable that both Islamic and non-Islamic bankers had similar risk perceptions about risk management in Islamic banking.

In addition, the interview findings indicate that Islamic banking in its current state can be riskier than conventional banking because of the additional risk management and

mitigation challenges and constraints the industry faces. As the participants stated, there are several risk management areas where improvement can be made to promote and to enhance the functioning of IFIs. Empirical evidence also indicates that many of Islamic banking products aim to essentially replicate the products and processes of the conventional system. Most IFIs prefer mark-up based contracts and shy away from profit sharing contracts that they perceive as more risky.

Interviewees had varying views about the suitability of Basel II and potentially Basel III to Islamic banking and whether IFIs should keep higher or lower capital requirements than their conventional peers. In general, respondents, particularly bankers and rating agencies' analysts agree that with a few amendments, Basel II becomes applicable to IFIs, and that IFIs should hold higher capital levels than their conventional counterparts because the Islamic banking business model at its current state carries more risks. It is interesting to note that, despite a general lack of absolute clarity about Basel III and its potential impact on IFIs, most interviewees agreed that Basel III is a fact that is here to stay.

Furthermore, most interviewees believe that although IFIs have been more resilient to the on-going crisis than their conventional counterparts, the shift in the environment did negatively affect some of them. Since Islamic finance is not an island, it has suffered from the liquidity drought, to the point where a few IFIs have defaulted, but as an industry it now has a track record of resilience, which had not been tested before. While the global crisis gave Islamic banking an opportunity to prove its resilience, it also highlighted the need to address important challenges. The crisis has led to greater recognition of the importance of liquidity risks, and the need for more advanced risk management and mitigation.

Interviewees are in the view also that IFIs will not achieve their objectives by simply mimicking conventional products. While the ideals of Islamic finance offer some compelling ideas, the reality is that much of Islamic finance today is focussed on replicating the conventional system.

Finally, the interviewees almost unanimously agree that there is now an opportunity for Islamic banking to thrive as it has the potential to contribute to a more stable economy. However as it stands in its current form, Islamic banking has little to offer in terms of long-lasting solutions and sustainable financing, as the solution ultimately has to be a moral, not a material one. Islamic banking needs to aim for a truly alternative vision based on the ethical and moral safeguards within authentic Islamic concepts, together with improving risk management and mitigation techniques, enhancing liquidity management, and reducing concentrations.

The empirical findings in this chapter provide efficient response to the research questions and objectives. Having presented the findings of the interview analysis, the following chapter combines these findings with the quantitative findings from the questionnaire data analysis in an integrated manner within the context of the existing literature in order to provide a basis of overall conclusion.

CHAPTER 10

CONTEXTUALISING THE FINDINGS: AN INTERPRETATIVE DISCUSSION

10.1 INTRODUCTION

The discussion in this chapter is based on the results of the conceptual aspects of the research that were gained from the literature review and from data collected and analysed in order to investigate risk management issues in Islamic banking. The available studies on similar subjects are mostly theoretical in nature, considering primary data research only. The results of the current study will therefore fill a significant gap in current scholarship by providing vital empirical information about risk management in Islamic banking.

In the last three chapters, namely 7, 8, and 9, the findings of the quantitative and qualitative data analysis were presented. This chapter discusses the implications of the findings in relation to the existing body of knowledge in the field. It aims to achieve the objective of giving greater meaning to the results through an interpretative method. The aim of this chapter, hence, is to combine the main results of the empirical chapters so as to conduct an integrated discussion of the hypotheses identified earlier, whereby it will be possible to highlight the contribution of this study.

For the purpose of clarity and to provide a more clearly structured approach to discussion, the flow of this chapter corresponds to the research hypotheses and to the thematic structure used in the questionnaire and interviews. Thus, the main discussion of the chapter is divided into ten main sections: Section 10.2: Risk perception in Islamic banking; Section 10.3: Islamic Finance Contracts; Section 10.4: Additional Risk Issues Facing IFIs; Section 10.5: Capital Adequacy for Islamic Banks; Section 10.6: Credit Crisis and Islamic banks, Section 10.7: Risk Management and Reporting; Section 10.8:

Risk Measurement; Section 10.9: Risk Mitigation; Section 10.10: Islamic Banking in Practice; and, finally, Section 10.11: The Next Chapter in Islamic Banking.

10.2 RISK PERCEPTION IN ISLAMIC BANKING

This section aims to provide a discussion through further interpretation of the results on the overall risks faced by Islamic banks by responding to the hypotheses set in advance.

Hypothesis 1:

The main risks facing Islamic banks are reputational risk, Shari'ah-non-compliance risk, asset-liability management risk, liquidity risk, and concentration risk.

In order to identify the main risk facing IFIs, the findings from the questionnaire and interview analyses were examined side by side, in addition to searching the existing literature review.

The null hypothesis is accepted and the alternative hypothesis is rejected by both quantitative and qualitative analyses.

The descriptive statistics for the entire sample, as in Table 7.5, show that the top 5 risks facing IFIs according to mean ranking are: liquidity, ALM, reputational, concentration, and credit risks. *Shari'ah*-non-compliance risk followed with a close mean rank of 3.71, while market risk was considered as the least risky (2.72). Of note is the proximity of mean values among the top risks.

These findings are no surprise, as liquidity management is far from being an easy task for IFIs; it is structurally more challenging at IFIs because there is still a significant shortage of liquid instruments, despite the efforts of the various central banks to provide a variety in which Islamic banks can place their surplus cash. In fact, Tamweel and Amlak would have gone insolvent if not for government help. As discussed in Chapter 3, there have been some efforts to improve liquidity management and to develop an Islamic capital market and tradable Islamic financial instruments, but to date these have been limited.

ALM and liquidity risks are closely correlated, as the earlier is basically the practice of managing risks that arise due to mismatches between the assets and liabilities of a bank. For IFIs, the limited range of possible funding sources leads to concentrated liabilities, imbalanced funding mixes, and stretched capital management strategies. Therefore, IFIs' funding bands usually remain imbalanced and IFIs tend to fill the gaps by capital. However, capital is a very expensive way of funding. This is why Islamic banks, particularly in the GCC, engage in higher risk/high yield transactions to make up for the expensive funding via capital and consequently keep shareholders satisfied with high returns. Those IFIs forced themselves, unintentionally, up the risk curve instead of diversifying their risks. This makes the balance sheet of Islamic banks quite polarised, with high real estate assets, which led Islamic banks to a high Concentration Risk, on both sides of the balance sheet. A typical balance sheet structure of many IFIs displays high exposure to properties on the assets side and limited funding sources with high reliance on short-term liabilities and capital on the other side. This is a very unfavourable funding continuum that led IFIs to a vicious circle of risks.

Moreover, IFIs tend to have a concentration base of assets and/or deposits; they face high concentration by name and sector, as well as high geographical concentration. The limited scope of eligible asset classes creates asset concentration risk. Focus on tangibles had led to increased property-related financings at IFIs, affected by relatively undiversified nature of the economies. As the real estate markets are highly volatile in the GCC, the concentration risk is magnified because concentrations are even more problematic when they are biased towards high-risk sectors. High lending concentrations to construction and real-estate companies are common for many IFIs. Moreover, the construction and real-estate sectors are highly cyclical, require high capital-intensity, and typically have a long production cycle, rendering the IFIs with high exposures to this sector vulnerable to shifts in the market environment. According to Smith (2010), the combined exposure to the real-estate and construction sector is in some cases higher than 100% of Tier 1 capital for Islamic banks, particularly in the GCC.

Respondents also identified credit risk as being among the top risks that face IFIs. Traditionally, a large part of a bank's profit came from lending businesses. Also, the majority of bank losses were related to this aspect of risk management; hence the focus was primarily on credit risk. Credit risk management for IFIs is further complicated by a number of factors like contractual complications with Islamic banking products creating additional credit risks, difficulty of foreclosure, lack of credit assessment models, track records, robust ratings, mitigation techniques, *etc.*

Furthermore, reputational risk is critically important for Islamic banks as a growing industry that is built on trust and transparency. Finally, *Shari'ah* compliance is inherently and systemically significant to Islamic banking. Any divergence from *Shari'ah* principles exposes the IFI to a wide range of risks at different levels as discussed in previous chapters.

Of note is the political risk. Under Question 8 of the questionnaire, only two respondents added political and country risks as extra risks facing IFIs. However, the lesson from the recent political unrest and revolutions in the Middle East is that political risk – which was previously largely ignored – does matter. Political risks are hard to predict and are not recurring. The nature of political risk is that it can strike suddenly and have unpredictable consequences as has already been witnessed this in Tunisia, Egypt, Libya, Syria, Bahrain, and Yemen. Political risk has been latent for many years in the Middle East, but has now erupted across most countries in the region. Events just the past few months show that the structural landscape of the region's politics is changing fundamentally. Under these circumstances, long-standing assumptions concerning political risk and its potential economic impact are being challenged. There is no doubt that political change in the Middle East could ultimately be positive as governments that enjoy greater legitimacy tend to be more resilient to economic shocks, which require governments to take tough economic measures. In the short term, however, the process of political change has brought negative economic pressures on the economies of these countries, hence affecting IFIs' operating directly or indirectly through the region. On 15 May 2011, Zawya reported that close to USD 1.6-trillion worth of projects are cancelled or are on

hold in the Middle East and East North African market, where most IFIs reside and/or operate, because of the recent events.

If the questionnaire was to be re-distributed now, after the eruption of the Middle Eastern revolutions, political risk is most likely to attract much higher scores given that most Islamic banks are located in, or directly affected by, the Middle East.

Interviewees also indicated that the IFI's unsound risk-management architecture is reflected by their concentration risks, poor sector allocation, imprudent liquidity management and imbalanced ALM. In addition, interviews revealed that *Shari'ah*-non-compliance risk is a significant risk facing IFIs. It is also noticeable that both Islamic and non-Islamic bankers had similar risk perceptions about risk management in Islamic banking. This supports Research Hypothesis 1.

This further confirms the findings from the research conducted by Al-Omar and Abdel-Haq (1996), who identified credit and liquidity risks for Islamic banks to be higher than for conventional banks. Also, Khan and Ahmed (2001) found that IFIs face some risks that are different from those faced by conventional financial institutions. They revealed that some of these risks are considered more serious than the conventional risks. While Moody's (2009c) highlighted that IFIs suffer from liquidity management and stated that "liquidity tends to be a financial crutch for Islamic banks", the report indicated that the handling of asset-liability mismatches is not a new problem in Islamic banking; it is as old as Islamic banking itself.

Furthermore, breaking down the descriptive statistics among different groups provided significant findings, as summarized in Table 7.6. Three out of the top 4 risks identified by Islamic bankers are also listed by conventional bankers among the top 4 risks. In general, risk perceptions among bankers, whether Islamic or non-Islamic, reflected similar patterns. This was emphasised by the frequency distribution and the K-W test of significance in Chapter 8.

Subsequently, further sub-hypotheses were formulated in order to further investigate the impact of various categories of respondents on the risk perception. This was done with the objective of exploring if there are trends and correlations among the different control variables.

The sub-hypotheses are as follows:

H₁₋₁: There is no statistically significant difference among the respondents in relation to their perception of the various risks facing IFIs according to Region.

As can be seen in Table 8.1, at $\alpha = 0.05$, the null hypothesis is rejected and the alternative hypothesis is accepted, since the tested p-value is lower than the critical p-value for corporate governance risk ($p=0.002$), implying that there are statistically significant differences in the risk perception of corporate governance risk among different regions.

The mean rankings for credit, liquidity, corporate governance, and concentration risks remain very similar between fully-fledged Islamic banks and Islamic subsidiaries, and slightly change when conventional banks are added to the sample; however, the pattern is still obvious. The findings indicate that there is an observed pattern, which can be generalized to most of the risk categories. This can only be explained by market realities. In line with this, Noraini *et al.* (2009) found no evidence that Islamic bankers in different countries perceived risks differently; that research focused solely on Islamic bankers.

Moreover, the K-W test with 'region' as the control variable for different samples of data, in terms of the institutional nature of respondents consistently show that there is a significant difference between regions in risk perception about corporate governance risk. A bank's corporate governance practices can have a material impact on its risk profile, particularly where governance practices are weak.

This was re-emphasised by the K-W test results for statement 10 in questionnaire 11 of the questionnaire. When asked how strongly they agree or disagree with '*Corporate governance is generally weak in Islamic banks*', the majority of respondents agreed, and

the K-W test had very significant results across various control variables as summarised in Table 8.19.

According to a recent study by Safieddine (2009), there is a need to give special attention to corporate governance issues in IFIs due to the importance of corporate governance for economic development, the growth of Islamic finance, the critical role of governance in financial institutions, and the unique agency issues faced by these institutions. Most of the surveyed Islamic banks surveyed by Safieddine (2009) recognize the importance of incorporating governance mechanisms. Some governance instruments, including the board of directors, *Shari'ah* Supervisory Boards, and internal control departments, appear to have the qualifications and composition that would equip them to mitigate agency issues; however, deficiencies in the actual practices of governance are still observed, leaving agency issues unresolved. The establishment of a governance committee or an audit committee is not common among the banks surveyed, and clear internal audit functions are not properly established. Therefore, the financial reporting process does not appear to be tightly monitored, and this could potentially result in agency problems. Most importantly, IAHs and other investors still lack access to relevant information, and they continue to lack influence on management decisions, which expands the divergence between their cash flow and monitoring rights.

Khandelwal (2008) also argues that transparency and corporate governance in the Islamic financial services industry should always be developed and adjusted to meet the specific needs of Islamic banks.

As explained in Chapter 3, IFIs do not generally have robust corporate governance frameworks in place. However, in this they are no different from some of their local conventional peers. For instance, family ownership/majority ownership by a core shareholder group is seen in both segments of an Islamic country's banking system. Their prevalence weakens the rights of minority shareholders, could lead to unmerited appointments or promotion of family members, and could give rise to conflicts of interest between shareholders and bondholders. The lack of genuinely independent directors is a

shortcoming of emerging markets in general and impairs a board's ability to maintain accountability and provide strategic guidance. As discussed in Chapter 3 (Section 3.6.6), the two cases of Ahmad Hamad Algozaibi & Brothers and Saad Group in Saudi Arabia had raised questions about corporate governance in the Middle East as the two conglomerates were, to a certain degree, a family affair.

In fact, weak corporate governance structures are a general feature of Islamic banking. For a number of IFIs, corporate governance systems are opaque, unaccountable and often heavily 'relationship-based', as opposed to the predominantly rule-based corporate governance systems of conventional banks in developed markets. Often, Islamic banks' ownership structures are complex and not transparent; in addition, developed corporate governance structures comprising qualified independent board members, effective committee structures, minority shareholders interest *etc.*, are absent. In many cases, the owners or shareholders hold key management positions and dominate the board of directors, thus making it difficult for the board to manage the conflicts of interest between the controlling shareholder's interests and those of the minority shareholders.

Banks in the Middle East in general have traditionally enjoyed a cozy relationship with prominent family-owned businesses. The practice of so-called name lending – extending credit based on the reputation and standing of the company's owners rather than on rigorous examination of its financial health – is prevalent.

According to Zawya, most family businesses in the Middle East are less than 65 years old. Many of them began as trading houses and have now become diversified conglomerates. However, a host of challenges facing many family businesses in the Gulf are worth considering:

- (i) Succession issues and transferring effective control and knowledge from one generation to the next is a challenge and, as shareholders (family members) become numerous, they impact on efficiency of decision making;

- (ii) Attracting outside talent and relinquishing control when necessary are always important. Over the years, family groups have grown into multi-billion-dollar conglomerates, sometimes without commensurate skill resource;
- (iii) Family businesses need to shift from being purely operational to thinking in more strategic terms;
- (iv) Separation of management and ownership;
- (v) Diversification into multiple businesses can lead to over-extension beyond the group's core knowledge and competences.

The GCC Board Directors Institute, a Dubai-based non-profit that seeks to improve corporate governance standards, issued a report in 2009 highlighting the need for reform in the six GCC member states – Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. The report, “Building Better Boards,” notes that only 55 percent of GCC companies disclose the main executive positions of board members, compared with 100 percent in Europe, and only 32 percent of companies disclose other positions held by board members, compared with 97 percent in Europe. It urges a reduction in the number of boards on which directors serve; the appointment of strong audit, nomination and remuneration committees; efforts to attract more international directors to the boards of Gulf companies; and the promotion of greater corporate transparency (Townsend, 2009).

Corporate governance risk in the GCC, where most Islamic banks reside, has become publicly exposed. Poor corporate governance imposes heavy costs. The need for additional efforts toward improved corporate transparency is paramount. As long as Gulf companies and banks restricted their activities largely within the region, there was little pressure to change those opaque practices. But growing links with international markets and financial institutions are generating greater demands for reform. Changing corporate practices, however, would not be easy. Governance reform needs to be addressed against the cultural backdrop in the Gulf, which places great emphasis on reputation and discretion.

The same trend could be established when different K-W tests were conducted with different institutional settings. As discussed in the following hypotheses, it was concluded that three control variables (region, country, and nature of FI) demonstrate some significant differences about risk perception among respondents, but not for all risks.

Furthermore, although, statistically, corporate governance risk is the sole significant risk identified by respondents, examining the mean ranking of other risks like concentration, credit, and liquidity risks reveal a structural pattern determined by market realities. Also, as depicted by Tables 8.4 to 8.6, the differences between the mean rankings is noticeable among different regions for these risks and when conducting the K-W test for different samples using different institutional settings, which confirms that there is significant difference between regions.

H_{1.2}: There is no statistically significant difference among the respondents in relation to their perception of the various risks facing IFIs according to the country in which they operate.

At $\alpha = 0.05$, the null hypothesis is rejected and the alternative hypothesis is accepted. The K-W test was conducted in a similar manner according to ‘country’ as control variable; the results confirm those produced by the test conducted according to the ‘region’.

H_{1.3}: There is no statistically significant difference among the respondents in relation to their perception of the various risks facing IFIs according to the Respondent’s Position.

At $\alpha = 0.05$, the null hypothesis is accepted and the alternative hypothesis is rejected, since the tested p-value is higher than the critical p-value. Therefore, the results suggest that statistically there are no differences in the risk perception among respondents according to their position.

H_{1.4}: There is no statistically significant difference among the respondents in relation to their perception of the various risks facing IFIs according to Accounting Standards.

At $\alpha = 0.05$, the null hypothesis is accepted and the alternative hypothesis is rejected, since the tested p-value is higher than the critical p-value. The results of the K-W test in Table 8.7 show that there are no significant differences among different respondents' categories.

H₁₋₅: There is no statistically significant difference among the respondents in relation to their perception of the various risks facing IFIs according to Nature of the FI.

For this hypothesis, the results from the K-W test provided dispersed data. At $\alpha = 0.05$ liquidity, ALM, *Shari'ah* non-compliance, concentration, reputation, and displaced commercial risks had significant p-values, while the remaining risks did not. Therefore, the null hypothesis is accepted and the alternative hypothesis is rejected, since the tested p-value is lower than the critical p-value for most risks. Further examination of the mean rankings for risks with significant p-value, as summarised in Table 8.9, confirms the dispersion of data as no trend could be established. In general, fully-fledged Islamic banks and conventional banks with Islamic activities have higher mean values than conventional banks alone and 'Others', particularly for liquidity, ALM, and displaced commercial risks. This trend, nonetheless, slightly changes for concentration and reputation risks. Of note is also the proximity of mean value among fully-fledged Islamic banks and Islamic subsidiaries, which reflects the similar perception about risks in Islamic banking. One possible reason for this can be the similar knowledge and awareness about Islamic banking products and structures among those professionals with hands-on experience in Islamic banking. This confirms the findings of the descriptive statistics in Section 7.2.2.

Moreover, this coincides with the findings of the qualitative analysis as on the basis of the interview findings, there is high degree of correlation between the responses of the two groups. However, differences generally existed between the responses of bankers and non-bankers.

Based on the above hypotheses and the findings from both quantitative and qualitative analyses, it can be concluded that three control variables (region, country, and nature of FI) contribute to some significant differences about risk perception among respondents, but not for all risks. In addition, this can also be supported by the fact that there is no significant difference in perception levels between respondents from stand-alone Islamic banks and Islamic subsidiaries. Initially, it was expected that respondents from stand-alone Islamic banks have stronger perception compared to those from Islamic subsidiaries for two reasons: firstly, stand-alone Islamic banks have been in existence much longer than Islamic subsidiaries, and, secondly, the respondents from stand-alone Islamic banks have the advantage of dealing with only Islamic banking products and services whereas Islamic subsidiaries still need to operate side-by-side with their respective conventional counterpart in sharing the same operating platforms and buildings. Nevertheless, the results have indicated otherwise. Differences could be spotted between perceptions of conventional banks and stand-alone Islamic banks, and more noticeably between the perceptions of bankers and non-bankers, represented by ‘Others’. This could be because bankers, whether Islamic or non-Islamic, have hands-on experience and better understanding about the Islamic banking model and its risk architecture than non-bankers who tend to be more theoretical in their approach.

10.3 ISLAMIC FINANCE CONTRACTS

This section aims to provide a discussion through further interpretation of the results on the usage and risk perception of Islamic finance contracts by responding to the hypotheses set in advance.

10.3.1 Intensity of Use of Different Islamic Finance Contracts

Hypothesis 2:

Islamic bankers prefer mark-up based contracts (murabahah, salaam, istisna'a, and ijarah) and shy away from profit sharing contracts (musharakah and mudarabah).

Descriptive statistics as depicted by Table 7.8 demonstrate that *murabahah* contracts are by far the most used contracts. This “*murabahah* syndrome” has been under criticism

from many *Shari'ah* scholars but unfortunately still remains the backbone of Islamic banking and finance; it has been intensively used by IFIs for money market transactions, investment and retail activities. Recently, more banks have been using *walaka* for money market transactions to replace the commodity *murabahah*, which involves more complications and raises *Shari'ah* concerns. The low mean for *musharakah* and *mudarabah* reflects Islamic banks' reluctance to hold risk-sharing assets. Moreover, the questionnaire revealed that *salaam* has a long way to go before becoming commonly used by IFIs. It is evident from the responses that the banks' first preference is for financial instruments that are generated through debt creating, sale contracts and leasing instruments. This is enhanced by the responses about risk perception in different modes of financing. These findings are supported by the results of the Chi-square test which indicated that the Chi-square values of the contracts are very significant ($p < 1\%$).

Moreover, evidence from interview analysis indicates that many of Islamic banking products aim to essentially replicate the products and processes of the conventional system. Most IFIs prefer mark-up based contracts and shy away from profit sharing contracts that they perceive as more risky as explained under Hypothesis 3.

Therefore, the hypothesis stating that Islamic bankers prefer mark-up based contracts and shy away from profit sharing contracts is accepted by both quantitative and qualitative analyses.

Subsequently, the following sub-hypotheses were tested to identify whether there is any statistically significant difference in the level of understanding across various groups of respondents based on the selected control variables.

H₂₋₁: There are no statistically significant differences among the respondents' use of Islamic finance contracts according to Region.

At $\alpha = 0.05$, the null hypothesis is rejected, since the significant p-value is for *mudarabah* is lower than the critical 0.05 p-value, hence the alternative hypothesis is accepted. Inferential statistics in Table 8.11 show that 'Other Middle East' and 'Southeast Asia' use

mudarabah the most with means values of 32.5 and 27.13 respectively, while Europe (17.71) and the GCC (16.74) rank less on the use of *mudarabah*, as FIs in these regions tend to rely more on *murabahah*, *wakala*, and *ijarah*. This should be explained by the economies of the regions in question.

H_{2.2}: There are no statistically significant differences among the respondents' use of Islamic finance contracts according to the Respondents' Position.

As can be seen in Table 8.10, the results suggest that the null hypothesis is accepted as p-value for all contracts is higher than the critical 0.05 p-value, and hence it can be concluded that the Respondents' Position does not play a statistically significant determining role.

H_{2.3}: There are no statistically significant differences among the respondents' use of Islamic finance contracts according to the Nature of the FI.

At $\alpha = 0.05$, the null hypothesis is rejected, since the significant P-values for *wakala* and *salaam* are lower than the critical 0.05 p-value, hence the alternative hypothesis is accepted. This is also emphasised by the findings of the qualitative data analysis which reflects that fully-fledged Islamic banks have some appetite for risk-sharing contracts, although not enough, unlike Islamic subsidiaries and conventional banks which wish to share rewards without sharing risks, and prefer the use of mark-up based contracts.

H_{2.4}: There are no statistically significant differences among the respondents' use of Islamic finance contracts according to the Nature of Activities.

The results shown in Table 8.10 indicate that the null hypothesis is accepted, which suggest that Nature of Activities plays no statistically significant determining role.

10.3.2 Risk Perception in Different Islamic Finance Contracts

Hypothesis 3:

Profit-sharing contracts are perceived as more risky than mark-up based contracts in the Islamic finance industry.

The risk perceptions of the respondents in different modes of financing are summarized in Table 7.9, which shows that respondents perceive *mudarabah* and *musharakah* (mean value of 6.21 and 5.89 respectively) to be riskier than *wakala* and *murabahah* (mean value of 2.26 and 1.90 respectively). The manipulation of the contracts by Islamic finance practitioners in order to mimic conventional products made the risk perception of equity and risk sharing contracts, for instance *wakala*, similar to risk perception of fixed-income contracts like *murabahah*. This created a gap in risk perceptions of different contracts among different groups of respondents. These findings are supported by the results of the Chi-square test which indicated that the Chi-square values of the items are very significant ($p < 1\%$). In addition, the Friedman test of significance in Table 8.13 shows that there is a significant difference with regard to the risk in each mode of financing at 1% significance level. This explains why IFIs shy away from such instruments due to their lack of appetite for risky assets, which in turn is due to IFIs trying to emulate the conventional model.

Qualitative analysis confirmed those findings as most interviewees indicated that in general IFIs prefer mark-up based contracts and shy away from profit sharing contracts that they perceive as more risky. Therefore, Hypothesis 3 is supported.

Although Islamic banking offers a combination of both equity and non-equity based instruments, the system's preference for equity contracts – in theory – makes it more efficient and stable than debt-based conventional systems. Sadr and Iqbal (2002) presented empirical evidence based on the data gathered over 15 years from the Agricultural Bank of Iran which demonstrated that equity based financing increase transparency, monitoring, and supervision, and thus improve efficiency and stability of

the financial system. Unfortunately, IFIs tend to shy away from equity and partnership based instruments for several reasons, such as the inherent riskiness and additional costs of monitoring such investments, low appetite for risk, and lack of transparency in the markets.

“It may be seen that greater reliance on equity financing has to be an indispensable part of the strategy of any system, which wishes to actualize the humanitarian goals of need fulfilment, full employment, equitable distribution of income and wealth, and economic stability. And hence the ideals of Islamic economics and finance.” (Asutay, 2009a)

The result is as *per* the expectation of the researcher and further confirms the findings from the research conducted by Noraini *et al.* (2009), who found that that Islamic bankers perceive *salaam* and *istisna'a* to be riskier than *murabahah* and *ijarah*, and that profit sharing assets (*mudarabah* and *musharakah*) are perceived to be more risky than mark-up based assets particularly *murabahah* and *ijarah*, in the exception of *Salam*. Also, Khan and Ahmed (2001) found that profit-sharing modes of financing are perceived to have higher risk by bankers, while *murabahah* was ranked as having the least risks followed by and *ijarah*. This is because Islamic debt contracts (like *murabahah*) give the banks a relatively certain income and the ownership of the leased asset remains with the bank. Nagaoka (2007) reflected on the dichotomy in Islamic debt securities and concluded that Islamic finance strongly adheres to the financial transactions that involve real assets or those that can be retrieved from the assets while the accumulation of wealth by money-chained transactions is considered highly unacceptable in Islamic finance.

The following sub-hypotheses were developed to see if there is any significant difference in the level of knowledge across the groups of respondents for each category. The statistical tests for all the relevant questions in relation to the hypotheses are presented in Tables 8.13 to 8.17.

H₃₋₁: There are no statistically significant differences among the respondents' risk perceptions about Islamic finance contracts according to Region.

As depicted in Table 8.13, at $\alpha = 0.05$, the null hypothesis is rejected, since the K-W test results for *murabahah* recorded a lower significant value than the critical p-value. Therefore, the null hypothesis suggests that, statistically, there is a significant difference in the level of risk perception about *murabahah* across different regions. This is expected because *murabahah* is extensively used globally. Moreover, mean rankings for *murabahah*, in Table 8.14, show that 'Other' regions, like Turkey and Pakistan, have a higher ranking (54.0) than the GCC (43.13) and Europe (38.63), while the remaining regions follow. This can be attributed to two main reasons. First, the European and GCC markets are more sophisticated in their financial awareness about risk management, products' structures, and the use of risk hedging techniques than Turkey and Pakistan, which has a direct impact on the risk perception among those markets. Second, at the time of conducting this questionnaire, European and GCC markets enjoyed stable political environment and 'relatively' less volatile business cycles compared to 'Others'.

This trend was confirmed when K-W test was repeated for different institutional data. There is a general pattern in terms of perception about *murabahah*-related issues. Such regional and institutional differences can be attributed to market conditions prevailing in each region.

However, interview data analysis did not reveal such regional differences among respondents when it comes to risk perception about different Islamic finance contracts. Most interviewees, regardless of the region, agreed that risk sharing among Islamic banks is still the exception rather than the rule.

H_{3.2}: There are no statistically significant differences among the respondents' risk perceptions about Islamic finance contracts according to the Respondent's Position.

For this hypothesis, the results from the K-W test accept the null hypothesis and reject the alternative hypothesis, since all the Islamic finance modes of finance registered an insignificant p-value of more than the critical p-value of 0.05 as can be seen in Table 8.17. Therefore, it can be concluded that, statistically, there is no significant difference in the level of risk perception about Islamic finance contracts according to the Respondent's Position.

Qualitative analysis in Chapter 9 reveals that *Shari'ah* scholars and consultants in a particular encourage the use *musharakah* and *mudarabah* contracts more than bankers do. Also, the earlier group considers risk sharing modes of finances to be less risky, while the latter perceives the mark-up based modes of finance to be less risky.

H_{3.3}: There are no statistically significant differences among the respondents' risk perceptions about Islamic finance contracts according to Nature of FI.

As depicted in Table 8.17, at $\alpha = 0.05$, the null hypothesis is rejected and the alternative hypothesis is accepted, since the p-value for *murabahah* (0.03) is lower than the critical p-value of 0.05.

This is also emphasised by the findings of the qualitative data analysis which reflects that fully fledged Islamic banks believe that *musharakah* and *mudarabah* are not as risky as perceived by Islamic subsidiaries and conventional banks, which tend to find comfort in using *murabahah* and *wakala* products.

H_{3.4}: There are no statistically significant differences among the respondents' risk perceptions about Islamic finance contracts according to Accounting Standards used.

Table 8.17 depicts that at $\alpha = 0.05$, the null hypothesis is rejected, since the K-W-test results for *murabahah* recorded a lower significant value (0.028) than the critical p-value. Therefore, the alternative hypothesis suggests that Accounting Standards plays a statistically significant determining role.

Qualitative data analysis did not test responses against accounting standards used by the FI.

H_{3.5}: There are no statistically significant differences among the respondents' risk perceptions about Islamic finance contracts according to Nature of Activities.

At $\alpha = 0.05$, the null hypothesis is accepted, since the K-W-test results for all contracts recorded a higher p-value than the critical p-value as can be seen in Table 8.17.

10.4 ADDITIONAL RISK ISSUES FACING IFIS

This section aims to provide a discussion through further interpretation of the results on additional risk issues facing IFIs by responding to the hypothesis set in advance.

Hypothesis 4:

There is no substantial difference between risk management in Islamic banking and conventional banking.

Descriptive statistics in Chapter 7 indicate that risk management for IFIs is more challenging than it is for conventional banks. Not only do IFIs face some risks that are different from their conventional peers, but these risks are also more serious and not well understood. Displaced commercial risk and *Shari'ah* standardisation are obvious examples of additional challenges facing IFIs. The findings also highlighted that corporate governance is generally weak in Islamic banks, which re-emphasises the findings of sub-hypothesis H_{1.1}.

In addition, risk management functions in IFIs in many cases lack influence in the bank's decision making process. They may in some cases appear strong on paper, although the *de facto* governance behind this is not robust. This could include, for example, a lack of sufficiently senior risk-management representation at the board level, insufficient powers delegated to risk management, or the presence of strong shareholders or political influences that are able to override or influence risk-management's decision making. Engel (2010) argues that risk-managers in IFIs generally lack independence. Rarely can risk managers veto or influence strategy in Islamic banks and they are mostly tasked with managing existing exposures and monitoring disbursed loans, alongside other back-office functions.

Furthermore, factor analysis was used in responding to Hypothesis 4. The final outcomes and a detailed discussion of the factor analysis are available in Section 8.2.1.3. The factor analysis results suggest that all eleven variables of risk perception are reduced to three components, namely 'Risk Perception', '*Shari'ah* Compliance', and finally 'Rate of Return'.

The findings from the quantitative analysis echo the interview findings which indicate that Islamic banking in its current state can be riskier than conventional banking. There are several risk management areas where improvement can be made to promote and to enhance the functioning of IFIs. Risks in IFIs must be assessed in an integrated manner and risks for IFIs should not be managed using same techniques used in conventional banking.

The following sub-hypotheses were formulated in order to identify whether there is any significant differences across various groups in the respective control variables.

H_{4.1}: There are no statistically significant differences among respondents' perceptions about additional risk management issues in Islamic banking according to the Nature of FI.

The results in Table 8.18 suggest that the null hypothesis is rejected in favour of the alternative hypothesis, indicating that there are significant differences according to Nature of FI. In addition, in order to respond to this hypothesis after conducting factor analysis, further analysis was carried out using a one way between groups MANOVA test in order to investigate if there is any significant difference between the three component groups identified under factor analysis in relation to same control variables. This helped to locate the impact or significance of each control variable on the established distribution. The results in Table 8.30 signify 30.1% and 33.6% of the variances in 'Risk Perception' and 'Shari'ah Compliance' scores are explained respectively by the nature of FI.

H_{4.2}: There are no statistically significant differences among respondents' perceptions about additional risk management issues in Islamic banking according to Region.

As can be seen in Table 8.19, similar conclusions can be derived from this category analysis, where the statistical results reject the null hypothesis. Similarly, after conducting factor analysis further analysis was carried out using a one way between groups MANOVA test in order to investigate if there is any significant difference between the three component groups in relation to same control variables. This helped to locate the impact or significance of each control variable on the established distribution. The results in Table 8.26 signify 45.9% and 34.4% of the variances in 'Risk Perception' and 'Shari'ah Compliance' scores are explained respectively by the region.

Conducting the MANOVA test according to 'region' and 'nature of FI' as independent variables provided consistent results. It can be concluded that 'Risk Perception' and 'Shari'ah Compliance' are significant dependent variables and have strong explanatory power, while 'Rate of Return' does not follow the pattern.

H_{4.3}: There are no statistically significant differences among respondents' perceptions about additional risk management issues in Islamic banking according to the Respondent's Position.

Similarly for this sub-hypothesis, the results reject the null hypothesis as Table 8.19 depicts. The p-value for statements 2, 3, 4, 7, and 10 are lower than the critical p-value of 0.05. It can be concluded that the Respondent's Position play a statistically significant determining role.

H_{4.4}: There are no statistically significant differences among respondents' perceptions about additional risk management issues in Islamic banking according to the Nature of Activities.

The inferential statistical results in Table 8.19 reject null hypothesis and accept the alternative hypothesis as the p-value for statements 2, 4, 7, 8, 10 and 11 are significantly lower than the critical p-value of 0.05.

H_{4.5}: There are no statistically significant differences among respondents' perceptions about additional risk management issues in Islamic banking according to the Accounting Standards used.

Similarly, for the Accounting Standards control variable, the null hypothesis is rejected in favour of the alternative hypothesis, since the p-value recorded for some statements in the Table 8.19 is lower than the critical p-value limit.

10.5 CAPITAL ADEQUACY FOR ISLAMIC BANKS

This section aims to provide a discussion through further interpretation of the results on capital adequacy issues facing IFIs by responding to the hypothesis set in advance.

Hypothesis 5:

Capital requirements levels should be lower in IFIs than in conventional banks.

The frequency distribution in Figure 7.5 shows that 65.3% of respondents believe that IFIs should hold higher capital levels than their conventional peers. Only 8.3% of

respondents indicated that IFIs should hold lower capital levels, 18.1% indicate the same level, while 6.9% indicated they do not know the answer.

In addition, most interviewees believe that IFIs should hold higher capital levels than their conventional counterparts because the Islamic banking business model at its current state carries more risks.

Therefore, the hypothesis stating that capital requirements levels should be lower in IFIs than in conventional banks is rejected by both quantitative and qualitative analyses, which implies that capital requirement levels should be higher in IFIs than in conventional banks.

The responses are against the researcher's expectations, as most literature reviews suggest that IFIs should have lower capital requirements than their conventional peers. Archer and Abdel Karim (2007), for instance, argue that the risk-sharing characteristic of PSIA in Islamic banking could greatly enhance risk management and mitigation in IFIs provided that proper pricing, reserving, and disclosure are maintained. Therefore, IFIs should be subject to lower capital requirements because according to the IFSB supervisory discretion formula, α represents the extent of total risk assumed by the PSIA, with the remainder absorbed by the shareholders on account of displaced commercial risk. In line with this, Farook (2008) argues that, if IFIs practically apply the PLS principle, losses will be shared with PSIA and hence the Islamic bank will be prone to lower risks leading to lower required minimum capital. The IFSB supervisory discretion formula is a step in the right direction, with α representing the extent of total risk assumed by the PSIA, with the remainder absorbed by the shareholders on account of displaced commercial risk. IFIs that practically implement the risk-sharing technique will be keen on proper disclosure to enjoy a higher capital relief.

While the researcher agrees with the concepts discussed in the literature review from an academic point of view, the practice remains to be different (as depicted by the primary research findings). In order to practically apply the risk-sharing principle, the IFSB

standards should be made mandatory for Islamic banks to allow for wider implementation, consistency, and standardisation of risk management principles across the Islamic financial industry. This requires collaboration between regulators, IFSB, AAOIFI, Islamic banks, and industry practitioners.

Hypothesis 6:

Basel II was drafted with conventional banking very much in mind. IFIs should follow their own standards, e.g. IFSB Principles on capital adequacy.

The frequency distribution in Figure 7.6 shows that the majority of respondents believe that Basel II could be applied to IFIs but with a few amendments. In fact, most IFIs use Basel II capital adequacy standards, with greater use of basic and standardised approaches rather than advanced models. This is due to the relative simplicity of their capital requirements. Moreover, 87.5% of respondents believe that Basel II standards should be reviewed after failing to prevent the current crisis. As depicted in Figure 7.6, there is an obvious lack of clarity on the applicability of the proposed Basel III standards to Islamic banking, as 65.3% of respondents were ‘neutral’ when asked about the issue, 27.8% either ‘disagree’ or ‘strongly disagree’ that the proposed Basel III rules would be easily applicable to Islamic banks. Around one third of respondents do not believe that the new standards, with its stricter capital, leverage, and liquidity rules, are likely to prevent another financial crisis. The break down between Islamic and non-Islamic bankers reveals the same pattern as shown in Table 7.15.

Interviewees had varying views about the suitability of Basel II and potentially Basel III to Islamic banking. In general, respondents, particularly bankers and rating agencies’ analysts agree that with a few amendments, Basel II becomes applicable to IFIs in order to ensure a level playing field for all banks. It is interesting to note that despite a general lack of absolute clarity about Basel III and its potential impact on IFIs, most interviewees agreed that Basel III is a fact that is here to stay. There is also a general belief among respondents that although Basel III is more demanding than Basel II with regard to addressing systemic risk, it may not be the last of the Basel series. This is mainly because risk is inherent in the complex global financial markets of increasing sophistication. Basel

III cannot work on its own. As the regulators recognize, financial stability is about far more than capital and liquidity ratio. Banks will still fail even if higher ratios are implemented. Regulators need to work on other steps to reduce systemic risk including enhanced transparency, risk sharing, and value creation. All these concepts are rooted in Islamic finance, but unfortunately tend to be neglected.

Therefore, hypothesis 6 is rejected by both quantitative and qualitative analyses.

Although the result is not as per the expectations of the researcher, it confirms the findings from the research conducted by Noraini *et al.* (2009), who concluded that that Basel II could be applied to Islamic banks but with some adaptations and the IFSB could play an important role in this context. In addition, consideration of the implications of Basel III is at an early stage for most IFIs. While Akkizidis and Khandelwal (2007) argue that Basel II is primarily for conventional banks and thus does not offer a great help to IFIs. They believe that Pillars I and II of Basel II have limited applicability for Islamic banking, while the third Pillar of Basel II on market disclosure is largely applicable to IFIs because social responsibility and transparency are of utmost importance in Islamic finance.

Fitch Ratings (2011) expects Basel III to have little impact on IFIs' capital adequacy, as capital ratios are generally sound and consist largely of core Tier 1 capital. Hybrid capital is negligible in the region. However, new liquidity requirements may be significant, as IFIs have a substantial maturity mismatch: customer deposits are contractually short term (albeit very stable), while IFIs are financing increasingly longer-term assets. This may require some adjustment to their liquidity management.

Subsequently, the following sub-hypotheses were developed to see if there is any significant difference in the perception across different groups of respondents for each control variable.

H₆₋₁: There are no statistically significant differences among the respondents' views about capital adequacy for Islamic banks according to Region.

At $\alpha = 0.05$, the null hypothesis is rejected, since the K-W test results for four statements (out of five) recorded a lower significant value than the critical p-Value as depicted in Table 8.31 .

H₆₋₂: There are no statistically significant differences among the respondents' views about capital adequacy for Islamic banks according to Nature of FI.

As Table 8.32 shows, at $\alpha = 0.05$ the null hypothesis is accepted and the alternative hypothesis is rejected for all statements except Statement 5. All statements are statistically insignificant except Statement 5 which shows different views between bankers (whether Islamic or conventional) and non-bankers (p-Value = 0.02), which is also evident from the mean ranking. This implies that the nature of FI is not a statistically determining factor; and that the opinions of the respondents are rather similar. This coincides with the results of descriptive statistics, in Figure 7.4, as more than 59% of respondents use Basel II standards.

H₆₋₃: There are no statistically significant differences among the respondents' views about capital adequacy for Islamic banks according to the Nature of Activities.

Similarly, for the 'Nature of Activities' control variable, the null hypothesis is rejected since the p-value recorded in the testing is lower than the critical p-value limit for three statements as depicted in Table 8.33.

H₆₋₄: There are no statistically significant differences among the respondents' views about capital adequacy for Islamic banks according to Respondent's Position.

Similar results also can be found for the 'Respondent's Position' control variable in Table 8.34. At $\alpha = 0.05$, the null hypothesis is rejected and suggest that alternative hypothesis is accepted since the p-value recorded in the testing is significantly lower than the critical p-value limit for Statement 5 (0.008). Therefore it can be concluded that, statistically,

there is a significant difference in the respondents' perceptions according to their position.

10.6 ISLAMIC BANKING AND THE GLOBAL CREDIT CRISIS

This section aims to provide a discussion through further interpretation of the results on the global credit crisis and Islamic banking by responding to the hypothesis set in advance.

Hypothesis 7:

Islamic banking is more resilient to economic shocks than conventional banking but not recession proof.

It is interesting to note that both Islamic and non-Islamic bankers in the questionnaire share the view that Islamic banking is less risky than conventional banking, in theory, due to the naturally inherent conservatism in the *Shari'ah* principles; however, the theory is a long way from fact in its current financial practice. Participants asserted that reform is needed within Islamic banking in order to be successful and capable of providing an ethical alternative to the debunked Wall Street banking model. Most respondents also support the view that the recent crisis could have been avoided under a genuine Islamic banking system. Although IFIs were by no means unscathed by the crisis, it had a less severe impact than elsewhere and allowed prominent issues to be brought to the forefront. This supports Hypothesis 7.

Factor analysis was used in responding to Hypothesis 7. The final outcomes and a detailed discussion of the factor analysis are available in Section 8.2.3. The factor analysis results suggest that all nine variables of perception about the credit crisis and Islamic banking are reduced to two components, namely 'Resilience of IFIs' and 'Risk management must be embedded institutionally'.

Furthermore, most interviewees believe that although IFIs have been more resilient to the on-going crisis than their conventional counterparts, the shift in the environment did negatively affect some of them. Islamic finance is not an island; it has suffered from the liquidity drought, to the point where a few IFIs have defaulted, but as an industry it now has a track record of resilience (which had not been tested before). While the global crisis gave Islamic banking an opportunity to prove its resilience, it also highlighted the need to address important challenges.

Therefore, Hypothesis 7 is supported by both quantitative and qualitative analyses.

The results are further confirm the findings revealed by Moody's (2011a) that while the Islamic financial industry seems to have been resilient to the current crisis relative to their conventional counterparts, it is far from being a risk-free segment. The most affected line of business within the industry was undoubtedly that of investment banking. And yet, until 2007, *Shari'ah*-compliant investment banks were portrayed by market participants as having significant potential, benefiting from cheap funding, high liquidity, exceptional profits and robust capitalisation. At the time, the combination of these four factors led them to pursue investments in riskier markets and asset classes such as private equity, infrastructure or real estate, mostly in emerging markets ranging from the Maghreb to Southeast Asia.

When the financial crisis erupted in mid-2007, the Islamic finance industry remained relatively healthy and insulated, and recorded robust performance. Some commentators wrongly labelled Islamic finance as a 'risk-free' sector. However, the significant defaults of TID and GFH since early 2009 and the growing difficulties of the rest of the Islamic investment banking community makes this assessment dubious, as the structural weaknesses of the Islamic financial industry started to become more obvious. The crisis was a unique opportunity for the industry to prove that it had the capacity and ability to react and absorb shocks, but not for all its sub-segments. While the commercial banking sector seems to have emerged from the crisis relatively unscathed, the investment banking sector could not have been more different, as it suffered a very sudden and sharp

dip in performance as losses mounted (Moody's, 2011a). One of the interviewees for this research, Engel (2010), adds that the structural feature of IFIs' ALM – which was once a benefit when ample liquidity was chasing too few assets – started to turn negative when too many impaired assets were available to serve massive liquidity withdrawals. In addition, the crisis revealed that IFIs also had heavy concentrations across the board, by name, sector, geography and business lines.

In fact, until 2007, IFIs benefited from a very favourable economic and liquidity environment, especially due to the boom in the real-estate and infrastructure sectors, and supported by massive government spending within these sectors. Meanwhile, an increasing number of regional investors were attracted by the high yields that IFIs were offering through their recycling of a growing amount of oil wealth into investments that fell outside the remit of their plain-vanilla banking activities. The perception of sound capitalisation was largely artificial in the sense that it underestimated the profound impact of sector-wide concentration risks and inadequate liquidity management. Above all, IFIs registered impressive performance for one main reason: available and cheap liquidity, explains Thun (2010), one of the interviewees for this research. This element was at the heart of their business model, consisting of borrowing short to invest long on behalf of their investment constituencies, while keeping on the balance sheet a portion of their illiquid investment portfolio that was incommensurate with their liquidity and capital profile.

The interviews also indicated that by the beginning of 2009, operating revenues started to shrink for IFIs reflecting their struggle to book new transactions (negative volume effect) and declining asset valuations (negative price effect). At the same time, their fixed charges remained stable, while funding costs and expenses escalated. This P&L scissors effect worsened in the second half of 2009, leaving the IFIs with very limited room for manoeuvre. This highlights the very weak diversification of their revenue base, their dependence on a very uncertain transaction flow rather than on an existing stock of cash-flow-generating assets, and the cyclical cost of their funding profiles. Only a few IFIs banks managed to mitigate this issue.

Above all, the crisis revealed weak risk-management architectures among most IFIs. It had the constructive effect of focusing the minds of Islamic practitioners on their core business strategies and operating models, highlighting corporate governance and asset and liability management specifically. According to Moody's (2011a), TID for instance (which defaulted in May 2009) did not disclose proper risk-management information. Furthermore, in 2007, most IFIs only applied Basel I, which did not make it mandatory for them to adhere to Basel II's Pillar 3 disclosure requirements. Only in the 2008 financial reporting data (released during Q1 2009, *i.e.* quite late in the cycle given extreme circumstances at the time) did IFIs start to adopt more transparent approaches to risk management, Basel II guidelines and requirements. Even then, not all the information was clearly and consistently released by the IFIs. However, since 2009, disclosure practices have been improving significantly (Moody's, 2011a).

Traditionally, IFIs have not been heavily leveraged. The primary reasons for conservative financial leverage maintenance are: (i) IFIs have limited incentives to grow debt-like liabilities because their assets tend to be highly profitable; (ii) they needed to set aside extra capital buffers to prepare for expansion; (iii) funding is usually cheap, thanks to easy access to non-remunerated *qardh hasan* current-account deposits; and (iv) the necessity to set aside capital charges for specific risks like DCR, reputation risks and concentration risks as per Basel II's Pillar 2 (Moody', 2009c). These capital and liquidity buffers, previously criticized by opponents of Islamic finance as a burden on profitability, have perhaps been one of the most important strengths of the IFIs amid this crisis because they provides a financial institution with surplus cash to use as a shock absorber. Under the recent difficult economic conditions, most IFIs have been able to seek out opportunities by using their surplus liquidity to aggressively boost deposit volumes and thus to increase their market shares by growing lending volumes, while maintaining their focus on the retail and corporate sectors. This is a strategy employed by GCC banks to de-couple their retail lending business from global markets by focusing on extending credit locally. According to another interviewee, Damak (2010), with very few exceptions (especially in Dubai), funding has been less of a constraint for IFIs because of

the market's perception that these players will be more resilient than their conventional peers to the global credit turmoil.

Hasan and Dridi (2010) argue that IFIs have avoided the subprime exposure, but note that they are subject to the 'second round effect' of the global crisis. They explain that, because the global financial crisis originated from sub-prime mortgage portfolios which were spun off into securitized instruments subsequently offered as investments, IFIs were not affected because Islamic finance is based on a close link between financial and productive flows. However, the protracted duration of the crisis affected IFIs as well, not because these institutions have a direct exposure to derivative instruments, but simply because Islamic banking contracts are based on asset-backed transactions. With the global economic downturn, property markets have seen a decline in a number of countries where IFIs have a significant presence. This carries negative implications for these banks as a large number of contracts are backed by real estate and property as collateral. They assert that the crisis highlighted a number of sector-specific challenges that need to be addressed in order for IFIs to continue growing at a sustainable pace. Specifically, the key challenges faced by the Islamic banking industry include (i) the infrastructure and tools for liquidity risk management, which remains underdeveloped in many jurisdictions; (ii) a legal framework, which is incomplete or untested; (iii) the lack of harmonized contracts; and (iv) insufficient expertise (at the supervisory and industry levels) relative to the industry's growth.

In addition, the lack of harmonized accounting and regulatory standards was a key challenge for regulators and market participants during the crisis. This is even more acute for IFIs given the lack of standard financial contracts and products across the various institutions within the same country, as well as across jurisdictions. Local accounting standards used in the Islamic banking sector often consist of a mixture of IFRS, IAS, AAOIFI and other specific standards, complicating the operations of IBs. While full harmonization might not be possible given the nature of the industry, mutual recognition of financial standards and products across jurisdictions would help limit this problem. It would also reduce transaction costs, help implement an efficient regulatory oversight,

enhance the process of compliance, and contribute to confidence and industry growth (Hasan and Dridi, 2010). Moreover, Ahmed (2009) identifies the issues and problems behind the crisis at three levels: regulatory level; organizational level; and at the product level. “There is a real role for regulators on the national level to make regulations a fair playing field for Islamic banks” adds Asaria (2011).

In summary, Islamic banks, working within the business cycle of their respective countries, have suffered from the crisis, to the point where a few of the sector’s banks have defaulted, but as an industry it now has a track record of resilience (which had not been tested before). Islamic banking is expected to emerge stronger from the crisis, provided some conditions are met: more innovation, enhanced transparency, more robust risk-management architecture and culture, and above all, enhanced *Shari’ah* compliance. In theory, Islamic financial principles contribute to the stability of the financial system. Islamic modes of finance, particularly the profit-sharing principle, provide a loss absorption feature to financial institutions. However, the practice is very different from the theory. All of these deviations between theory and practice mean that the system is not functioning at its full potential and has adapted itself to a limited functionality. Even if Islamic finance had been prevailing, at its current state, the crisis could have happened but at a less severe level. Islamic finance has not yet provided a more principled mode of finance than the debunked Wall Street model because the embedded ethical foundations have not been explored yet (Asutay, 2009b).

Paradoxically, Islamic banks’ reputation has generally benefited from the recent crisis. From a conceptual perspective, Islamic banks will probably be the big winners when the crisis ends. As a sub-set of ethical finance, Islamic banking is now considered not so much niche business standing at the margins, but rather as representative of a credible, viable and sustainable alternative business model for sound, ethical and socially responsible banking. Many now believe that mainstream finance has moved too far into excess leverage, meaningless innovation and value-destroying investments. The credit crunch has shaken confidence in the existing western regulations and created the need for a better more transparent system; this has opened the door for Islamic bankers to take up

the opportunity. Indeed at the 5th World Islamic Economic Forum (WIFE) in Jakarta on 2 March 2009, Muslim leaders including Indonesian President Susilo Bambang Yudhoyono and Malaysian Prime Minister Abdullah Badawi, called on the Muslim world to leverage the global financial crisis by turning “adversity into opportunity” (Parker, 2009).

According to proceedings of the Securities Commission Malaysia (SC) and the Oxford Centre for Islamic Studies (OCIS) Roundtable and Forum (2010), after the recent financial crisis, Islamic banks seem to be emerging stronger than the conventional banks. According to Ken Eglinton, Director - Banking and Capital Markets at Ernest & Young, and who was interviewed for this research, Ernest & Young did a comparison between the top conventional banks and top Islamic banks. It showed that the aggregate net profits of the commercial banks dropped by USD 42 billion in 2008 from USD 116 billion in 2006. In contrast, the net profits of Islamic banks increased by 9% during the same period.

The following sub-hypotheses were developed to see if there is any significant difference in the level of perception across the different categories of respondents.

H₇₋₁: There are no statistically significant differences among the respondents’ perceptions about credit crisis and Islamic banking according to Region.

At $\alpha = 0.05$, the null hypothesis is rejected and the alternative hypothesis is accepted, since 7 out of 9 statements had significant p-Values. Therefore, it is concluded that there are statistically different opinions among the respondents coming from different regions.

In addition, in order to respond to this sub-hypothesis, after conducting factor analysis further analysis was carried out using a one way between groups MANOVA test in order to investigate if there is any significant difference between the two component groups identified under factor analysis in relation to Region as the control variables. This helped to locate the impact or significance of each control variable on the established

distribution. The results signify 32% of the variances in ‘Resilience of IFIs’ scores are explained respectively by the Region.

H_{7.2}: There are no statistically significant differences among the respondents’ perceptions about credit crisis and Islamic banking according to the Nature of the FI.

At $\alpha = 0.05$, the null hypothesis is accepted and the alternative hypothesis is rejected for all statements except statement 3, which shows that, statistically, the Nature of FI does not play a significant role in the difference in perceptions among respondents. This is consistent with the descriptive statistics which show that most respondents share similar views regardless of the nature of FI.

Statement 3 ‘Islamic finance could have solved the global crisis’ produced differences among different categories of respondents. Mean rankings for statement 3, as depicted by Table 8.36, shows that fully-fledged Islamic Banks are far more aggressive in their belief that Islamic finance could have solved the global crisis than other categories (46.2), followed by Islamic Subsidiaries (40.25), then by Others and Conventional Banks.

An attempt was also made to see the effect of ‘nature of FI’ on the identified components in factor analysis through MANOVA. However, no significant results could be established.

H_{7.3}: There are no statistically significant differences among the respondents’ perceptions about credit crisis and Islamic banking according to the Nature of Activities.

As Table 8.37 depicts, at $\alpha = 0.05$ the K-W test results suggest that the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, it can be concluded that, statistically, there are significant differences in the level of perception according to the institution’s ‘Nature of Activities’.

H_{7.4}: There are no statistically significant differences among the respondents' perceptions about credit crisis and Islamic banking according to Accounting Standards.

Similarly, for the Accounting Standards control variable, the null hypothesis is rejected in favour of the alternative hypothesis, since the p-value recorded in the testing is lower than the critical p-value limit as shown in Table 8.38. Therefore, it can be concluded that, statistically, there is a significant difference in the level of perception according to the accounting standards utilized by the institution.

H_{7.5}: There are no statistically significant differences among the respondents' perceptions about credit crisis and Islamic banking according to the Respondent's Position.

At $\alpha = 0.05$, the null hypothesis is accepted and suggest that alternative hypothesis is rejected since the p-value recorded in the testing is higher lower than the critical p-value limit. Thus, it can be concluded that, statistically, there are no significant differences according to respondent's position.

The findings from the above sub-hypotheses tests echo the findings from the descriptive statistics and from the qualitative interview analysis. However, the inferential statistical analysis provides a higher level of understanding and knowledge concerning the subject matter. Combining the results of the above five sub-hypotheses tests together provide an aggregate trend that can be attributed to prevailing market conditions: retail fully-fledged Islamic banks and Islamic subsidiaries, located mainly in the GCC and 'Other', are more aggressive in their perceptions about the credit crisis and Islamic finance than other categories. These banks tend to use AAOIFI accounting standards or International and AAOIFI standards together. This trend could not be established by studying one control variable in isolation, the 5 control variables had to be examined together in order to see the bigger picture. This pattern is consistent with the findings of Table 7.16 that breaks down the descriptive statistics among Islamic Bankers and Non Islamic Bankers.

10.7 RISK MANAGEMENT AND REPORTING

This section aims to provide a discussion through further interpretation of the results on risk management and reporting issues facing IFIs by responding to the hypothesis set in advance.

Hypothesis 8:

Not many Islamic banks use the more technically advanced risk measurement and reporting techniques.

Findings from quantitative analyses indicate that although IFIs are doing comparatively well in terms of their general risk management and reporting, they are still perceived to use less advanced risk management approaches. Frequency distribution in Table 7.16 shows that IFIs usually use the same risk management techniques as the conventional banks for managing the risks, in particular liquidity, credit, and market risks. Nevertheless, the spread and frequency of utilising these techniques is lower among Islamic banks than among their conventional peers. The most widely used report among IFIs on daily basis is liquidity risk report, followed by credit exposure report and profit rate risk report. Commodity risk and equity mark-to-market reports are the least used by IFIs in this survey. Improving risk management and reporting practices, represent a serious challenge to Islamic banking in order to lift itself to the next level. Interviewees also perceived IFIs to use less advanced risk management approaches. Risk management frameworks are not fully developed in IFIs yet. There is still lack of well-functioning system of controls and internal checks and balances. The findings support hypothesis 8.

Some interviewees indicated that currently there are weaknesses and a serious lack of a robust risk culture among IFIs. However, the financial crisis has raised the profile of risk management within Islamic banks. In the current environment the painful cost of inadequate risk management is being demonstrated every day. Banks seeking to navigate through this recession must put a premium on effective risk management. Also, due to limited resources, IFIs are often unable to afford high-cost management information systems or the technology to assess and monitor risk in a timely fashion. Efforts should

be made to collaborate among IFIs to develop Islamic risk management systems that are customised to the industry needs. The changes required to institutionalize a strong risk culture are fundamental and far-reaching: risk must become “everyone’s business” throughout the organization starting from the front line through to the functions. Responsibility and accountability for risk should be intertwined among all stakeholders, from board members to business unit heads and their teams, must be more actively committed to identifying and mitigating risks. There is a need to introduce risk management culture among Islamic banks.

These findings contradict with those by Shaikh and Jalbani (2009) whose paper optimistically concluded that equity-based business of Islamic banks posing a slightly more risk than conventional banks is well mitigated by Islamic banks through their effective and adequate distinct risk management procedures. The researcher does not agree with the research methodology and the findings of this study by Shaikh and Jalbani. Rosman and Abdul Rahman (2010) surveyed the risk management practices of 28 Islamic banks from 16 different countries. Their findings indicate that Islamic banks are doing comparatively well in terms of their general risk management and operational risk management. In terms of risk reporting, the study found that majority of Islamic banks produced various types of risk reports and there is a significant improvement in their risk reporting over the last few years. Majority of Islamic banks they surveyed produced all the risk reports except for commodities and equities positions risk reports; and country risk reports. On the other hand, Ahmed and Khan (2007) argue that there is a need to introduce a better risk management culture in Islamic banks. Wilson (2002) also argues that IFIs can learn from conventional banks in the fields of technology and developing infrastructure, as much as conventional banks need to learn from IFIs about staff and client motivation and relationships.

The following sub-hypothesis was developed to see if there is any significant difference in the level of use of risk reporting across different regions.

H8-1: There are no statistically significant differences among respondents in the frequency of producing risk management reports according to Region.

The results from the K-W test reject the null hypothesis and accept the alternative hypothesis, since there is a significant difference among various regions in the frequency of producing risk reports (p-value <0.05) except for Commodity Risk report (0.094), Industry Concentration Risk Report (0.129), Credit Exposure Report (0.091), and Large Exposure Report (0.071). Hence, for the rest of the reports there are significant differences in the perceptions of the participants. Thus, for most of the reports 'region' is a significant factor. Repeating the K-W test with 'Region' as the control variable for various institutional samples provided an obvious trend: conventional banks, concentrated in Europe and the Americas, produce risk reports more frequently than Islamic banks. In addition, the results reflect the risk management culture difference between Islamic and conventional banks.

10.8 RISK MEASUREMENT

This section aims to provide a discussion through further interpretation of the results on risk measurement in IFIs by responding to the hypothesis set in advance.

Hypothesis 9:

The use of risk measurement techniques is less advanced among Islamic banks than among their conventional peers.

In addition to risk management reports, financial institutions use various techniques to measure and analyse risks. Similar to Hypothesis 8, Hypothesis 9 is supported by both quantitative and qualitative analyses. Frequency distribution in Table 7.17 shows that the most common technique used by IFIs as indicated by respondents is maturity matching analysis (22 respondents), followed by reliance on external ratings provided by rating agencies (21 responses), internal based rating and Gap analysis (19 responses each). Only 14 respondents indicated they use VAR models, while Simulation techniques are used by just 6 IFIs in the sample. Interviewees also emphasised the fact that risk measurement

techniques in Islamic banking are not as sophisticated as in the conventional banking world.

In line with this, Noraini *et al.* (2009) also found that more technically advanced risk measurement approaches are perceived not to be widely used by Islamic banks, except for Internal Based Rating System and Estimates of Worst Case. The study concluded that most IFIs did not use sophisticated risk measurement approaches as they are still new and do not have sufficient resources and systems to use more technically advanced techniques. Supporting this argument is the study by Rosman and Abdul Rahman (2010), who concluded that IFIs are using less technically advanced risk measurement approaches.

Khan and Ahmed (2001), on the other hand, found that the overall risk management processes in Islamic financial institutions to be satisfactory. They apprehended, however, that this may be because the banks that have relatively better risk management systems have responded to the questionnaires. The results from risk management process showed that while Islamic banks have established a relatively good risk management environment, the measuring, mitigating and monitoring processes and internal controls needs to be further upgraded. Khan and Ahmed's study also identified the problems that Islamic financial institutions face in managing risks. These include lack of instruments (like short-term financial assets and derivatives) and money markets. At the regulatory level, the financial institutions apprehend that the legal system and regulatory framework is not supportive to them. Results from a survey of 17 Islamic institutions from 10 different countries revealed that while Islamic banks have established a relatively good risk management environment, the measuring, mitigating and monitoring processes and internal controls needs to be further upgraded. The results indicated that the growth of Islamic financial industry will, to a large extent, depend on how bankers, regulators, and *Shari'ah* scholars understand the inherent risks arising in these institutions and take appropriate policies to cater to these needs.

Subsequently, the following sub-hypotheses were tested to identify whether there is any statistically significant difference in the frequency of producing risk measurement reports across various groups of respondents based on the selected control variables.

H_{9.1}: There are no statistically significant differences among respondents in the use of risk measurement techniques according to Region.

H_{9.2}: There are no statistically significant differences among respondents in the use of risk measurement techniques according to the Respondents' Position.

H_{9.3}: There are no statistically significant differences among respondents in the use of risk measurement techniques according to the Nature of the FI.

H_{9.4}: There are no statistically significant differences among respondents in the use of risk measurement techniques according to the Nature of Activities.

H_{9.5}: There are no statistically significant differences among respondents in the use of risk measurement techniques according to Accounting Standards.

AS Table 8.56 depicts, at $\alpha = 0.05$ the 5 sub-hypotheses are declined. This means that statistically all the selected control variables play a role in the difference in utilizing risk measurement tools. However, 'Region' and 'Nature of FI' are the control variables with the most significant results and hence these two variables are most essential to the difference in risk management techniques among banks. Mean rankings show that conventional banks in relation to their regional location, concentrated outside of the GCC and Middle East, use more advanced risk management techniques than Islamic banks. 'Americas' are the most advanced across all techniques, followed often by 'Other' or 'Europe'. The rest of the regional samples include mostly Islamic banks, their use of sophisticated risk measurements however is not as significant as in conventional banks in Americas and Europe.

10.9 RISK MITIGATION

This section aims to provide a discussion through further interpretation of the results on risk mitigation issues facing IFIs by responding to the hypothesis set in advance.

Hypothesis 10:

Islamic banks use a number of risk mitigation tools that are intended to be Shari'ah Compliant and that are less advanced from those utilised by conventional banks.

Both the descriptive statistics and the qualitative interview analyses clearly reflect that risk mitigation techniques in Islamic banking are less advanced than conventional banking. This supports Hypothesis 10.

Risk mitigation is currently one of the most contentious issues in Islamic banking. The unique nature of risks faced by Islamic banks, combined with the restrictions added by *Shari'ah*, makes risk mitigation for Islamic banks a difficult and complex process. There are risks that Islamic banks, like their conventional counterparts, can manage and control through appropriate risk policies and controls that do not conflict with the *Shari'ah* principles. However, there are other risks that banks cannot eliminate and can only be reduced by transferring to or selling those risk in well-defined markets. These risks can generate unexpected losses that need capital insulation, and hedging can help to restrict the impact of unexpected loss. Traditionally in the conventional world risk transferring techniques include the use of derivatives for hedging, selling or buying of financial claims, and changing borrowing terms. The challenge is, however, that most of the conventional hedging tools do not so far comply with the *Shari'ah* requirements. This makes IFIs face additional array of risks particularly market and credit risks. As explained in Chapter 3, there have been substantial efforts in developing *Sharia'ah*-compliant hedging instruments; however, much of this progress remains localised with limited scope for cross-border application and further work is still needed.

Until recently, it had been the opinion of most *Shari'ah* scholars that hedging would fall into the category of speculation and uncertainty. In the last few years, however, the increasing sophistication in Islamic banking products has led some scholars to take the view that Islamic banks could be able to enter into hedging arrangements provided that the hedging tool is in itself structured in a *Shari'ah* compliant manner. According to Khan (2010), “there is growing demand for hedging and *Shari'ah*-compliant derivatives,

which would be used merely for hedging and not speculation.” Khandelwal (2008) also asserts that there has been substantial development in finding ways to apply derivatives in Islamic finance to reduce certain risks such as currency and commodity risks. For example, some *Shari’ah*-compliant hedging instruments such as profit rate swaps, have been introduced in Malaysia. However, much of this progress remains localised with limited scope for cross-border application and further work is still needed. The empirical study conducted by Rosman and Abdul Rahman (2010) found that IFIs are still lacking on the application of unique *Shari’ah*-compliant risk mitigation techniques, while Ahmed and Khan (2007) believe that the potential of futures, currency forwards, options, and embedded options in risk management in Islamic finance is tremendous.

One of the interviewees, Chowdhury (2010), argues that derivatives are sophisticated instruments that can, if employed with care, enhance efficiency in Islamic financial institutions through risk mitigation, thereby making them more competitive as well as appealing to customers. However, their application in Islamic finance is surrounded by religious dogma and is highly controversial for reasons of speculation and uncertainty, two practices banned under *Shari’ah*. There are varying scholarly opinions in the world of *Fiqh* and, due to this judicial fragmentation, the final verdict on the legitimacy of derivatives varies between a total ban in some countries and actual implementation (although on a limited scale) in others (Chowdhury, 2010).

Another interviewee, Engel (2010), adds that the recent financial crisis, in the opinion of many, including *Shari’ah* scholars, is blamed on the ‘speculative’ use of complex derivative instruments. The economic meltdown was in fact due to a combination of several factors, primarily a lack of proper risk monitoring and quantification mechanisms. The bubble in the derivatives industry was attributed to a copycat phenomenon, whereby banks took on more risk than they could possibly cope with, exceeding their liabilities many times over and building inverted pyramid structures on their balance sheets. The consequential seizure in the market has forced financial institutions to drastically scale back their proprietary risk-taking and to revamp models, which adds to the reluctance of *Shari’ah* scholars to permit the use of derivatives. Thun (2010), one of the interviewees

for this research, agrees that despite their pivotal function, the use of derivatives in emerging countries in general, and in the Islamic banking sector in particular, has been limited, in part due to the absence of legal provisions, insufficient technical frameworks, underdeveloped capital markets, and/or inadequate accounting, regulatory, and disclosure standards. Therefore, the use of derivatives in Islamic banking requires an understanding of the distinction between hedging and speculating.

As risk management and corporate governance in IFIs are already below par relative to the rest of industry, the use of securitisation and derivatives offers considerable scope for reducing IFIs' risk exposures and thus improving their overall risk profile (Smith. 2010).

Recently, highly skilled financial engineers in global conventional banks owning Islamic windows, more advanced Islamic banks, economists and a few *Shari'ah* scholars have combined efforts to develop Islamic derivative products. For this, jurists have increasingly been working on *khiaar*, *arbun* and *wa'ad* concepts to turn them into contracts as explained in Chapter 3. Although *wa'ad* is still criticised from a conceptual perspective, in practice this instrument has become a contractual promise, as it offers great flexibility, explains Thun (2010), who was interviewed for this research. For instance, it allows for an FX forward profile to be emulated. The writer makes a unilateral promise to buy or sell a particular amount of currency against another currency on a predetermined date and at a predetermined rate. If the promise is contractually agreed not to be binding, then the buyer chooses whether to enforce the *wa'ad* or not in exchange for a non-refundable fee, which ends up becoming equivalent to a put or call option (Thun, 2010).

Far from having a complete derivative supply, the trend in the Islamic financial industry is therefore to develop explicit Islamic derivative products. Through *Shari'ah*-compliant engineering, currency forward, call options on *sukuk*, securities or commodities, profit rate swaps, cross currency rate swaps, forward rate swaps and even total return swaps can be copied, at least conceptually, adds Lowe (2010), one of the interviewees for this research. On the other hand, as previously discussed, if IFIs continue to mimic

conventional banking products, they will weaken the uniqueness of their value proposition and the powerful nature of their natural factors of differentiation.

Risk mitigation techniques are inherently complex by nature and require a well thought-out regulatory framework for their management and application. For instance, in order to promote and legalise the use of derivatives, large Islamic banks in Malaysia, are stepping forward in collaboration with the Malaysian Financial Market Association to establish standards in *Shari'ah*-compliant derivatives to enhance liquidity and improve balance sheet management (Moody's, 2011a). This is in addition to the progress made by supervisory bodies like IFSB, IIFM, AAOIFI, and others.

It is interesting to investigate the findings further to determine whether there is any statistically significant difference in the use of mitigation techniques according to various control variables. Therefore, the following sub-hypotheses were formulated.

H₁₀₋₁: There are no statistically significant differences among respondents in the use of risk mitigation techniques according to Region.

H₁₀₋₂: There are no statistically significant differences among respondents in the use of risk mitigation techniques according to the Respondent's Position.

H₁₀₋₃: There are no statistically significant differences among respondents in the use of risk mitigation techniques according to the Nature of the FI.

H₁₀₋₄: There are no statistically significant differences among respondents in the use of risk mitigation techniques according to the Nature of Activities.

H₁₀₋₅: There are no statistically significant differences among respondents in the use of risk mitigation techniques according to Accounting Standards.

Table 8.59 shows that at $\alpha = 0.05$ the 5 sub-hypotheses are rejected in favour of the alternative hypotheses. This means that statistically all the selected control variables play a role in the difference in utilizing risk mitigation techniques among FIs. However 'Nature of FI' is the control variable with the most significant p-values (0.00). Mean ranking in Table 8.60 shows that with the exception of Islamic swaps and Islamic currency forwards, fully-fledged Islamic banks fell behind Islamic subsidiaries in using

all other risk mitigation techniques. The latter group tends to benefit from the already developed risk mitigation platforms at their conventional parents. However, of notice is that the difference in the value of mean ranking between the two groups is small, which reflects that IFIs are progressing in the use risk mitigation but still the use of risk mitigation techniques in IFIs is not as developed as in conventional banking.

10.10 ISLAMIC BANKING IN PRACTICE

This section aims to provide a discussion through further interpretation of the results on practical issues in Islamic banking by responding to the hypothesis set in advance.

Hypothesis 11:

Most IFIs abandoned conservative risk management Shari'ah principles in favour of copying conventional structures.

Descriptive statistics support hypothesis 11 as most respondents believe that IFIs should stop simply mimicking conventional finance, as the trend seemed to be towards trying to duplicate what conventional banks did. Everyone assumed there was a single model of banking and they were copying the Wall Street model; a model that had more or less collapsed. Before the current financial meltdown, The Islamic banking industry came under criticism that it has not been able to match all the existing conventional products with Islamic equivalents. From hindsight, if IFIs continued on the same track as conventional peers, they would have been prone to the same risks. Hence Islamic banks have been largely spared from the sub-prime crisis.

Likewise, interviewees are of the view that IFIs will not achieve their objectives by simply mimicking conventional products. While the ideals of Islamic finance offer some compelling ideas, the reality is that much of Islamic finance today is focused on replicating the conventional system. This provides support for hypothesis 11. Chowdhury (2010) argues that this reminds us that IFIs will not achieve their objectives by simply mimicking conventional products. If scholars had allowed simple mimicking without checks, IFIs would have been as exposed to sub-prime as the conventional banks are.

In theory, the Islamic financial system is definitely more resilient to economic shocks than the debunked Wall Street model, but unfortunately the theory is a long way from fact in its current financial practice. Practitioners of Islamic finance to-date have been mimicking conventional products. This mimicking has resulted in a close correlation between the two systems. “People all over the world have been paying attention to Islamic finance, not necessarily because it would have solutions to all these problems; but because it is institutionalised and has embraced conservative principles” (Warde, 2009). Certainly, Islamic banks have partially ignored this conservatism by simply mimicking conventional banks, but still the fundamental principles of Islamic finance saved Islamic banks from many of the conventional financial woes.

The crisis created a golden opportunity to Islamic finance to present itself to the world a better more sustainable financial system. Dr. Mohammed Mahmoud Awan, a leading scholar and Dean at Malaysia-based International Centre for Education in Islamic Finance (IINCEIF), thinks that the current global crisis has opened many windows of opportunities for Islamic finance as it has the capacity and capability to bring stability to the market (Awan, 2008). However, the defaults of *sukuk* in the Middle Eastern market, and the frauds that occurred in several Islamic financial institutions have downplayed this notion. According to the proceedings of the SC - OCIS Roundtable and Forum (2010), there were failures of credit risk assessment and over-concentration of risks in real estate assets; there was lack of transparency; there were family-owned businesses that were perceived to have government support (in some of the *sukuk*); in some areas, there was even inadequate regulation and in a recent case, there was also an inappropriate use of legal defence. The industry needs to work together to remove the negative perceptions that are seen to somewhat impact the industry. So, it is important to subscribe to the values of *Shari'ah*, to build robust risk management systems, IT systems, and to have greater transparency and greater practice of *Shari'ah* governance.

The following sub-hypotheses were formulated in order to identify whether there is any significant differences across various selected groups in the respective control variables.

The results of the hypotheses testing can be referred to Tables 8.61 and 8.62 in Chapter 8.

H₁₁₋₁: There are no statistically significant differences among respondents' perceptions about the current practices in Islamic banking according to the Nature of the FI.

The results suggest that the null hypothesis is rejected, which implies that 'Nature of FI' is a statistically significant determining factor. Mean rankings revealed that Islamic bankers are more critical of the current practices in the industry than their conventional peers. This could be explained by the fact that Islamic bankers are more educated about the underlying principles of Islamic finance and have a better understanding of current structures than conventional bankers.

H₁₁₋₂: There are no statistically significant differences among respondents' perceptions about the current practices in Islamic banking according to Region.

The results suggest that the null hypothesis is rejected and the alternative hypothesis is accepted. There are significant 'regional' differences among respondents' views.

H₁₁₋₃: There are no statistically significant differences among respondents' perceptions about the current practices in Islamic banking according to the Respondent's Position.

For this sub-hypothesis, the testing results were unable to reject the null hypothesis, meaning that the impact of Respondent's Position has no significant difference.

10.11 THE FUTURE OF ISLAMIC BANKING

This section aims to provide a discussion through further interpretation of the results on the future of Islamic banking by responding to the hypothesis set in advance.

Hypothesis 12:

Islamic banking has a great potential to become a strong alternative financing system provided that it goes back to its roots.

Evidence from questionnaire data analysis indicates that Hypothesis 12 is supported. Most respondents reckon that Islamic banking has benign potential provided that it goes back to its roots. Both Islamic and non-Islamic bankers (including Islamic subsidiaries, conventional banks, and others) also consider improved risk management and mitigation practices among the top priorities IFIs should focus on in their development plans. The future of Islamic banking will highly depend on risk architecture and how the industry will develop instruments that enhance liquidity; improve ALM and risk management; and develop Islamically acceptable risk hedging tools. This questionnaire identified the inadequacy of risk management practices by IFIs that may threaten their sustainability especially during financial crises. Adequate resources need to be devoted to risk identification and measurement, as well as risk management techniques so as to be able to develop innovative risk mitigation and hedging instruments suitable to IFIs.

Interview findings similarly provide strong support to Hypothesis 12, as interviewees almost unanimously agree that there is now an opportunity for Islamic banking to thrive as it has the potential to contribute to a more stable economy. “We have all learnt a lot over the past few years about how to allow the Islamic finance market to mature. There’s now an opportunity for Islamic finance to thrive”, says Chowdhury (2010), one of the interviewees. Many interviewees, particularly consultants, researchers, and *Shari’ah* scholars, revealed that as it stands in its current form, Islamic banking has little to offer in terms of long-lasting solutions. The solution ultimately has to be a moral, not a material one. Islamic banking needs to aim for a truly alternative vision based on the ethical and moral safeguards within authentic Islamic concepts, together with improving risk management and mitigation techniques, enhancing liquidity management, and reducing concentrations.

The recommendations for the future of Islamic banking provides by both survey respondents and interviewees were numerous, however this section focus on the most important ones highlighted by most respondents and that scored high mean rankings.

The continuing rapid growth of demand for Islamic financial services is clearly good news for Islamic banks. At the same time, it also presents some challenges, as the banks need to invest in upgrading their risk management capabilities in line with the more complex and larger projects into which they are entering. Given the unparalleled market conditions, the risk management process is going through fundamental and significant changes. Islamic banks need to ensure they are prepared for the constantly changing environment, and they also need to get involved in those changes to have they say.

While the Islamic banking model limited the chances of surviving the crisis unscathed, there is still strong growth potential for the industry. “After enduring the recent financial shocks, some IFIs are now conducting internal reviews and looking more deeply into ways to improve and diversify their business model,” explains Engel (2010), one of the interviewees. For instance, efforts are being made to better organise professional off-balance-sheet asset-management activities targeting high net-worth individuals and institutional investors who require *Shari’ah*-compliant placements, across a wider range of asset classes. Unicorn Investment Bank, for instance, typically focuses on general corporate finance, including advisory, M&A, debt and equity capital markets, structured finance and brokerage. First Energy Bank, an energy finance specialist, will likely follow the same path. The business evolution of Khaleeji Commercial Bank is also relevant as it is trying to consolidate its investment banking services with a more robust commercial banking platform. “Overall, I believe that the strategic move of some IFIs acquiring larger, more diversified and established Islamic banks offers the most promising potential” adds Lowe (2010), another interviewee for this research.

Going forward, it is expected that lower volumes, shrinking margins and deteriorating asset quality will all weigh on IFIs’ profitability and ultimately their capitalisation. However, the impact will be more manageable than for conventional peers. Fortunately,

Islamic banks have been very profitable in the past and have therefore accumulated large amounts of capital, making them capable of absorbing these sorts of shocks. As previously discussed, conventional banks have had a greater appetite for exotic asset classes than IFIs. In that sense, asset quality deterioration at conventional banks may be more pronounced. In addition, conventional peer banks used to be less well capitalised and less liquid, and therefore will find it more difficult to book new business in the current market conditions. “To grow today, a bank must have accumulated excess liquidity and capital in the past: most Islamic banks have, some conventional peer banks haven’t”, says Damak (2010) during the interview for this research.

According to the latest findings (Moody’s, 2011a and Fitch Ratings, 2011), IFIs are already tightening their belts and are using their surplus liquidity deposits to meet their basic financing needs and to replace recent deposit withdrawals. Most IFIs have placed property-based projects on hold because of declining demand in the real estate sector and foreign direct investment. There have been financial stimulus packages supplied by the governments to assist IFIs with their liquidity constraints. Those banks that are on the brink of liquidity crunch and have been unsuccessful in attracting additional deposits will either have to issue more *sukuk* or merge with their financially stronger counterparts.

Islamic banks, organisations, and regulators are working to address these challenges. The rapid developments are likely to continue. Financial institutions in countries such as Bahrain, the UAE and Malaysia have been gearing up for more *Shari’ah*-compliant financial instruments and structured finance – on both the asset and liability sides. At the same time, the leading financial centres, such as London, New York and Singapore, are making significant progress in establishing the legal and prudential foundations to accommodate Islamic finance side-by-side with the conventional financial system. Many of the largest western banks, through their Islamic windows, have become active and sometimes leading players in financial innovation, through new *Shari’ah*-compliant financial instruments that attempt to alleviate many of the current constraints such as a weak systemic liquidity infra-structure. More conventional banks are expected to offer

Islamic products, enticed by enormous profit opportunities and also ample liquidity, especially across the Middle East.

New product innovation is also driven by domestic banks' interest in risk diversification. With a large number of new Islamic banks across the Middle East and Asia especially, diversification of products enables banks to offer the right product mix to more sophisticated clients. A few banks are already active across different jurisdictions, and this trend is certainly going to continue in the near future, possibly with some consolidation (Moody's, 2011a).

Thun (2010), who was interviewed for this research, argues that just before the crisis Islamic banking was on the edge to enter a new era that would bring Islamic finance closer to the profit-and-loss sharing, asset-backed and real-economy financing ideals with the innovations introduced by *Shari'ah*-compliant investment banking. Sometime before the crisis, institutions like Gulf Finance House, Arcapita Bank, Unicorn Investment Bank or the Investment Dar started moving away from pure banking intermediation and into more sophisticated investment/merchant banking lines of business, like private equity, asset management, brokerage, infrastructure and structured real-estate finance, as well as advisory, corporate and project finance – thereby laying the groundwork for innovation within Islamic banking. The industry was on the edge of moving beyond the focus on raising cheap *murabahah* or *wakala* deposits (so as to recycle them into safe, stable and expensive retail and corporate loans) and to adopt a greater emphasis on risk-taking instead. However, the onset of the financial liquidity crisis prevented the dawning of this new era, adds Thun.

On the regulatory front, whereas the growth history and forecasts are a source of optimism for the Islamic Finance industry, the growing regulation in the wake of current credit crisis offer a newer set of challenges. There will be material, substantive change to the regulatory environment under which banks and other financial institutions operate (PWC, 2009). Regulators across the world are all set to introduce a new era of tightened regulation for the financial sector in general. Central banks and financial regulatory

authorities around the world are under intense criticism for failure to predict and check the current global financial crisis. Issues are being framed (particularly under areas of risk management, liquidity, and capital requirements), consultation papers drafted, and stakeholders' opinions are being sought for introducing a new and tougher regime of banking and financial regulations. "Islamic banks should get involved and should be proactive," asserts Lowe (2010). The IFSB has moved ahead with its efforts aimed at fostering of the soundness, risk management, capital standards, and stability of the Islamic financial services industry through more standardised regulation.

According to Khan S. (2009), as it stands, Islamic banking regulations are currently framed from a conventional base and as long as the conventional yardstick is applied certain structures such as *mudarabah* and *musharakah* products will likely continue to be treated as higher risk. While, some of these products may actually have a higher risk profile, concepts of risk-sharing could be ingrained further through the development of more profit and risk-sharing *mudarabah* and *musharakah* products. This should be driven by both regulators and Islamic banking practitioners who, together, need to facilitate a transparent explanation of the risks to the customer as well as enable better risk allocation between Islamic banks and the customer. The current regulatory infrastructure for IFIs is more or less largely voluntary, such that very few penalties apply to institutions that do not follow the AAOIFI Standards, or any other set of *Shari'ah*-related rules or standards. Until a regulatory system is meaningfully enforced where penalties of non-compliance actually hurt, it is rather futile to expect IFIs to change any of their past patterns of behaviour. Such enforcement is largely dependent on both political will and vision (Khan S., 2009).

Islamic banking will continue to grow at a faster rate than conventional banking both because of the inevitable de-leveraging of the global system, but also because the roots of Islamic banking are in the Gulf and South East Asia; these are regions with higher growth rates, expanding populations, and abundance of natural resources especially energy (Eedle, 2009). Several IFIs are therefore in a position to gain market shares at the expense of conventional peers, which have been weakened by toxic sub-prime assets. However,

for Islamic banking to become a true global alternative to the existing western system, there are a number of actions that must be considered as explained earlier. The main issue is the development of products that are more in line with the spirit of *Shari'ah* and not just replicating conventional equivalents.

However, the political and social upheaval throughout the Middle East will undoubtedly have direct and indirect impacts on IFIs in general, and on those located in the Middle East in specific. The ability of local governments to support Islamic banking and to bailout financial institutions remains to be assessed after the scissor effect of rising oil prices and local geo-political unrest.

Subsequently, the following sub-hypotheses were formulated in order identify whether there is any significant differences across various groups in the respective control variables. The results of the hypotheses testing are summarized in Table 8.63.

H₁₂₋₁: There are no statistically significant differences among respondents' recommended growth strategies for Islamic banks according to Region.

The K-W test results suggest that the null hypothesis is accepted and the alternative hypothesis is rejected, which implies that, statistically, there are no significant differences in the respondents' views across various regions.

H₁₂₋₂: There are no statistically significant differences among respondents' recommended growth strategies for Islamic banks according to Respondent's Position.

Similarly, the results suggest that the null hypothesis is accepted indicating that, statistically, this control variable plays no significant role in impacting the respondents' opinions.

H₁₂₋₃: There are no statistically significant differences among respondents' recommended growth strategies for Islamic banks according to the Nature of the FI.

For this hypothesis, the testing results decline the null hypothesis, meaning that, statistically, there are significant differences among respondent's views according to the Nature of FI. 'Organic growth in home market' and 'Standardization' had p value of 0.036 and 0.015 respectively, which is lower than the critical p-value of 0.05. However, examining the mean rankings of these two strategies according to 'Nature of FI', as summarized in Table 8.64, did not identify a particular pattern.

H₁₂₋₄: There are no statistically significant differences among respondents' recommended growth strategies for Islamic banks according to the Nature of Activities.

The K-W results were unable to reject the null hypothesis, indicating that, statistically, the Nature of Activities plays no significant role in impacting the respondents' opinions.

H₁₂₋₅: There are no statistically significant differences among respondents' recommended growth strategies for Islamic banks according to Accounting Standards.

The testing results accept the null hypothesis indicating that this control variable is, statistically, not significant in influencing the respondents' opinions.

Hypothesis 13:

Perceptions of Islamic and conventional bankers differ significantly. Islamic bankers are more biased towards their business model, and vice versa.

Finally, Hypothesis 13 is a general hypothesis not linked to a specific part of the questionnaire. The researcher expected the perceptions of Islamic bankers to be biased in favour of their business model, and those of the conventional bankers to be biased against Islamic banking. Hypothesis 13 is declined as the findings from both the quantitative and qualitative analyses reflected high degree of correlation between the responses of the two groups. However, differences generally existed between the responses of bankers and non-bankers. Non-bankers have a different risk perception than bankers; this is because bankers, whether Islamic or non-Islamic, have hands-on experience and better

understanding about the Islamic banking model and its risk architecture than non-bankers who tend to be more academic in their approach.

More specifically, the various K-W tests conducted in Chapter 8 generally show that there is no significant difference in perception levels between respondents from stand-alone Islamic banks and Islamic subsidiaries. Initially, it was expected that respondents from stand-alone Islamic banks have a stronger perception compared to those from Islamic subsidiaries for two reasons: firstly, stand-alone Islamic banks have been in existence much longer than Islamic subsidiaries, and, secondly, the respondents from stand-alone Islamic banks have the advantage of dealing with only Islamic banking products and services whereas Islamic subsidiaries still need to operate side-by-side with their respective conventional counterpart in sharing the same operating platforms and buildings. Nevertheless, the results have indicated otherwise. Some differences could be spotted between perceptions of conventional banks and stand-alone Islamic banks, and more noticeably between the perceptions of bankers and non-bankers, represented by 'Others'. Examining the mean rankings for different questions confirmed that there is an observed pattern, which can be explained by market realities.

10.12 SUMMARY AND CONCLUSION

The current chapter is intended to combine, integrate and discuss the main results and findings from all the three empirical chapters, combined with knowledge developed from the literature review, and to provide a basis of overall conclusion.

In an attempt to render the results in a more systematic manner, Table 10.1 attempts to bring the results of all the main hypotheses' testing together.

Table 10.1 – Summary of the Hypotheses Testing Decisions

Hypothesis	Questionnaires Decision	Interviews Decision
1- The main risks facing Islamic banks are reputational risk, <i>Shari'ah</i> - non-compliance risk, asset-liability management risk, liquidity risk, and concentration risk	Accept H_0	Majority approve
2- Islamic bankers prefer mark-up based contracts and shy away from profit sharing contracts.	Accept H_0	Majority approve
3- Profit-sharing contracts are perceived as more risky than mark-up based contracts in the Islamic finance industry	Accept H_0	Majority approve
4- There is no substantial difference between risk management in Islamic banking and conventional banking.	Reject H_0	Majority disapprove
5- Capital requirements levels should be lower in IFIs than in conventional banks.	Reject H_0	Majority disapprove
6- Basel II was drafted with conventional banking very much in mind. IFIs should follow their own standards, e.g. IFSB Principles on capital adequacy.	Reject H_0	Majority disapprove
7- Islamic banking is more resilient to economic shocks than conventional banking but not recession proof.	Accept H_0	Majority approve
8- Not many Islamic banks use the more technically advanced risk measurement and reporting techniques.	Accept H_0	Majority approve
9- The use of risk measurement techniques is less advanced among Islamic banks than among their conventional peers.	Accept H_0	Majority approve
10- Islamic banks use a number of risk	Accept H_0	Majority approve

mitigation tools that are intended to be <i>Shari'ah</i> -compliant and that are less advanced from those utilised by conventional banks.		
11- Most IFIs abandoned conservative risk management <i>Shari'ah</i> principles in favour of copying conventional structures.	Accept H_0	Majority approve
12- Islamic banking has a great potential to become a strong alternative financing system provided that it goes back to its roots.	Accept H_0	Majority approve
13- Perceptions of Islamic and conventional bankers differ significantly. Islamic bankers are more biased towards their business model, and <i>vice versa</i> .	Reject H_0	Majority disapprove

As can be seen in Table 10.1, in the case of 13 hypotheses, 9 null hypotheses were accepted leading; while the alternative null-hypotheses were accepted for the remaining 4 hypotheses.

Based on the decisions of the hypotheses testing, the main findings and implications of this study will be presented in the following chapter together with recommendations for areas in which future research appears to be desirable. It also discusses future directions of risk management in Islamic banking.

CHAPTER 11

CONCLUSION AND RESEARCH RECOMMENDATIONS

11.1 INTRODUCTION

This final chapter summarises the main results and renders the conclusion of the thesis. It brings together all the findings and ideas discussed throughout this research. To reiterate, this study was undertaken with the objective of evaluating the contemporary risk management practices in Islamic banking. In meeting this broad objective, the views and opinions from the sampled Islamic banking professionals were obtained through a survey questionnaire and by conducting in-depth interviews. The results of the survey and interviews were analysed and compared with the theoretical framework and the related literature.

This chapter briefly recapitulates the salient conclusions derived from the findings of this research. In addition, it also presents the main policy and practical recommendations for enhancing risk culture and architecture in Islamic banking. Finally, the research limitations and suggested future research topics will be presented.

11.2 SUMMARY OF THE RESEARCH

As laid down in the introduction chapter (Chapter 1), the main aim of this research was to investigate the perceptions and views of professional bankers and financiers one way or another involved in the provision of Islamic financial and banking products across different regions about risk management in Islamic banking, with the objective of mapping out the various issues related to risk through the perceptions of the participants, namely bankers, financiers, and scholars.

This study, hence, consists of two major sections, namely background and empirical work. The first five chapters are the foundational chapters for the next six chapters, which form the empirical part of the thesis. The first chapter introduces the main research questions and states the research aim and objectives as well as explaining the rationale of choosing the research topic. It also briefly discusses the research hypotheses, and the selected research methodology. Chapter 2 covers, among others, the systemic importance of the Islamic banking industry and its potential growth. An overview of the various concepts of risks and the industry standards of risk management techniques are discussed in Chapter 3 along with the discussion of the unique risks facing IFIs. This chapter represents the main chapter in the literature review part of the paper. Chapter 4 looks at capital adequacy rules for IFIs in a financial world dominated by Basel standards, while Chapter 5 analyses the roots of the recent financial crisis and its implications to Islamic banking by making reference to the risk management nature of the financial crisis.

The second part of the thesis is concerned with the empirical work and the findings thereof. Chapter 6, which is the first chapter of this part, deals with the research design and methodology. In essence, it is about the primary data collection and administration process, covering different phases of that process and dwelling on its important aspects, such as the research questions, hypotheses, and the relevance of the selected research methodologies to the research questions. For the empirical part of the thesis, the primary data assembled through the use of questionnaire surveys and in-depth interviews as the research methods are utilised. Chapter 7 is the beginning of the statistical analysis of the survey questionnaire employing mainly descriptive analyses and Chi-square tests as well as the more basic frequency and percentage tables. Chapter 8 is the main primary quantitative data analysis, presenting the findings from inferential statistical tests such as Kruskal-Wallis, factor analysis, MANOVA multivariate analysis of variance, and Chi-square tests. This chapter, to a certain extent, answers the main research hypotheses and their sub- hypotheses as the information presented in various sections of the chapter suggests. Chapter 9 is the qualitative analysis part in which the responses given by the interviewees are analysed through a coding analysis. However, more detailed discussion of the findings of both quantitative and qualitative analyses is handled in Chapter 10

which combines, integrates, and discusses the main findings from all the empirical chapters, within the context of the existing literature, to provide a basis of overall conclusion.

Finally, this chapter contains the conclusion and recommendations as already explained and also summarises the research findings and the proposed policy implications as well as the research limitations and further research topics.

11.3 REFLECTING ON THE RESEARCH FINDINGS

As discussed in Chapter 1, risk management in Islamic banking is one of the major prime as well as controversial issues. Although progress has been made across the industry over the past few years, still Islamic banks are facing significant challenges when measuring and managing risks. At the same time, risk management is getting more attention all over the world due to the recent financial crisis. Within this context, it goes without saying that, for most Islamic financial institutions, risk management presents specific challenges. The study, therefore, investigates the controversial question of whether Islamic banks are more or less risky than conventional banks. This research answers the identified research questions, not only based on conceptual research but more importantly using empirical evidence from the market place by focusing on the practical side of risk management in Islamic banking.

It should be noted that this research is a practical PhD research that fills the gap in research about risk management in Islamic banking by investigating the perceptions and attitudes of different categories of Islamic banking practitioners towards the unique characteristics of risk management in Islamic banking from empirical evidence. Therefore, this paper fills the gap by taking the research one step further by integrating theoretical concepts with the practical reality in a socially constructed manner through the opinions and perceptions of the participants.

Based on the findings in this study, it is obvious that Islamic banks face a number of challenges in terms of risk management. The entanglement of credit, market and operational risk in each contract type used by Islamic banks in their daily operations, as well as displaced commercial risks attached to the incentive to serve PSIA-holders with returns at least comparable to similar conventional deposits, are two of the main constraints IFIs need to cope with. In addition, as indicated by the findings in this research, in the absence of a wide pool of *Shari'ah*-compliant, sufficiently liquid investment vehicles (especially in fixed income), Islamic banks find it difficult to manage their balance sheet from an ALM perspective, especially liquidity and margin-rate risk.

As the findings depicts, Islamic banks' funding mix tends to be imbalanced, with the dominance of deposits, PSIA and equity making their funding profile predominantly short-term at a time when the maturity of their asset classes is widening. To mitigate nascent maturity mismatches, some IFIs have started issuing medium-term *sukuk* to lengthen the maturity profile of their funding, but *sukuk* still account for only a small portion of IFIs' total liabilities as discussed in Chapter 3. Subordinated *sukuk* and hybrid instruments have not been used yet; these are more expensive funding sources and incentives to issue them are limited given the abundance of capital among most IFIs. The lack of liquidity and viable alternatives, combined with the competitive disadvantage, hamper IFIs and can even create a liquidity crisis. To overcome the shortcomings of the Islamic money market, many investment banks are currently designing new complex products, compliant with *Shari'ah* requirements. It remains to be seen whether these new solutions will obtain widespread *Shari'ah*-compliant status in the Islamic finance community, and generate enough demand for a functional Islamic money market to develop. To help manage their liquidity, IFIs will have to develop creative funding strategies and improve their internal capabilities to understand and forecast their liquidity needs.

In addition, the research findings identifies that IFIs face other challenges from weak corporate governance practices, lack of standardisation in accounting and *Shari'ah*

standards, and high concentration risk. In fact, IFIs show heavy concentrations across the board, by name, sector, geography and business lines.

Political risk was ignored by both questionnaire respondents and interviewees in this study; only a few respondents recognised it as a major risk affecting Islamic banking. However, the lesson from the recent political unrest and revolutions in the Middle East is that political risk matters. There is no doubt that the political and social upheaval throughout the Middle East will undoubtedly have direct and indirect impacts on IFIs in general, and on those located in the Middle East in specific as discussed in Chapter 10. The escape of foreign investors and lack of ability of governments to support Islamic banking and to bailout financial institutions remains to be assessed after the scissor effect of rising oil prices and local geo-political unrest.

Literature review reveals that Basel II was drafted with conventional banking so much in mind. Previous researchers also argue that Basel II is primarily for conventional banks and has limited applicability for Islamic banking. However, empirical evidence from this study found that market practitioners believe that with some adaptations Basel II could be applied to Islamic banks and that the IFSB could play an important role in this context.

In brief, empirical findings from this study identified weaknesses and vulnerabilities among IFIs in the area of risk management and governance. The risk management, monitoring, reporting, and mitigation need to be upgraded across the whole Islamic banking industry. This study shows that the difficulties IFIs are currently faced with mostly stem from risk-management failures, characterised by a very low degree of diversification, preference for illiquidity, and an absence of financial flexibility and imbalanced funding strategies. This highlights the significance of risk management for the growth of whole Islamic banking industry.

The findings in this research also show that although IFIs have shown resilience, they are not immune from economic shocks. Empirical evidence shows that Islamic banking is expected to emerge stronger from the crisis, provided some conditions are met, such as

‘further innovation’, ‘enhanced transparency’, ‘more robust risk-management architecture and culture’, and, above all, ‘enhanced *Shari’ah* compliance’. Broadly speaking, Islamic banking had a relatively ‘mild crisis’ in that it suffered less damage as a result of the global economic and financial turmoil of the past few years than conventional banking. Of course there were exceptions: Dubai, with its high debt and open economy, was the main regional casualty as well as the private sectors of some other Gulf countries which were bruised as their credit bubbles popped. In general IFIs have relatively maintained stability despite the global financial crisis thanks to ample liquidity, safe debts, and high profit margins. However, this situation will not continue for long. Islamic banks need to reform in different levels – product, operational, and institutional - to be successful. They have been lucky so far, and perhaps they will learn from the difficulties faced by conventional banks.

Many studies including this study indicate that IFIs tend to shy away from equity and partnership based instruments for several reasons, such as the inherent riskiness and additional costs of monitoring such investments, low appetite for risk, and lack of innovation. This unwillingness to take on risk reflects the lack of transparency in the Islamic banking system, which dampens confidence and trust among investors and market participants. The result is that depositors and investors become more risk averse, and so banks become even more risk averse, thus creating a vicious circle which results in severe financial and economic crises.

The original concept of Islamic financing is undoubtedly in favour of equity participation rather than creation of debt, because it is only equity that brings an equitable and balanced distribution of wealth in the society. However, the practice is very different from the theory. Practitioners of Islamic finance to-date have been mimicking conventional products. This mimicking has resulted in a close correlation between the two systems. These deviations between theory and practice mean that the system is not functioning at its full potential and has adapted itself to a limited functionality. In fact, due to these deviations, the Islamic banking system is exposed to additional risks that it is not supposed to be exposed to as explained in the previous chapters. This dichotomy

between the ideals of Islamic banking moral and the realities, combined with the lack of advanced risk management and mitigation techniques, renders Islamic banking more risky than the debunked conventional banking model instead of being a safe haven. There is a growing realisation that the long-term sustainable growth of Islamic banking will depend largely on the development of proper risk management architecture. Islamic banking could only be a safe haven when its broader principles on a macro-level are entirely followed by all participants. In other words, when the short-term risks and the longer-term stability are put together and optimised, the outlook for the Islamic banking industry looks less risky than its critics claim.

Islamic banking, so far, as it is being practiced does not appear to be a genuine reflection of the aspirational expectations of *fiqh* requirement for Islamic finance. Islamic banking benefits, when measured by conventional yardsticks, do not amount to much. Therefore, IFIs and all participants in Islamic finance should strictly follow the rules of *Shari'ah*, regardless of whether the benefits of such rules are apparent or measurable. There is a particular logic and morality to *Shari'ah* principles, which Islamic banking practitioners will only see if they stop trying to shoe-horn them into conventional product structures.

Market discipline and transparency rules have been the pride of Western financial systems for decades. The irony is that those rules have consistently failed whenever tested by severe financial stress. On the other hand, more resilient and ethical rules have long existed in the roots of *Shari'ah* finance. Some of the previously criticised inherent constraints – imposed on Islamic banks by *Shari'ah* – have proved to be conservative risk management tools that enabled most Islamic banks to navigate through the current crisis. Limited available hedging tools, prohibition of derivatives and speculation, linking risks to assets, and extra liquidity and capital buffers are all examples of built-in principles that have been criticised by opponents of Islamic banking as burdens on profitability prior to the crisis; with hindsight they proved to be the most important strengths that ensure stability as explained in Chapter 5. From a risk management perspective, *Shari'ah* can provide a moral compass that guides risk takers which risks are acceptable and which are not.

11.4 RESEARCH IMPLICATIONS AND RECOMMENDATIONS

As mentioned in Chapter 1, the present study is motivated by an observation that there is a gap between the theoretical aspects of risk management in Islamic banking and the practical behaviour of the industry practitioners – a fact that has been articulated by many in different formats. Therefore, the results of this study provide positive implications and recommendations for various stakeholders in pursuing the desired ultimate objectives of the Islamic banking system.

It should, furthermore, be stated that this research also contributes to the body of existing academic research in terms of opening up new areas of study; in addition, it renders valuable input to industry practitioners for improving current regulations and practice related to risk management, reporting, mitigation, capital adequacy, and development strategies. The findings in this study may also prove very useful for promoting financial stability from a risk management perspective.

11.4.1 Policy Implications

The results have some policy implications for regulators, policy makers, *Shari'ah* scholars, practitioners, academics, and institutional stakeholders. In addition, regulative bodies such as central banks, AAOIFI, IIFM, and IFSB may find the results useful for assessing the level of adequacy of risk reporting in Islamic banks and for developing new guidelines for risk management and mitigation. The findings provide evidence which enables the IFSB and regulators to pursue policies that promote transparency with regard to risk management. The general findings in this study, if combined with other studies, will have important implications for setting up risk reporting standards for IFIs.

In addition, the risk perception trends identified by this study across different countries, regions, and other categories of respondents could be beneficial for marketing and growth

strategies of IFIs across borders. These findings could therefore be of greatest help to regulators in understanding regional and institutional differences among banks.

The findings also show that IFIs are still far behind the current best practice in terms of risk management methods, transparency, and disclosure. This has implications, particularly for PSIA holders because, as mentioned earlier, they require adequate risk information to monitor their investment due to profit-sharing arrangements.

Furthermore, the perceptions of Islamic banking professionals about Basel I and III and their applicability to Islamic banking could be useful to regional regulators and the BCBS in drafting and applying Basel III standards, which tend to neglect the unique characteristics of Islamic banks. The failings of Basel II and the market expectations resulting from Basel III were thoroughly discussed in this study with wide implications to banks, regulators, consultants, and researchers.

IFIs also need to make use of the findings in this research to improve their risk management architectures and culture. By doing so, they would be able to improve their funding structures, reduce their inherent risks, and hence improve their ratings, market transactions pricing, and overall profitability. Moreover, from a risk management perspective, the recommended growth strategies discussed in this paper could be of great help to Islamic banks particularly during the current turbulent economic climate.

It is impossible to lay out one best strategy but various strategies can be adopted to achieve profitable growth and to enhance IFIs' competitiveness. It is worthwhile to point out that, while asset growth is important, appropriate systems and infrastructures to address risk issues need to be in place to support sustainable growth. Therefore, strategic focus needs to be timed, with risk management being implemented first, followed by growth. Finally, regulators, shareholders, management and employees, and customers all have roles in shaping an organization's strategies.

The main recommendations of the thesis can be summarised as follows:

(i) Consolidation:

There are far too many IFIs to serve this growing market, but none has the size necessary to compete on a global stage.

(ii) Diversification:

Consolidation will also help IFIs to gain from the benefits of diversification across different geographical territories, sectors, and industries. Currently, Islamic banks are not fully exploiting the benefits that come from both geographic and product diversification. On the asset side, diversification can reduce credit, concentration, and market risks, in addition to reducing the variance in the returns that accrue to the claimholders. Diversification on the liabilities side can reduce the displaced commercial risk and withdrawal risk and will help to improve liquidity gaps and assets-liabilities management.

In addition, most IFIs need to diversify their activities from what is mostly a real estate and standard lending play, to offer a comprehensive service suite, including advanced treasury services, innovative asset management, balance sheet management, and securitisation services.

(iii) Liquidity enhancement:

There is a growing realisation that the sustainable growth of Islamic banking will depend largely on the development of well-functioning secondary markets and the introduction of liquidity-enhancing products.

(iv) Investing in risk management infrastructure:

The establishment of risk assessment and measurement systems often becomes an expensive proposition as it requires sophisticated models, software, packages technologies, and skilled human resources who can understand the nature of the risks and prepare models accordingly. Given the small size of the IFIs, establishing such

frameworks at the organisation level may not be possible. IFIs and supervisory authorities should work together to find a reasonable solution to the problem. Risk management solutions should not be considered as an extra cost but should be viewed as an investment to build a knowledge base of superior quality entrepreneurs and projects. As Islamic banks should have learnt from the crisis, the painful cost of inadequate risk management is being demonstrated every day.

(v) Innovation:

Islamic banking might find it difficult to innovate because it exists in a deeply-rooted conventional system. However, if the industry is not innovating authentic products according to genuine *Shari'ah* principles, it might end up with the same failures as conventional banking. At this point in time, there is no real value proposition offered by Islamic banks. While Islamic banking is considered to have a bright future, mimicking conventional banking is mostly considered as making Islamic banking lose many opportunities to serve the markets and communities around the world.

(vi) Back to roots: a *Shari'ah*-based approach vs. *Shari'ah* compliancy

Shari'ah compliance is inherently and systemically significant to Islamic banking. However, developments indicate that *Shari'ah* based solutions should be better placed in appreciating opportunities available. It is clear through experience that any divergence from *Shari'ah* principles exposes the IFI to a wide range of additional risks at different levels as discussed in this paper, thus rendering Islamic banking to be more risky than the conventional model. Considering that the current practice is very much shaped by *Shari'ah* compliancy, which hence exposed Islamic banks and finance to further risks, it is hoped that with *Shari'ah* based approach such unnecessary risk areas can be avoided.

11.4.2 Theoretical and Empirical Implications: Significance of the Research

This research is expected to fill a gap in the critically investigating risk management in Islamic banking from a practical perspective, and as a tool to boost growth and

profitability of IFIs. It is, however, not merely another addition to the available literature. It has distinguished itself for a number of reasons:

First, it focuses on the risk management aspect of Islamic banking, a highly under-researched area in Islamic finance. Second, it places theory and practice in one place by taking analysis one step further from literature review to the market place. As explained earlier, there is a clear difference between theory and reality in Islamic banking, which subsequently leads to a distinction between conceptual formulations and actual practices of risk management in Islamic banking. The differences are discussed and analysed in depth in this study. To relate this research to the realities of the banking and finance practice, the focus of this research is on the everyday aspects of risk management in Islamic banking. Moreover, this study relies on a larger sample size within the Islamic banking wider population than previous studies, and the sample is well diversified for both the questionnaire and interviews in order to enable the researcher to obtain better findings by conducting significance tests on the differences among the various groups. Finally, while a few have researched the practical implementation of risk management in Islamic banking, this research is the first of its kind to do so after the recent credit crisis. Thus, this research extracts empirical evidence from the perceptions of Islamic banking professionals and from the current crisis to support its own views and conclusions.

11.5 LIMITATIONS OF THE STUDY

There is no perfect study and the current one is no exception. There are four limitations that need to be acknowledged and addressed regarding the present study. Firstly, the cultural aspects of risk management and the impact of regional cultural differences on the risk perception of respondents should have been examined. Each region has its unique culture which shapes its risk management and therefore Islamic finance related studies should also endogenize the cultural and cultural-religious dimension of risk in considering risk and risk management practices. It is hoped that such a study could be conducted in the coming future, perhaps as part of post-doctoral studies.

Similarly, the impact of macroeconomic factors and business cycles on risk management perceptions across different regions could be investigated. Considering that each country has a particular dynamism related to macroeconomy with specific implication for various risk dimensions in that particular framework, such economic realities should be considered as part of risk management related studies.

The third limitation has to do with the approach to the research process. In addition to qualitative research methodology, as this study utilized, a quantitative methodology based on secondary data with econometric analysis to measure the ‘actual’ findings in literature against the ‘perceptions’ as studied in this research could have been also considered.

It should be noted that time and costs limitations were, no doubt, restricting factors for the research to address the first three limitations.

Finally, the fourth limitation has to do with literature review. The literature on risk management in Islamic banking was limited and thus the references were seriously affected.

11.6 SUGGESTIONS FOR FUTURE RESEARCH

There is still wide scope for improvement and for further research. Having mentioned the limitations that were identified and discovered throughout the research process, the researcher would like to make suggestions and recommendations which may be taken from this study for future research either to enhance the study or as a basis for new studies in the same field.

Future studies may expand the scope of the sample enlarging the coverage to include respondents from more countries and with more diversified backgrounds.

This study accessed the perception of Islamic banking professionals about risks facing IFIs. It is also possible to seek the views and perceptions of Islamic banking customers

themselves. Expanding the sample in this way would enable the researcher to use probability sampling techniques. The outcome of random sampling may enable the researcher to obtain data that are more representative and would assist the researcher to make more conclusive analyses by using robust statistical tools such as parametric statistical tools.

Although the research sample for this study comprised a wide range of respondents with different backgrounds within the industry, no regulators were included. It would be useful to obtain the regulators' views on the issues discussed in this thesis. Including regulators in the research sample would give additional insights on their roles to improve the risk management standards in Islamic banking.

Furthermore, the cultural aspects of risk management and the impact of regional cultural differences on the risk perception of respondents should have been examined as each region has its unique culture which shapes its risk management.

This study focused on risk management within Islamic banking. Further research may attempt to extend the attempt of this study to analyse risk management among *takaful* companies, Islamic brokers and Islamic funds, and to expand the research about risk management across the whole wider Islamic finance industry.

Finally, as mentioned in the previous section, secondary data based econometric analysis should be considered also in future research to observe and model the articulation and practice of risk and risk management in Islamic banking and finance. As mentioned, this can help to measure the 'actual' against the 'perceptions' as studied in the research.

11.7 EPILOGUE

This research set out to explore and analyse the perceptions and attitudes of Islamic banking professionals towards contemporary risk management issues within Islamic banking. The efforts and dedications put into this research especially during the data

collection and analysis duration yielded highly significant and meaningful results, which is a critical success factor. As the foundational and empirical chapters indicate, this study is considered as having fulfilled its research aims and objectives. It is hoped and expected that at least some, if not all parts of this research, will be applied by the stakeholders of Islamic banking.

A number of ideas have been discussed and analysed in this research, which can be considered to constitute an agenda for further research and deliberations by researchers, practitioners, regulators, and *Shari'ah* scholars. As is acknowledged by many, the Islamic banking industry is at the crossroad. The right direction can provide the required impetus for the sustained growth in the long run. The only alternative is through efficient and effective risk management practices and systems within the authentic worldview of Islamic moral economy. Integrated Islamic risk management and building risk-sensitive culture are needed now and for the future. Investment in better risk management systems and tools should be viewed as strategic developments rather than a situational necessity. Risk management for Islamic banking is not a destination or a project; it is rather a journey and a process – an on-going process.

BIBLIOGRAPHY

- AAOIFI - Accounting and Auditing Organization for Islamic Financial Institutions (1999), "Statement on the Purpose and Calculation of the Capital Adequacy Ratio for Islamic Banks". Bahrain, March 1999.
- Abbas Mirakhor, A. and Krichene, N. (2009). *Recent crisis: lessons for Islamic finance*. [Online] Available from: [http:// www.newhorizon-islamicbanking.com/index](http://www.newhorizon-islamicbanking.com/index) [Accessed: 12 November, 2009].
- AbdelKarim, R. A. & Archer, P. S. (2005). *Islamic Finance: Innovation and Growth*. London: Euromoney Books.
- Abdullah, D. (2007). *Transparency and Market Discipline: Basel Pillar 3*, in Simon Archer and Rifaat A. Karim (eds.), *Islamic Finance: The Regulatory Challenge*. Singapore: John Wiley and Sons (Asia), pp. 366-377.
- Abdul-Ghani, B. (2009). *Conference Proceedings. Understanding Sukuk – Issues, Structuring, Innovation* London Sukuk Summit. London, 2-3 July, 2009.
- Abu Dawood. *Sahih Sunan Abu Dawud, Al Beyooh wa Al Egazat*. Part 3, Chapter 27, Hadith no. 3383, p. 677. [Eng. Trans 2/445 no. 1694].
- Ahmed, H. (2009). Presentation. *Global Financial Crisis: Lessons for Islamic Finance*. Durham University.
- Ahmed, H. and Khan, T. (2007). *Risk management in Islamic banking*, in M. Khabir Hassan and Mervyn K. Lewis (eds.), *Handbook of Islamic Banking*. Cheltenham: Edward Elgar, pp. 144-160.
- Ainley, M. (2007). *Summit Proceedings. Regulating Islamic Finance in the UK Market*, Islamic Finance Summit, London, 30-31 January, 2007.
- Akkizidis, I. and Khandelwal, S. K. (2007). *Financial Risk Management for Islamic Banking and Finance*. London: Palgrave Macmillan.
- Al-Omar, F. and Abdel-Haq, M. (1996). *Islamic Banking: Theory, Practice and Challenges*. Karachi, Pakistan: Oxford University Press.
- Alsayed, A. (2008). *Risk management issues in Islamic banks*, in Lori Hunt (eds.), *Islamic Finance Review 2007/08*. London: Euromoney Yearbooks.
- Alvi, I. A. (2009a). *Liquidity Management in Islamic Finance*. Research Report Dow Jones Islamic Market Indexes, April 2009.

- (2009b). *Standardisation of documentation in Islamic finance: IIFM Master Agreements for Treasury Placement (MATP)*, in Lisa Paul (eds.), *Islamic Finance Review 2009/10*. London: Euromoney Yearbooks.
- Archer, S. and A. Karim, R. (2007). *Specific Corporate Governance Issues in Islamic Banks*, in Simon Archer and Rifaat A. Karim (eds.), *Islamic Finance: The Regulatory Challenge*. Singapore: John Wiley and Sons (Asia), pp. 310-341.
- Archer, S. and Haron, A. (2007). *Operational Risk Exposures of Islamic Banks*, in Simon Archer and Rifaat A. Karim (eds.), *Islamic Finance: The Regulatory Challenge*. Singapore: John Wiley and Sons (Asia), pp. 120-134.
- Asaria, I (2011). Seminar Proceedings, *Eye on Islamic Finance*. Bloomberg, London, 18 March 2011.
- Askari, H., Iqbal, Z. and Mirakhor, A. (2009). *New Issues in Islamic Finance and Economics: Progress and Challenges*. Singapore: John Wiley and Sons (Asia).
- Asutay, M. (2007). A Political Economy Approach to Islamic Economics: Systemic Understanding for an Alternative Economic System. *Kyoto Bulletin of Islamic Area Studies. IIUM Journal of Economics and Management*, Vol. 1, No. 2, pp. 3-18.
- (2009a). Seminar Proceedings, *Comparative Development of the Islamic Economic Model in the Context of Current Market Conditions: The Political Economy of Islamic Moral Economy*, London, 30 January, 2009.
- (2009b). Seminar Proceedings, *Considering the Dichotomy between the Ideals and Realities of Islamic Finance*. Institute of Islamic Banking and Insurance (IIBI), London, 15 October, 2009.
- (2011). *Research Workshop Handout No. 4- Research Strategy and Design*. Durham: SGIA.
- Asutay, M. and Zaman, N. (2009). Divergence between Aspirations and Realities of Islamic Economics: A Political Economy Approach to Bridging the Divide. *IIUM Journal of Economics and Management*, Vol. 17. No. 1, pp. 73-96.
- Awan, D. M. M. (2008). Islamic Finance Can Solve Global Crisis. *Arab News*, 24 April, 2008.
- Ayub, M. (2007). *Understanding Islamic Finance*. Chichester: John Wiley and Sons, Ltd.
- Babbie, E. (2010). *The Practice of Social Research*. 12th edition. Wadsworth, USA: Library of Congress.

- Bartram, B. (2009). Derivatives are not weapons of mass destruction. *Evening Standard*. 2 November, 2009, p. 40.
- BIS – Bank for International Settlements (2009). 79th Annual Report, June 2009.
- BCBS - Basel Committee on Banking Supervision (2006), “International Convergence of Capital Measurement and Capital Standards”, June 2006.
- (2008), “Liquidity Risk: Management and Supervisory Challenges”, February 2008.
- (2009a), “Proposed enhancements to the Basel II framework”, January 2009.
- (2009b), “Strengthening the resilience of the banking sector - consultative document”, December 2009.
- Bell, J (2005). *Doing your research project: a guide for first-time researchers in education*. 4th edition. Berkshire: Open University Press.
- Bessis, J (1999). *Risk Management in Banking*. Chichester: John Wiley and Sons Ltd.
- Blaikie, N (2007). *Approaches to Social Enquiry: Advancing Knowledge*. 2nd edition. Cambridge: Polity Press.
- BLME – Bank of London and the Middle East (2009). *Liquidity Risk Management under Financial Services Authority’s Liquidity Policy 2009 for Islamic Financial Institutions in the United Kingdom*. February 2009.
- British Bankers’ Association (2009), Seminar Proceedings, *Update on Capital Requirements Directive*, London, 13 March, 2009.
- Brown, K, Hassan, K. and Skully, M. (2007). *Operational efficiency and performance of Islamic banks*, in M. Khabir Hassan and Mervyn K. Lewis (eds.), *Handbook of Islamic Banking*. Cheltenham: Edward Elgar, pp. 96-115.
- Bryman, A. (2008). *Social Research Methods*. 2nd edition. Oxford University Press.
- Buffet, W (2002), Berkshire Hathaway Annual Report.
- Chapra, M. U. (2007). *Challenges facing Islamic financial industry*, in M. Khabir Hassan and Mervyn K. Lewis (eds.), *Handbook of Islamic Banking*. Cheltenham: Edward Elgar, pp. 325-360.
- Charmaz, K. (1983). *The grounded theory method: An explication and interpretation*, in Robert M. Emerson (eds.), *Contemporary field Research: A Collection of Readings*. Boston: Little, Brown and Company, pp. 109-128.

- Cohen, M.P. (2005). *Sample Size Considerations for Multilevel Surveys*. *Internat. Statist. Rev.* Vol. 73, No. 3 (2005), pp. 279-287.
- Creswell, J. (1994). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 2nd edition, London: Sage Publications.
- Creswell, J. and Plano Clark, V.L. (2007). *Designing and Conducting Mixed Methods Research*. Thousand Oaks: Sage Publishing.
- Dar Al Istithmar (2006). *Sukuk: An Introduction to the Underlying Principles and Structure*, June 2006.
- Dar, H. and Presley, J (2000). Lack of Profit Loss Sharing in Islamic Banking: Management and Control Imbalances. *International Journal of Islamic Financial Services*, Vol. 2 No.2, July-Sept. 2000, pp. 3-18.
- Das, S. (2006). *Risk Management*. 3rd edition. Singapore, John Wiley and Sons (Asia).
- Davies, P. J. (2009). Tawarruq loans split scholars. *Financial Times*, Tuesday, December 8, 2009.
- Davis, E. (2009a). The City Uncovered: Part 2 - Tricks with Risk, BBC Two. [Online] Available from: <http://www.bbc.co.uk/iplayer> [Accessed: 15 March, 2009].
- Davis, E. (2009b). The City Uncovered: Part 3 - Risk Management, BBC Two. [Online] Available from: <http://www.bbc.co.uk/iplayer> [Accessed: 15 March, 2009].
- Denton Wilde Sapte (2009). Seminar Proceedings. *Islamic Finance*, 05 June, 2009.
- De Vaus, D. (2002). *Surveys in Social Research*. 5th edition, London: UCL Press.
- Dey, D. and Holder, D. (2008). *Securitisation in the United Arab Emirates and Saudi Arabia – two promising markets*, in Lori Hunt (eds.), *Islamic Finance Review 2007/08*. London: Euromoney Yearbooks.
- Dillman, D. (2000). *Mail and Internet Surveys: The Tailored Design Method*. 2nd edition. New York: John Wiley and Sons.
- Eedle, S. (2009). *A global bank's view of the evolution of Islamic finance*, in Lisa Paul (eds.), *Islamic Finance Review 2009/10*. London: Euromoney Yearbooks.
- EIIB - European Islamic Investment Bank Plc (2010a), *Product Programme: Dual Currency Murabaha*, February 2010.
- (2010b), *Credit Risk Policy*, May 2010.

- (2010c), *Implementation of Capital Requirements Directive*, June 2010.
- (2010d), *Market Risk Policy*, November 2010.
- Economist Intelligence Unit (2009), *Managing risk in perilous times: Practical steps to accelerate recovery – April 2009*.
- Farook, S. (2008). Capital Adequacy Ratios. *Islamic Banking & Finance*, Vol. 6, Issue 2, No. 17, pp. 18-20.
- Fitch Ratings (2011), *GCC/ Middle East Outlook – January 2011*.
- Foster, J. (2009). How Sharia-compliant is Islamic Banking? BBC News, 11 December 2009. [Online] Available from: <http://news.bbc.co.uk> [Accessed: 11 December 2009].
- Freeland, C. and Friedman, S. (2007). *Risk and the Need for Capital*, in Simon Archer and Rifaat A. Karim (eds.), *Islamic Finance: The Regulatory Challenge*. Singapore: John Wiley and Sons (Asia), pp. 215-222.
- FRSGlobal (2009). *Risk Management in Islamic Banking*. Webinar, Monday, 7 December 2009.
- (2010). *Islamic Banks and Stress Testing*, 26 January, 2010.
- Funds@Work (2009). *Shariah Scholars in the GCC - A Network Analytic Perspective – 10 October 2009*.
- Grais, W. and Kulathunga, A. (2007). *Capital Structure and Risk in Islamic Financial Services*, in Simon Archer and Rifaat A. Karim (eds.), *Islamic Finance: The Regulatory Challenge*. Singapore: John Wiley and Sons (Asia), pp. 69-93.
- Greuning, H. V. and Iqbal, Z. (2008). *Risk Analysis For Islamic Banks*. Washington D.C.: The World Bank.
- Hasan, M. and Dridi, J. *The Effects of the Global Crisis on Islamic and Conventional Banks: A Comparative Study*. IMF Working Paper WP 10/201, International Monetary Fund, November 2010.
- Hebel, A. (2002). Presentation. *Parametric versus Nonparametric statistics – when to use them and which is more powerful?* Department of Natural Sciences, University of Maryland Eastern Shore, 5 April, 2002.

- Haron A. and Hin Hock L. (2007). *Inherent Risk: Credit and Market Risks*, in Simon Archer and Rifaat A. Karim (eds.), *Islamic Finance: The Regulatory Challenge*. Singapore: John Wiley and Sons (Asia), pp. 94-119.
- Heiko, H. and Cihak, M. (January 2008). *Islamic Banks and Financial Stability: An Empirical Analysis*. Research Report WP/08/16. International Monetary Fund.
- HMCS - Her Majesty's Courts Service [Online] Available from: www.hmcourts-service.gov.uk/judgmentsfiles/j2232/beximco-v-shamil.htm [Accessed: 28 November, 2009].
- Howell, D. C. (1997). *Statistical Methods for Psychology*. 4th edition, Belmont, CA: Duxbury.
- IFSB - Islamic Financial Service Board (2005a), "Guiding Principles of Risk Management for Institutions (other than Insurance Institutions) offering only Islamic Financial Services". Kuala Lumpur, Malaysia, December 2005.
- (2005b), "Capital Adequacy Standard for Institutions (other than Insurance Institutions) offering only Islamic Financial Services". Kuala Lumpur, Malaysia, December 2005.
- (2006), "Guiding Principles on Corporate Governance for Institutions offering only Islamic Financial Services". Kuala Lumpur, Malaysia, December 2006.
- (2007), "Islamic Financial Services Industry Development: Ten-Year Framework and Strategies". Kuala Lumpur, Malaysia, May 2007.
- (2008a), "Technical Note on Issues in Strengthening Liquidity Management of Institutions Offering Islamic Financial Services: The Development of Islamic Money Market". Kuala Lumpur, Malaysia, March 2008.
- (2008b), "Guidance Note in Connection with the Capital Adequacy Standard: Recognition of Ratings by External Credit Assessment Institutions (ECAIs) on *Shari`ah*-Compliant Financial Instruments". Kuala Lumpur, Malaysia, March 2008.
- (2009), *The IFSB membership reflects the growing interest among the Islamic financial services industry's stakeholders in the work of the IFSB*. [Online] Available from: <http://www.ifsb.org> [Accessed: 22 December, 2009].
- (2011), *The IFSB announces the establishment of an International Islamic Liquidity Management Corporation*. [Online] Available from: http://www.ifsb.org/press_full.php?id=149&submit=more [Accessed: 22 February, 2011].

- IIFM - International Islamic Financial Market. *International Islamic Financial Market (IIFM) holds its 20th Board of Directors Meeting*. [Online] Available from: <http://www.iifm.net> [Accessed: 22 November, 2009].
- Iqbal, M. & Llewellyn, D. T. (2002) *Islamic Banking and Finance: New Perspectives on Profit-Sharing and Risk*. Cheltenham: Edward Elgar.
- Iqbal, M. and Molyneux, (2005). *Thirty Years of Islamic Banking: History, Performance and Prospects*. Palgrave Macmillan.
- Iqbal, Z. and Mirakhor, A. (2007). *An Introduction to Islamic Finance: Theory and Practice*. Singapore: John Wiley and Sons (Asia).
- Ishaq, E. (2009). Crisis a blessing in disguise. Arab News, 13 April, 2009 [Online] Available from: <http://www.securities.com> [Accessed: 14 April, 2009].
- Jorion, P. and Khoury, S. J. (1996). *Financial Risk Management: Domestic and International Dimensions*. Cambridge, Massachusetts: Blackwell.
- Khalaf, R. (2009). Islamic finance must resolve inner tensions. *Financial Times*, Monday, March 30, 2009.
- Kamali, M. H. (2005). *Financial Engineering and Islamic Contracts*, in Iqbal, M. and Khan, T. (eds.), *Fiqh issues in commodity futures*. London: Palgrave Macmillan.
- Khan, B. A. and Proshan, B. (1992). *Islamic Banking: A Survey*. Templeton College, The Oxford Centre for Management Studies, March 1992.
- Khan, S. (2009). Why Tawarruq Needs To Go. *Islamic Finance News*, September 2009, pp. 14-22.
- Khan, T. *Risk Management In Islamic Banking: A conceptual framework*. Distance Learning Lecture. 2 November 2004. [Online] Available from: www.sbp.org.pk/departments/ibd/Lecture5 [Accessed: 24 June, 2009].
- Khan, T. and Ahmed, H. (2001). *Risk Management: An Analysis of Issues in Islamic Financial Industry*. Occasional Paper 5, Islamic Development Bank.
- Khan, T and Muljawan, D (2006). Seminar Proceedings. *Islamic Financial Architecture: Risk Management and Financial Stability*.
- Khandelwal, A. *Risk Management In Islamic Finance*. 11 March 2008 [Online] Available from: www.gtnews.com/article/7199.cfm [Accessed: 04 April, 2008].
- KPMG (2006) *Making the Transition From Niche to Mainstream Islamic Banking and Finance: A Snapshot of the Industry and Its Challenges Today*.

- KPMG (2007) *Basel Briefing - July 2007*.
- KPMG (2009) *Basel II and Pillar III - January 2009*.
- KPMG (2010) *Basel 3 Pressure is building... - December 2010*.
- Lee, J. (2008). Complexities of risk outweigh Basel II. *Islamic Banking & Finance*, August - September 2008, pp. 28-29.
- Lewis, M. K. and Algaoud, L. M. (2001). *Islamic banking*. Cheltenham: Edward Elgar.
- Mahlknecht, M. (2009). *Islamic Capital Markets and Risk Management: Global Market Trends and Issues*. London: Risk Books, a division of Incisive Financial Publishing Ltd.
- Markowitz, H. (1959). *Portfolio Selection: Efficient Diversification of Investment*. New York: John Wiley and Sons.
- McKenzie, H. (2007). Four pillars of support. *The Banker*, September 2007, pp. 10-13.
- McKinsey&Company (2009), *The Financial Crisis and the Way Forward*. The World Islamic Banking Competitiveness Report 2009/10 – December 2009.
- (2010), *In Search of New Opportunities*. The World Islamic Banking Competitiveness Report 2010/11 – November 2010.
- Miller, N. D. Conference Proceedings. *Risk Management considerations in Sukuk Issuance & Securitisation*. London Sukuk Summit. London, 25 June, 2008.
- Mirakhor, A. and Krichene, N. (2009). *Recent Crisis: Lessons for Islamic Finance*. Research Report.
- Mirakhor, A. and Zaidi, I. (2007). *Profit-and-Loss sharing contracts in Islamic finance*, in M. Khabir Hassan and Mervyn K. Lewis (eds.), *Handbook of Islamic Banking*. Cheltenham: Edward Elgar, pp. 49-63.
- Moody's (2008a), *The Benefits of Ratings for Islamic Financial Institutions and What They Address* – February 2008.
- (2008b), *Islamic Banks in the GCC: A Comparative Analysis* - March 2008.
- (2009a), *Frequently Asked Questions: Islamic Finance, Oil Prices and the Global Crisis* – February 2009.

- (2009b), *Calibrating Bank Ratings in the Context of the Global Financial Crisis* - February 2009.
- (2009c), *The Liquidity/Leverage Trade-Off for Islamic Banks – and its Impact on Their Ratings* - August 2009.
- (2009d), *Global Sukuk Issuance Surges as Effects of Credit Crisis Recede: Overview and Trend Analysis* - November 2009.
- (2010a), *Global Macro-Risk Scenarios 2010-2011* – January 2010.
- (2010b), *Shari'ah Risk: Understanding Recent Compliance Issues in Islamic Finance* – May 2010.
- (2010c), *Focus On The Middle East* - February 2010.
- (2011a), Conference Proceedings. *Islamic Banking Update*. Moody's Middle East Sovereign Outlook Seminar. London, 24 March 2011.
- (2011b), *Banks' Standalone Credit Strength Unlikely to Return to Pre-Crisis Levels, Even under Basel 3* – May 2011.
- Moktar, H., Abdullah, N, and Al-Habshi, S. (2006). Efficiency of Islamic Banking in Malaysia: A Stochastic Frontier Approach. *Journal of Economic Cooperation*, Vol. 27, No. 2, 2006, pp. 37-70.
- Moore, E. J. (2009). *The International Handbook of Islamic Banking and Finance*. Kent: Global Professional Publishing.
- Miller, N. D. Conference Proceedings. *Risk Management considerations in Sukuk Issuance & Securitisation*. ICG London Sukuk Summit. London, 25 June, 2008.
- Newby, A. (2009). Islamic finance suffers from first big crisis. *Bloomberg*, 2 December, 2009.
- Nagaoka, S. (2007). Beyond the Theoretical Dichotomy in Islamic Finance: Analytical Reflections on *Murābahah* Contracts and Islamic Debt Securities. *Kyoto Bulletin of Islamic Area Studies*, Vol. 1, No. 2 (2007), pp. 72-91.
- Nienhaus, V. (2007). *Governance of Islamic banks*, in M. Khabir Hassan and Mervyn K. Lewis (eds.), *Handbook of Islamic Banking*. Cheltenham: Edward Elgar, pp. 144-160.
- Noraini M. A., Archer, S., and Abdel Karim, A. R. (2009). Risks in Islamic banks: Evidence from empirical research. *Journal of Banking Regulation*, Vol. 10, No. 2, March 2009, pp. 153-163.

- Oakley, D. (2009). The Future of Islamic Finance. *Financial Times*, Tuesday, December 8, 2009.
- Oana, B. (2009). Economist: Need for unified regulation of Islamic finance. *New Straits Times (Malaysia)*, 30 September, 2009. [Online] Available from: http://www.btimes.com.my/Current_News/BTIMES/articles/abas/Article [Accessed: 22 October, 2010].
- Obaidullah, M. (2007). *Securitization in Islam*, in M. Khabir Hassan and Mervyn K. Lewis (eds.), *Handbook of Islamic Banking*. Cheltenham: Edward Elgar, pp. 191-199.
- Obama, B. (2009). Speech on the on the economic crisis, 9 January 2009.
- Oliver Wyman (2009), *The Next Chapter in Islamic Finance: Higher Rewards but higher Risks* - February 2009.
- Oppenheim, A. N. (2001). *Questionnaire Design and Attitude Measurement*. London: Printer Publishers.
- Pallant, J. (2007). *SPSS Survival Manual*. Maidenhead: Open University Press.
- Parker, M. (2009). Islamic finance pushes for role in G20 agenda. *Arab News*, 30 March, 2009.
- Proceedings of the Securities Commission Malaysia (SC) and the Oxford Centre for Islamic Studies (OCIS) Roundtable and Forum. Kuala Lumpur, 15-16 March, 2010.
- PWC - PricewaterhouseCoopers (2008), *Risk appetite- How hungry are you?* Research Report.
- (2009), *The day after tomorrow*. Research Report, February 2009.
- Robson C. (2011). *Real World Research; A resource for social scientists and Practitioner-researchers*. Oxford: Blackwell.
- Rosman, R. and Abdul Rahman, A.R Conference Proceedings. *Risk Management Practices of Islamic Banks: International Evidence*. Durham Islamic Finance Conference, July 14-15, 2010.
- Sadr, K. and Iqbal, Z. (2002). *Islamic Banking and Finance: New Perspectives on Profit-Sharing and Risk*, in Iqbal, M. & Llewellyn, D. T. (eds.). *Choice between debt and equity contracts and asymmetrical information: some empirical evidence*. Cheltenham: Edward Elgar.

- Safieddine, A. (2009). Islamic Financial Institutions and Corporate Governance: New Insights for Agency Theory. *Corporate Governance: An International Review*, 2009, 17(2): pp. 142-158.
- Samad, A. (2004). Performance of Interest-Free Islamic Banks Vis-A-Vis Interest-based Conventional Banks of Bahrain. *IJUM Journal of Economics and Management*, Vol. 12, No. 2 (2004), pp. 2-15.
- Santomero, Anthony M. (1997). Commercial Bank Risk Management: An Analysis of the Process. *Journal of Financial Services Research*, 12, 83-115.
- Saunders, M., Lewis, P. and Thornhill, A. (2007). *Research methods for business students*. 4th edition London: Prentice Hall.
- Schroeck, G (2002). *Risk management and value creation in financial institutions*. New Jersey: John Wiley and Sons.
- Selvam, J. (2008). Call for more intellectual capital. *Islamic Banking & Finance*, Spring 2008, pp. 12-14.
- Shaikh S.A. and Jalbani A.A. (2009). Risk management in Islamic and Conventional Banks: A Differential Analysis. *Journal of Independent Studies and Research*, Vol. 7, No. 2, July 2009, pp. 67-79.
- Siddiqi, M. N. (1983). *Issues in Islamic banking: selected papers*. Leicester: Islamic Foundation.
- Standard & Poor's (2009), *The Sukuk Market Has Continued To Progress in 2009 Despite Some Roadblocks* - September 2009.
- (2010a), *The Sukuk Market Is Likely To Show Steady Growth in 2010* - January 2010.
- (2010b), *GCC Outlook* - December 2010.
- (2011), *Global Standards Needed to give Breadth and Depth to Growing Sukuk Market*- March 2011.
- Stiglitz, J. E. (2008). The fruit of hypocrisy. *The Guardian*, 16 September, 2008.
 [Online]Available from:
<http://www.guardian.co.uk/commentisfree/2008/sep/16/economics.wallstreet>
 [Accessed: 28 December, 2010].
- Stremme, A. (2005). Course Material, *Corporate Finance*. Warwick FT MBA 2004/2005.

- Sundararajan, V. (2007). *Risk Characteristics of Islamic Products: Implications for Risk Measurement and Supervision*, in Simon Archer and Rifaat A. Karim (eds.), *Islamic Finance: The Regulatory Challenge*. Singapore: John Wiley and Sons (Asia), pp. 40-68.
- Sundararajan, V. and Errico, L. (2002). *Islamic Financial Institutions and Products in the Global Financial System: Key Issues in Risk Management and Challenges Ahead*. IMF Working Paper WP 02/192, International Monetary Fund, November 2002.
- Tabachnick, G. and Fidell, L. (2006). *Using Multivariate Statistics*. 5th edition. USA: Allyn & Bacon.
- Taylor, M. (2010). The devil is in the detail. *The Bahrain Banker*, Winter 2010, p. 32.
- Thomas, R. (2009). Conference Proceedings. *Understanding Sukuk – Issues, Structuring, Innovation* London Sukuk Summit. London, 2-3 July, 2009.
- Townsend, M. (2009). Saudi Scandals Lifts Veil on Gulf Finance. *International Investor*, Wednesday, October 28, 2009.
- Turen, S (1995.) Performance and Risk Analysis of Islamic Banks: The Case of Bahrain Islamic Bank. *Journal of King Abdulaziz University: Islamic Economics*, Vol. 7, 1415/1995
- Usmani, J. M. T. (2002). *An Introduction to Islamic Finance*. The Netherlands: Kluwer Law International.
- (2008). *Looking for new steps in Islamic finance*, in Lori Hunt (eds.), *Islamic Finance Review 2007/08*. London: Euromoney Yearbooks.
- Usmani, M. I. A. (2009) *Examining the prudence of Islamic banks: A risk management perspective*, in Lisa Paul (eds.), *Islamic Finance Review 2009/10*. London: Euromoney Yearbooks.
- Visser, H. (2009). *Islamic Finance: Principles and Practice*. Cheltenham: Edward Elgar .
- Wan Yusuf, Wan Yusrol (2011). The Impact of IFSB Capital Adequacy Standards on IFIs in Malaysia. School of Government and International Affairs. *Mimeo*.
- Warde, I. (2009). 'Pent-up demand' for Islamic finance in Egypt. *Daily News Egypt*, 29 January, 2009.
- Wilson, R. (2002). *Islamic Banking and Finance: New Perspectives on Profit-Sharing and Risk*, in Iqbal, M. & Llewellyn, D. T. (eds.), *The interface between Islamic and conventional banking*. Cheltenham: Edward Elgar.

- (2005). *Are we likely to witness consolidation within the Islamic Banking Industry as we have seen with the conventional banks?* Islamic Finance news, August 2005 [Online] Available from: [http:// www.islamicfianncenews.com](http://www.islamicfianncenews.com) [Accessed: 12 May, 2009].
- (2009). *The development of Islamic finance in the GCC*. Research Report/ Kuwait Programme on Development, Governance and Globalisation in the Gulf States, London School of Economics, May 2009.
- Wright, C. (2008). Islamic Finance: Size will matter in Islamic banking. *Euromoney*, Tuesday, 2 December, 2008.
- Wroughton, L. (2009). IMF gives self an 'F' in spotting financial crisis. *International Herald Tribune*, Friday March 6, 2009 [Online] Available from: <http://www.iht.com> [Accessed: 16 March, 2009].
- Y-Sing, L. (2009). Islamic benchmark financing rate not expected in near term. *Guardian*, Monday, March 16 2009. [Online] Available from: <http://www.guardian.co.uk> [Accessed: 18 March, 2009].
- Yudistira, D (2004). Efficiency in Islamic banking: an empirical analysis of eighteen banks. *Islamic Economic Studies*, Vol. 12, No. 1, August 2004, pp. 1-19.
- Zawya: Global Sukuk Market (2011). [Online] Available at http://www.zawya.com/viewpdfStory.cfm/sidpdf_290710090529/lok1 [Accessed: 5 March, 2011].

Appendix 1

Questionnaire

Risk Management in Islamic Banks

Dear Respondent,

My name is Wael Eid, Associate Director – Risk Management at a leading Islamic Bank. I am also pursuing my Phd. research at Durham University under the joint supervision of Professor Rodney Wilson and Dr. Mehmet Asutay. My goal is to combine my practical experience with my academic background in a pioneering research that *Shari'ah* scholars, policy makers, practitioners, academia and researchers may find relevant and motivating to conduct more research in this important but under researched area.

My supervisors at Durham University feel that this is a promising thesis and a fruitful topic.

My research is about "Mapping the Risks and Risk Management Practices in Islamic Banking", which aims to explore the unique risks of the Islamic financial services industry and the perceptions of participants about these risks. This is in addition to analysing the *Shari'ah* related challenges concerning risk management in Islamic banking.

Please find attached a questionnaire that is highly relevant to every Islamic banker. I would be grateful if you complete this questionnaire at your convenience and return to me. This is purely for my studies and not for work-related purposes.

If you have any questions, suggestions or comments – please contact me on waelkamal77@gmail.com

Most of the survey is ticking the boxes or writing a number at the most, so it will not take more than 5 minutes out of your precious time.

Of course your responses will be treated with strict confidentiality.

Many thanks in advance.

Kind regards
Wael Eid

Questionnaire

PhD. Research on "Risk Management in Islamic Banking"

Part One: General and Background Information

1. Name and location of the Financial Institution:

2. Respondent's Name:

3. Position:

Department:

4. Nature of the Financial Institution:

(Please mark the appropriate boxes)

Fully-fledged Islamic Bank

Conventional Bank with Islamic activities/windows

Conventional Bank

Other, please specify

5. Nature of Activities: (Please mark the appropriate boxes)

Commercial Banking

Investment Banking

Retail banking

Other, please specify

6. The accounting standards used by your institution comply with:

International standards

AAOIFI standards

Other, please specify

Don't know

Part Two: Risk Perception

Section I- Risk issues in Islamic banks

7. Severity of risks facing Islamic Banks.

Below are the main inherent risks in Islamic banking. Could you please identify the seriousness/importance of the following risks to Islamic Banks according to your own personal view?

Please mark the appropriate box.

Risk	Very Important	Important	Neutral	Unimportant	Very Unimportant
Credit Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Market Risk*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operational Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Equity Investment Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liquidity Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asset–Liability Management Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Displaced Commercial Risk **	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Shari’ah</i> non-compliance Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Concentration Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reputation Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fiduciary Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corporate Governance Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Legal Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Market Risk encompasses Rate of Return Risk, Currency Risk, Commodity Risk, Benchmark Risk, and Mark-up; but excludes Equity Investment Risk.

** Displaced Commercial Risk is the risk of liquidity suddenly drying up as a consequence of massive withdrawals should the Islamic bank assets yield returns for Investment account Holders lower than expected, or worse, negative rates of profits.

8. Please list below any other risks (if applicable) that you think might affect Islamic Banks, in order of their seriousness/ importance.

- a.
- b.
- c.
- d.
- e.

9. For institutions that use Islamic finance contracts, please rank the following Islamic finance contracts according to the intensity of use by your institution (the most used first):

Please use a scale from 1 to 7, with 1 as the most used and 7 as the least used.

Contract	Rank
<i>Murabahah</i>	
<i>Mudarabah</i>	
<i>Wakala</i>	
<i>Ijarah</i>	
<i>Musharakah</i>	
<i>Istisna'a</i>	
<i>Salam</i>	

10. According to your own view, please rank the following Islamic finance contracts according to their risk seriousness, starting by the most risky:

Please use a scale from 1 to 7, with 1 as the most risky and 7 as the least risky.

Contract	Rank
<i>Murabahah</i>	
<i>Mudarabah</i>	
<i>Wakala</i>	
<i>Ijarah</i>	
<i>Musharaka</i>	
<i>Istisna'a</i>	
<i>Salam</i>	

11. Please mark the appropriate boxes below

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Risks for Islamic banks should be managed using same techniques used in conventional banking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Islamic banking is more risky by nature than conventional banking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Risk management for Islamic banks is more challenging than it is for conventional banks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. There is naturally inherent conservatism in the principles of Islamic finance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. In an Islamic bank, a low rate of return on deposits will lead to withdrawal of funds.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Depositors would hold the bank responsible for a lower rate of return on their deposits.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Variation among <i>Shari'ah</i> scholars' opinions represents a major risk to Islamic banking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Non- <i>Shari'ah</i> compliance could severely damage the reputation of an Islamic bank.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. AAOIFI and IFSB standards should be made mandatory for Islamic banks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Corporate governance is generally weak in Islamic banks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Islamic banking in its current state is a safer option than conventional banking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section II- Capital Adequacy

12. Which of the following does your bank use in calculating its minimum capital requirements?

- Basel II standards
 IFSB standards
 Other, please specify
 Don't know

13. If your institution is using Basel II standards, please indicate the methodology used to calculate the minimum capital requirement for:

Credit Risk

- Standardised approach
 Foundation IRB
 Advanced IRB

Market Risk

- Standardised approach Internal models approach

Operational Risk

- Basic indicator approach Advanced measurement approach

14. Do you think that the capital requirements for Islamic banks as compared to conventional banks should be:

- Higher Same Lower Don't know

15. Please mark the appropriate boxes in the table below

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Basel II standards should be equally applied to Islamic banks without modification.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. IFSB standard on Capital Adequacy should be used by Islamic banks rather than Basel II.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Basel II standards should be reviewed after failing to prevent the current crisis.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The proposed Basel III rules would be easily applicable to Islamic banks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Stricter capital, leverage, and liquidity rules, as proposed under Basel III, are likely to prevent another financial crisis.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section III– Credit Crisis and Islamic Finance

16. Please mark the appropriate boxes in the table below

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Islamic banks are more resilient to economic shocks than their conventional peers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The recent crisis would not have happened under a true Islamic banking system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Islamic finance could have solved the global crisis.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Risk management must be embedded institutionally.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Banks in general used to rely heavily on rating agencies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Islamic banks rely less on rating agencies than conventional banks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Islamic finance industry should develop its own rating agencies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Islamic banks will emerge stronger from the current crisis.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Consolidation is needed among smaller Islamic banks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part Three: Risk Management and Mitigation

17. How often does your bank produce the following reports, if applicable?

	Daily	Weekly	Monthly	Yearly	Never	Don't know
Capital requirement report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operational risk report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Profit rate risk report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Foreign exchange risk report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Liquidity risk report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commodity risk report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Country risk report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Equity mark-to-market report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Classified accounts report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industry concentration risk report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Credit exposure report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Large exposure report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other risk reports (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. Which of the following techniques does your organisation use to analyze risks, if applicable?

Internal based ratings	<input type="checkbox"/>
Credit ratings by rating agencies	<input type="checkbox"/>
Gap analysis	<input type="checkbox"/>
Duration analysis	<input type="checkbox"/>
Maturity matching analysis	<input type="checkbox"/>
Earnings at risk	<input type="checkbox"/>
Value at risk	<input type="checkbox"/>
Stress testing	<input type="checkbox"/>
Simulation techniques	<input type="checkbox"/>
Risk Adjusted Rate of Return on Capital (RAROC)	<input type="checkbox"/>
Other (Please Specify)	

19. Risk mitigation techniques in Islamic banking compared to conventional banking are:

- More Advanced
- Less advanced

Similar

Don't know

20. For institutions that use Islamic finance contracts, which of the following techniques does your organisation use to mitigate risks?

On-balance sheet netting	<input type="checkbox"/>
Islamic options	<input type="checkbox"/>
Islamic swaps	<input type="checkbox"/>
Guarantees	<input type="checkbox"/>
Islamic currency forwards	<input type="checkbox"/>
Parallel contracts	<input type="checkbox"/>
Collateral arrangements	<input type="checkbox"/>
Other (Please Specify)	

Part Four: Islamic Banking in Practice

21. Please mark the appropriate boxes in the table below

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Islamic banks have been mimicking conventional models.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Islamic finance provides an ethical banking alternative.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. There is difference between the current practice and principles of Islamic banking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Islamic banks need to reform to be successful.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part Five: The Next Chapter in Islamic Banking

22. According to your own view, which of the following strategies should Islamic banks focus on in order to thrive? Please rank the following strategies according to their importance, starting by the most important.

Please use a scale from 1 to 8, with 1 as the most important and 8 as the least important.

Strategy	Rank
Improved risk management	
Enhanced morality – Back to roots	
Mergers and Acquisitions	
Organic growth in home market	
Better risk mitigation	
Innovation	
Diversification – reduce concentration	
Standardization	
Other (Please Specify)	

Thank you for your cooperation

Appendix 2

Interview Participants

Interview Number	Name	Organisation	Position	Country
1	Sheikh Nizam Yaccubi	Not Applicable	<i>Shari'ah</i> Scholar	UAE
2	Dr Abdul Latif Mahmood Al Mahmood	Not Applicable	<i>Shari'ah</i> Scholar	Bahrain
3	Dr Abdul Sattar Abu Ghuddah	Not Applicable	<i>Shari'ah</i> Scholar	Syria
4	Mohaimin Chowdhury	European Islamic Investment Bank Plc	Head of Legal, <i>Shari'ah</i> and Compliance	UK
5	Osaid Kailani	Abu Dhabi Islamic Bank	Head of <i>Shari'ah</i> Compliance	UAE
6	Rokaya Riad	Al Baraka Bank - Egypt	Head of Legal	Egypt
7	Adnan Yousif	Al Baraka Banking Group	CEO	Bahrain
8	Ashraf Al-Ghamrawy	Al Baraka Bank - Egypt	Managing Director	Egypt
9	Sameer Abdulaziz Qaedi	Bahrain Islamic Bank	Senior Dealer, Treasury and Investment	Bahrain
10	Dato' Wan Ismail Wan Yusoh	Bank Islam Malaysia Berhad	General Manager	Malaysia
11	Sami Fathi	Al Baraka Bank - Egypt	Head of Investments	Egypt
12	Danie Marx	European Islamic Investment Bank Plc	Head of Treasury and Capital Markets	UK
13	Chris Engel	European Islamic Investment Bank Plc	Head of Risk Management	UK
14	Grant Lowe	Qatar Islamic Bank (UK) Plc	Head of Risk Management	UK
15	Abdullah Al Raisi	Qatar Commercial Bank	Deputy CEO	Qatar
16	Peter Knott	Standard Chartered Bank	Group Head, Operational Risk	UK
17	Ximena Jaramillo	Rabo Bank	Credit Risk Manager	UK
18	Hussien Abaza	Commercial International Bank	Head of Credit Risk	Egypt
19	Ahmed Masri	KPMG	Consultant	UAE

20	Hassan Afifi	Beltone Financial	Consultant	Egypt
21	Mohammad Farrukh Raza	IFAAS UK Limited (Islamic Finance Advisory & Assurance Services)	Managing Director	UK
22	Ken Eglinton	Ernest & Young	Director - Banking and Capital Markets	UK
23	Abdulkader Thomas	SHAPE Financial Corp.	Consultant	Kuwait
24	Mahmoud ElSayed	University of Alexandria	Researcher	Egypt
25	Nawel Turki	Cass Business School	Researcher	UK
26	Mohamed Al Khan	University of Bahrain	Researcher	Bahrain
27	Dr. Christian Thun	Moody's	Senior Director	UK
28	Mohamed Fayek	Standard & Poor's	Senior Analyst	UK
29	Paul Smith	Standard & Poor's	Senior Analyst	UK
30	Oliver Fochler	Moody's	Director	France
31	Oliver Putz	Fitch Ratings	Senior Director	UAE
32	Mohamed Damak	Standard & Poor's	Senior Analyst	UK
33	Sunil Rajan	Standard & Poor's	Director, Business Development	UK